HERMES

REFERENCE MANUAL – Project management

Outcome-oriented project management method
for various types of projects

2022 edition

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Bundeskanzlei BK
Digitale Transformation und IKT-Lenkung DTI

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HERMES PROJECT MANAGEMENT AT A GLANCE:

Reference manual

- This reference manual documents the method and is both printed and available online;
- It is used in training, is suitable for self-study, and can serve as a reference work;
- It forms the reference basis for certification.

Online

- Scenarios and planning documents can be downloaded;
- Document templates and checklists facilitate fast and consistent planning and documentation;
- Individually adaptable sizing aligns the documentation effort with the complexity of the project.

Training and certification

- Courses help with becoming familiar with HERMES and with trying out its application;
- Subject-specific advanced courses support professionalization;
- Certificates from an independent body attest to skills.

Exchange of experiences

- Events encourage exchange and networking;
- Newsletters and social media provide information on the latest news;
- HERMES users' experience and wishes are incorporated into further development.

Standardization

- New developments are standardized by eCH;
- eCH is the standardization body for eGovernment;
- Users are represented in the HERMES group of experts.

Foreword

The evolution of HERMES

The HERMES project management method is a successful product that successively adapts to the spirit of the times and reflects each evolutionary stage of the understanding of the project.

The most substantial aspect of the project's evolution has been revision of its agile approach. Projects can still be handled in a traditional manner, however, as is familiar from HERMES 5; the goal was to safeguard the previous success of HERMES while incorporating new features.

Revising the method helped us to gain new insights such as decoupling of project and development management. Other improvements included incorporating the long overdue needs of our users, such as more prominent placement of the procurement process, but also the question of when a project should start and who should fill which role when.

To place a greater focus on business aspects, we have adapted certain roles and emphasized the importance of stakeholders and of specialist responsibility.

We have recognized that it is becoming increasingly important for the core organization to know what it wants and to make those needs known. After all, it is the core organization's project, it is the core organization's solution that is being developed, and it is the core organization's finances that make everything possible. The new HERMES is intended to help the specialist areas to determine for themselves how their own product should be handled.

To remain flexible and stay up-to-date with respect to development, we have integrated it into the overall project management in such a way that both traditional and agile development can be selected for solution development and can be handled side by side without any problems.

We strive to continuously adapt the project management method to current needs, and we take the concerns of our users very seriously.

We are happy to support you with any questions about the structure of the project organization or about project realization by phone or via email (see Imprint).

I would like to thank everyone who has helped and is still helping us to keep this method up-to-date, simple, and clear, and I wish you much success in using it.

André Bürki

HERMES Method Officer,
Federal Chancellery FCh
Digital Transformation and ICT Steering

www.bk.admin.ch

"The new HERMES version incorporates the experience gained from the handling of agile projects. This facilitates optimal steering and management of complex agile undertakings such as SUPERB."

Patrik Riesen, SUPERB Program Manager

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HERMES project management method / document templates

Libor F. Stoupa, Stoupa & Partners AG, Author;
Michael Halfar, Stoupa & Partners AG, Co-author, Sizing;
Claude Eisenhut, Data Model Expert, Eisenhut Informatik AG;
Agile Expert Team: Daniel Aeschbacher, avega IT AG; Patrik Riesen, couniq consulting AG; Tobias Durrer, kiwi Consultants AG;
Kathrin Schmidt, Bern University of Applied Sciences – BFH, Manuscript and Consistency Review;
Michael Kammerbauer, Swiss Federal Chancellery – Proofreading

Note on gender equality in language

To make it more readable and comprehensible, this manual refers to roles and people in forms which are independent of a person's gender and positions in an organization. These formulations explicitly include all other genders in their respective function.

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Support

Email: hermes@bk.admin.ch
Phone: +41 58 461 89 61

Preface

"Small deeds done are better than great deeds planned."

(Peter Marshall)

Agile methods have proven superior to traditional approaches in many areas of our fast-moving times. It therefore makes sense that they are also being used more frequently by the public authorities and are reflected in HERMES. However, the experience of the Swiss Federal Audit Office (SFAO) shows that consistent application of a method is unfortunately no guarantee for successful project implementation. Other aspects are also important. We therefore encourage you to keep the following in mind:

Any transformation depends on cultural change.

From the outset, raise the awareness of everyone involved that innovation is not driven by technology alone, but rather starts with the individual employee. Encourage a willingness to engage in dialogue, learn to live with uncertainty, question taboos, and allow for errors. A zero-error culture is fatal – not only, but especially for the agile world.

Focus on the business and the end user.

As the project sponsor, steer the project by focusing on the expected business benefits and by ensuring that reporting is consistently aligned with those benefits. For example, use milestones to define when you want to realize which benefit and leave project execution primarily to the project team.

With regard to the Administration's transformation plans, do not hesitate to question existing organizations and processes. Motivate those involved to develop the solution together with the users. In the case of the Administration, users include citizens, companies, subsidy recipients, but also cantons and communes. Dare to ask everyone involved to work together so that a continuous end-to-end process is ultimately created.

Assemble the puzzle pieces in your plan without any gaps.

Orchestrate your projects in such a way that they jointly make a valuable contribution to achieving your strategic objectives. Involve architecture, ICS,[1] and security officers at an early stage so that their requirements are actually taken into account. Finally, make sure you have sufficient explicit test cases for the internal controls and security elements and that they are automated to the extent possible.

Provide your organization with the necessary powers.

Secure key resources in a timely and sustainable manner and unambiguously confirm their role-specific responsibilities. Make sure that the user representative (product owner) has both the expertise and the necessary decision-making powers, and never start without a mature quality and risk management system.

We will examine these aspects during our audits in the Federal Administration, and we look forward to exploring this new world together with all users. If you have any questions, please contact us at info@efk.admin.ch.

Swiss Federal Audit Office SFAO

www.efk.admin.ch

[1] The internal control system (ICS) of the Federal Administration, phased in between 2007 and 2008.

New clothes for HERMES

(Libor F. Stoupa, Author of HERMES Project Management, 2022 edition)

This 2022 edition of HERMES project management reflects the evolving understanding of projects in recent years and the expectations of users with respect to advanced project management. One of the goals is for the agile development approach in HERMES project management to be adapted to the current needs of the organizations. For this purpose, the already existing agile approach should be optimized and integrated into the phase model – taking into account governance, a uniform approach in the projects, and the proven interfaces to the project environment. A further goal is to give greater weight to aspects such as organization and business focus, while further reducing the heavy emphasis on IT.

HERMES distinguishes between traditional and hybrid project management. With hybrid project management, HERMES now allows various agile development methods to be integrated in a uniform manner. Otherwise, HERMES offers the same structural system and the same method components as before. The basic outlines of the method also remain the same – only with a greater focus on outcomes, which is why the sequence of sections has been modified, in some cases with new headings.

The specific terminology for HERMES has also been kept largely the same, irrespective of the development approach. The traditional development process corresponds to the currently widespread practice of making project management more business-centric. Agile development now provides for the option of approving interim releases, which gives project sponsors an additional opportunity to determine the next step in the same way as a phase release, helping to further safeguard governance.

Other important adjustments:

- The project phases take into account the requirements of the agile world.
- The focus is on project management; agile development management is subordinate as a method and is integrated as a black box without going into further detail.
- The project already starts with a lean initiation phase; the scenario selection comes into play only with the decision on next steps.
- The procurement process is already planned and prepared during initiation – in that way, it facilitates adaptation scenarios.
- The steering function of the milestones is strengthened. The milestones are now tangible as method components and apply independently of the selected approach.
- The tasks now include a definition of which available outcomes form the prerequisite for their execution.
- Roles that must be filled at a minimum are project sponsor, project management, and user representative, which must be filled by the user partner group.
- Management and specialist competencies are clearly and unambiguously set out and separated from each other on a role-specific basis. The project management no longer needs specialist knowledge, but all the more relevant management knowledge and skills. The project management can therefore be recruited externally by the user partner group. The role of the user representative has in turn become more important; the user representative has specialist product responsibility (traditional and agile). The requirements for the role holder have also increased accordingly.

As in previous editions, this manual provides a basis for projects that tend to be large. However, project-specific application of the method is expected (tailoring). Using individually adaptable sizing, the scope of the documents can be specified online. The goal is to keep the complexity of the approach as low as possible and to further increase the user-friendliness of HERMES project management.

We hope that the new HERMES meets your expectations, and we look forward to your feedback.

HERMES is a successful product and we want it to remain so in future.

A Method overview

A.1 HERMES project management – big picture

The outcome diagram (Figure 1) provides a rough big picture for the outcomes of HERMES project management.

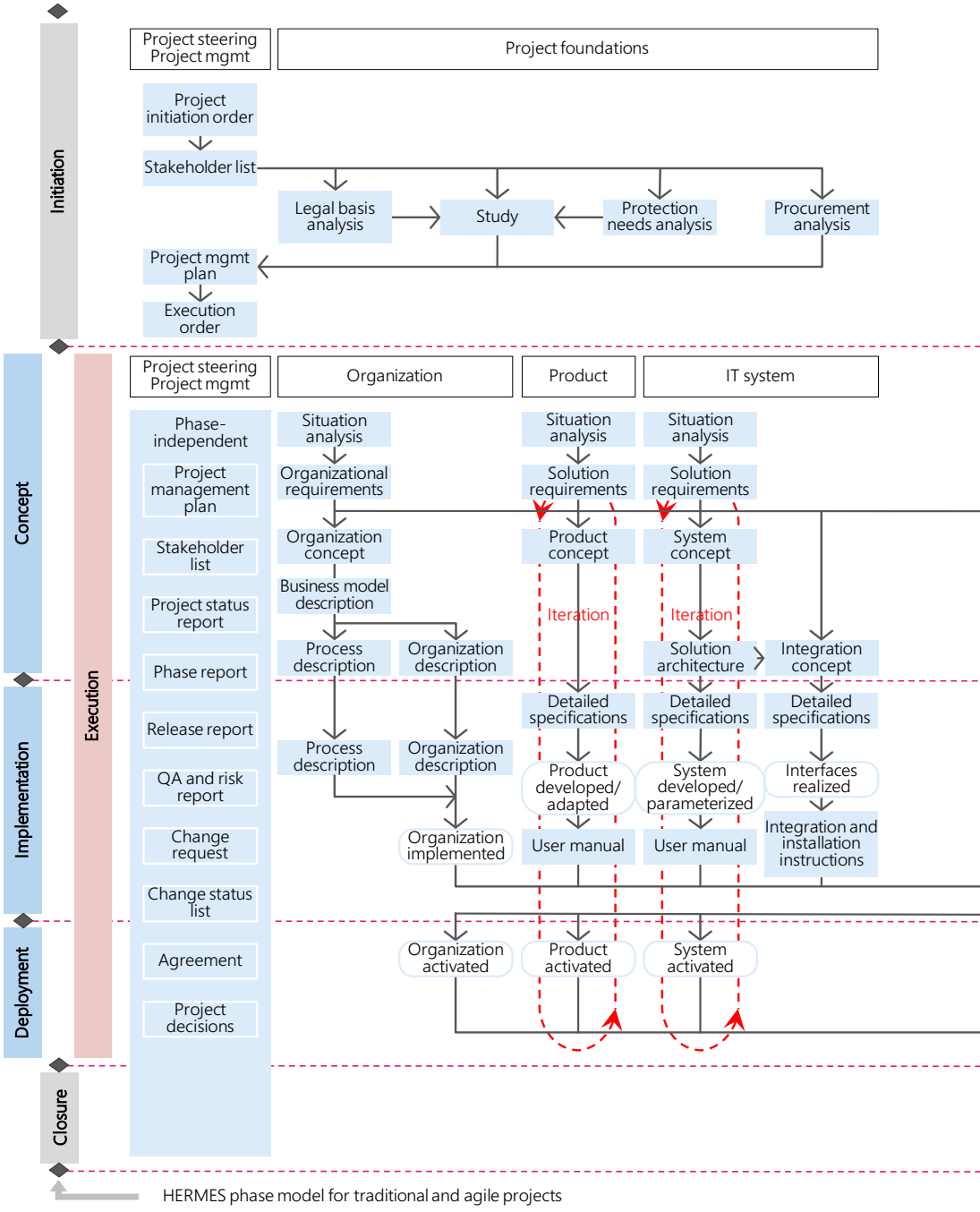
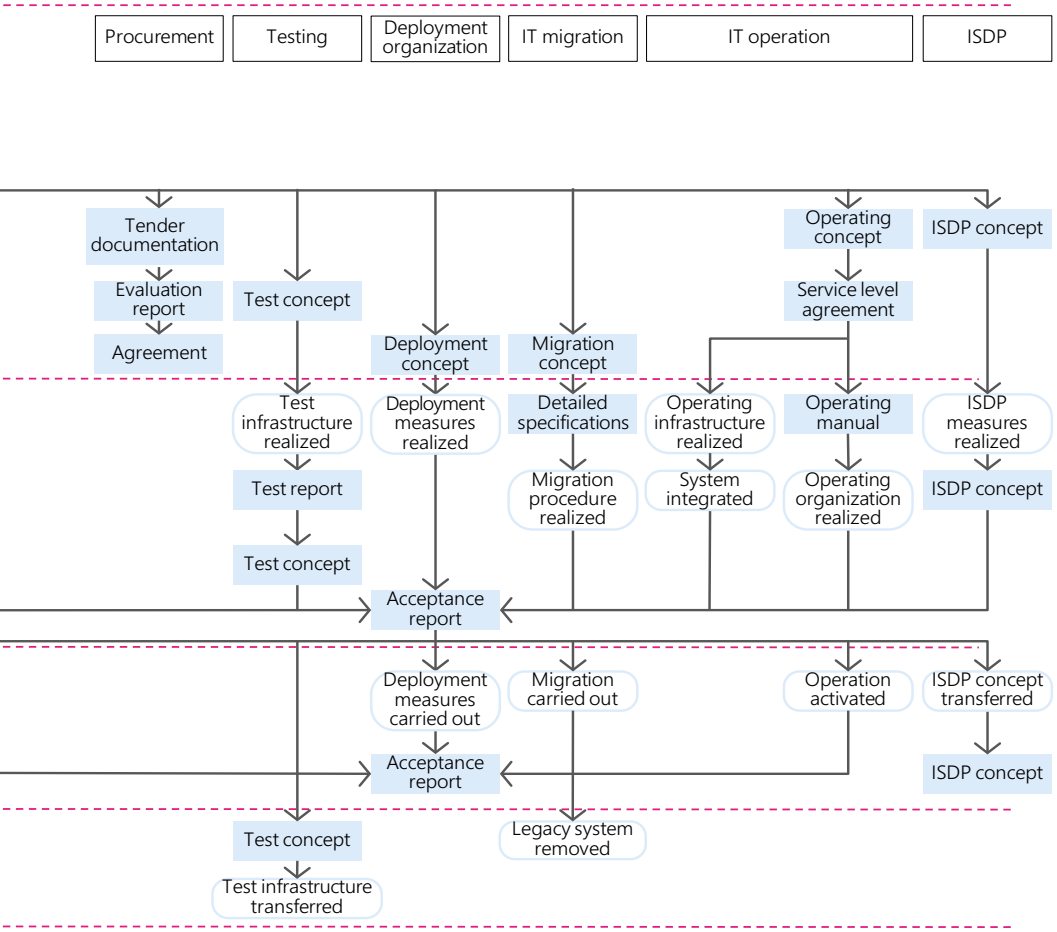


Figure 1: Overview of the HERMES modules and the essential outcomes along the phases

HERMES is an outcome-oriented process method; the focus is on the outcomes. The overview shows the essential outcomes of the individual modules along the phases as well as the rough dependencies and interrelationships. The oval iteration arrows in red symbolize the core of the iteration, the driving character of the product and IT system modules during agile development. The outcomes of the other modules are developed in sync with that iteration, likewise iteratively and incrementally.



A.2 What is HERMES project management?

HERMES project management is the holistic management method for carrying out projects and programs of various types in many fields of activity, such as organization adjustment, IT, and service and product development. As Figure 2 shows, HERMES portfolio management, HERMES project management, and HERMES application management are method components of equal value and jointly form the HERMES method.

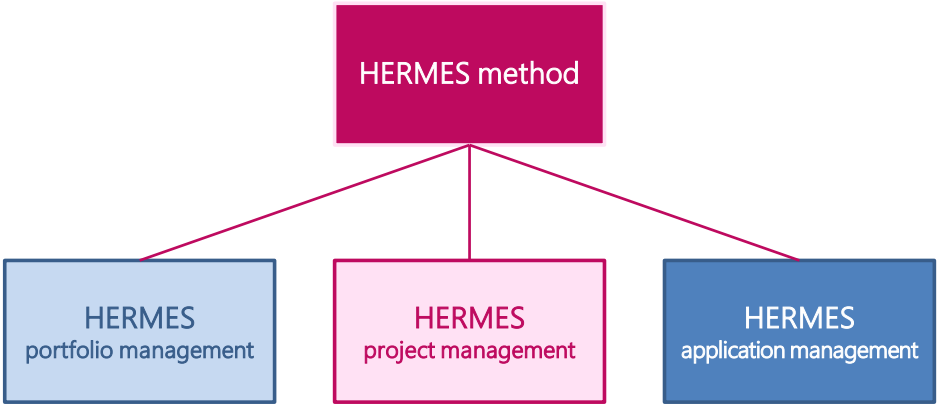


Figure 2: The three top method components of the HERMES method

HERMES project management supports the steering, management, and execution of projects and accompanies the further development of organizational structures, products and services, IT and logistics systems, infrastructures, etc. with various levels of complexity and different features. A project can be divided into subprojects that deal with different aspects of the same project (e.g. subprojects for users, creators, operators for organization, IT, legal bases). Long-term or complex projects do not necessarily have to be structured as programs. They can be carried out as projects with implementation units.

As a method, HERMES project management has a clear, easy-to-understand structure with common terminology for all participants, has a modular design, and can be expanded. It is continuously updated and further developed.

The other two, equally positioned method components – portfolio management and application management – are not dealt with in detail in HERMES project management.

A.3 Project sizes supported by HERMES

To ensure the completeness of the information and the method as such, HERMES project management is designed for major projects of high complexity. This is not an appropriate fit for every project, however. With the sizing function provided in HERMES online, the standard scenarios are adjusted according to the actually determined project value. The project value is determined from a combination of factors such as lead time, size of the project team, stakeholder structure, and political urgency, all of which relate to the complexity of the underlying solution option according to the study. Based on the determined value of the envisaged project, the sizing function provides the project manager with the selected, appropriately tailored scenario together with adapted document templates.

The project sizes/values set in HERMES online should be seen as general standard assumptions. They can be adapted by the project management or core organization as needed.

A.4 Use of HERMES project management in practice

The HERMES project management method supports two approaches: The traditional phased approach as described in systems engineering[2], hereinafter referred to as "traditional", and the iterative and incremental approach[3], hereinafter referred to as "agile". The method provides a framework that makes it possible to embed different approaches and the corresponding project-specific methods in a uniform way.

Figure 3 shows the functional use of the HERMES project management method, illustrates the prerequisites for the project roles involved in carrying out the project, and shows how the application of the method requires other relevant methodological training or at least sound project practice: The project management method channels knowledge acquired in different areas, enhances it with HERMES-specific elements and terminology, and provides a homogeneous framework for all projects.

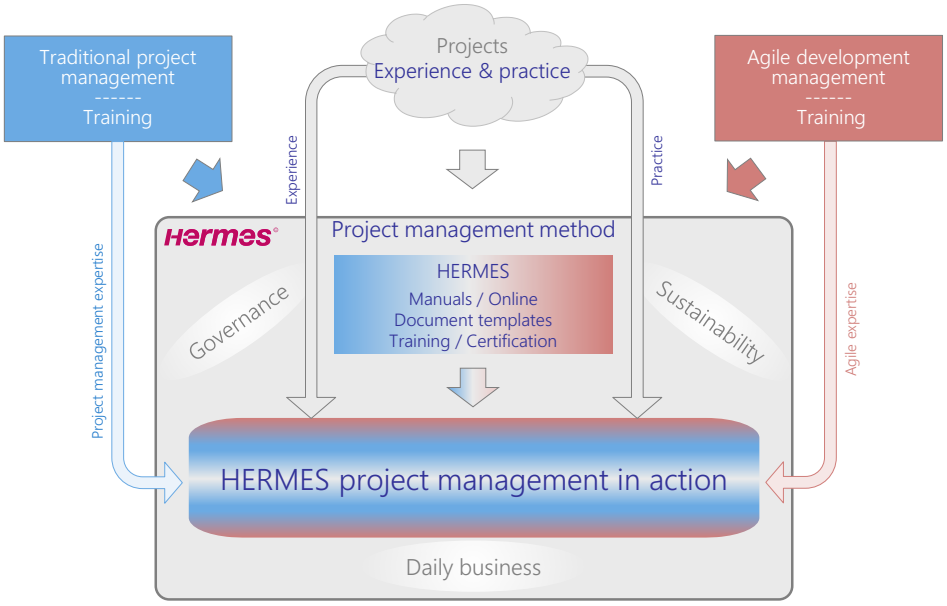


Figure 3: How HERMES project management works in practice

HERMES courses and certifications strengthen the required competence and expertise. This ensures the same manner of reporting and communication both within the project and in relation to the core organization, while at the same time meeting the accompanying framework requirements of HERMES project management (see Section 7, e.g. Governance). In this way, projects of all types can be anchored uniformly within the core organization, exhibiting the same level of integration into the operational processes regardless of the selected approach.

The project teams are supported in applying the approach selected for the project and in delivering the outcomes required by the project management method in a lean manner. This does not curtail the traditional and agile methods, but additional, binding method components are required and defined with regard to roles, tasks, or outcomes. The HERMES framework lays a structure over the selected approach that provides a uniform picture of all projects externally and communicates the same language internally to all project participants. This makes the selected project approach completely autonomous as such, so that it can be integrated into any organization.

[2] The traditional approach set out in Systems Engineering, ETHZ, Walter F. Daenzer

[3] Based on e.g. Extreme Programming or SCRUM: Development methods used mainly for agile software development. The focus is on the development process; specific project management aspects are not defined.

Independently of the project type or approach, both planning and controlling are largely done in the same way. This also applies to methods supported in principle by HERMES, such as SAFe[4] and the process-based optimization approach DevOps[5].

A.5 The interfaces of HERMES project management

HERMES project management covers the entire project life cycle and is outcome-oriented. It guarantees the compatibility of its standardized interfaces within the project and with the core organization, such as reporting, regardless of whether development is carried out in a traditional or agile manner.

HERMES terminology guarantees a common language and understanding between the core and project organizations, between the project and the program, and between project, application, and portfolio management.

Within the project organization, the project sponsor, project management, and user representative are the indispensable roles for the functioning of the interfaces, but also for the project as a whole. The project sponsor steers the project and has the overall responsibility for the project and for achievement of the project objectives. The project management manages and coordinates the project and determines its course. The user representative is responsible for solution development.

A.6 Agile development management with HERMES

The HERMES project management method is a project approach shell into which a specific agile development method can be inserted like a black box. HERMES does not go into any further detail on the development approach encapsulated in this way, but it does define relevant interfaces for the purpose of steering, management, communication, and reporting. These are the corresponding outcomes and specific roles.

The traditional and agile development processes have a fundamentally different understanding of the management of the roles of the hierarchy level of execution. While the traditional approach assumes that the project manager issues work orders, in the agile approach the work of the development team is steered by the user representative via the solution requirements, and the team organizes its work independently. The project manager manages the project, but the project manager is not allowed to interfere with the self-organization of the agile development team. As the representative of the agile development team, the user representative is the contact person for the project manager.

The terminology within agile development is not prescribed; it depends on the development method used in each case. Only the outcome interfaces and the terminology within the framework of project management are defined.

HERMES project management gives the project its uniform structure and a uniform framework. The focus is on the project life cycle; agile development management forms a black box as an encapsulated method. Agile development management determines the organization and steering of the development team and autonomously steers solution development within a predefined framework. The method-specific role models, processes, and rituals can be put into practice without interference – provided there is consensus within the core and project organization.

[4] SAFe facilitates the application of scaled agility in the broad enterprise environment and on a large scale. HERMES with agile development management is compatible with SAFe up to the agile release train (e.g. Essential SAFe).

[5] The focus of DevOps (Development/Operations) is on the holistic lifecycle of a product or system – and is accordingly also supported by HERMES application management.

A.7 Positioning of program management

In organizations with far-reaching and comprehensive changes, a holistic management system is required to achieve objectives within a group of interrelated projects in a lean and coordinated manner. This management system is called program management and is an extension of project management. In program management, the projects are grouped together as part of a program.

Projects and programs can be managed side by side in a core organization. Figure 4 shows an example of a portfolio with traditionally and agilely managed projects and a program that includes other projects. The figure shows that a project can be stand-alone or part of a program. A program contains several projects. Projects and programs can be combined within a portfolio.

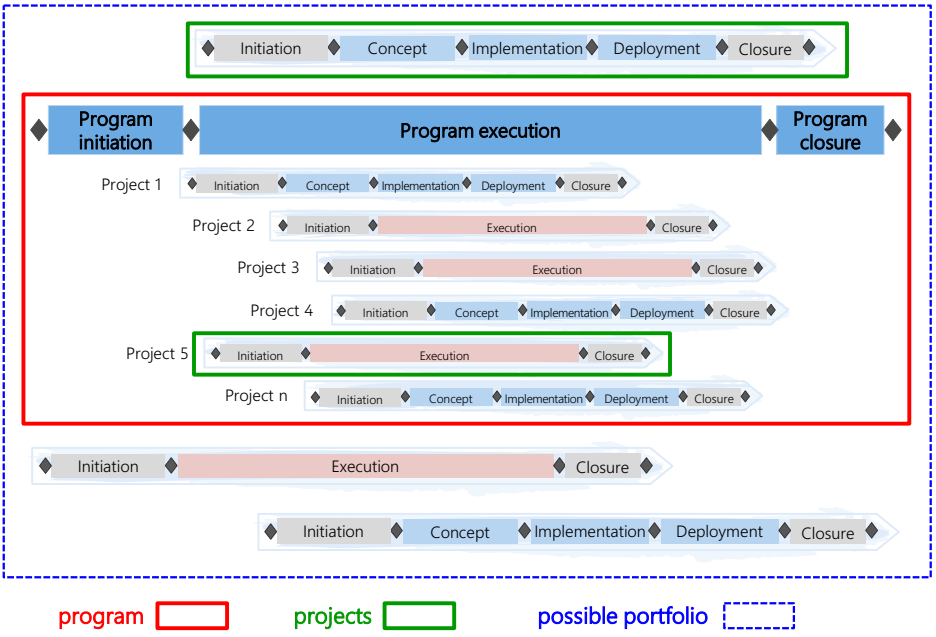


Figure 4: Simultaneous management of projects and programs in a core organization

HERMES project management creates a common understanding of project and program management. A prerequisite, however, is that the project partners involved in program management have the necessary skills to perform their role successfully. The extension of project management by program management is discussed in the appendix to this reference manual.

A.8 User information

The user information describes specific aspects of HERMES project management. User information forms the basis for a deeper understanding of the method, for example in relation to governance and sustainability. User information also shows how HERMES should be applied in specific situations and helps to reduce room for interpretation, for example in hybrid development or when using implementation units.

B HERMES project management method components

B.1 Phases

The HERMES phase model for projects forms the backbone of every project. It creates the conditions for the common understanding of all project participants. This is an important prerequisite for the successful cross-organizational handling of projects.

The phase model builds on the life cycle of a project. Figure 5 shows the HERMES project life cycle and the phase model for the traditional and agile approach; the initiation phase at the start and the closure phase at the end of the project are common to both approaches and include the solution development phases.

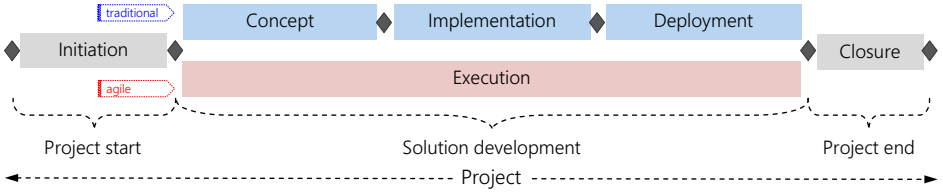


Figure 5: HERMES project life cycle with phase model for traditional and agile approach

Accordingly, projects are carried out in either five or three phases. The project starts with the initiation phase and ends with the closure phase. The initiation phase corresponds to a structured orientation for a focused project. It formulates which possible solutions exist and which path to take. The closure phase ends the project and defines the organizational and administrative transition from the project organization to the application organization.[6]

The phases included between initiation and closure are, in the traditional approach, the three phases of concept, implementation, and deployment, and in the agile approach, only execution.

If the core organization wants to explore a possible vision for a solution, it starts the project with the initiation phase, the outcomes of which also decide whether a traditional or agile approach should be taken for the development procedure. Within a single program, some of the projects may be carried out according to the traditional approach, others according to the agile approach.

B.2 Scenarios

Different projects are carried out within a core organization. Projects can vary considerably in terms of content and complexity. HERMES project management provides scenarios to satisfy the diversity of the projects. In the project, a scenario is determined for the development procedure included between initiation and closure, i.e. for the concept, implementation, and deployment phases in the traditional approach and for the execution phase in the agile approach.

A scenario is geared towards the implementation of projects of a specific nature. The scenario contains precisely those HERMES method components that are important for the development of the solution. Consequently, HERMES project management is quick and easy to use. By way of example, Figure 6 shows several plans of a core organization with the corresponding projects and scenarios.

[6] Like the project organization, the application organization is a temporary organization that is closely related to the core organization. It is system- or product-specific and ends at the end of the life cycle of a product or a system (the application).

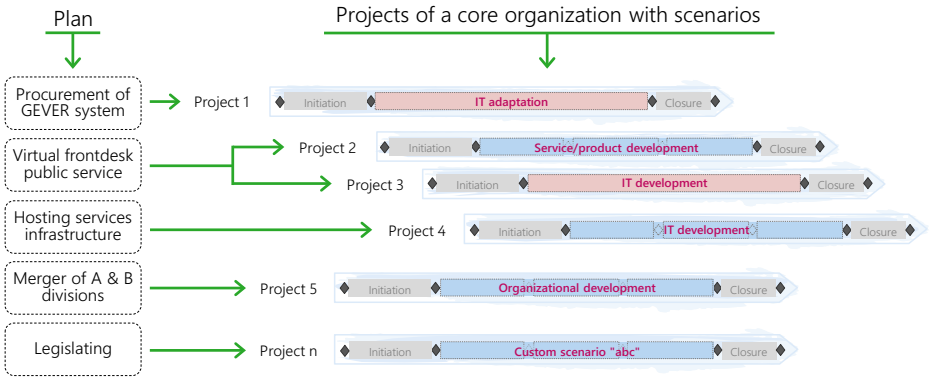


Figure 6: Projects of a core organization with scenarios

In the initiation phase, the project manager selects the suitable solution option, along with the scenario suitable for the development procedure. Based on this, the project manager plans the specific procedure and the development of the solution. HERMES offers a selection of possible standard scenarios, such as for an organizational adjustment or for the development of a service/product.

HERMES users can adapt standard scenarios to the needs of their organization and create their own custom scenarios.

B.3 Modules

Modules are reusable building blocks assigned to phases for creating projects and scenarios. Thematically related outcomes and the tasks associated with them form a module (see Figure 7).

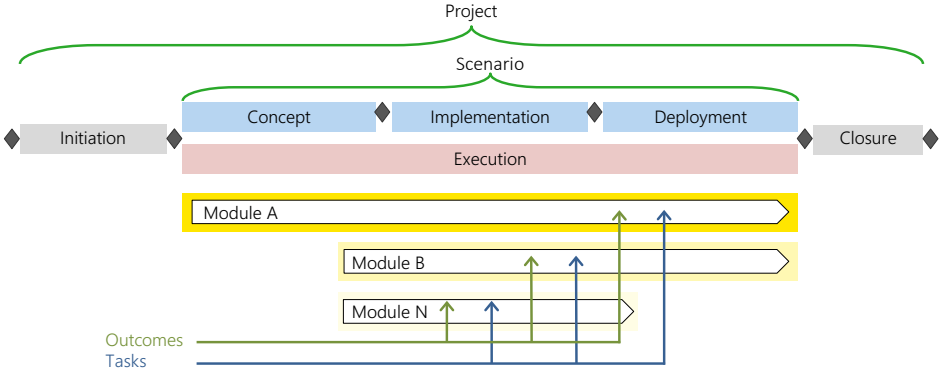


Figure 7: A module is composed of outcomes and tasks

The project manager can create additional modules and integrate them into individual scenarios.

B.4 Outcomes

As shown in Figure 8 with a selection of outcomes for each phase, outcomes are at the heart of HERMES project management.

There is an outcome description for each outcome. For all documents, there are document templates that describe the content in the outcomes in more detail. Tasks and roles are assigned to each outcome. The roles give an indication of the responsibilities for outcomes and of the involvement in the production of outcomes.

HERMES defines minimum required documents (outcomes) to meet project governance requirements.

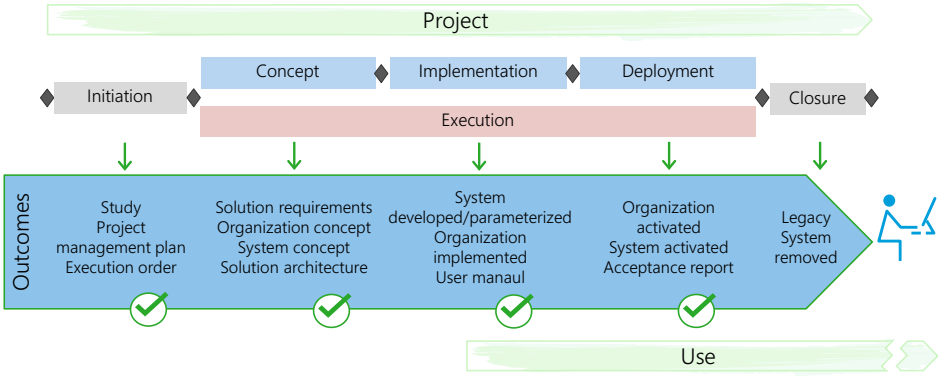


Figure 8: Outcomes are at the heart of HERMES

Figure 9 shows that the phases start and end with milestones. These milestones correspond to quality gates when the outcomes and the procedure are decided. This also involves coordination with the strategic objectives and requirements of the core organization. Analogous to phase releases, optional interim releases may be approved under the agile approach, creating additional milestones.

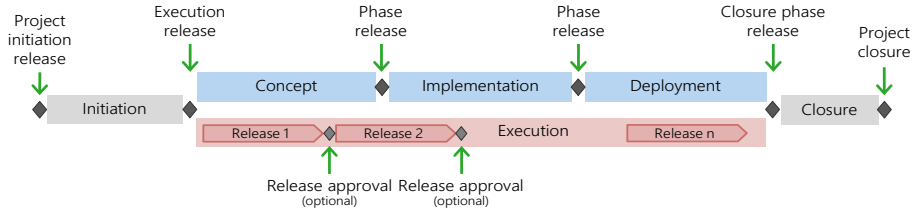


Figure 9: Phases and releases with milestones as quality gates

All milestones are outcomes that mark decision points over the course of the project. Each decision task accordingly ends with a milestone. Depending on the module, there are different decisions and consequently also different further milestones.

B.5 Tasks

Tasks are used to develop outcomes. Thematically related outcomes together with their associated tasks form modules.

There is a task description for each task. It defines the general approach and the activities that are undertaken to produce the outcomes. The roles give an indication of the role to which the responsibility for a task is assigned.

B.6 Roles

HERMES project management distinguishes between the roles of the core organization and roles of the project organization, but it describes only the HERMES roles of the project organization. For each role, there is a role description with the responsibilities, powers, and required skills for the roles as well as their relationships. Each role is assigned to one of the hierarchy levels of steering, management, or execution. Different roles are defined which can be used as needed.

Partners in the project organization are users, creators, and operators. Each role is assigned to one or more partner groups.

Figure 10 shows a project organization with the minimum roles to be filled, highlighted in gray: project sponsor, project management, and user representative.

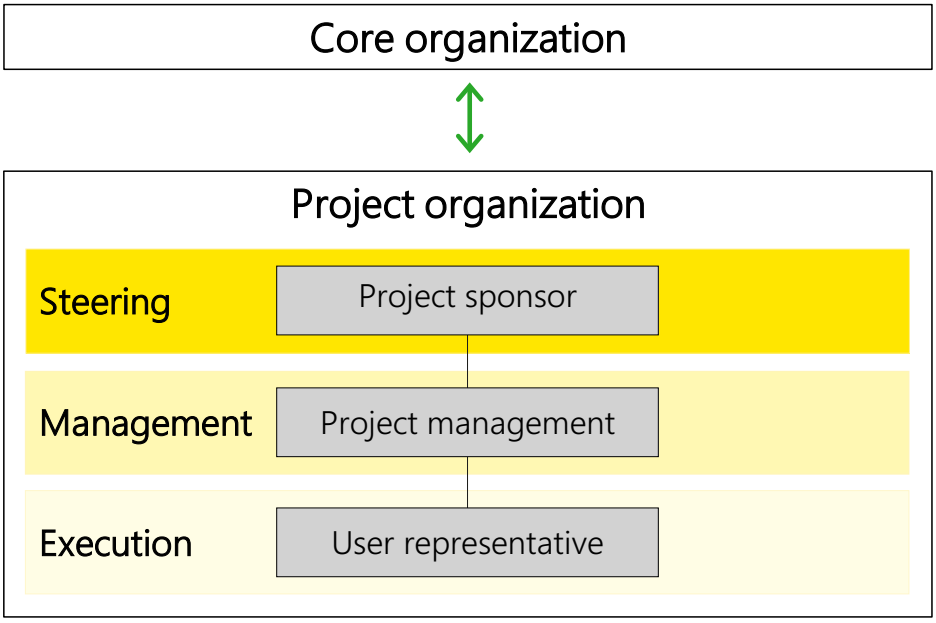


Figure 10: Minimum roles to be filled: project sponsor, project management, and user representative

B.7 Project management

HERMES project management (see Section A.2) is one of the three method components of the holistic HERMES method.

C HERMES data model

The conceptual HERMES data model describes the data and information from a methodology perspective and formulates their structure. Figure 11 shows the diagram of the data model. The universally usable open source data model is freely available and can be used by anyone for their own tools.

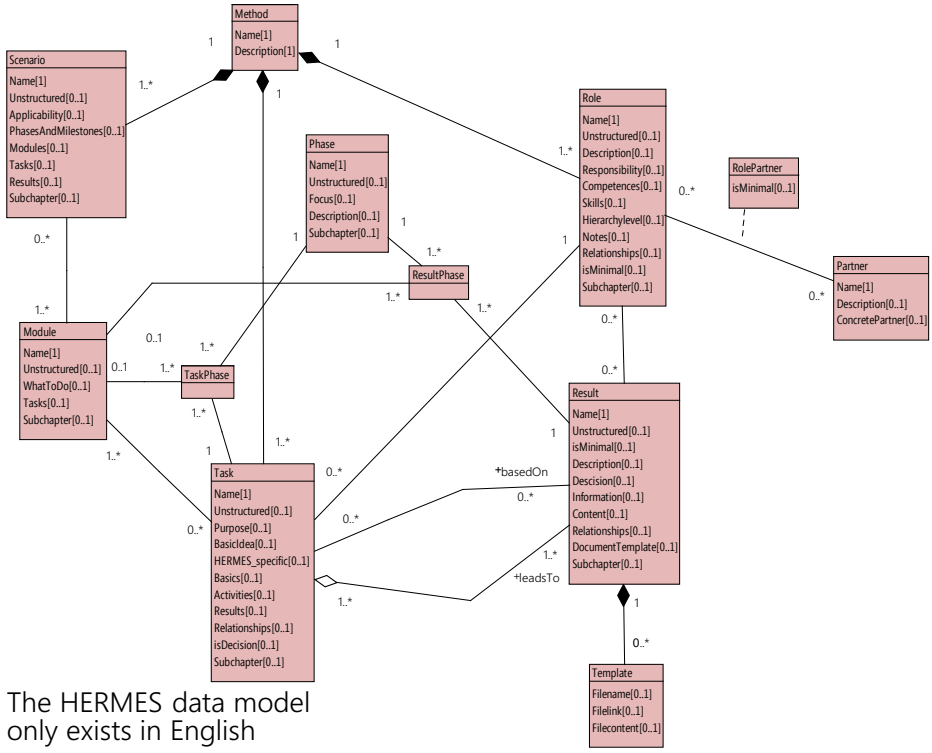


Figure 11: Diagram of the HERMES data model

The data model was developed using INTERLIS[7], a conceptual data description language of the Confederation. HERMES coherence, i.e. the uniform structure of the data in a method component, is determined with this data model (e.g. each task is assigned to a module). Implemented as a tool, the INTERLIS data model means being able to save, display, and generate method data, but also the effective project data, with the appropriate level of detail.

With the help of the HERMES data model and the INTERLIS description language, the aim is to advance the envisaged further development of new method components, but also the expansion of existing method components such as HERMES project management itself.

[7] INTERLIS is a description language designed to ensure long-term compatibility between different systems. INTERLIS is software- and system-independent. INTERLIS 2 is officially published as standard SN 612031.

1 Phases

1.1 Introduction

1.1.1 Project life cycle

With its phase model, the HERMES project management method supports both the traditional and the agile approach. The phase model for projects is based on the life cycle of the project. For all project participants, it creates the prerequisite for a common understanding of the project process. The phases determine the project structure.

Figure 12 shows the HERMES project life cycle.

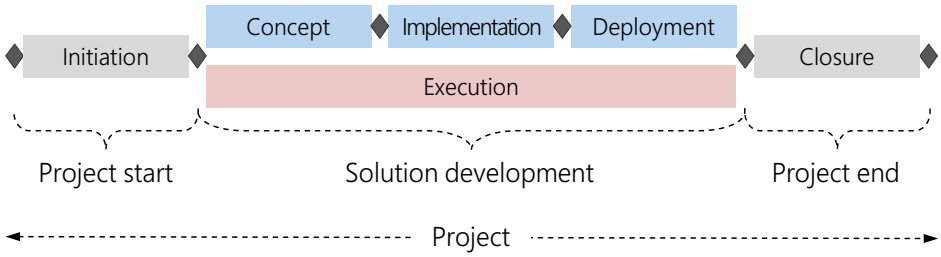
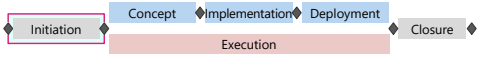


Figure 12: HERMES project life cycle

The HERMES project life cycle is divided into project start, solution development, and project end:

- The project start is where the envisaged project is aligned with visions, needs, and objectives. Not infrequently, the focus is on both an urgent need for action as well as external influences (legislators, policymaking and politics, international agreements, association rules, etc.) or superordinate entities (core organization, program, or portfolio).
- The solution development according to the traditional or agile approach is carried out on the basis of the execution release.
- The project end concludes the current project in organizational and formal terms and prepares the transition to the application organization.

1.1.2 Project start



The initiation phase is always situated at the project start. Figure 13 shows the initiation process with the most important outcomes.

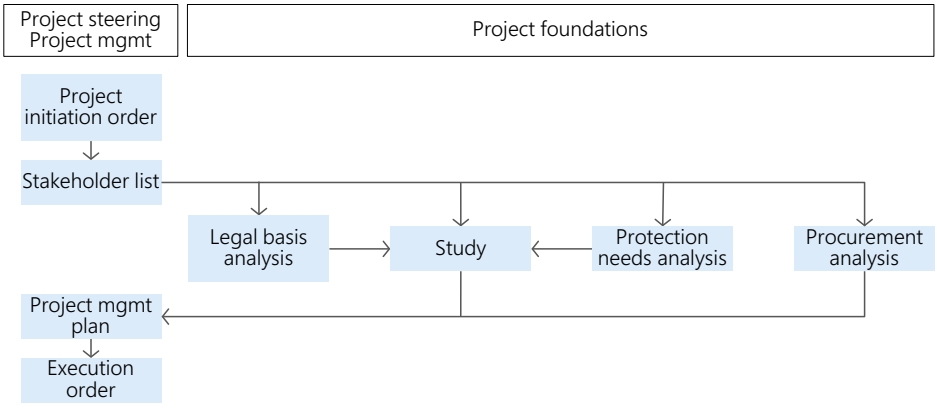
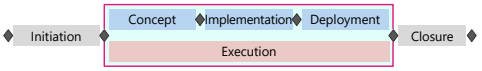


Figure 13: Outcome diagram of the initiation phase

During initiation, the requisite project-specific foundations and the possible solution options are elaborated, compared, and evaluated. The choice of solution option includes the decision as to whether the development approach should be agile or traditional. This decision must be justified in terms of the subject matter and process and should not merely follow current trends. The proposed approach is derived from the premises available to the project and is shaped by the selected solution option.

1.1.3 Solution development



The solution development process differs depending on whether a traditional or agile approach is adopted. Most of the method components are almost identical under both approaches; what differs is the project organization and the structure of the project, and consequently the development process and ultimately also the specialist and formal content of the outcomes.

In agile development management, changes are a fundamental part of the development process. The development team follows the given and desired impact and proactively responds to changing requirements instead of following a fixed plan. Development and deployment are iterative and incremental. A phase structure does not make sense under this approach. For that reason, the execution phase cannot be further subdivided.

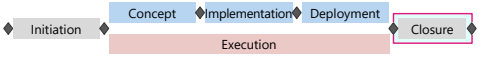
Depending on which approach is selected, the solution development of the project after execution release is either

- traditional
  with the phases of concept, implementation, and deployment, or
- agile
  solely with an execution phase

and then concluded with the closure phase, irrespective of the approach taken.[8]

The interfaces to the core organization remain largely the same, as do the documents required at project closure.

1.1.4 Project end



The closure phase is always situated at the project end. It is the last phase of each project, during which the project is conclusively brought to completion. The closest attention during this phase is paid to the project documentation, which is checked accordingly and supplemented and structured as necessary, especially from a formal point of view. The organizational and administrative transition from the project organization to the application organization is also set out during this phase; legacy systems are deactivated or removed, all project data is archived in accordance with the provisions of the core organization and, if necessary, responsibility for the solution is transferred.

The purpose of the closure phase is, in particular, to ensure that the organizational and administrative handover and transition interfaces of the project (vis-à-vis the core organization, the program, the portfolio, the application organization, if necessary the operating organization, etc.) remain identical regardless of the approach selected.

[8] Hybrid approaches are discussed as a special case in Section 7.

1.2 Phase overview

1.2.1 HERMES phase model

Because different types of projects in different core organizations at various hierarchical and decision-making levels may be carried out using both the traditional and agile approaches, the HERMES phase model must be able to handle a correspondingly high level of requirements. Figure 14 illustrates the phase model for projects with traditional and agile approaches.

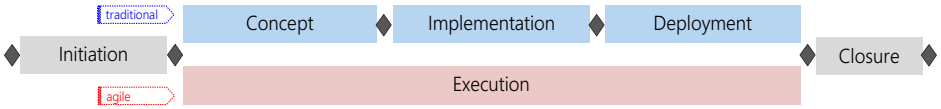


Figure 14: HERMES phase model for traditional and agile approaches

The phase model

- always reflects the same project structure vis-à-vis the core organization and provides uniform interfaces,
- covers the common controlling and reporting requirements of management,
- fully integrates into a traditional or agile core organization, regardless of the approach chosen,
- makes use of synergies and avoids any redundancies, and
- is easy to apply.

The table shows the phase model using traditional and agile development processes:

HERMES phases Traditional development	Project life cycle	HERMES phases Agile development
Initiation	Project start	Initiation
Concept	Solution development	Execution
Implementation		
Deployment		
Closure	Project end	Closure

Table 1: HERMES phases for projects with traditional and agile solution development

1.2.2 Uniform project structure

The first and last phases of the project are always common to all projects. A project begins with the initiation phase and ends with the closure phase. This ensures the uniformity of the project structure and the project life cycle. The project interfaces to the core organization, controlling, program, portfolio, etc. are kept the same regardless of the approach. The transitions to the application organization and operating organization are channeled in a uniform way.

The project structure is supported additionally by the milestones described in Section 4. Over the course of the project, they mark important decision outcomes of project steering and management. As shown in Figure 15, milestones are at the beginning and end of each phase. With each phase release, the (financial, personnel, infrastructure) resources are released for the next phase by the sponsor. Under the agile approach, interim releases can be defined and approved on an optional basis as milestones during the execution phase.

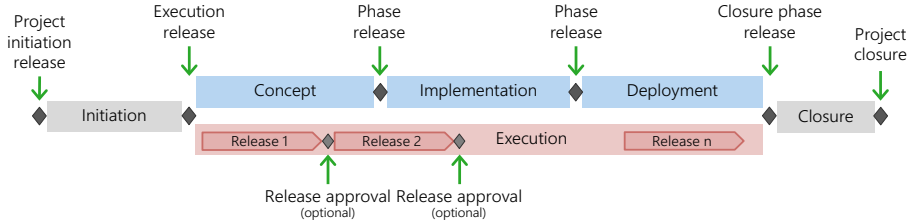


Figure 15: Milestones at the beginning and end of each phase and approval of interim releases

These milestones defined in terms of the project structure correspond to quality gates, before which the outcomes and the procedure are decided. Compliance with the requirements and the conformity of the project with the strategic objectives of the core organization are checked.

1.2.3 Phase progression

The initiation phase provides a basis for planning and steering the project. The initiation phase is followed by solution development, either with the traditional phases of concept, implementation, and deployment or with the agile phase of execution. The execution phase covers the agile development process and serves to embed any agile development method within the HERMES framework.

The closure phase provides space for all necessary measures in connection with the removal of the replaced legacy product or system environment, including the infrastructure that is no longer required, and for the systematic shutting down of the project, including all administrative and organizational measures.

Along the phases, further decisions are made with corresponding specific milestones that determine the successful progression of the project. These milestones vary depending on the nature of the project. As an example, Figure 16 shows the steering and management milestones for traditional and agile IT development projects.

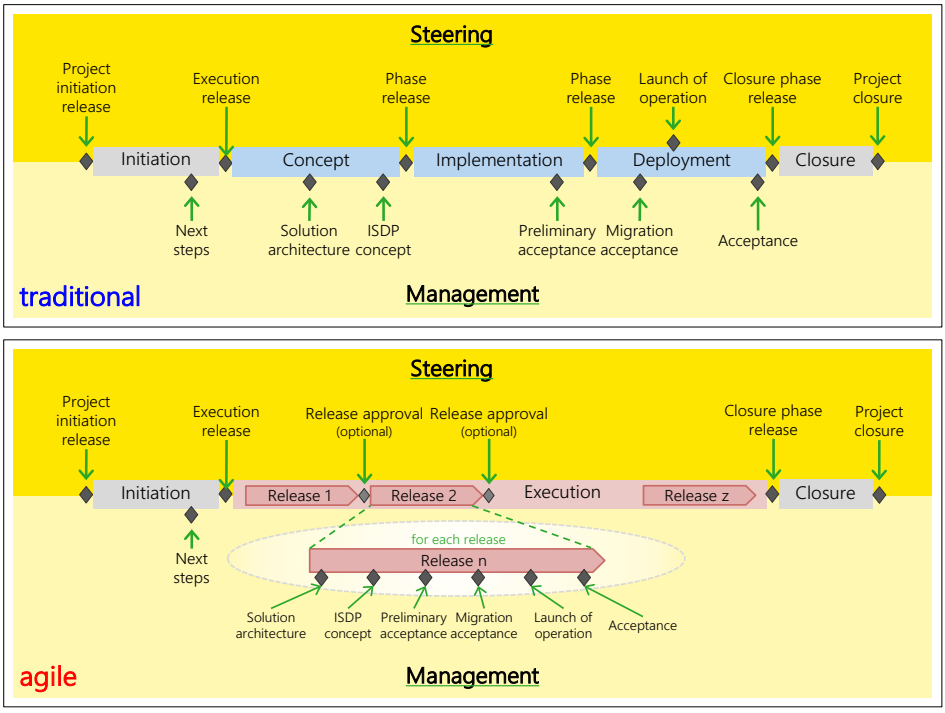


Figure 16: Milestones for traditional and agile IT development projects

For the next steps milestone, but also for other milestones, achievement of the sustainability goals (see Section 7) is also taken into account as an assessment criterion.

Over the course of the entire project, reporting is carried out in accordance with the requirements of the core organization in terms of the content and, to the extent feasible, the frequency of the reports (see Section 7).

1.3 Explanation regarding the phase description

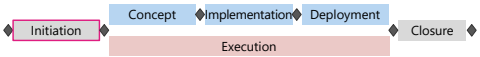
For each phase, a phase description is provided that is always structured in the same way:

- Description of the phase as a whole, **highlighted**
- Enumeration of important points and rough description of what needs to be done over the course of the phase
- Description of the phase closure, **highlighted**

1.4 Explanation of the phases

1.4.1 Project start

1.4.1.1 Initiation



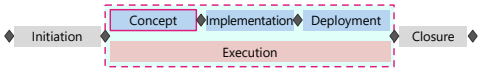
The initiation phase is carried out in any case, regardless of the approach subsequently chosen. It creates a defined starting position for possible solution development and the subsequent project closure. It ensures that the set objectives are aligned with the organization's requirements. The project foundations and execution order are drawn up.

- Based on the project initiation order, the project sponsor releases the resources for the initiation phase. The project sponsor commissions the project manager to carry out the initiation phase.
- From the perspective of project management, the initiation phase is always handled using the traditional approach. Agile tools can nevertheless also be used.
- The study is compiled.
  - The work starts with an initial status report, objectives, and rough requirements.
  - The solution options are drawn up. The solution options are described in such detail that they can be evaluated in a comprehensible and transparent manner.
  - The project and operational risks are determined.
  - In parallel with the study, the legal basis analysis and the protection needs analysis are drawn up and included in the decision.
  - It is further defined and documented in a comprehensible manner how to proceed within the framework of each solution option: either traditional or agile.
  - The decision on next steps is made.
- A procurement analysis is carried out in parallel to the study for any procurement of a product or a system.
- The scenario suitable for the solution development is selected and customized as needed.
- Based on the chosen option and the approach, the project management plan and execution order are drawn up and compared with the strategies, specifications, and overriding objectives of the core organization. Stakeholder interests are analyzed and conflicts of interest are resolved.
- If an agile approach is taken, it is set out whether the optional decision on release is required in the project.
- The decision on execution release is made and the execution order is signed. The release is carried out by the core organization and the sponsor.

At the end of the initiation phase, a check is carried out to see whether it is wise to release the project; if so, the decision on execution release is made. Possible reasons for termination include lack of economic efficiency, excessive risks, infeasibility, legal or political concerns, and lack of alignment with the objectives, strategies, and priorities of the organization.

1.4.2 Traditional solution development

1.4.2.1 Concept

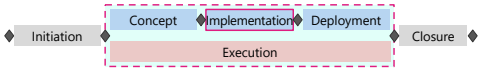


The option chosen in the initiation phase is fleshed out. The outcomes are drawn up in such detail that those involved in the project can plan, offer, and implement the solution based on reliable foundations.

- Based on the selected option and the initial status report from the study, situation analyses are carried out.
- Based on the findings from the situation analyses, the requirements from the study are fleshed out, completed, and newly defined as solution requirements.
- In organizational and IT projects or if business processes or structures are affected by the solution, the organizational requirements and subsequently the organization concept must be drawn up in every case.
- The solution is developed conceptually. The feasibility, where applicable only of individual solution components, is tested, e.g. with prototypes.
- The deployment concept is designed in preparation for deployment.
- Depending on the scenario, a test concept and migration concept are designed.
- In IT projects, the solution architecture and the operating concept are also designed. The decision on solution architecture is made.
- If a solution is to be procured, the call for tenders is issued, the tenders are evaluated, and the selected product or system is procured.
- For systems, the integration concept is designed.
- The implementation release decision is made (decide on phase release).
  - The project and operational risks must be identified, analyzed, and evaluated.
  - Feasibility of the solution development must still be proven or confirmed.
  - The resources for the next phase are released based on the fleshed out project management plan and the offers available.

At the end of the concept phase, a check is carried out to see whether it is wise to implement the project. Possible reasons for termination include economic inefficiency, excessive risks, infeasibility, and lack of alignment with the objectives and strategies of the organization.

1.4.2.2 Implementation

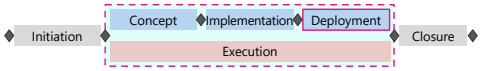


The product or system is implemented and tested. The necessary preparatory work is done to minimize the deployment risks.

- The product or system is developed or, if procured, parameterized or adapted.
- The organization is implemented.
- In IT projects, the IT system is integrated into the operating infrastructure.
- Preliminary acceptance is carried out.
- The operating organization is implemented and the documentation is prepared.
- Deployment is prepared on the basis of the deployment concept.
- Depending on the scenario, tests are carried out and migration is prepared.
- The deployment release decision is made (decide on phase release). It is based on the preliminary acceptance decision. The resources for the next phase are released based on the fleshed out project management plan.

At the end of the implementation phase, the deployment risks must be assessed and be acceptable. Otherwise, deployment cannot take place.

1.4.2.3 Deployment



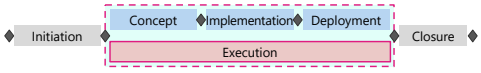
The deployment phase ensures a safe transition to the new state. Operation is launched.

- The deployment measures such as user training, etc., are carried out.
- Depending on the scenario, a migration is performed.
- The product or system and the organization are activated.
- Operation is activated.
- The ISDP concept is transferred.
- During the initial period of operation between the launch of operation and the acceptance of the complete system or product, the project supports problem analysis and resolution (after which the warranty begins, and with it regular operation).
- The decision on closure phase release is made. The resources for the closure phase are released based on the updated project management plan.

At the end of the deployment phase, the decision on acceptance is made and the phase is closed once the operation has been successfully launched.

1.4.3 Agile solution development

1.4.3.1 Execution



The option selected in the initiation phase is executed iteratively and incrementally. The project organization, including the development team, is established. The solution requirements are further divided, refined, and fleshed out. The requirements are updated, prioritized, and processed (developed, realized, and put into operation) in descending order of priority; priorities are updated continuously and adjusted according to project findings.

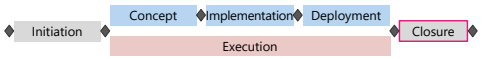
- Based on the selected option and the initial status report from the study, situation analyses are carried out.
- With the findings from the situation analyses, the requirements from the study are fleshed out, completed, and defined as prioritized initial solution requirements.
- If the envisaged solution affects business processes or structures, the organizational requirements must be drawn up in every case.
- If a solution is to be procured, the call for tenders is issued, the offers are evaluated, and the selected product or system is procured.
- With each iteration, a further part of the solution – the increment – is created, which can be seamlessly connected to the already created scope of execution results.
  Iterative and incremental execution:
  - Each individual solution requirement is continuously fleshed out, refined, completed, and divided and prioritized to such an extent that they can be processed in descending order of priority.
  - The organization concept is drawn up and the successively emerging organization is realized and documented.
  - The project, operational, and deployment risks are identified, analyzed, evaluated, and assessed. Feasibility is checked.
  - The product is developed or adapted or the system is developed or parameterized.
  - In parallel, the operating organization and all other outcomes of the remaining modules are successively developed, realized, and documented.
  - For systems, the integration concept is designed and the decision on solution architecture is made.

  - For systems, tests are designed and conducted, migration is prepared and carried out, and the system is integrated into the operating infrastructure.
  - The deployment concept is designed and the preliminary acceptance, deployment measures such as user training etc., and the launch of operation are carried out.
  - The organization, the relevant part of the solution (one or more increments), and the operation are activated.
- During the initial period of operation until the acceptance of the part of the solution, the project supports problem analysis and resolution (after which the warranty begins, and with it regular operation).
- If so defined in the project management plan, the decision on approval of the next release is made (decide on release).
- The decision on closure phase release is made. The resources for the closure phase are released based on the updated project management plan.

After the completed launch of operation including the acceptance of the last release, the agile part of the project and the execution phase are completed; the development team is dissolved into the project organization.

1.4.4 Project end

1.4.4.1 Closure



The closure phase provides a structure for the systematic shutting down of a project. Project documentation is checked and amended as needed. The project closure is prepared.

- From the perspective of project management, the closure phase is always handled using the traditional approach. Agile tools can nevertheless also be used.
- The outcomes are checked for completeness and amended, in particular from a formal perspective.
- The final project evaluation is checked and approved as appropriate.
- The project organization is dissolved. Before the dissolution, it can be checked whether parts of the project organization can be transferred analogously to the application organization.
- The outcomes, documentation, etc., are transferred to the core organization, specifically the application, operating, and maintenance organization. In IT projects, this also applies to the test infrastructure, including the test concept and the tools.
- The documentation of the project execution, including the outcomes of the approach, is archived according to the filing rules of the core organization.
- Depending on the scenario and taking the specifications into account, the legacy system is decommissioned and removed, including the old, no longer required infrastructure, and the legacy data is archived or destroyed.

At the end of the closure phase, the project closure is carried out. The final project evaluation is prepared. Open points are transferred to the core organization and the application organization. The project is closed and the project organization is dissolved.

2 Scenarios

2.1 Introduction

Different kinds of projects are carried out within a core organization. Projects can vary significantly in terms of content and complexity.

HERMES provides various scenarios to satisfy the diversity of projects. A scenario is oriented towards the implementation of projects with a specific characteristic, such as the development or adaptation of an IT solution.

As Figure 17 shows, a scenario maps the complete solution development of a project and supports the project manager in execution planning. The findings of the study are decisive for the selection of the appropriate standard scenario. The initiation and closure phases are not part of a scenario.

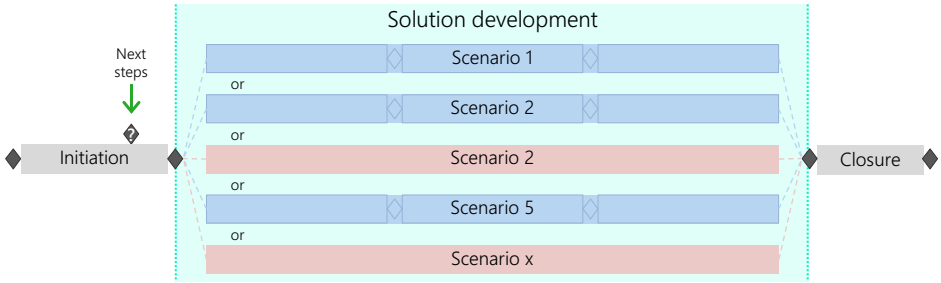


Figure 17: Selection and application of the scenario suitable for the project

A standard scenario contains those method components that are usually of importance for projects with the respective characteristics. This makes HERMES quick and easy to use.

The project manager can adapt standard scenarios to the needs of the core organization and the project at hand, and create further customized scenarios.

2.2 Overview of scenarios

2.2.1 Structure of scenarios

Scenarios are based on modules with thematically related tasks and outcomes. Figure 18 shows how a scenario can be formed with the help of modules B and N and part of module A.

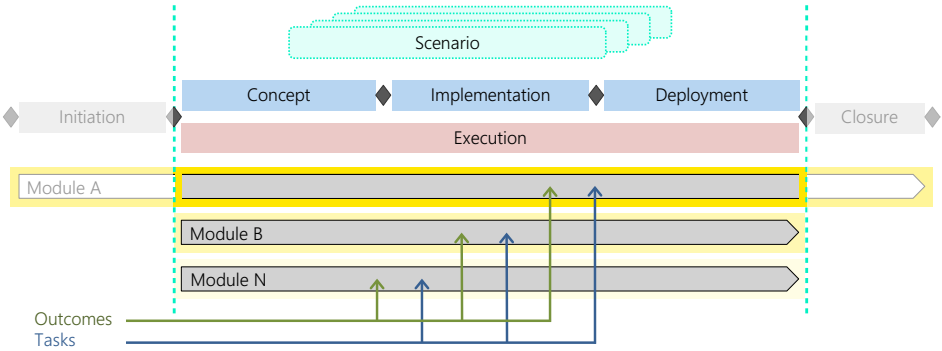


Figure 18: Multiple modules with tasks and outcomes as the basis for a scenario

Scenarios are geared towards the development of solutions with a specific characteristic; accordingly, they use those modules that are relevant and suitable for solution development. A module can be used in several scenarios or – because a module can be more comprehensive than a scenario – used only partially in a scenario. Because the modules are composed of the corresponding tasks and outcomes, there is a coordinated solution development template for each scenario, including the necessary document templates.

A scenario describes only the solution development; the initiation and closure phases are outside the scenario.

2.2.2 Standard scenarios

HERMES offers five standard scenarios for projects with different characteristics:

- Service/product development
- Service/product adaptation
- IT development
- IT adaptation
- Organizational adjustment

The following table shows the modules used for each scenario according to context. The first four scenarios can be selected for both the traditional and the agile development approach. The organizational adjustment scenario is designed as a traditional scenario. If an agile approach is taken instead, the scenario must be extended accordingly by means of tailoring.[9]

Modules / Scenario	Project steering	Project management	Procurement	Organization	Product	IT system	Tests	Deployment organization	IT migration	IT operation	ISDP
Service/product development	X	X		X	X			X			
Service/product adaptation	X	X	X	X	X			X			
IT development	X	X		X		X	X	X	X	X	X
IT adaptation	X	X	X	X		X	X	X	X	X	X
Organizational adjustment	X	X		X				X			

Table 2: Standard scenarios for projects with various characteristics including modules

The range of standard scenarios is not exhaustive. The demand for new scenarios is reviewed periodically, and additional standard scenarios are made available as needed.

2.2.3 Customized scenarios

2.2.3.1 Adjustment of scenarios

It is possible to adapt an existing scenario or to create a customized scenario. For this purpose, HERMES offers two options which that be used in combination in the following order:

- Sizing
- Tailoring

[9] The selection of new or the omission of existing aspects and components that are required or not required in the specific project. Translated to project management, this means the manual, subject- and content-specific expansion or tailoring of the project.

2.2.3.2 Sizing

HERMES project management is designed as a foundation for high-value projects to ensure completeness of information and the method as such. However, this breadth does not fit every project. Since many core organizations predominantly manage only medium and small projects, the application of the method should be adapted to the size of the project. Given that manual, subject- and content-specific tailoring of a project rarely leads to the desired outcomes once it has been dimensioned, HERMES online offers a sizing feature. The use of sizing aims to keep the complexity of the procedure and the scope of the documentation as low as possible and to reduce the documentation effort to what is absolutely necessary.

Sizing is based on the "size" or value of the project. The value is determined from a combination of lead time, effort or cost, size of the project team, stakeholder structure, political impact, confidentiality level, legal relevance, etc. It shows the relevance of the project or only part of the project compared to other projected undertakings and the resulting demand on the level of detail of the documentation. This is independent of whether these projects are, for example, grouped together in a program or are part of a portfolio.

Depending on the value determined in the initiation phase, comprehensive or reduced scenarios and the corresponding documentation are generated. This adaptation supported by the online tool guarantees method continuity and coherence and allows all projects to be processed in a lean manner.

Subsequent manual adjustment of the "redimensioned" scenarios to the needs of the project by way of tailoring is always still possible.

2.2.3.3 Tailoring

Using tailoring, standard scenarios or customized scenarios already created through sizing are adapted to the needs of the project and further customized. This can also be done with the help of HERMES online.

There are four basic options that can be used in combination:

1. Remove modules from an existing scenario:
   Unnecessary modules are removed.
   → Example:
   In a scenario with the procurement module, deactivate the procurement module.
2. Remove tasks and outcomes:
   The content of a module can be reduced by outcomes and associated tasks, with the exception of the minimum required documents.
3. Integrate an additional subject-specific module into the existing scenario:
   A separate module with subject-specific content – with existing or with new customized tasks and outcomes – is created and integrated into a scenario.
4. Add tasks and outcomes:
   The content of a module can be extended. New customized tasks and outcomes can be created.

With the help of these options, additional, customized, project- or organization-specific scenarios can be easily modeled. Figure 19 shows how several projects of a core organization with different scenarios can be handled simultaneously side by side.

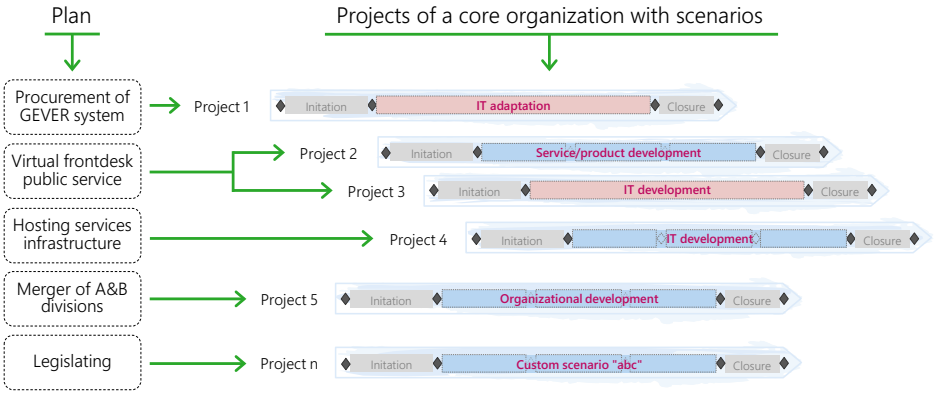


Figure 19: Application of standard and user-defined scenarios

Customized scenarios can be shared with other HERMES users or made available to all users. Please refer to the HERMES website for more information.

2.3 Explanation regarding the scenario description

For each scenario, a scenario description is provided that is always structured in the same way:

- Applicability
  describes concrete project criteria for which the scenario is suitable.
- Modules
  enumerate and graphically represent all modules of the scenario along the solution development; the project foundations module and parts of other modules that are used outside solution development and accordingly do not appear in any scenario are shown shaded white.

2.4 Scenario directory

2.4.1 Service/product scenarios

2.4.1.1 Service/product development

Applicability

The service/product scenario supports the execution of those projects where a service or product is developed and provided.

Examples:

- Development of training materials and courses on a specific topic
- Development of an internal standard
- Establishment of a delivery service

Modules

The product/service scenario is based on the following modules shown in Figure 20:

- Project steering
- Project management
- Organization
- Product
- Deployment organization

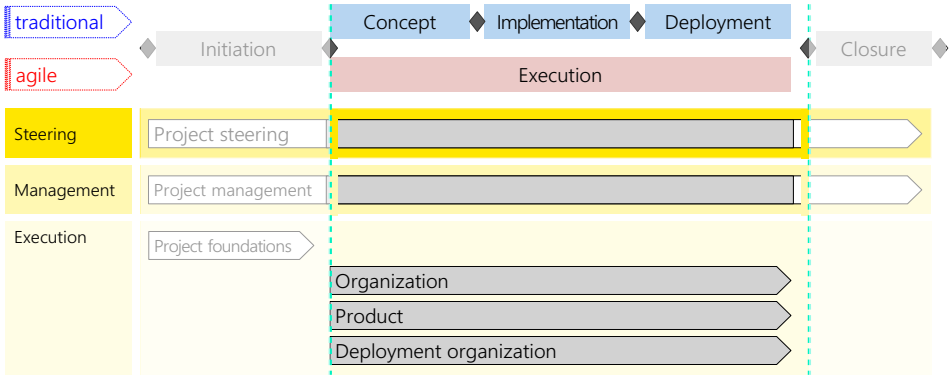


Figure 20: Modules in the context of the service/product development scenario

As needed, the tests module can also be embedded in the scenario. This makes it possible to organize and conduct tests of solutions.

2.4.1.2 Service/product adaptation

Applicability

The service/product adaptation scenario supports the execution of those projects where a product or service available on the market is procured, adapted, and integrated into the organization.

Modules

The service/product adaptation scenario is based on the following modules shown in Figure 21:

- Project steering
- Project management
- Procurement
- Organization
- Product
- Deployment organization

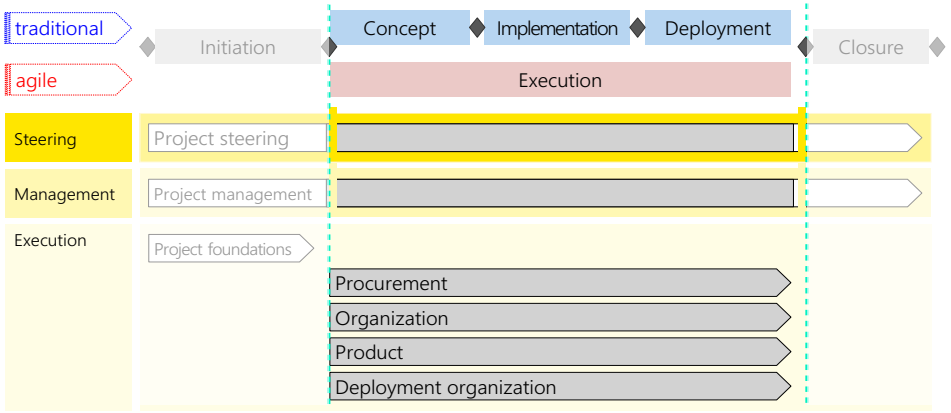


Figure 21: Modules in the context of the service/product adaptation scenario

As needed, the tests module can also be embedded in the scenario. This makes it possible to organize and conduct tests of solutions.

2.4.2 Information technology scenarios

2.4.2.1 IT development

Applicability

The IT development scenario supports the execution of those projects where a new IT application is developed for the specific needs of one or more specialist areas (user needs) or an existing IT solution is further developed and is integrated both technically and organizationally.

Modules

The IT development scenario is based on the following modules shown in Figure 22:

- Project steering
- Project management
- Organization
- IT system
- Tests
- Deployment organization
- IT migration
- IT operation
- ISDP

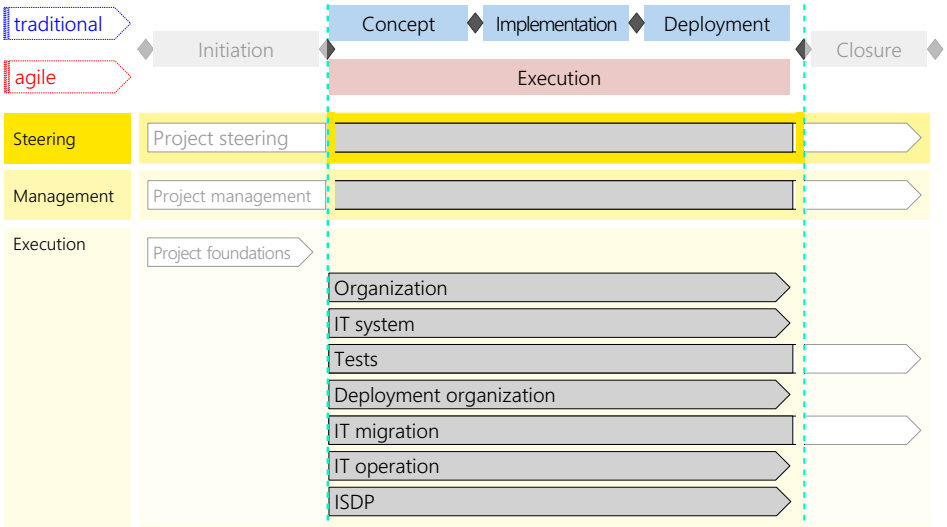


Figure 22: Modules in the context of the IT development scenario

2.4.2.2 IT adaptation

Applicability

The IT adaptation scenario supports the execution of those projects where an IT solution available on the market (e.g. standard software or IT infrastructure) is procured, adapted, and integrated both technically and organizationally.

Modules

The IT adaptation scenario is based on the following modules shown in Figure 23:

- Project steering
- Project management
- Procurement
- Organization
- IT system
- Tests
- Deployment organization
- IT migration
- IT operation
- ISDP

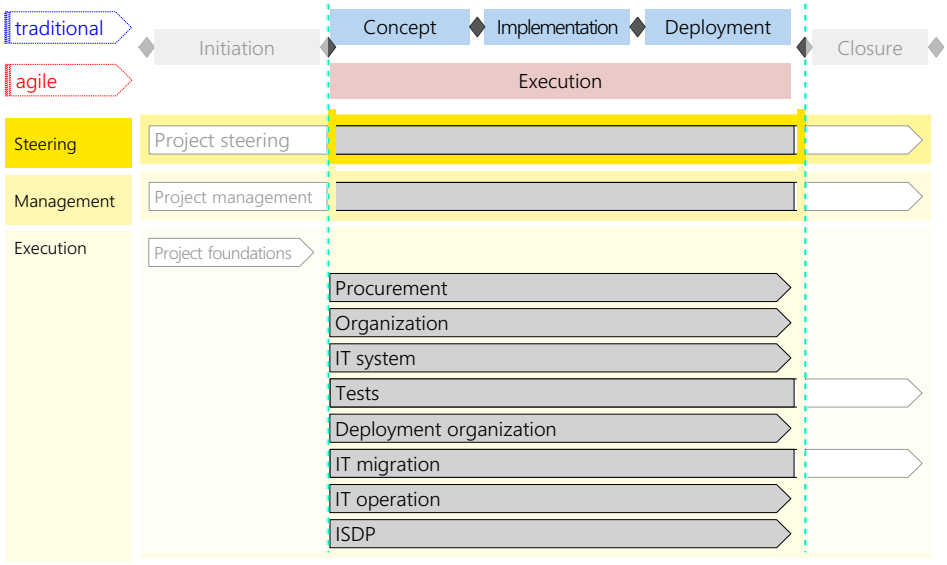


Figure 23: Modules in the context of the IT adaptation scenario

2.4.3 Organization scenarios

2.4.3.1 Organizational adjustment

Applicability

The organizational adjustment scenario supports the execution of those projects where new organizations are established or existing organizations are adjusted through restructuring and innovation, new business areas, in- and outsourcing, acquisitions, mergers and separations, liquidations, (international) expansions, etc.

Examples:

- Relocation, adjustment, or creation of an organization
- Merger of organizations
- Outsourcing of services to a service center

Modules

The organizational adjustment scenario is based on the following modules shown in Figure 24:

- Project steering
- Project management
- Organization
- Deployment organization

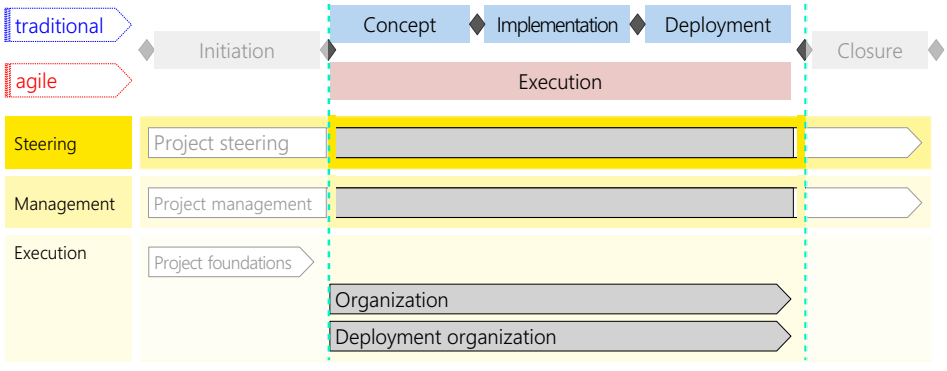


Figure 24: Modules in the context of the organizational adjustment scenario

3 Modules

3.1 Introduction

Modules contain thematically related tasks and outcomes. They are building blocks for creating projects and scenarios.

Figure 25 shows an overall context of all modules that can be used and in some cases even must be used. In addition, own modules can be created.

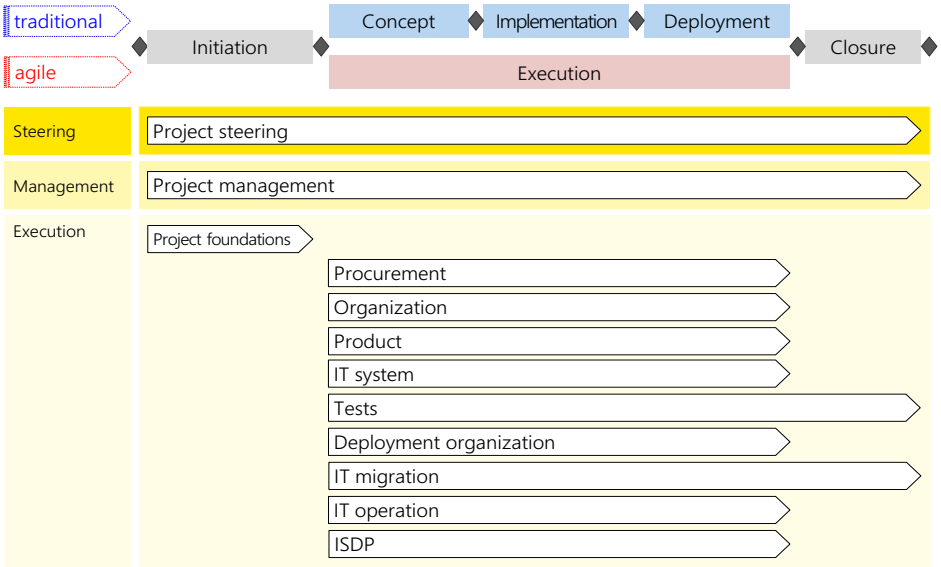


Figure 25: Overall context of available standard modules in HERMES

3.2 Overview of modules

3.2.1 Standard modules

The table lists all available standard modules according to their context and shows in which project phases they can occur.

Project phases / Modules	Initiation	traditional: Concept	traditional: Implementation	traditional: Deployment	agile: Execution	Closure
Project steering	X	X	X	X	X	X
Project management	X	X	X	X	X	X
Project foundations	X					
Procurement		X	X	X	X	
Organization		X	X	X	X	
Product		X	X	X	X	
IT system		X	X	X	X	
Tests		X	X	X	X	X
Deployment organization		X	X	X	X	
IT migration		X	X	X	X	X
IT operation		X	X	X	X	
ISDP		X	X	X	X	

Table 3: Standard modules assigned to project phases

To comply with the project governance, the following modules must always be included in each project:

- Project steering (all phases);
- Project management (all phases);
- Project foundations (initiation phase).

3.2.2 Customized modules

Supplementing the standard modules available, it is also possible to develop own subject-, organization-, or project-specific modules with existing or new customized tasks and outcomes and to integrate them into own projects or scenarios. This is also supported by HERMES online.

Examples of subject-specific, customized modules that can be developed by users include marketing, real estate, communication, personnel development, legislating, training, strategy development, and business administration deployment.

3.3 Explanation regarding the module description

For each module, a module description is provided that is always structured in the same way:

- Purpose
  defines the purpose of the module.
- What has to be done
  describes the module tasks in the overall context of the module.
- Tasks and outcomes
  provide a tabular breakdown of
  - the module tasks in their overall context, with the decision-making tasks highlighted in pink;
  - the outcomes derived from or adapted by the tasks and assigned to the corresponding project phases.

3.4 Description of the modules

3.4.1 Steering and management modules

3.4.1.1 Project steering

Purpose

The project steering module ensures the overall and cross-organizational steering of the project and ensures that the set objectives are achieved.

What has to be done

- Initiate the project, steer it continuously, and ensure that it is kept in line with the core organization's overarching objectives and requirements.
- Consider and integrate stakeholder concerns, make decisions on risks.
- Make decisions on steering.
- Close the project, discontinue early where necessary.

Tasks and outcomes

Task	Outcome	Phases					
		I	C	I	D	E	C
Decide on project initiation release	Project initiation release checklist	X					
	Project initiation order	X					
	Project initiation release milestone	X					
	List of steering project decisions	X					
Decide on execution release	Execution release checklist	X					
	Execution order	X					
	Execution release milestone	X					
	List of steering project decisions	X					
Steer project	QA and risk report		X	X	X	X	
	List of steering project decisions	X	X	X	X	X	X
Decide on phase release	Phase release checklist		X	X			
	QA and risk report		X	X			
	Phase release milestone		X	X			
	List of steering project decisions		X	X			
Decide on release	Release checklist					X	
	QA and risk report					X	
	Release milestone					X	
	List of steering project decisions					X	
Decide on project discontinuation	Project discontinuation checklist		X	X	X	X	
	Lessons learned		X	X	X	X	
	Final project evaluation		X	X	X	X	
	Project closure milestone		X	X	X	X	
	List of steering project decisions		X	X	X	X	
Decide on closure phase release	Closure phase release checklist				X	X	
	QA and risk report				X	X	
	Closure phase release milestone				X	X	
	List of steering project decisions				X	X	
Decide on project closure	Project closure checklist						X
	QA and risk report						X
	Project closure milestone						X
	List of steering project decisions						X

Table 4: Project steering module tasks and outcomes

3.4.1.2 Project management

Purpose

The project management module encompasses the planning, management, and coordination of the project in order to achieve the project outcomes and procedure objectives, as well as the execution of all necessary accompanying measures.

What has to be done

- Plan and manage the project and complete it with the required outcome according to the defined framework (deadlines and costs).
- Gain stakeholders for the project and inform them.
- Manage risks, overcome problems, and take lessons learned into account.
- Agree on and steer goods/services, manage change management and quality assurance.

Tasks and outcomes

Task	Outcome	Phases					
		I	C	I	D	E	C
Manage and control project	Project management plan	X	X	X	X	X	X
	Work order	X	X	X	X	X	X
	Project status report	X	X	X	X	X	X
	Minutes	X	X	X	X	X	X
	Solution requirements					X	
	Detailed specifications					X	
Manage and inform stakeholders	Stakeholder list	X	X	X	X	X	X
	Stakeholder interests	X	X	X	X	X	X
	Project management plan	X	X	X	X	X	X
Draw up project management plan	Project management plan	X					
Draw up project execution order	Execution order	X					
Manage changes	Change request		X	X	X		
	Change status list		X	X	X	X	
	Project management plan		X	X	X	X	
	Solution requirements		X	X	X		
Agree on and steer goods/services	Quote request		X	X	X	X	
	Offer		X	X	X	X	
	Evaluation report		X	X	X	X	
	Agreement		X	X	X	X	
Deal with problems and benefit from lessons learned	Lessons learned		X	X	X	X	X
Perform quality assurance	Project management plan		X	X	X	X	X
	Review report		X	X	X	X	X
Manage risks	Project management plan		X	X	X	X	
	Project status report		X	X	X	X	
Prepare phase release	Phase report		X	X	X	X	
	Project management plan		X	X	X	X	
	Project status report		X	X	X	X	
Prepare release closure	Release report					X	
	Project management plan					X	
	Project status report					X	
Prepare project closure	Lessons learned						X
	Final project evaluation						X

Table 5: Project management module tasks and outcomes

3.4.2 Execution modules

3.4.2.1 Project foundations

Purpose

The project foundations module creates a concrete, well-founded starting point for possible solution development and subsequent project closure.

What has to be done

- Prepare study to decide on next steps.
- Clarify the legal basis and analyze protection needs.
- Carry out a procurement analysis if procurement with subsequent adaptation is planned.
- Create the prerequisites for drawing up the project management plan and execution order.

Tasks and outcomes

Task	Outcome	phases					
		I	C	I	D	E	C
Analyze legal basis	Legal basis analysis	X					
Analyze protection needs	Protection needs analysis	X					
Prepare procurement analysis	Procurement analysis	X					
Prepare study	Study	X					
	Stakeholder list	X					
Carry out prototyping	Prototype realized	X					
	Prototype documentation	X					
Decide on next steps	Next steps checklist	X					
	Study	X					
	Next steps milestone	X					
	List of management project decisions	X					

Table 6: Project foundations module tasks and outcomes

3.4.2.2 Procurement

Purpose

The procurement module is used for targeted procurement of a system, product, or service available on the market by means of an open or selective procedure.

What has to be done

- Procurement by means of an open or selective procedure and public tender; all other procurement is handled with the project management module.
- Boundaries:
  The development of the procurement foundations such as needs and market analysis, determination of the proper procedure with the procurement/purchasing unit, ensuring the legal aspects, and procedure selection take place during the development of the procurement analysis in the project foundations module.

Tasks and outcomes

Task	Outcome	Phases					
		I	C	I	D	E	C
Prepare call for tenders	Tender documentation		X			X	
Decide on call for tenders	Tender checklist		X			X	
	Tender milestone		X			X	
	List of steering project decisions		X			X	
Issue call for tenders	Offer		X			X	
	Tender documentation		X			X	
Evaluate tenders	Evaluation report		X			X	
	Tender report		X			X	
Decide on contract award	Contract award checklist		X			X	
	Publication		X			X	
	Contract award milestone		X			X	
	List of steering project decisions		X			X	
Draw up agreement	Agreement		X			X	

Table 7: Procurement module tasks and outcomes

3.4.2.3 Organization

Purpose

The organization module supports the solution-specific structure or adaptation of the organization and its implementation or provides the organizational and specialist basis for the structure of the solution.

What has to be done

- Adapt or redesign, implement, and activate organization with business model, organizational and process structure.
- Continuously identify and analyze the interests of the stakeholders.
- Involve stakeholders in the solution development.

Tasks and outcomes

Task	Outcome	Phases					
		I	C	I	D	E	C
Establish organizational requirements	Situation analysis		X			X	
	Organizational requirements		X			X	
Advocate stakeholder interests	Stakeholder interests		X	X	X	X	
Draw up organization concept	Organization concept		X			X	
	Business model description		X			X	
	Process description		X			X	
	Organization description		X			X	
Implement organization	Process description			X		X	
	Organization description			X		X	
	Organization implemented			X		X	
Activate organization	Organization activated				X	X	

Table 8: Organization module tasks and outcomes

3.4.2.4 Product

Purpose

The product module is used to develop a product or service.

What has to be done

- Design the product concept and develop or adapt the product.
- Refine the solution requirements.
- Create detailed specifications.
- Know the interests of the stakeholders and, where appropriate, involve them in solution development.

Tasks and outcomes

Task	Outcome	Phases					
		I	C	I	D	E	C
Prepare solution requirements	Situation analysis		X			X	
	Solution requirements		X			X	
Advocate stakeholder interests	Stakeholder interests		X	X	X	X	
Design product concept	Product concept		X			X	
Carry out prototyping	Prototype realized		X	X		X	
	Prototype documentation		X	X		X	
Decide on product concept	Product concept checklist		X			X	
	Product concept milestone		X			X	
	List of management project decisions		X			X	
Realize product	Detailed specifications			X		X	
	Product documentation			X		X	
	User manual			X		X	
	Product developed or adapted			X		X	
Activate product	Product activated				X	X	

Table 9: Product module tasks and outcomes

3.4.2.5 IT system

Purpose

The IT system module is used to develop a system.

What has to be done

- Refine the solution requirements, prepare the solution architecture, and check feasibility (using prototypes if necessary).
- Realize and/or integrate and document the system.
- Create detailed specifications and realize the system and integration.
- Know the interests of the stakeholders and involve them in solution development.

Tasks and outcomes

Task	Outcome	Phases					
		I	C	I	D	E	C
Prepare solution requirements	Situation analysis		X			X	
	Solution requirements		X			X	
Advocate stakeholder interests	Stakeholder interests		X	X	X	X	
Prepare solution architecture	System concept		X			X	
	Solution architecture		X			X	
Carry out prototyping	Prototype realized		X	X		X	
	Prototype documentation		X	X		X	
Decide on solution architecture	Solution architecture checklist		X			X	
	Solution architecture milestone		X			X	
	List of management project decisions		X			X	
Design integration concept	Integration concept		X			X	
Realize system	Detailed specifications			X		X	
	System concept			X		X	
	Solution architecture			X		X	
	User manual			X		X	
	System developed or parameterized			X		X	
Prepare system integration	Interfaces realized			X		X	
	Solution architecture			X		X	
	Integration and installation instructions			X		X	
	Detailed specifications			X		X	
Activate system	System activated				X	X	

Table 10: IT system module tasks and outcomes

3.4.2.6 Tests

Purpose

The tests module is used for systematically and efficiently organizing and conducting solution tests.

What has to be done

- Realize and transfer test infrastructure.
- Prepare and conduct the tests and record them in the minutes.

Tasks and outcomes

Task	Outcome	Phases					
		I	C	I	D	E	C
Design test concept	Test concept		X			X	
Realize test infrastructure	Test infrastructure realized			X		X	
Conduct test	Test report			X	X	X	
	Test concept			X	X	X	
Transfer test infrastructure	Test concept						X
	Test infrastructure transferred						X
	Minutes						X

Table 11: Tests module tasks and outcomes

3.4.2.7 Deployment organization

Purpose

The deployment organization module supports training and deployment of the new solution or transition to the new state.

What has to be done

- Design deployment concept.
- Realize and execute deployment measures and deployment organization.
- Carry out preliminary acceptance and acceptance.
- Perform organizational change management.

Tasks and outcomes

Task	Outcome	Phases					
		I	C	I	D	E	C
Design deployment concept	Deployment concept		X			X	
	Project management plan		X			X	
Realize deployment measures	Deployment measures realized			X		X	
Decide on preliminary acceptance	Preliminary acceptance checklist			X		X	
	Acceptance report			X		X	
	Preliminary acceptance milestone			X		X	
	List of management project decisions			X		X	
Execute deployment measures	Deployment measures carried out				X	X	
Decide on launch of operation	Launch of operation checklist				X	X	
	Launch of operation milestone				X	X	
	List of steering project decisions				X	X	
Decide on acceptance	Acceptance checklist				X	X	
	Acceptance report				X	X	
	Acceptance milestone				X	X	
	List of management project decisions				X	X	

Table 12: Deployment organization module tasks and outcomes

3.4.2.8 IT migration

Purpose

The IT migration module is used to transfer the data to the new system and to decommission and remove the legacy system.

What has to be done

- Design, plan, prepare, and conduct migration.
- Conduct acceptance of migration.
- Decommission the legacy system.

Tasks and outcomes

Task	Outcome	Phases					
		I	C	I	D	E	C
Design migration concept	Migration concept		X			X	
Realize migration procedure	Detailed specifications			X		X	
	Migration procedure realized			X		X	
Conduct migration	Migration carried out				X	X	
Decide on acceptance of migration	Migration acceptance checklist				X	X	
	Acceptance report				X	X	
	Migration acceptance milestone				X	X	
	List of management project decisions				X	X	
Decommission the legacy system	Legacy system removed						X

Table 13: IT migration module tasks and outcomes

3.4.2.9 IT operation

Purpose

The IT operation module is used to design and realize the operating organization at the operator and to activate the operation.

What has to be done

- Design and realize operation with infrastructure and operating organization.
- Integrate the system into operation.
- Activate operation.

Tasks and outcomes

Task	Outcome	Phases					
		I	C	I	D	E	C
Design operating concept	Operating concept		X			X	
	Service level agreement		X			X	
Realize operation	Operating manual			X		X	
	Operating infrastructure realized			X		X	
	Operating organization realized			X		X	
Integrate the system into operation	Operating manual			X		X	
	System integrated			X		X	
Activate operation	Operating manual				X	X	
	Operation activated				X	X	

Table 14: IT operation module tasks and outcomes

3.4.2.10 ISDP

Purpose

In the ISDP module (information security and data protection), the necessary protection measures concerning information security and data protection are defined for the use and operation of the IT solution.

What has to be done

- Identify ISDP requirements, assess risks, and design and implement measures to meet the requirements.
- Design the ISDP concept and document the outcomes on an ongoing basis.

Tasks and outcomes

Task	Outcome	Phases					
		I	C	I	D	E	C
Design ISDP concept	ISDP concept		X			X	
Decide on ISDP concept	ISDP concept checklist		X			X	
	ISDP concept milestone		X			X	
	List of management project decisions		X			X	
Implement ISDP concept	ISDP measures realized			X		X	
	ISDP concept			X		X	
Transfer ISDP concept	ISDP concept transferred				X	X	
	ISDP concept				X	X	

Table 15: ISDP module tasks and outcomes

4 Outcomes

4.1 Introduction

The HERMES project management method is outcome-oriented; outcomes as the most important method components are at the heart of HERMES.

Two types of outcomes are distinguished. An outcome may be:

1. a document that is drafted where possible on the basis of an existing document template such as an execution order, a study, a checklist, or a process description;
2. a state that is newly achieved, such as operating infrastructure realized or also a milestone that is the direct consequence of a decision.

Boundaries

The outcome of an entire project (the actual finished solution) or a part thereof (the increment) are not HERMES method components. This solution may include products, services, IT applications, infrastructures, changed or new operating organizations, new or merged core organizations, or individual organizational units. The project outcome may also consist of trained users and the activated organization with its processes. At the end of a successful project, the outcome is a solution, an overall system, consisting of one or more activated elements.

4.2 Overview of outcomes

4.2.1 Standard outcomes

4.2.1.1 Standard documents

The following table lists all standard documents. HERMES also provides a corresponding document template for each document.

Documents			
minimum required documents = X		minimum required documents = X	
Acceptance report	X	Organization concept	X
Change request	X	Product documentation	X
Change status list	X	Product concept	X
Offer	X	Lessons learned	
Tender report		Phase report	X
User manual		Project initiation order	X
Work order		Project management plan	X
Tender documentation	X	Final project evaluation	X
Procurement analysis		Project status report	X
Operating manual	X	Minutes	
Operating concept	X	Prototype documentation	
Checklists		Process description	X
Detailed specifications	X	Review report	
Execution order	X	Publication	X
Deployment concept	X	QA and risk report	X
Evaluation report	X	Legal basis analysis	X
Business model description	X	Release report	X
Integration and installation instructions		Protection needs analysis	X
Integration concept	X	Service level agreement	
ISDP concept	X	Situation analysis	X
List of management project decisions	X	Stakeholder interests	
List of steering project decisions	X	Stakeholder list	X
Solution requirements	X	Study	X
Solution architecture	X	System concept	

Documents			
minimum required documents = X		minimum required documents = X	
Migration concept		Test concept	X
Quote request	X	Test report	X
Organizational requirements	X	Agreement	
Organization description	X		

Table 16: Overview of outcomes – documents

The minimum required documents marked with an X are required to meet governance requirements. These include not only those outcomes that must be checked by the auditors, but also all those that must be produced in a module as a "must have".

The minimum required documents are the safeguards for ensuring the project's success and reflect a general project situation without addressing the specifics of individual projects. The preparation of the minimum required documents is mandatory. If a module is not relevant for the project, the minimum required documents defined in it are also dropped. They are likewise dropped if, under certain circumstances, their use is not foreseen in the module (e.g. in the case of traditional/agile). The minimum required documents can also be adapted to the specific needs of the core organization in accordance with its governance provisions.

4.2.1.2 Standard states

The following table lists all the standard states.

States	
Legacy system removed	Organization activated
Operation activated	Organization implemented
Operating infrastructure realized	Product activated
Operating organization realized	Product developed or adapted
Deployment measures carried out	Prototype realized
Deployment measures realized	Interfaces realized
ISDP concept transferred	System activated
ISDP measures realized	System developed or parameterized
Milestones	System integrated
Migration carried out	Test infrastructure realized
Migration procedure realized	Test infrastructure transferred

Table 17: Overview of outcomes – states

4.2.2 Customized outcomes

Supplementing the standard documents and states, it is possible to integrate further specialist, organization-specific, or project-specific outcomes in one's own modules. This is supported by HERMES online and is especially relevant when new modules with new tasks are developed. Examples of customized outcomes can be core organization-specific reports or a completed consultation.

4.3 Explanation regarding outcome description

For each outcome, a description of the outcome is provided that is always structured in the same way:

- Description
  creates a fundamental understanding of the outcome.
- Content (for documents only)
  describes the proposed content of a document (see document templates below).
  Where applicable, each content note is marked with "A" for agile or "T" for traditional.
- Relationships (online only)
  show how the outcome relates to modules, roles, and tasks.

- Templates (online only)
  A document template is available for all documents. The template is a concrete aid for deeper understanding of the application of HERMES documents. The document templates can, however, be adapted to the needs of the organization or replaced by adequate tool-supported solutions (see Section 7).

4.4 Description of the outcomes

4.4.1 Documents

4.4.1.1 Acceptance report

Description

The acceptance report is created for decisions on preliminary acceptance, acceptance, and acceptance migration. It documents compliance with the agreement on solution characteristics (product/service/system) and existing defects. It is a legally binding document.

Content

- Item being accepted
- Those involved in acceptance
- Basis
- Acceptance procedure
- Acceptance criteria with defect categories
- Delivery outcomes and defects, incl.
  - Measures
  - Responsibilities
  - Deadlines
- Acceptance outcome
- Signatures

4.4.1.2 Change request

Description

The change request is used only in the case of traditionally managed solution development and forms the basis for a change in content. It includes the description of the change to be made, as well as the request, the procedure for making the change, and the proposed solution for implementing the change. The change request acts as a requirement to be met and specifies the change to be made in detail.

Content

- Identification of change request
- Requester
- Description of the change
- Information on execution
- Proposed solution
- Impact assessment
  - Effort
  - Costs
  - Deadline
  - Risks

4.4.1.3 Change status list

Description

The change status list is used to enumerate and monitor changes as well as document all added, deleted, or changed functions or other modifications. It supports the comprehensibility of the project progress (governance) and provides an overview of the processing status and – if the changes are made – the status of the changes.

Content

For each change:	(T=traditional, A=agile)	
• Responsible	T	
• Date of receipt	T	A
• Identification of change request	T	
• Change/brief description		A
• Decision maker	T	
• Status	T	A
• Change date	T	A
• Person responsible for the change	T	
• Effort	T	
• Costs	T	

In addition:

• Total effort and costs for all approved change requests	T	

4.4.1.4 Offer

Description

The offer specifies the service or product proposed by the developer/operator. The offer also includes all commercial elements such as effort, costs, warranties, guarantees, rights to outcomes, etc. The offer describes the processes and procedures for the provision of the goods/services and/or for the installation and integration of products/systems.

Content

The structure of the offer is based on the purchaser's specifications.

4.4.1.5 Tender report

Description

In the case of public procurement, a report on the opening of tenders is prepared after the submission deadline. On a case-by-case basis, all points relevant to procurement law and procurement evaluation are also recorded in the report.

Content

- Procurement item
- Date
- Tenderer/offer
- Subject matter
- Agenda items
- To-do list (appendix)

4.4.1.6 User manual

Description

The user manual contains all the information that the user of a product/system needs to use it properly and to be able to react correctly in the event of problems.

Content

- Overview
- Functions
- Detailed descriptions of use
- Defect handling

4.4.1.7 Work order

Description

The work order contains all relevant information for completing a set task. The project manager uses it to give orders to the project staff within the framework of project planning, management, information, and monitoring. Work orders can be issued internally or externally. Any solution-specific orders must be coordinated with the user representative in advance.

Content

- Work objectives
- Outcomes
- Boundaries
- Prerequisites and dependencies
- List of activities with
  - Reference to the outcomes
  - Activity
  - Those responsible/involved
  - Plan hours
  - Deadlines
  - Status
- Resource requirements
- Presentation of outcomes
- Quality assurance

4.4.1.8 Tender documentation

Description

The tender documentation includes all information published in the context of a call for tender. This includes first and foremost the specifications, together with the catalogue of criteria, which is an indispensable part of the tender documentation.

The tender documentation additionally includes a draft contract, general terms and conditions of the core organization, the tender notice, and further specification enclosures. If questions are answered in a public tender, the questions and answers are likewise part of the tender documentation and are given to all tenderers.

Content

- Specifications with
  - Background with
    - Introduction, purpose of the document
    - Reason for the tender, need for action
    - Procurement item
  - Description of the situation with
    - Organization
    - Strengths and weaknesses
    - Quantities and frequencies
    - Scope and price
  - Target situation with
    - Objectives and requirements
    - Mandatory and discretionary criteria

    - Scope
    - Price (range)
  - Deadlines
  - Structure of the offer
  - Administrative details
  - List of criteria with
    - Eligibility and award criteria
    - Weighting
    - Points
- Appendices such as
  - General terms and conditions
  - Draft contract
  - Tender notice
  - Additional tender documentation

4.4.1.9 Procurement analysis

Description

The procurement analysis describes the concrete need for action, what is to be procured by whom and when, how the market presents itself, which other framework conditions must be observed, and which procurement procedure applies. The analysis is coordinated with the controlling and compliance bodies.

As a supplement to the study, the procurement analysis forms the basis for the decision whether or not to release continuation of the project. It is also a prerequisite for drawing up the project management plan and the execution order.

Content

- Reason for procurement, need for action
- Procurement contents with
  - Procurement needs
  - Procurement item with type, condition, and quality
  - Availability on the market
- Tenderers and suppliers with
  - Possible tenderers and suppliers
  - Existing suppliers
  - Existing contracts and their duration
  - Requirements for tenderers
  - Selection of potential tenderers
  - Desired distribution type
- Roles and their responsibilities with
  - Tasks and responsibilities of project manager
  - Tasks and responsibilities of project team including contact/coordination point for tenderers and suppliers
  - Tasks and responsibilities of procurement unit/purchasing
- Scheduling aspects
- Financial aspects
- Approximate preliminary costing/efficiency preview
- Procurement law aspects
- Standards of procurement:
  - What documents are used in procurement?
  - How are the process steps in procurement designed?
- Forms of contract:
  - What forms of contract are used?
- Coordination of processes:
  - How are the interdependencies between the procurement process and other upstream or downstream processes managed?
  - Does procurement differ depending on the solution option from the study?

- Procurement plan
- Tender procedure
- Procedure for questions about the tender, the documents

4.4.1.10 Operating manual

Description

The operating manual provides all the information the operator needs to operate the system properly and to be able to react correctly in the event of problems. All operating information of relevance for the operator is documented in the operating manual.

During agile solution development, the operating manual is updated several times, per iteration/release, according to the activation of a complete part of the solution.

Content

- System overview
- Launch of operation
  - Prerequisites for the launch of operation
  - Launch of operation process
  - Quality assurance after the launch of operation
  - System acceptance specifications
- Implementation and monitoring of operation
- Interruption or termination of operation
- Support organization with
  - Support processes
  - Organization with roles
- Change management with
  - Change management process
  - Change management organization with
    - Roles
    - Contact details
- Security provisions
- Appendices
  - Operating concept
  - Integration concept

4.4.1.11 Operating concept

Description

The operating concept describes the operating organization with the organizational structure and operating processes of the operator. The operating concept forms the basis for creating the operating manual and the organization of the operator.

Content

- Operation requirements
- System technology
  - IT infrastructure concept
  - Systems, components used, versions
  - Networks
  - Data security
  - Archiving
- Organization
  - Organizational structure
  - Operating process
- System operation with
  - Normal operation
  - System monitoring
  - Work preparation

- Troubleshooting
- Description of security aspects
- Requirement coverage

4.4.1.12 Checklists

Description

Checklists are part of the documents. They are used to support decision-making. They represent lists of monitoring and review steps which must be executed systematically and completely within the scope of a decision preparation. This reduces the probability of wrong decisions, given that all essential aspects are taken into account.

Each checklist is tailored to a specific decision and specifies the necessary review points with outcomes, release criteria, evaluation, those responsible, and review date. The checklists must be supplemented with further project-, core organization-, and solution-specific criteria in the context of decision preparation.

- Acceptance checklist
  The acceptance checklist describes general and project-specific review points and criteria that are relevant for the acceptance decision.
- Migration acceptance checklist
  The migration acceptance checklist describes general and project-specific review points and criteria that are relevant for the migration acceptance decision.
- Tender checklist
  The tender checklist describes general and project-specific review points and criteria that are relevant for the tender decision.
- Launch of operation checklist
  The launch of operation checklist describes general and project-specific review points and criteria that are relevant for the decision on launch of operation.
- Execution release checklist
  The execution release checklist describes general and project-specific review points and criteria that are relevant for the execution release decision.
- ISDP concept checklist
  The ISDP concept checklist describes general and project-specific review points and criteria relevant for the ISDP concept decision.
- Solution architecture checklist
  The solution architecture checklist describes general and project-specific review points and criteria that are relevant for the solution architecture decision.
- Phase release checklist
  The phase release checklist describes general and project-specific review points and criteria that are relevant for the phase release decision.
- Closure phase release checklist
  The closure phase release checklist describes general and project-specific review points and criteria that are relevant for the closure phase release decision.
- Product concept checklist
  The product concept checklist describes general and project-specific review points and criteria that are relevant for the product concept decision.
- Project discontinuation checklist
  The project discontinuation checklist describes general and project-specific review points and criteria that are relevant for the project discontinuation decision.

- Project closure checklist
  The project closure checklist describes general and project-specific review points and criteria relevant to the project closure decision.
- Project initiation release checklist
  The project initiation release checklist describes general and project-specific review points and criteria that are relevant for the project initiation release decision.
- Release checklist
  The release checklist describes general and project-specific review points and criteria that are relevant for the release decision.
- Preliminary acceptance checklist
  The preliminary acceptance checklist describes all general and project-specific review points and criteria that are relevant for the preliminary acceptance decision.
- Next steps checklist
  The next steps checklist describes general and project-specific review points and criteria that are relevant for the decision on next steps.
- Contract award checklist
  The contract award checklist describes general and project-specific review points and criteria that are relevant for the contract award decision.

4.4.1.13 Detailed specifications

Description

In traditional solution development, the detailed specifications describe the functional and qualitative solution characteristics. They are based on the solution requirements and the product concept or, in the case of IT projects, the system concept and the solution architecture. They are designed in sufficient detail in terms of content and planning to form a reliable basis for the realization (development and adaptation or development and parameterization) of the solution. The detailed specifications form the basis for the creation of detailed test case descriptions.

In agile solution development, the detailed specifications largely correspond to a sprint backlog, but from the project management perspective they serve only to document the current planning of those requirements that the development team has selected in a self-organized manner and that are to be completed within the relevant iteration. The detailed specifications are continued in an iterative and incremental manner as part of the manage and control project task, so that the requirements of previous iterations that have already been completed in the document are each supplemented by a new chapter.

Content

In traditional solution development, the content of the detailed specifications depends on the item being implemented and the specification method used. The following specification is possible on a supplementary basis:

- Detailed requirements with
  - Organizational requirements
  - Functional requirements
  - Quality requirement, framework condition

In agile solution development, on the other hand, the content is characterized by the agile development methods used.

4.4.1.14 Execution order

Description

The execution order forms the framework and the binding basis for solution development and subsequent project closure and authorizes continuation of the project. It contains all essential solution-specific information as well as indications of the procedure in the next phases. It is a binding agreement between the project sponsor and the project manager.

Content

- Background and need for action
- Objectives
  - Solution objectives
  - Procedure objectives with
    - Traditional/agile approach
    - Scenario
    - Other objectives
  - Framework conditions & boundaries
- Summary description of the solution
- Strategy reference and implementation of requirements
- Legal basis
- Investment requirements
- Resource and aid requirements
- Cost/benefit/economic efficiency (preview)
- Planning and organization
- Approach (development management)
- Risks
- Consequences
- Liabilities

4.4.1.15 Deployment concept

Description

The deployment concept describes the measures for deployment of the solution and the deployment organization. This includes the measures of organizational change management to support the transition to the new state, the training concept, the planning of acceptances including acceptance criteria, and the release criteria for the launch of operation.

Content

- Background
- Impact analysis
- Deployment procedure
- Deployment measures with
  - Organizational transition/change management
  - Emergency measures and emergency organization
- Training concept with
  - Requirements
  - Training procedure
  - Training materials
  - Training infrastructure
- Deployment organization
- Deployment planning
- Planning of preliminary acceptance and acceptance with
  - Acceptance criteria
- Release criteria for the launch of operation

4.4.1.16 Evaluation report

Description

The evaluation report summarizes the results of the tender evaluation. It forms the basis for the award decision.

Content

- Background
- Procedure for the evaluation
  - Members of the evaluation team
  - Evaluation process
- Call for tender, questions, and tender opening
- Results of the evaluation with
  - Eligibility criteria
  - Technical specifications
  - Award criteria
  - Evaluation procedure
  - Evaluation of tenders (performance value/economic efficiency)
  - Comparison of tenders
  - Selection and justification
- Recommendation with
  - Most suitable tender (performance value)
  - Most economically efficient tender (cost/benefit)
  - Best tender (performance value/economic efficiency)
- Requests
- Appendices with
  - Completed list of criteria
  - Evaluation
  - Other appendices

4.4.1.17 Business model description

Description

The business model description includes all organizational aspects that are relevant for the solution and that can be influenced by the solution, and it provides the framework for the process structure and organizational structure. It is based on the elements of the business model of an organization, reinforces the holistic view of the organization, and encompasses a selection of components such as customer segmentation and customer relationships.

Content

The content is strongly influenced by the project and the approach as well as the core organization.

- Customer segments
- Value propositions
- Channels
  - Communication channels
  - Distribution channels
  - Sales channels
- Customer relationships
- Key activities on
  - Value propositions
  - Markets
  - Customer relationships
- Key resources
  - Physical
  - Financial

    - Intellectual
    - Personnel
- Key partnerships
- Revenue sources
- Cost structure
    - Cost-oriented business model
    - Value-oriented business model

4.4.1.18 Integration and installation instructions

Description

The integration and installation instructions describe how the system is integrated and installed in the operating infrastructure.

Content

- Product description
- Prerequisites
- Execution instructions
- Integration plan
- Quality assurance and testing
- Defect handling
- Support
- Acceptance

4.4.1.19 Integration concept

Description

The integration concept describes how the system is integrated into the environment. It also describes how transport from one system environment to another takes place and how to ensure configuration management and quality. In the case of deployment with implementation units (traditional) or step-by-step integration with releases (agile), the planning of implementation units or release planning according to the project management plan is part of the integration concept.

Content

- System overview and integration items
- Interfaces
- Integration environments
- Integration procedure and integration steps with measures
- Framework conditions and interdependencies
- Integration organization
- Planning of implementation stages
- Transport concept and transport processes
- Quality assurance

4.4.1.20 ISDP concept

Description

The ISDP concept forms the basis for defining the information security and data protection (ISDP) measures. It shows the residual risks associated with the operation of the system and the organization.

Content

- List of security-related documents
- Classification based on the protection needs analysis
- Security-related system description
- Risk analysis with residual risks

- Emergency concept
- Processing regulations
- Compliance with/review of protection measures
- Testing/acceptance of information security functions
- Liquidation

4.4.1.21 List of management project decisions

Description

The list of management project decisions documents the outcomes of the decision-making tasks of the management hierarchy level. The list is used for the entire duration of a project.

Content

- Decision
- Milestone achieved yes/no
- Underlying documents
- Decision-makers at the management and/or execution hierarchy level
- Date

4.4.1.22 List of steering project decisions

Description

The list of steering project decisions documents the outcomes of the decision-making tasks of the steering hierarchy level. The list is used for the entire duration of a project.

Content

- Decision
- Milestone achieved yes/no
- Underlying documents
- Decision-makers at the steering hierarchy level
- Date

4.4.1.23 Solution requirements

Description

The solution requirements, as a crucial HERMES outcome, include the specialist and technical requirements, but also other elements such as characteristics, functions, optimizations, and defect corrections, legal as well as solution-relevant and regulatory requirements that the future system or product must fulfill. They include the business requirements, operational requirements, support requirements, and security requirements that flow directly into the solution.

In traditional solution development, the solution requirements are prepared in the concept phase on the basis of the study and the situation analysis in the final level of detail and are successively updated during solution development via change management as needed.

In agile solution development, the solution requirements are prepared for the first time on the basis of the study and the situation analysis in the execution phase in the form of an authoritative initial product backlog. The solution requirements correspond to a list of unambiguously prioritized requirements, subdivided into releases as needed, which are ordered according to business-specific or other aspects and logical dependencies important for the project. They are continuously updated as part of self-organized agile development. As a HERMES outcome, they are updated iteratively and incrementally, and they consequently have only informative and documentary character.

Content

The content is strongly influenced by the project and the approach.
Possible content:

- Overview of all orders (possibly subdivided by releases)
- Releases
- General description
  - Business and systemic context
  - Impact/benefit
  - Use case
- Requirement with
  - Priority
    (e.g. according to requirement type, overall context, importance, urgency, etc.)
  - Designation/title
  - Order/identification number
  - Product/system overview
  - Objective to be achieved
  - Specialist description
    - Free text
    - Organization, function, quality, etc.
    - For the system:
      Requirements for the operating concept, solution architecture, data archiving, migration concept, from the ISDP concept
    - Expectations of the user
    - Consultation with the user
  - Function description
  - Benefits/added value
  - Business relevance
  - Acceptance criteria
  - Product compliance
  - Realization date
  - Estimated outlay
  - Test criteria
  - Other aspects and criteria

4.4.1.24 Solution architecture

Description

The solution architecture is based on the system concept and divides the system into subsystems and their components. It describes the system structure and the interfaces. The solution architecture allows for a comprehensive view of the system. Depending on the project outcome and scope, it contains several architecture elements and models, e.g. the business process model, the function model (e.g., with use cases/user stories), the data architecture/data model, and the security architecture. It also contains the IT documentation or refers to the developer's documentation. The outcomes of the system concept are summarized in an appendix to the solution architecture.

The solution architecture takes into account the specifications of the controlling and compliance bodies.

Content

- System structure
  - Overview of the system
  - Subsystems and components
  - Solution architectures/models
- Interfaces and scope
  - Interfaces with peripheral systems
  - Reference to integration concept
  - Boundaries

- Feasibility assessment
- Compliance with specifications
- Requirement assignment and coverage
- Outcomes of the system concept

4.4.1.25 Migration concept

Description

The migration concept describes the technical and organizational requirements for migration and contains the migration procedure concept. The migration concept proves feasibility and shows migration planning. Aside from technical and organizational requirements, the auditing, information security and ISDP requirements are also taken into account.

Content

- Migration objectives
- Migration requirements
- Migration items
- Data analysis
- Migration procedure
- Migration plan
- Feasibility
- Archiving and decommissioning of the legacy system
- Requirement coverage

4.4.1.26 Quote request

Description

Offers for various services internal and external to the organization are obtained with the quote request. The offers form the basis for the service level agreement as described in the agree on and steer goods/services task. The quote specifications allow the offers to be compared and evaluated.

Content

- Sponsor
- Background
- Subject of the order
- Deadlines
- Conditions
- Quote specifications
- Administrative process for procurement

4.4.1.27 Organizational requirements

Description

The organizational requirements define whether a new or updated business model is needed or whether the organizational and process structure is changing. They include those contextual, business, and organizational requirements that strengthen the internal organization within the framework of the future solution and enable the solution itself to be more effective.

In addition to the traditional aspects specific to the organizational and process structure, they also include the requirements on economic efficiency, effectiveness, and efficiency as well as the objectives of the core organization and the organizational strategy derived from the objectives, often manifested in a business model that defines the framework into which the new organization must be fitted.

Content

The content is strongly influenced by the project and the approach.

- Background
- Direction of the planned/changed business model
- Direction of the planned/changed organizational structure
- Direction of the planned/changed process structure
- List of requirements

4.4.1.28 Organization description

Description

The organization description describes the organizational structure with a detailed organization chart, function descriptions, and personnel requirements. It forms the basis for assigning positions.

Content

- Organization chart
- Organizational interfaces
- Function descriptions
- Personnel requirements

4.4.1.29 Organization concept

Description

The organization concept goes into more depth about the solution option described and selected in the study from an organizational perspective. It is based on the organizational requirements, supplemented where needed by the findings from the solution requirements, and it describes the relevant business model aspects as well as the organizational and process structure (business processes) for business processing and support. It shows which new organization is created and which changes are made to what already exists.

Content

- Background
- Organizational requirements
- Business model with
  - Customer segmentation and value propositions
  - Customer contact points and customer relationships
  - Key activities and key resources
  - Key partnerships
  - Revenue sources and cost structure
- Organizational structure with
  - Organizational principles and options
  - Rough organization description
  - Organization chart
- Process structure with
  - Process landscape
  - Description of actual/target situation
  - Processes to be supported
  - Rough process description with
    - Core processes
    - Management processes
    - Support processes
- Overview of changes
- Requirement coverage

4.4.1.30 Phase report

Description

The phase report forms the basis for deciding on the release of the next phase and for updating the project status report. It summarizes the outcomes and decisions of the current phase and shows the organization of the next phase.

Content

- Background
- Strategy reference, successes, and implementation of specifications
- Benefits and economic efficiency
- Legal basis
- Planning and organization
- Forecast regarding objective achievement and solutions
- Risks
- Requests
- Conclusion

4.4.1.31 Product documentation

Description

Product documentation refers to the technical documentation of the product. All of the documentation defined in the development process together forms the product documentation. It is a prerequisite for the maintenance and further development of the product.

Content

The content of the product documentation depends on the outcomes defined in the development process.

4.4.1.32 Product concept

Description

The product concept goes into more depth about the solution option described and selected in the study. It is based on the solution requirements, supplemented where needed by the findings from the organizational requirements, and it describes the product to be created. Depending on the product and the complexity of the solution requirements, its structure and level of detail vary.

Content

- Background
- Requirements
- Boundaries
- Intended use
- Product classifications
- Options with
  - Overview of the product with
    - Description
    - Product structure
    - Components
    - Relationship to business processes
  - Boundaries
  - Requirement coverage
  - Compliance with specifications
  - Feasibility assessment
- Comparison of options
- Selected option

4.4.1.33 Lessons learned

Description

The lessons learned are systematically collected and continuously documented as a project review. They support the continual improvement process in the project and in the core organization. They provide valuable information for the further course of the project and possible indicators for subsequent projects by identifying and adopting positive aspects and preventing negative aspects as far as possible.

Content

- Contact
- Subject area
- Date
- Lessons learned: positive/negative
- Relevance: possible significance for own project or other projects
- Possible causes
- Recommendation: information for the core organization

4.4.1.34 Project initiation order

Description

The project initiation order forms the binding basis for the release of the initiation phase. It is the agreement between the project sponsor and project manager for the initiation phase.

Content

- Background
- Objectives
  - Objectives of the initiation phase
  - Parameters
- Resource requirements with
  - personnel costs
  - materials
  - costs
- Deadlines
- Project organization and personnel
- Communication
- Risks

4.4.1.35 Project management plan

Description

The initial development of the project management plan is influenced by the decisions on option and approach in the initiation phase. The decision on the approach in particular – traditional or agile – influences the execution of the tasks and the structure and content of the outcomes.

The project management plan contains the overall planning of the project and the essential regulations on methods, techniques, roles, and tools determined for the specific project. The project management plan serves as a uniform basis for action for everyone involved in the project. As part of project organization, the project management plan ensures that the responsibilities and the division of tasks between service recipients, internal service providers, and external suppliers where applicable are sufficiently clearly regulated and documented. As the project progresses, it is continuously fleshed out and updated according to the principle of rolling planning and steering.

In agile solution development, the schedule for the execution phase is combined with the (agile) release plan. This release plan specifies the scope of the releases and when operation is activated for each release. It also specifies whether the (optional) release decision is mandatory in the project or not.

At the end of the phase, the project management plan is adapted to the changed conditions for the next phase. Before the closure phase is released, the project management plan for project closure is also prepared and adapted accordingly.

Content

- Project description
  - Summary
  - Phases and milestones (traditional) or releases (agile)
  - Release yes/no (agile)
- Scenario with execution structure plan
- Execution organization with
  - Project organization chart
  - Roles in core and project organization
  - Assignment of roles (including development team (agile))
- Project outcome structure
- Quality objectives and specifications (for execution)
- Review plan (QA)
- Execution planning with
  - Schedule
  - Release plan (agile) with
    - Releases
    - Dependencies and requirements
    - Organization
    - Deadlines
- Cost plan/approved budget
- Resource plan
- Procurement plan
- Communication plan
- Stakeholder management (project specific)
- Reporting
- Specifications, methods, work instruments, and tools
- Quality assurance
- Change management
- Risk management
- Escalation procedure
- Document management

4.4.1.36 Final project evaluation

Description

The final project evaluation forms the basis for the project closure decision. It gives the project sponsor information on the target/actual comparison with regard to the project and procedure objectives in terms of deliverables, scheduling, and finances. The content of the lessons learned outcome is documented in a summary. The content and deadlines for project success monitoring are set.

Content

- Background
- Evaluation of the achievement of objectives
- Economic efficiency

- Target/actual comparison
  - Costs/benefits
  - Effort
  - Deadlines
  - Outcomes
- Lessons learned
- Pending items and measures
  - Directly from the project with
    - Pending item
    - Measure
    - Those responsible
    - Implementation deadline
  - Further measures after project closure with
    - Measure
    - Those responsible
    - Implementation deadline
- Request

4.4.1.37 Project status report

Description

The project status report is used for periodic reporting on the project status, project progress, and forecasts as to how the project will proceed. The form and method of reporting are set out in the project management plan. The core organization's requirements with regard to reporting content and frequency are taken into account.

Content

- Overview of project status
- Forecast regarding objective achievement (agile: burndown chart)
- Target/actual comparison and forecasts
  - Costs/benefits
  - Effort
  - Deadlines
  - Outcomes
- Problems and measures
- Risks
- Outlook

4.4.1.38 Minutes

Description

The minutes document, firstly, the decisions and orders that are made or placed in a meeting and, secondly, important management and execution processes that must be traceable later as needed. Important discussion and action points are recorded. Orders recorded in the minutes are transferred to a to-do list.

In general:
The full set of minutes ensures the traceability and comprehensibility of decisions and processes.

Content

- Meeting type/topic
- Date
- Participants

- Agenda items with
  - Minute points
  - Those responsible
  - Final deadline
- To-do list (appendix)

4.4.1.39 Prototype documentation

Description

The prototype documentation forms the basis for the creation and evaluation of the prototype. It records the prototyping objectives, requirements, outcomes, and conclusions.

Content

- Background
- Parameters
- Requirements
- Concept
  - Prototype concept
  - Required infrastructure
- Summary of test results
  - Reference to test concept
  - List of test cases
  - Summary of test protocols, test report
- Conclusions
- Recommendations

4.4.1.40 Process description

Description

The process description is a detailed process structure down to the individual process level, describing the processes with the tools used.

Content

- Process designation
- Process owner
- Parties involved in the process
- Process objectives
- Process key indicators/measurement variables
- Critical success factors
- Process evaluation
- Process diagram with
  - Input
  - Output
  - Activities
  - Tools

4.4.1.41 Review report

Description

The review report records review findings and documents the implementation decisions concerning the findings, as well as the decision on the status of the outcome.

Content

- Outcome to be checked
- Review date
- Reviewer
- Findings

- Decisions on findings
- Outcome decision

4.4.1.42 Publication

Description

The publication provides information about the award for the tender concerned. The form and content of the publication are specified by the controlling and compliance bodies or the procurement office.

Content

- Tender concerned
- Procurement office
- Successful tenderer
- Legal means

4.4.1.43 QA and risk report

Description

The QA (quality assurance) and risk report provides independent information on the project's quality and risk situation. The content of the QA and risk report depends on the mandate and scope, as well as on the methods used.

Content

- Mandate and scope
- Procedure
- Overall assessment with project status
- Quality assessment
- Risk assessment
- Recommendations

4.4.1.44 Legal basis analysis

Description

The legal basis analysis describes the existing and applicable legal basis for the project outcome and the possible need for it to be amended. Special attention is paid to the communal, cantonal, national, and – where applicable – international legal as well as product-relevant and regulatory requirements that the envisaged solution, including its effects on the peripheral systems, must comply with (product compliance).

Content

- Existing legal basis
- Imminent changes
- Gaps identified
- Proposals to close gaps
- Notes concerning product compliance
- Evaluation of the consequences
- Recommendations

4.4.1.45 Release report

Description

The release report provides an overview of the project's success so far, forming the basis for the preparation of the project status report and, depending on the provision in the project management plan, also for the decision on approval of any next release. It summarizes the outcomes and decisions of the current release and provides an overview of the remaining outlay for the project.

Content

- Background
- Strategy reference and successes
- Benefits and economic efficiency
- Content of the release
- Known errors
- Burndown chart
- Risks
- Conclusion

4.4.1.46 Protection needs analysis

Description

The protection needs analysis, or ISDP analysis, documents the information security and data protection requirements.

Content

- Requirement category
- Requirement description
- Requirement assignment

4.4.1.47 Service level agreement

Description

A service level agreement (SLA) is a type of agreement between the operator and the user, represented by the sponsor and the user representative. The SLA specifies the services to be provided by the operator, defines their service level (quality of service), and formulates any measures and penalties for non-compliance. As a rule, the agreed services and their service levels are subject to a charge.

If operations are outsourced, SLAs can be an important factor in evaluating the potential operator.

Content

The content of an SLA is specified by the core organization. An external provider may already have a predefined SLA. The SLA may cover points including the following:

- Preamble with
  - Subject matter
  - Objectives
  - Partners
- Scope
- Entry into effect, duration, cancellation
- Services
- Remuneration with
  - Transfer prices
  - Invoicing
  - Payment modalities
- Reporting with
  - Service level reports (standard reports)
  - Other reports (as needed)
- Consequences of deviation from agreed service levels
- Rules for monitoring the SLAs (SLA audits)
- Rules for changing the SLAs
- Rules for resolving conflicts
- Data protection

- Liability and warranty
- Damages
- Applicable law
- Legal venue
- Arbitration
- Confidentiality, secrecy, and publication
- Partial invalidity of provisions
- Signatures
- Enclosures

4.4.1.48 Situation analysis

Description

The situation analysis describes and analyzes the current situation and future developments, and it supplements the rough status report in the study and goes into more depth.

The overall solution and influence area of the option selected in the initiation phase is used to determine the area of investigation. In addition to compiling the essential quantities and frequencies, the situation analysis in particular addresses the deficiencies and weaknesses that must be eliminated as far as possible with the future solution, and it defines the existing strengths that are to be preserved. The situation analysis examines whether the organization module is relevant.

The situation analysis forms the specialist basis for the definition of the solution and organizational requirements to be met by the project outcome. It is neutral in terms of objectives and solutions.

Content

- Introduction
- Current organization (if relevant) with
  - Business model/business perspective
  - Organizational structure
  - Process structure
- Description, if available, of the current solution (current system/current product)
  - Objective and intended use, function
  - Documentation on the existing solution such as
    - Original solution description/solution concept
    - Parameters and specifications
    - User documentation
    - Operating manual
    - ISDP
    - Interfaces and peripheral systems (organizational/technical)
  - Operating costs
- Quantities and frequencies
- Analysis of strengths, weaknesses, and causes
- Description of the current overall context
- Conclusion and need for action

4.4.1.49 Stakeholder interests

Description

The stakeholder interests form the basis for informing the stakeholders and for direct cooperation with them. The analysis of stakeholder interests is conducted separately from the stakeholder list. This analysis is a subjective, internal project assessment and not a public outcome. The stakeholder interests are needed for communication and for cooperation with stakeholders and are regularly updated.

Content

- Stakeholder positioning
- Stakeholder description
- Identified conflicts of interest and objectives

4.4.1.50 Stakeholder list

Description

The stakeholder list is developed for the first time in the initiation phase and forms the basis for managing the stakeholders, for direct cooperation with them, and for communication planning. It is continuously updated over the course of the project.

Content

- Stakeholders

4.4.1.51 Study

Description

The study describes the desired solution by defining the rough objectives based on the status report, listing possible solution options and the proposed procedure, and then evaluating them. It corresponds to the business case and shows the business benefits as well as the reference to the strategy and the objectives of the core organization. All aspects that have an influence on the planned solution or that can be influenced by the solution are mentioned in the study. In addition, the appropriate scenario (see Section 2 Scenarios) is selected, a customized scenario is created where appropriate, and the future value of the project is estimated.

The study is detailed only to the extent that the direction of the envisaged project is clear and the decision on next steps can be made. The lean approach applies in particular to the status report so as not to prolong the initiation phase unnecessarily.

The decision on next steps documented in the study forms the basis for preparing a decision on whether or not to continue a project. The study is the prerequisite for drawing up the project management plan and the execution order.

Content

- Background
- Status report from a business perspective with
  - Quantities and frequencies
  - Information security and data protection
  - Analysis of strengths, weaknesses, and causes
  - Solution context and boundaries
  - Analysis and evaluation
- Objectives
- Parameters
- Rough requirements
- Solution options with
  - Option overview
  - Description per option, incl. proposed approach
  - Analysis and evaluation with
    - Degree of objective achievement
    - Requirement coverage
    - Cost/benefit/economic efficiency considerations
    - Risk assessment (project and operational risks)
    - Further criteria such as sustainability, etc.

- Proposal for next steps including reasons with
  - Solution option
  - Scenario
  - Procedure
  - Project value
- Decision on next steps concerning
  - Solution option
  - Scenario
  - Procedure
  - Project value
- Planning and deadlines
  - Scenario and modules
  - Project deadlines, milestones
  - Planned period of use

4.4.1.52 System concept

Description

The system concept goes into more depth about the solution option described and selected in the study. It is based on the solution requirements and shows how the solution meets those requirements. The system concept can describe and evaluate several system options.

There can be several system concepts on different topics.

Content

- Background
- Requirements
- Solution concept with
  - System options
    - Description
    - Requirement coverage
    - Feasibility assessment
- Comparison of options
- Recommendation

4.4.1.53 Test concept

Description

The test concept describes the test objectives, test objects, test types, test infrastructure, and test organization. It also includes test planning and test case descriptions. A detailed test case description is created for each test case. This constitutes the test specifications. Test planning determines the logical and chronological structure of the tests. The test concept forms the basis on which the test organization and test infrastructure are provided and the tests are carried out. The test concept is updated if new findings arise.

Content

- Test objectives
- Test strategy and test levels
- Test objects
- Test types
- Test coverage
  - Overview of test cases
  - Assessment of test objectives and test coverage
- Test framework with
  - Test prerequisites
  - Defect classification
  - Starting and abandonment conditions
- Test environment

- Test case descriptions
- Test plan
- Test organization and responsibilities
- Test infrastructure with
  - Test system
  - Test data
  - Test tools

4.4.1.54 Test report

Description

The test report records the test results. The test results are evaluated according to the defect classes defined in the test concept.

Content

- Overview of test cases/testing
- Test case
  - Test case description
  - Test date, tester
  - Defect category (test result)
  - Defect description

4.4.1.55 Agreement

Description

The agreement governs the cooperation between different project participants, mainly between the user (project sponsor) and the developer. The agreement can be concluded for one or more phases. Agreements are differentiated according to project agreement and contract.

Content

The content of agreements is stipulated by the core organization. The agreement may include, but is not limited to, the following points:

- Deployment
- Scope
- Scope of goods/services and outcomes
- Persons deployed
- Cooperation duties
- Quality assurance and acceptance
- Warranty
- Data protection and data security
- Change management
- Reporting
- Effort and costs
- Signatures
- Supplementary technical standards
- Regulations
- Directives

4.4.2 States

4.4.2.1 Legacy system removed

Description

The old system version and the legacy system are decommissioned or removed in accordance with the specifications. The decommissioning also includes the destruction or archiving of data.

4.4.2.2 Operation activated

Description

Operation of the activated system is launched and conducted with the operating organization defined in the operating concept. The activities set out in the operating manual are carried out. The operating staff carry out the operating tasks. The prerequisites for measuring and complying with the SLA are given.

4.4.2.3 Operating infrastructure realized

Description

The operating infrastructure comprises all infrastructures required for the creation and operation of a system with the various system environments (development, testing, production, etc.) and all its components. The operating infrastructure also includes the components needed to supervise operation, such as monitoring and alarm systems, statistical tools, etc.

4.4.2.4 Operating organization realized

Description

The operating organization defined in the operating concept, including the operating organizational structure and operating processes of the operator, is realized. The operating staff are trained and can perform the operating tasks.

4.4.2.5 Deployment measures carried out

Description

The measures described and realized in the deployment concept are executed. The implementation of the measures is reviewed and their quality assurance carried out. For example, user training has been carried out and the participants' course assessments are available for quality assurance.

4.4.2.6 Deployment measures realized

Description

The measures described in the deployment concept and the organization needed for deployment are realized. For example, the superusers are recruited and trained to support the users in deployment, or the training materials are produced so that training can then be carried out.

4.4.2.7 ISDP concept transferred

Description

The ISDP concept is updated, checked by the controlling and compliance bodies, and transferred from the project organization to the core organization.

4.4.2.8 ISDP measures realized

Description

The ISDP measures are realized on the basis of the ISDP concept. They ensure that the requirements in terms of protection needs are met in accordance with the ISDP concept.

4.4.2.9 Milestones

Description

Milestones are states and are always the consequence of a decision. They mark and define a specific point in time reached in the course of the project.

Milestones serve as envisaged and achieved decision outcomes for project steering and management, give the project a structure, and mark important points in the course of the project at which decisions are made on next project steps.

- Acceptance milestone
  The milestone is reached when the decision on acceptance is made. The solution is definitively transferred to the application organization and, where applicable, also to the operating organization. After that, the warranty begins and with it regular operation.
- Migration acceptance milestone
  The milestone is reached when the decision on acceptance of migration is made. The use of the new system can be released for the users (decide on launch of operation).
- Tender milestone
  The milestone is reached when the decision on call for tenders is made. The tender can be published.
- Launch of operation milestone
  The milestone is reached when the decision on launch of operation is made. The solution can be put into operation.
- Execution release milestone
  The milestone is reached when the decision on execution release is made. Work starts according to the execution order.
- ISDP concept milestone
  The milestone is reached when the decision on ISDP concept is made. Implementation of the ISDP measures can begin.
- Solution architecture milestone
  The milestone is reached when the decision on solution architecture is made. This forms the prerequisite for the development or adaptation of systems.
- Phase release milestone
  The milestone is reached when the decision on phase release is made. The work in the next phase can begin.
- Closure phase release milestone
  The milestone is reached when the decision on closure phase release is made. The provision of goods or services within the scope of solution development is completed. The work in the closure phase can begin.
- Product concept milestone
  The milestone is reached when the decision on product concept is made. The concept is the prerequisite for the development or adaptation of products or services.
- Project closure milestone
  The milestone is reached when the decision on project closure is made. The project is concluded.
- Project initiation release milestone
  The milestone is reached when the decision on project initiation release is made. The project has been formally launched. Work starts according to the project initiation order.
- Release milestone
  The milestone is reached when the decision on release is made. Work on the next release can begin under the agile approach.
- Preliminary acceptance milestone
  The milestone is reached when the decision on preliminary acceptance is made. This forms the basis for the execution of deployment measures and launch of operation.

- Next steps milestone
  The milestone is reached when the decision on next steps is made. This forms the basis for drawing up the project management plan and the execution order.
- Contract award milestone
  The milestone is reached when the decision on contract award is made. The decision can be published and the contract work with the successful tenderer can begin.

4.4.2.10 Migration carried out

Description

The migration from the old system to the new or further developed system is carried out and documented in accordance with the specifications of the controlling and compliance bodies. The comprehensibility of the migration is ensured. Successful migration is the prerequisite for its acceptance and the decision on launch of operation.

4.4.2.11 Migration procedure realized

Description

The migration procedure realized has been tested by the developer or the developer's tester. The developer or tester provides evidence of the tests performed. The tests are the prerequisite for preliminary acceptance.

4.4.2.12 Organization activated

Description

The new organization is activated. It carries out its processes according to the process descriptions.

If the new organization is activated under traditional solution development, this is the prerequisite for activating the product or system. In agile solution development, only the relevant part of the organization is activated.

4.4.2.13 Organization implemented

Description

The organization defined in the organization concept is implemented.

Based on the process description and organization description, the measures were realized in order to establish the organization (position assignments, recruitment, etc.).

4.4.2.14 Product activated

Description

The activated product is made available to users for utilization.

4.4.2.15 Product developed or adapted

Description

The developed and/or adapted product has been tested by the developer or the tester of the developer. It is handed over to the user for the tests and preliminary acceptance.

4.4.2.16 Prototype realized

Description

The prototype is used to check the feasibility or behavior of a system or product in a specific situation. Prototypes are used to assess and reduce risks.

Over the course of the project, several different prototypes can be realized in order to test the feasibility of the project. A distinction can be made between disposable prototypes and reusable prototypes.

4.4.2.17 Interfaces realized

Description

The interfaces realized ensure the exchange of data between the system and the peripheral systems.

The interface has been tested by the developer or the integrator and the developer's tester. It is handed over to the operator for integration into the operating infrastructure.

4.4.2.18 System activated

Description

The activated system is made available to users for utilization.

4.4.2.19 System developed or parameterized

Description

The developed and/or parameterized system has been tested by the developer or the integrator and the developer's tester. It is handed over to the operator for integration into the operating infrastructure. Development and integration can take place in several steps or releases.

4.4.2.20 System integrated

Description

The integrated system is available to the user's testers for testing and preliminary acceptance.

The system is activated after the decisions on preliminary acceptance and launch of operation.

4.4.2.21 Test infrastructure realized

Description

A test infrastructure consisting of a test system (including all systems for performing tests), test data, and test tools is used to perform the tests. The test infrastructure is provided according to the test concept. The test infrastructure must meet different requirements depending on the test method. Different test systems may then also be required.

The test infrastructure is based on the infrastructure of the production system, i.e. on the operating infrastructure realized. The test system must correspond to the production system to the extent that the test case descriptions can be carried out under realistic conditions.

If non-anonymized copies of productive data are used as test data for the tests, the requirements for ISDP must be met.

4.4.2.22 Test infrastructure transferred

Description

The entire test infrastructure including the test concept has been transferred to the core organization.

5 Tasks

5.1 Introduction

5.1.1 Positioning of tasks

Outcomes are at the heart of HERMS. They are developed together with the tasks.

A task consists of several activities. Activities are used to develop one or more outcomes and to ensure the quality requirements are met.

Two types of tasks are distinguished:

- Decision-making tasks, which lead to a decision and end with the milestone outcome. They are further divided into
  - Decision-making tasks of steering and
  - Decision-making tasks of management.
- Other tasks that accompany the course of the project, serve to develop outcomes and solutions, and ensure or increase quality.

Task descriptions do not replace knowledge of the methods and practices to be applied or corresponding training.

5.1.2 Decision-making tasks

5.1.2.1 General

Decisions have to be made over the course of the project. Tasks that lead to a decision are defined as decision-making tasks. They end with a milestone.

HERMES distinguishes between decisions made by project steering and decisions made by project management. For example, the decision on launch of operation is made by the project sponsor (steering), while the decision on solution architecture is made by the project manager (management).

At the end of a phase (traditional) or a release (agile, if the decision on release approval is required in the project), steering checks whether the necessary specialist decisions have been made. If this is not the case, the next phase or the next release is not approved. In this way, steering can make decisions without having the necessary expertise itself.

Decision-making tasks are supported by checklists.

5.1.2.2 Steering decisions

At the steering hierarchy level, decisions are made by the project sponsor. The project sponsor decides on project initiation release, execution release, phase release, interim release approvals where applicable, project closure, project discontinuation where applicable, as well as other important decisions such as initiating a call for tenders, deciding on an award of contract, or approving launch of operation. As needed, the project sponsor is advised and supported by other roles, such as the project committee, the project manager, or the user representative.

5.1.2.3 Management decisions

Management decisions are decisions of the project manager on project outcomes.

Review and acceptance of technical outcomes is carried out on behalf of management by the execution level, i.e. by the specialists for the topic in question. Depending on the process model, the project manager or user representative plans the decision-making tasks, taking into account the specifications of the controlling and compliance bodies of the core organization.

5.2 Overview of tasks

5.2.1 Standard tasks

The table shows the assignment of all provided tasks to project phases, including the corresponding outcomes; decision-making tasks are highlighted in pink.

Task	Outcome	Phases					
		I	C	I	D	E	C
Decommission the legacy system	Legacy system removed						X
Manage changes	Change request		X	X	X		
	Change status list		X	X	X	X	
	Project management plan		X	X	X	X	
	Solution requirements		X	X	X		
Evaluate tenders	Evaluation report		X			X	
	Tender report		X			X	
Issue call for tenders	Offer		X			X	
	Tender documentation		X			X	
Prepare call for tenders	Tender documentation		X			X	
Prepare procurement analysis	Procurement analysis	X					
Activate operation	Operating manual				X	X	
	Operation activated				X	X	
Realize operation	Operating manual			X		X	
	Operating infrastructure realized			X		X	
	Operating organization realized			X		X	
Design operating concept	Operating concept		X			X	
	Service level agreement		X			X	
Draw up project execution order	Execution order	X					
Execute deployment measures	Deployment measures carried out				X	X	
Realize deployment measures	Deployment measures realized			X		X	
Design deployment concept	Deployment concept		X			X	
	Project management plan		X			X	
Decide on acceptance of migration	Migration acceptance checklist				X	X	
	Acceptance report				X	X	
	Migration acceptance milestone				X	X	
	List of management project decisions				X	X	
Decide on acceptance	Acceptance checklist				X	X	
	Acceptance report				X	X	
	Acceptance milestone				X	X	
	List of management project decisions				X	X	
Decide on call for tenders	Tender checklist		X			X	
	Tender milestone		X			X	
	List of steering project decisions		X			X	
Decide on launch of operation	Launch of operation checklist				X	X	
	Launch of operation milestone				X	X	
	List of steering project decisions				X	X	
Decide on ISDP concept	ISDP concept checklist		X			X	
	ISDP concept milestone		X			X	
	List of management project decisions		X			X	
Decide on solution architecture	Solution architecture checklist		X			X	
	Solution architecture milestone		X			X	
	List of management project decisions		X			X	
Decide on closure phase release	Closure phase release checklist				X	X	
	QA and risk report				X	X	
	Closure phase release milestone				X	X	
	List of steering project decisions				X	X	
Decide on phase release	Phase release checklist		X	X			
	QA and risk report		X	X			
	Phase release milestone		X	X			
	List of steering project decisions		X	X			

Task	Outcome	Phases					
		I	C	I	D	E	C
Decide on product concept	Product concept checklist		X			X	
	Product concept milestone		X			X	
	List of management project decisions		X			X	
Decide on project discontinuation	Project discontinuation checklist	X	X	X	X	X	
	Lessons learned	X	X	X	X	X	
	Final project evaluation		X	X	X	X	
	Project closure milestone		X	X	X	X	
	List of steering project decisions		X	X	X	X	
Decide on project closure	Project closure checklist						X
	QA and risk report						X
	Project closure milestone						X
	List of steering project decisions						X
Decide on execution release	Execution release checklist	X					
	Execution order	X					
	Execution release milestone	X					
	List of steering project decisions	X					
Decide on project initiation release	Project initiation release checklist	X					
	Project initiation order	X					
	Project initiation release milestone	X					
	List of steering project decisions	X					
Decide on release	Release checklist					X	
	QA and risk report					X	
	Release milestone					X	
	List of steering project decisions					X	
Decide on preliminary acceptance	Preliminary acceptance checklist			X		X	
	Acceptance report			X		X	
	Preliminary acceptance milestone			X		X	
	List of management project decisions			X		X	
Decide on next steps	Next steps checklist	X					
	Study	X					
	Next steps milestone	X					
	List of management project decisions	X					
Decide on contract award	Contract award checklist		X			X	
	Publication		X			X	
	Contract award milestone		X			X	
	List of steering project decisions		X			X	
Design integration concept	Integration concept		X			X	
Design ISDP concept	ISDP concept		X			X	
Implement ISDP concept	ISDP measures realized			X		X	
	ISDP concept			X		X	
Transfer ISDP concept	ISDP concept transferred				X	X	
	ISDP concept				X	X	
Agree on and steer goods/services	Quote request		X	X	X	X	
	Offer		X	X	X	X	
	Evaluation report		X	X	X	X	
	Agreement		X	X	X	X	
Prepare solution requirements	Situation analysis		X			X	
	Solution requirements		X			X	
Prepare solution architecture	System concept		X			X	
	Solution architecture		X			X	
Conduct migration	Migration carried out				X	X	
Design migration concept	Migration concept		X			X	
Realize migration procedure	Detailed specifications			X		X	
	Migration procedure realized			X		X	

Task	Outcome	Phases					
		I	C	I	D	E	C
Activate organization	Organization activated				X	X	
Implement organization	Process description			X		X	
	Organization description			X		X	
	Organization implemented			X		X	
Establish organizational requirements	Situation analysis		X			X	
	Organizational requirements		X			X	
Draw up organization concept	Organization concept		X			X	
	Business model description		X			X	
	Process description		X			X	
	Organization description		X			X	
Prepare phase release	Phase report		X	X	X	X	
	Project management plan		X	X	X	X	
	Project status report		X	X	X	X	
Deal with problems and benefit from lessons learned	Lessons learned		X	X	X	X	X
Activate product	Product activated				X	X	
Realize product	Detailed specifications			X		X	
	Product documentation			X		X	
	User manual			X		X	
	Product developed or adapted			X		X	
Design product concept	Product concept		X			X	
Manage and control project	Project management plan	X	X	X	X	X	X
	Work order	X	X	X	X	X	X
	Project status report	X	X	X	X	X	X
	Minutes	X	X	X	X	X	X
	Solution requirements					X	
	Detailed specifications					X	
Steer project	QA and risk report		X	X	X	X	
	List of steering project decisions	X	X	X	X	X	X
Prepare project closure	Lessons learned						X
	Final project evaluation						X
Draw up project management plan	Project management plan	X					
Carry out prototyping	Prototype realized	X	X	X		X	
	Prototype documentation	X	X	X		X	
Perform quality assurance	Project management plan		X	X	X	X	X
	Review report		X	X	X	X	X
Analyze legal basis	Legal basis analysis	X					
Prepare release closure	Release report					X	
	Project management plan					X	
	Project status report					X	
Manage risks	Project management plan		X	X	X	X	
	Project status report		X	X	X	X	
Analyze protection needs	Protection needs analysis	X					
Manage and inform stakeholders	Stakeholder list	X	X	X	X	X	X
	Stakeholder interests	X	X	X	X	X	X
	Project management plan	X	X	X	X	X	X
Advocate stakeholder interests	Stakeholder interests		X	X	X	X	
Prepare study	Study	X					
	Stakeholder list	X					
Activate system	System activated				X	X	
Integrate the system into operation	Operating manual			X		X	
	System integrated			X		X	
Realize system	Detailed specifications			X		X	
	System concept			X		X	
	Solution architecture			X		X	
	User manual			X		X	
	System developed or parameterized			X		X	

Task	Outcome	Phases					
		I	C	I	D	E	C
Prepare system integration	Interfaces realized			X		X	
	Solution architecture			X		X	
	Integration and installation instructions			X		X	
	Detailed specifications			X		X	
Conduct test	Test report			X	X	X	
	Test concept			X	X	X	
Realize test infrastructure	Test infrastructure realized			X		X	
Transfer test infrastructure	Test concept						X
	Test infrastructure transferred						X
	Minutes						X
Design test concept	Test concept		X			X	
Draw up agreement	Agreement		X			X	

Table 18: Assignment of all tasks to project phases, including corresponding outcomes

5.2.2 Customized tasks

Supplementing the standard tasks available, it is also possible to integrate new subject-, organization-, or project-specific tasks into own modules and then to expand them with outcomes.

This is supported by HERMES online and is especially relevant when new modules are developed. Examples of customized tasks can be extended, core organization-specific reporting or project-specific risk management.

5.3 Explanation regarding task description

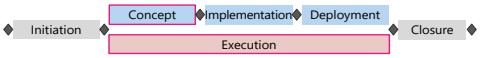
For each task, a task description is provided that is always structured in the same way:

- Purpose
  describes the intent and purpose of the task.
- Basic idea
  creates a fundamental understanding of the task.
- HERMES-specific
  describes how HERMES supports the task in concrete terms.
- Basis/prerequisites
  lists the outcomes necessary to perform the task, if relevant. For tasks during solution creation, the list varies depending on the scenario. Where applicable, the outcomes are marked with "A" for agile or "T" for traditional.
- Activities
  describe how the task is executed. If possible, the activities are listed in chronological order. Where applicable, the outcomes are marked with "A" for agile or "T" for traditional.
- Relationships (online only)
  show how the tasks relates to other module elements.
- Outcomes
  show which outcomes are generated by the task. Where applicable, the outcomes are marked with "A" for agile or "T" for traditional.

5.4 Descriptions of the tasks

5.4.1 Decision-making tasks of steering

5.4.1.1 Decide on call for tenders



Purpose

The decision on call for tenders creates the prerequisite for publication.

Basic idea

After the decision on call for tenders, the tender documentation is published or, in the case of an invitation procedure, sent out.

HERMES-specific

The decision on call for tenders is made by the project sponsor, where applicable with the involvement of the body in charge of tenders in the core organization. The project sponsor ensures coordination with the core organization.

Basis/prerequisites

- Tender documentation
- Project management plan

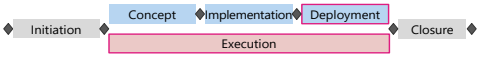
Activities

- Add further criteria to the tender checklist.
- Check the tender documentation with the tender checklist.
- Check whether overarching strategies, standards, and specifications have been adhered to and whether confirmations from the competent bodies are available.
- Coordinate the decision with the core organization.
- Make formal decision on call for tenders.

Outcomes

- Tender checklist
- Tender milestone
- List of steering project decisions

5.4.1.2 Decide on launch of operation



Purpose

The decision on launch of operation is the prerequisite for the activation of the product or the system (with subsequent activation of operation) and for the productive use of the solution.

Basic idea

The project sponsor decides on the launch of operation at the request of the project manager or the user representative.

HERMES-specific

The sponsor's decision on launch of operation is based on the decisions on preliminary acceptance and acceptance of migration, on the execution of deployment measures, and on further, partly project-specific release criteria according to the deployment concept.

Basis/prerequisites

- Preliminary acceptance milestone
- Migration acceptance milestone
- Deployment concept
- Deployment measures carried out
- ISDP concept transferred

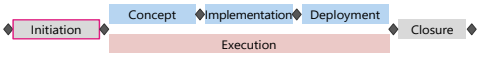
Activities

- Add further release criteria to the launch of operation checklist.
- Evaluate release criteria and assess and present deployment risks.
- Make formal decision on launch of operation.
- Release utilization for users after successful launch of operation.

Outcomes

- Launch of operation checklist
- Launch of operation milestone
- List of steering project decisions

5.4.1.3 Decide on execution release



Purpose

The decision on execution release continues the project with the next phase and starts the solution development. It creates the prerequisite for the work in the concept phase under a traditional approach and in the execution phase under an agile approach.

Basic idea

On the basis of the drawn up execution order, the project sponsor checks whether the project serves the objectives of the organization and whether the necessary resources can be released.

With the execution release, solution development begins and the adapted project organization is put into effect. The resources required for the next phase are released.

HERMES-specific

The execution release takes place at the end of the initiation phase. The decision is made by the project sponsor in consultation with the core organization, possibly within the framework of an existing portfolio. Before the execution release, the execution order and the project management plan are compared with the higher-level requirements of the core organization.

The project management plan and the adapted project organization are decided and put into effect. In the agile approach, the development team is formally established in the project organization.

The solution development is initiated with the execution release; this starts with the concept phase in the traditional approach and with the execution phase in the agile approach.

A decision is made whether

- the initiation phase is concluded or whether further outcomes are to be developed

and, provided that the initiation phase can be concluded, whether the project continuation

- is released,
- is not currently released and is to be requested again at a later date, or
- is not released and the project is terminated (does not constitute an actual project discontinuation, see Decide on project discontinuation).

Basis/prerequisites

- Project management plan
- Execution order

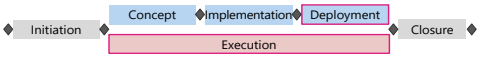
Activities

- Add further criteria to execution release checklist.
- Project sponsor checks the execution order against the execution release checklist.
- Ensure resources (human, financial, infrastructure) for the entire project duration.
- Release resources for the next phase.
- Deliver the execution order to the decision makers.
- Project organization is communicated to core organization and stakeholders.
- Coordinate the decision in the core organization.
- Make formal decision on execution release.
- If the decision is positive:
  - Sign execution order;
  - Release resources for solution development (concept or execution phase);
  - Inform stakeholders about the decision.

Outcomes

- Execution release checklist
- Execution order
- Execution release milestone
- List of steering project decisions

5.4.1.4 Decide on closure phase release



Purpose

The decision on closure phase release concludes the provision of goods or services within the scope of the solution development and creates the prerequisite for the work in the closure phase.

Basic idea

The outcomes of the entire solution development are checked and accepted or rejected. The phase is completed, and the closure phase as well as the resources required for it are released.

HERMES-specific

At the end of the deployment or execution phase, the phase report and – in the execution phase – the last release report are approved. The project sponsor decides on the end of solution development and on release of the closure phase.

If the solution development was agile, the development team is dissolved.

A decision is made

- whether the phase is concluded or whether there are additional outcomes to be developed prior to conclusion of the phase, or
- whether the closure phase is released.

Basis/prerequisites

- Acceptance milestone
- Phase report
- Release report

- Project management plan
- Project status report

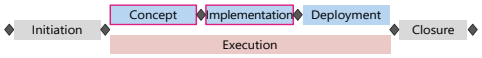
Activities

- Add further release criteria to closure phase release checklist.
- Coordinate the decision in the core organization.
- Make formal decision on closure phase release or reject outcomes.
- If the decision is positive:
  - Release resources for the next project phase.
  - Inform those affected about the decision.

Outcomes

- Closure phase release checklist
- QA and risk report
- Closure phase release milestone
- List of steering project decisions

5.4.1.5 Decide on phase release



Purpose

In the traditional approach, the phase release decision creates the prerequisite for the work in the next phase.

Basic idea

The phase outcomes are checked and accepted or rejected. The current phase is completed and the next project phase is released, as are any resources needed. If the defined project objectives cannot be achieved, the project is terminated (see Decide on project discontinuation).

HERMES-specific

At the end of the current project phase, the phase report is approved and a decision is made on the conclusion of the phase. The sponsor then decides on the release of the next phase.

Before phase release, the phase report and the project management plan are compared with the overarching strategies and objectives of the core organization. New findings are taken into account.

Adjustments to the project management plan and project organization are decided and put into effect.

If the project has specific controlling and QA/risk management bodies, they prepare a report for the project sponsor.

Basis/prerequisites

- Project management plan
- Project status report
- Phase report

Activities

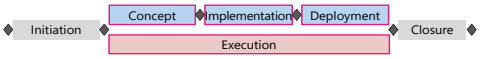
- Add further release criteria to the phase release checklist.
- Critically review objectives, feasibility, and benefits of the envisaged solution based on new findings and align with the core organization's objectives.

- Check whether overarching strategies, standards, and requirements have been adhered to and whether confirmations from the competent bodies are available.
- Ensure that the necessary resources (human, financial, infrastructure, knowledge and experience) are available in a timely and sufficient manner for the remainder of the project.
- Coordinate the decision in the core organization.
- Review and approve or reject phase report, project management plan, and phase-specific outcomes.
- Make formal decision on phase release or reject outcomes.
- If the decision is positive:
  - Release resources for the next project phase.
  - Inform those affected about the decision.
- If the set objectives cannot be achieved:
  - Either determine corrective measures, or
  - Decide on project discontinuation and request termination of the project.

Outcomes

- Phase release checklist
- QA and risk report
- Phase release milestone
- List of steering project decisions

5.4.1.6 Decide on project discontinuation



Purpose

The decision on project discontinuation is made before the set objectives have been achieved. The project organization is dissolved and the project is terminated in an orderly manner.

Basic idea

Project discontinuation is an unplanned step that can at most be foreseen as a possible action when, for example, a pilot project, a research project, or a project under aggravated critical circumstances is undertaken.

The generally unpopular step of a project discontinuation lies entirely within the competence and responsibility of the project sponsor. The termination should be as smooth as possible and without "collateral damage". The dissolution of the project organization is performed analogously to a project closure. The project participants are officially released from their project responsibilities.

Document storage is purged and the existing project documentation is transferred to the core organization. The reasons for project discontinuation are compiled and documented. Any open, relevant pending items and unresolved points are transferred to the responsible persons in the core organization. Any legal aspects arising from unfulfilled contracts are transferred to the legal department of the core organization.

HERMES-specific

A project discontinuation is possible only within the scope of solution development, i.e. after the decision on execution release and before the decision on closure phase release. It constitutes a premature, unplanned, possibly also abrupt project closure with the project closure milestone. The decision is made by the sponsor.

Termination of the project during the initiation phase does not constitute actual project discontinuation, because initiation serves as a structured orientation for a focused project, and any decision not to release execution followed by subsequent termination of the project is one of the possible steps anticipated in advance. This also applies to termination of the project in the earlier initiation phase. Formal termination of the project is not provided for; nevertheless, some activities of this task can support the termination if needed.

It should be ensured that the value already added can be preserved, thus limiting the damage due to project discontinuation.

Since the prepare project closure task cannot be performed in the event of project discontinuation, the lessons learned and the final project evaluation including the discontinuation notice must also be prepared before the decision is made.

The project manager's final project evaluation is reviewed and approved or rejected by project steering. The sponsor forwards important lessons learned from the project to the relevant bodies.

The project sponsor ensures that the orderly project discontinuation requirements of the controlling and compliance body as well as governance are met.

A decision is made

- that the project is discontinued.

If the project has specific controlling and QA/risk management bodies, they prepare a final report.

All members of the project team, all affected stakeholders, as well as all internal bodies and external service providers involved in the project are informed.

Basis/prerequisites

- Project management plan
- Lessons learned

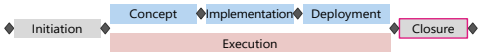
Activities

- Add further criteria to the project discontinuation checklist.
- Purge document storage.
- Secure value already created, if possible.
- Check work in progress to determine whether it should be discontinued immediately or better continued to the finished outcomes.
- Ensure that the closure work has been completed; carry out or commission corresponding tests.
- Return unrequired resources (infrastructure, etc.) to the core organization.
- Revoke access rights granted specifically for the project.
- Finalize expense recording systems, project accounts, reporting, etc.
- Transfer pending items arising from the project to those responsible in the core organization.
- Communicate the decision to the controlling and compliance bodies as well as to the project team.
- Have projects deleted from any portfolio.
- Hold final project committee meeting.
- Make formal decision on project discontinuation.
- Dissolve project organization.
- Inform those affected and interested about the decision.
- Add experience from the project discontinuation to lessons learned and pass them on the relevant bodies.
- Legal aspects such as disputes regarding agreements, rescission, shared liability, fees, claims for damages, etc. must be forwarded to the legal department of the core organization in a separate order, together with the relevant documentation, or the lawyers are involved directly.

Outcomes

- Project discontinuation checklist
- Lessons learned
- Final project evaluation
- Project closure milestone
- List of steering project decisions

5.4.1.7 Decide on project closure



Purpose

With the decision on project closure, the project organization is dissolved and the project is ended.

Basic idea

The last step of project closure is the formal dissolution of the project organization. This comes under the authority and responsibility of the project sponsor. The project participants are officially relieved of their project responsibilities.

HERMES-specific

The decision on project closure is the last regular and formal decision in the project.

The project sponsor checks that all outcomes are formally documented correctly and made available for further use and for the application organization in an orderly manner. The project sponsor ensures that the project closure requirements of the controlling and compliance body as well as governance are met. The project sponsor reviews and either approves or rejects the project management's final project evaluation. The project sponsor passes on important lessons learned from the project to the relevant parties.

The project sponsor also checks to what extent the project organization to be dissolved could be used as an application organization during the service life of the solution system and, if so, whether this is possible or feasible within the framework of the core organization.

The project sponsor decides

- whether the project will be closed or whether further documentation of the outcomes will need to be developed prior to project closure; and
- whether or not the dissolved project organization will be partially or fully transferred to the successor organization under a different name.

If the project has specific controlling and QA/risk management bodies, they prepare a final report.

Basis/prerequisites

- Project management plan
- Test infrastructure transferred
- Legacy system removed
- Lessons learned
- Final project evaluation

Activities

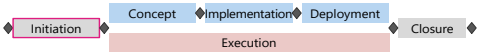
- Add further criteria to the project closure checklist.
- Ensure that the closure work has been completed. Carry out or commission corresponding tests.
- Provide decision-makers with the final project evaluation and further information for decision-making.
- Coordinate decision with the controlling and compliance bodies.
- Hold final project committee meeting.
- Approve (or reject) the final project evaluation.

- Make formal decision on project closure.
- If the decision is positive:
  - Dissolve project organization.
  - Inform those affected and interested about the decision.
  - Pass on lessons learned from the project to relevant bodies.

Outcomes

- Project closure checklist
- QA and risk report
- Project closure milestone
- List of steering project decisions

5.4.1.8 Decide on project initiation release



Purpose

With the decision on project initiation release, the project is established and it starts with the initiation phase.

Basic idea

With the project initiation release, the project formally begins. An initial clarification is undertaken whether the envisaged solution will be pursued.

In the order placement, the points are clarified that are important for successful project initiation.

HERMES-specific

The decision on project initiation release is the first regular decision in the project, with which the project is formally established. The decision is made solely by the project sponsor on behalf of the core organization, possibly within the framework of an existing portfolio. The decision is made that the envisaged project should be checked for project suitability and worthiness as part of the initiation phase.

The project sponsor assigns a project manager to draw up the project initiation order, which is still outside the possible future project structure. The project manager does not necessarily have to take over project management for the following phases. As long as the decision on project initiation release has not been made, the project is still non-existent.

The project organization for the initiation phase, consisting at least of the project sponsor and the project manager/user representative (in the same person) is put into effect. The resources required for initiation are released.

Basis/prerequisites

- Project initiation release checklist
- Project initiation order

Activities

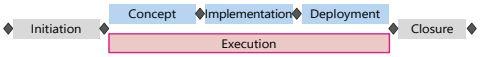
- Outside the possible future project structure:
  - Add further criteria to the project initiation release checklist.
  - The project sponsor checks the project initiation order with the project initiation release checklist.
  - Ensure resources for the initiation phase.
- As part of the project:
  - Make formal decision on project initiation release.
  - Sign project initiation order.

- Release resources for the initiation phase.
- Inform the core organization and enter projects in any existing portfolio.

Outcomes

- Project initiation release checklist
- Project initiation order
- Project initiation release milestone
- List of steering project decisions

5.4.1.9 Decide on release



Purpose

In the agile approach, the decision on release creates the prerequisite for the work in the next release.

Basic idea

The outcomes of the release are reviewed and accepted or rejected. The current release is completed and the next one is released. If the set goals cannot be achieved, the project is terminated (see Decide on project discontinuation).

HERMES-specific

Whether or not the optional decision on release is mandatory for a given project depends on a note to that effect in the project management plan.

At the end of the current release, the release report is accepted and a decision is made on closure of the release. The sponsor then decides on the next release.

Prior to release, the release report and project management plan are coordinated with the overarching strategies and objectives of the core organization or any overarching program. New findings are taken into account.

If specific controlling and QA/risk management bodies have been commissioned, they prepare a report for the sponsor.

Basis/prerequisites

- Project management plan
- Project status report
- Release report

Activities

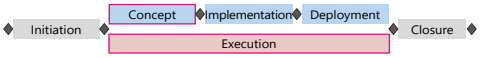
- Add further release criteria to release checklist.
- Critically review objectives, feasibility, and benefits of the envisaged solution based on new findings and align with the core organization's objectives.
- Check whether overarching strategies, standards, and requirements have been adhered to and whether confirmations from the competent bodies are available.
- Supply decision-makers with the release report, project management plan, and other decision-making documents.
- Ensure that the necessary resources (human, financial, infrastructure, knowledge and experience) are available in a timely and sufficient manner for the remainder of the project.
- Coordinate the decision in the core organization.
- Review and approve or reject release report, project management plan, and release-specific outcomes.
- Make formal decision on release or reject outcomes.

- If the decision is positive:
  - Inform those affected about the decision.
- If the set objectives cannot be achieved:
  - Either determine corrective measures, or
  - Decide on project discontinuation and request termination of the project.

Outcomes

- Release checklist
- QA and risk report
- Release milestone
- List of steering project decisions

5.4.1.10 Decide on contract award



Purpose

The decision on contract award creates the prerequisite for publication of the award and preparation of the contract with the successful tenderer.

Basic idea

After the decision on contract award, the tenderers are informed about the outcome of the evaluation. The award is published.

HERMES-specific

The decision on contract award is made by the sponsor.

The activities are based on the procurement plan chapter in the project management plan. Any requirements of the core organization must be taken into account.

Basis/prerequisites

- Evaluation report
- Tender report
- Project management plan

Activities

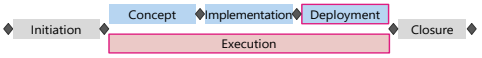
- Supplement contract award checklist.
- Critically review objectives, feasibility, and benefits of the envisaged solution based on new findings and align with the core organization's objectives.
- Provide decision-makers with the evaluation report.
- Coordinate the decision with the core organization and the controlling and compliance bodies responsible for procurement.
- Approve or reject the evaluation report.
- If the evaluation report is approved:
  - Make formal decision on contract award;
  - Publish award, e.g. at www.simap.ch;
  - Send rejection notice to unsuccessful tenderers;
  - If necessary, conduct debriefings;
  - Possibly further activities according to specific requirements of the core organization.

Outcomes

- Contract award checklist
- Publication
- Contract award milestone
- List of steering project decisions

5.4.2 Decision-making tasks of management

5.4.2.1 Decide on acceptance of migration



Purpose

The decision on acceptance of migration shows that the migration was successful; it is one of the prerequisites for the launch of operation.

Basic idea

If the quality criteria for the migration are met, utilization of the new system is released to the users (decision on launch of operation).

HERMES-specific

The decision on acceptance of migration requires the decision on preliminary acceptance and is made before the decision on launch of operation.

Basis/prerequisites

- Preliminary acceptance milestone
- Migration carried out

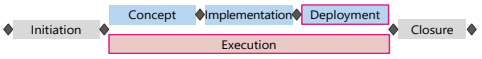
Activities

- Add further criteria to the migration acceptance checklist.
- Check the achievement of the quality criteria.
- Accept or reject migration.
- If the decision is positive:
  - Make formal decision on acceptance of migration;
  - Formally complete migration and document it in a comprehensible manner;
  - Release system.

Outcomes

- Migration acceptance checklist
- Acceptance report
- Migration acceptance milestone
- List of management project decisions

5.4.2.2 Decide on acceptance



Purpose

The decision on acceptance concludes the provision of goods or services within the scope of the solution development and creates the basis for the decision on closure phase release. The solution, including the required documentation, is definitively transferred to the application organization and, where applicable, to the operating organization.

Basic idea

Acceptance takes place between the project sponsor and the developer or supplier and operator of the solution; in the case of a product, the operator is generally the user. Acceptance regulates how outstanding obligations are to be handled and how the provision of goods or services is to be completed.

HERMES-specific

Acceptance takes place after operational activation and after the solution or part of the solution has been operational for an initial period during which utilization can take place – e.g. according to the product concept – and any defects are identified.

Acceptance is planned by all those involved in a timely manner.

With the acceptance of the solution, the development/parameterization of the system, the development/adaptation of the service/product, or the implementation of the organization is definitively completed and the provision of goods or services within the scope of solution development is concluded.

If necessary, separate acceptance processes (between developer and operator, between developer and user, etc.) are carried out.

Basis/prerequisites

- Organization activated
- Operation activated
- Product documentation
- User manual

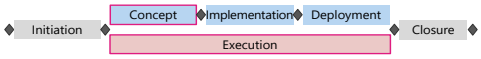
Activities

- Determine the organization and general conditions for acceptance.
- Add further criteria to the acceptance checklist.
- Prepare acceptance in technical and organizational terms.
- Perform acceptance process and record findings.
- Make formal decision on acceptance and next steps.
- Analyze and classify findings (e.g. by defect category, new requirements).

Outcomes

- Acceptance checklist
- Acceptance report
- Acceptance milestone
- List of management project decisions

5.4.2.3 Decide on ISDP concept



Purpose

The decision on ISDP concept confirms that all IDSP-relevant points can be identified and implemented.

Basic idea

The decision on ISDP concept confirms compliance with the requirements of the core organization.

HERMES-specific

Before the decision is made, the ISDP concept is checked by the responsible controlling and compliance bodies.

In the case of procurement (i.e. not customized development) of a system, the ISDP concept is reviewed after evaluation. This is because the tender chosen has a significant impact on the ISDP concept.

Basis/prerequisites

- ISDP concept
- Project management plan

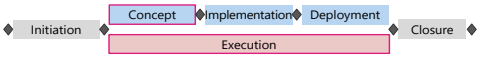
Activities

- Add further criteria to the ISDP concept checklist.
- Have the ISDP concept checked by the competent controlling and compliance body and get feedback.
- Have the project sponsor acknowledge protection measures and residual risks.
- Make formal decision on ISDP concept.

Outcomes

- ISDP concept checklist
- ISDP concept milestone
- List of management project decisions

5.4.2.4 Decide on solution architecture



Purpose

The decision on solution architecture forms the prerequisite for the development or parameterization of systems.

Basic idea

The decision on solution architecture confirms conformity with the IT architecture of the core organization.

HERMES-specific

Before the decision is made, the solution architecture is checked by the responsible controlling and compliance bodies.

In the case of procurement (i.e., adaptation) of a system, the solution architecture is reviewed before and after evaluation. This is because the tender chosen may result in an adaptation of the solution architecture.

Basis/prerequisites

- Solution architecture

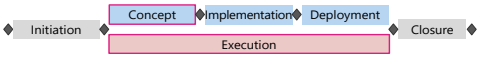
Activities

- Add further criteria to the solution architecture checklist.
- Have the solution architecture checked by the competent controlling and compliance body and get feedback.
- Make formal decision on solution architecture.

Outcomes

- Solution architecture checklist
- Solution architecture milestone
- List of management project decisions

5.4.2.5 Decide on product concept



Purpose

The decision on product concept forms the prerequisite for the development or adaptation of products or services.

Basic idea

The decision on product concept confirms conformity of the envisaged solution with the requirements and needs of the core organization.

HERMES-specific

Before the decision is made, the product concept is checked by the responsible controlling and compliance bodies.

In the case of procurement (i.e., adaptation) of a product or service, the product concept is reviewed before and after evaluation. This is because the tender chosen may result in an adaptation of the product.

Basis/prerequisites

- Product concept

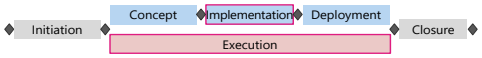
Activities

- Add further criteria to the product concept checklist.
- Have the product concept checked by the competent controlling and compliance body and get feedback.
- Make formal decision on product concept.

Outcomes

- Product concept checklist
- Product concept milestone
- List of management project decisions

5.4.2.6 Decide on preliminary acceptance



Purpose

Preliminary acceptance creates the basis for the execution of deployment measures as well as the subsequent launch of operation with acceptable risks.

Basic idea

Quality assurance measures such as tests and inspections are carried out in advance for preliminary acceptance. Preliminary acceptance gives users, developers, and operators the assurance that the transfer of the solution to the new state will most likely be successful.

HERMES-specific

Preliminary acceptance is planned early by all those involved. The acceptance criteria are agreed jointly in accordance with the deployment concept.

Basis/prerequisites

- Deployment measures realized
- Deployment concept
- Business model description
- Process description
- Organization description
- Organization implemented
- ISDP concept
- ISDP measures realized
- System integrated
- Test report

Activities

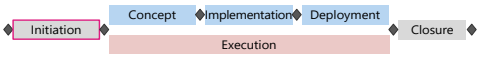
- Determine the organization and general conditions for preliminary acceptance.
- Check realized deployment measures and emergency organization.
- Add further criteria to the preliminary acceptance checklist.

- Prepare preliminary acceptance in technical and organizational terms.
- Perform preliminary acceptance and record findings.
- Analyze and classify findings (e.g. by defect category, new requirements).
- Make formal decision on preliminary acceptance.

Outcomes

- Preliminary acceptance checklist
- Acceptance report
- Preliminary acceptance milestone
- List of management project decisions

5.4.2.7 Decide on next steps



Purpose

The decision on next steps clarifies the choice of solution option, scenario, approach (whether traditional or agile), and project value. It forms the prerequisite for drawing up the project management plan and subsequently the execution order.

Basic idea

The decision on next steps sets the direction for how the solution development is executed, for future operation, and for the long-term benefit that can be achieved. If it becomes apparent that the expected benefit cannot be achieved, work is stopped at that time and the findings are recorded for those interested.

HERMES-specific

The decision on next steps is made only if it makes sense to continue the project. If so, care is taken when choosing the next steps to ensure that a sustainable solution option is chosen. Accordingly, the proposed option is reviewed again from that perspective. To this end, the various stakeholders are integrated into the decision-making process. The project manager decides on a solution option after consulting the project sponsor and other stakeholders. The decision is based on the option descriptions and evaluations developed in the study as well as the recommendations of those involved in the study and other stakeholders

Secondly, it is decided how the solution is to be developed. Here, a choice is made between a traditional or agile approach to solution development. This choice must be made for each project, since each project has different characteristics. The approach cannot be specified in the program or portfolio, and the choice must accordingly be comprehensible.

Thirdly, a suitable scenario is selected (see Section 2 Scenarios), and the project value is determined as needed.

The study is supplemented according to the decisions taken.

If, when deciding on next steps, the conclusion is reached that continuing the project makes little sense, the project is concluded.

Basis/prerequisites

- Study
- Procurement analysis

Activities

- Add further criteria to the next steps checklist.
- Check whether sustainability aspects are taken into account.
- Check whether the directions of the study and of the procurement analysis are congruent.

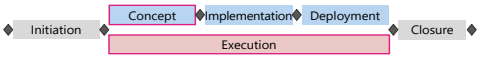
- Obtain recommendations based on the option description and evaluation in the study.
- Examine and decide on the appropriate approach for the preferred solution option.
- Coordinate the decision with the project sponsor and stakeholders.
- Make formal decision on next steps.

Outcomes

- Next steps checklist
- Study
- Next steps milestone
- List of management project decisions

5.4.3 Other tasks

5.4.3.1 Decommission the legacy system



Purpose

After the productive deployment of the new or the further developed system, the legacy system or the old system version is decommissioned.

Basic idea

The legacy system or the old version of the further developed system is decommissioned in such a way that the data security and data protection requirements are met and the specifications of controlling and compliance bodies are complied with.

HERMES-specific

The decommissioning of the legacy system or the old version of the further developed system is based on the procedure defined in the migration concept.

The data archiving requirements that may have been taken into account in the migration concept and those relating to data security and data protection (according to the solution requirements) are implemented.

Basis/prerequisites

- Migration concept
- Organizational requirements
- Solution requirements
- Acceptance milestone

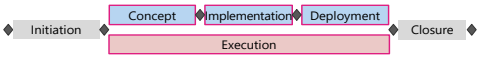
Activities

- Decommission the legacy system or old system version.
- Treat legacy data according to migration concept.
- Dismantle and dispose of the legacy system or remove the old system version (software).
- Remove infrastructure that is no longer needed, reverse structural, technical, or other measures as determined by the core organization, suspend or rescind ISDP measures and provisions.

Outcomes

- Legacy system removed

5.4.3.2 Manage changes



Purpose

In traditional solution development, change management ensures that newly identified or changed requirements are identified, assessed, and decided upon.

It further ensures that changes to all projects, regardless of approach, are documented.

Basic idea

Change management makes it possible to maintain control over development of the solution in the event of changes to objectives, scope, requirements, framework conditions, etc., and to recognize the impact on subsequent use and operation. The project manager ensures that the change process is followed and documented consistently.

In traditional solution development, execution planning and outcomes are adjusted based on approved changes.

In agile solution development, only the changes are documented in the change status list.

There is no formal change management in the initiation phase because the organization and solution requirements and the solution objectives have not yet been defined. If there are changes in relation to the project initiation order, for example, the project sponsor decides on these changes.

HERMES-specific

The changes are managed within the scope of solution development according to the project management plan.

Under the traditional approach, approved changes are updated in the solution requirements.

Under the agile approach, documentation of the most significant changes is drawn up based on the updated solution requirements.

The change status list keeps track of all the changes dealt with and provides an overview of their status.

Basis/prerequisites

(T=traditional, A=agile)

	T	A
• Solution requirements	T	A
• Change request	T	

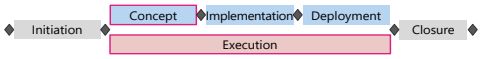
Activities

	T	A
• Enter and update change requests in traditional solution development and the significant changes in agile solution development in the change status list.	T	A
• Analyze and approve/reject change requests.	T	
• Plan, implement and review approved changes.	T	
• Adjust project management plan based on the changes, as needed.	T	A

Outcomes

	T	A
• Change request	T	
• Change status list	T	A
• Project management plan	T	A
• Solution requirements	T	

5.4.3.3 Evaluate tenders



Purpose

The available tenders are recorded in the report and evaluated according to the evaluation criteria.

Basic idea

After the deadline has expired, the tenders are opened and tender report is created. The tenders are then evaluated. The evaluation is based on the list of criteria completed by the tenderer and the information provided in the tender.

HERMES-specific

The activities are based on the procurement plan chapter in the project management plan.

The receipt and opening of tenders are recorded in the tender report. If tenderer presentations are made, all procurement law and evaluation-related points are recorded in the tender report and, if necessary, subsequent tenders are obtained.

If tenderer presentations are made, all procurement law and evaluation-related points are recorded in the tender report.

The evaluation report contains the consolidated results of the evaluation and the proposal issued by those in charge of the evaluation.

Basis/prerequisites

- Offer
- Project management plan
- Tender documentation
- Procurement analysis

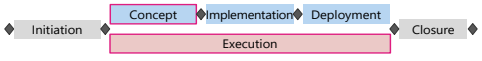
Activities

- Open tenders, check them formally (on time, complete), and create report.
- Evaluate tenders in terms of content.
- Carry out procurement planning activities (e.g. organizing and recording tenderer presentations, conducting and recording negotiations, etc.).
- Draw up an evaluation report and prepare a proposal.
- Coordinate the evaluation report with the controlling and compliance bodies responsible for procurement.

Outcomes

- Evaluation report
- Tender report

5.4.3.4 Issue call for tenders



Purpose

The tender is conducted according to a specific, transparent procedure.

Basic idea

With the publication of the call for tenders, an unrestricted group of tenderers is informed and invited to apply. As needed, any further tender documents are made available, questions are answered, and incoming tenders are collected.

HERMES-specific

The activities are based on the procurement plan chapter in the project management plan.

The call for tenders is published on the simap platform (www.simap.ch). Replies to questions from tenderers are recorded. They are made available to all interested parties in a neutralized form and are part of the tender procedure.

Basis/prerequisites

- Tender milestone
- Project management plan
- Tender documentation

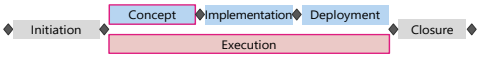
Activities

- Publish tender documentation or invite interested parties.
- Carry out procurement planning activities (e.g. answer tenderers' questions).

Outcomes

- Offer
- Tender documentation

5.4.3.5 Prepare call for tenders



Purpose

The preparation of the tender documentation makes it possible to issue a formally correct call for tenders, to obtain comparable offers, and to perform a comprehensible and comparable evaluation of the offers.

Basic idea

The tender documentation is prepared in such detail that the offers can be evaluated in a comprehensible manner. For this purpose, the evaluation criteria questions are set out in the list of criteria.

Specifications are drawn up in order to compare the offers received. The specifications describe the requirements for the items to be procured (goods, services, etc.) and the procurement procedure. By drawing up the specifications, the customer becomes aware of what is really needed, and the tenderer in turn recognizes what the customer wants. The specifications also force tenderers to comment on issues they may prefer to avoid and to submit the offer in the required structure. This creates a clear, uniform reference basis.

The draft contract forms the basis for concluding the contract and is part of the tender documentation.

HERMES-specific

The tender documentation consists of various documents, based on and guided by the procurement analysis. The documentation includes the specifications, the list of criteria, the draft contract, the tender notice, and other documents. The list of criteria must include all eligibility criteria, technical specifications, award criteria, and the evaluation model to be applied.

In the case of a public tender, the tender documentation must meet the formal and procurement law requirements (according to the procurement analysis).

The outcomes produced in other modules, such as solution and organizational requirements, concepts, etc., are an integral part of the specifications, where relevant and available.

Basis/prerequisites

- Procurement analysis
- Project management plan
- Protection needs analysis
- Study
- Organizational requirements
- Solution requirements

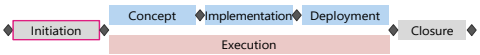
Activities

- Produce tender documentation with specifications, list of criteria, draft contract, tender notice, and other documents.
- Coordinate the tender documentation with the controlling and compliance bodies and/or have the latter check them.

Outcomes

- Tender documentation

5.4.3.6 Prepare procurement analysis



Purpose

Preparation of the procurement analysis is used to compile all procurement-relevant information and requirements, prepare the tendering process, and establish the basis for selecting the type of procedure. It is ensured that the procurement is coordinated with the execution planning.

Basic idea

The procurement analysis ensures timely and comprehensive information on what is to be procured by whom, how the market presents itself, which other parameters must be considered, whether any requirements under procurement law must be fulfilled, and which procurement procedure is to be used. The procurement analysis is coordinated with the controlling and compliance bodies for procurement.

Tendering, evaluation, and procurement are prepared from a technical and legal perspective, and the rough financial framework is defined.

In the procurement analysis, fundamental procedural issues are clarified, such as:

- Is a call for tenders justified, what is the specific need for action?
- What exactly is to be procured, and what requirements are there in terms of quantity and quality?
- What is the current market situation, what is the general offer?
- What type of market is it?
  How many tenderers are expected?
  Which tenderers and suppliers may be considered?
  Do contracts already exist and for how long will they remain valid?
  What are the requirements for the tenderers?
- Who is responsible for what in the project?
  Who prepares the tender documentation, who evaluates and assesses, who prepares the evaluation report, etc.?
  How does the decision-making process work?

- What is the estimated cost of what is to be procured?
- When should procurement take place?
  What is the planned timeframe/duration of use?
  How is timing coordinated with the project?
  What does the specific procurement plan look like?
- Has funding been secured for the entire project, including consequential costs?
- How is the entire procurement process structured in terms of standards and contract forms?
- What tender procedure is to be used?
- How will questions about the tender documentation be answered?
  Are vendor presentations envisaged?

The procurement analysis takes account of internal and statutory requirements, processes, and deadlines.

HERMES-specific

The preparation of the tendering procedure should begin as early as possible, i.e. already in the initiation phase. Under no circumstances should the project be delayed by the clarifications and coordination necessary for a call for tenders.

If, in the course of preparing the study, it is recognized that procurement of the solution is envisaged in one or more of the options, a procurement analysis must be prepared. Where a procurement analysis is prepared, it must be coordinated with the study. This applies in particular to the procurement plan.

The call for tenders itself takes place only after the execution release.

Basis/prerequisites

- Project initiation release milestone
- Study

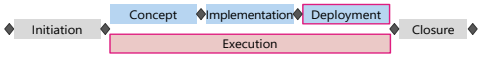
Activities

- Conduct needs and market analysis and gather information on possible solutions (products, services, etc.).
- Initiate kick-off meeting.
- Define the type of procedure based on the characteristics of the procurement, the core organization's requirements, and the statutory basis.
- Flesh out tasks, activities, and outcomes and take account of the core organization's requirements and the statutory basis.
- Create the procurement plan from a scheduling and financial point of view and, to the extent already possible, coordinate it with the planning from the study.
- Formulate requirements for the project organization.
- Plan human and financial resources for procurement.
- Coordinate procurement analysis with the controlling and compliance bodies responsible for procurement.

Outcomes

- Procurement analysis

5.4.3.7 Activate operation



Purpose

Activation of the new operating organization releases the system for initial utilization and later acceptance.

Basic idea

The activated system, tools needed for operation, and operating processes are put into effect so that the user can use the system productively.

HERMES-specific

Operation is activated based on the decision to launch operation. Activation and subsequent utilization of the system by the users may be a one-off occurrence; in agile solution development, however, this may also occur several times. In such cases, further parts of the solution always build on each other and come into play. The operator ensures operation according to the SLA.

Users and operators are actively supported by the project in the initial period up to the acceptance of the system.

Basis/prerequisites

- Organization activated
- System activated
- Operating manual

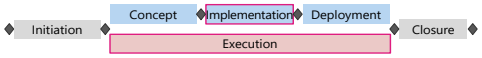
Activities

- Activate operation.
- Support the project organization during the initial utilization period.
- Monitor how systems and processes are functioning and check compliance with agreements.
- Analyze problems that arise and take or propose measures.
- If necessary, analyze and implement stabilization measures.
- Update the operating manual with the lessons learned.

Outcomes

- Operating manual
- Operation activated

5.4.3.8 Realize operation



Purpose

Based on the operating concept, the operating infrastructure and organization are realized to a degree that enables the system to be integrated.

Basic idea

Based on the operating concept, the operating infrastructure, the operating organization, and the tools required for operation are realized.

HERMES-specific

All components and measures defined in the operating concept are implemented and checked with suitable quality assurance measures. The operator tests the operating infrastructure to such an extent that integration can take place. The operator creates an initial version of the operating manual.

Basis/prerequisites

- Operating concept
- Service level agreement

Activities

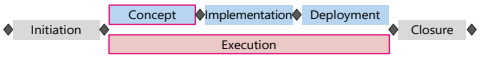
- Realize operating infrastructure and have tests carried out by the operator.
- Create operating manual.

- Realize tools in accordance with the operating concept.
- Realize specific security measures.
- Realize operating organization.
- Prepare handover from the project organization to the operating organization.
- Testing and acceptance by the operator's competent bodies.

Outcomes

- Operating infrastructure realized
- Operating manual
- Operating organization realized

5.4.3.9 Design operating concept



Purpose

The future operating infrastructure and operating organization are described, and the procedure for their realization is defined.

Basic idea

The operating concept shows how the requirements affecting operation are met at the organizational and technical level.

HERMES-specific

Based on the solution requirements and the solution architecture, the operating organization with the organizational structure and operating processes, the operating infrastructure, and the tools for operating the system are defined and set out in the operating concept.

The operator's specifications are incorporated into the operating concept.

The drawing up of the service level agreement is related to the agree on and steer goods/services task. It concludes the SLA and steers the goods/services. However, the steering of goods/services extends beyond the duration of the project and must be continued by the subsequent application organization.

Basis/prerequisites

- Solution requirements
- Organizational requirements
- Solution architecture milestone

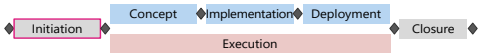
Activities

- Analyze the operating requirements defined in the solution requirements.
- Determine the need for operating infrastructure (rooms, hardware, software, means of communication, etc.) and tools for operating the system.
- Analyze the security requirements.
- Design an operating concept.
- Align with the operator's specifications.
- Determine the operating costs.
- If operations are outsourced, obtain offers from external operators in advance.
- Draft the SLAs.
- Coordinate SLAs with the controlling and compliance bodies or have the latter check and finalize them.
- Coordinate the operating concept with the stakeholders.

Outcomes

- Operating concept
- Service level agreement

5.4.3.10 Draw up project execution order



Purpose

Drawing up the execution order creates the prerequisites for deciding on execution release and thus for continuing the project with solution development.

Basic idea

Drawing up the execution order is based on the study, comprehensible execution planning in the project management plan, the legal basis analysis, the protection needs analysis, where applicable also the procurement analysis and, depending on the solution-specific characteristics, the stakeholder list.

HERMES-specific

The outcomes developed in the initiation phase form the basis for drawing up the execution order. The relevant information from the study and the other outcomes is further fleshed out and set out in the execution order. The focus is particularly on the objectives, the execution specifications, the risks, and the planning. Liabilities are drawn up and agreed between the project sponsor and the project manager. The execution order is coordinated with the requirements of the core organization.

In addition to the project management plan, the execution order is the prerequisite for steering and control of the project by the project sponsor.

Basis/prerequisites

- Study
- Project management plan
- Legal basis analysis
- Protection needs analysis
- Procurement analysis
- Stakeholder list
- Next steps milestone

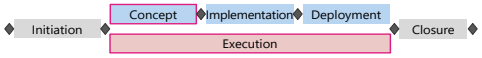
Activities

- Incorporate relevant outcomes from the study, the procurement analysis, and the project management plan into the execution order.
- Verify the execution order with the project sponsor, stakeholders, project participants, and controlling and compliance bodies.

Outcomes

- Execution order

5.4.3.11 Design deployment concept



Purpose

With the design of the deployment concept, all relevant aspects with regard to subsequent deployment are compiled and conceptualized to such an extent that they can subsequently be realized and executed.

Basic idea

The deployment concept determines how deployment is to take place:

- Deployment procedure:
  Decide between deployment on a specific date or phased deployment, and plan accordingly;
- Deployment organization:
  Define deployment support roles;
- Deployment measures:
  Develop training, prepare documents.

HERMES-specific

The deployment concept is designed based on the solution and organizational requirements as well as the concepts of various modules.

Designing the concept also includes the analysis and planning of the measures of organizational change management to support the transition to the new state, the development of the training concept, the rules governing the procedure for acceptance including the acceptance criteria, and the definition of the release criteria for the decision on launch of operation.

If a solution is procured, the developer draws on experience from similar projects when designing the deployment concept. In this case, the deployment concept is designed after procurement, and the acceptance criteria are defined between the organizations involved in the project at the time the contract is signed.

When replacing an existing system, the content of the deployment concept is related to the migration concept. They can influence each other.

Basis/prerequisites

- Solution requirements
- Organizational requirements
- Solution architecture
- Product concept
- Organization concept
- ISDP concept
- Project management plan
- Solution architecture milestone

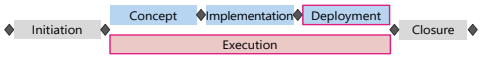
Activities

- Design a deployment concept taking account of the deployment risks.
- Integrate deployment planning into the project management plan.
- Identify user and operator training needs and record training measures in the deployment concept.
- Coordinate the deployment concept with the stakeholders.
- Plan acceptances and regulate them together with the acceptance criteria.
- Determine release criteria for the launch of operation.

Outcomes

- Deployment concept
- Project management plan

5.4.3.12 Execute deployment measures



Purpose

Carrying out the realized and prepared deployment measures creates one of the bases for the launch of operation and subsequent use of the system.

Basic idea

The realized deployment measures are carried out. This includes user training, for example. The execution of the deployment measures can extend over the entire duration of the deployment until the decision on launch of operation.

HERMES-specific

The realized deployment measures, which have been verified as part of the decision on preliminary acceptance, are carried out based on the deployment planning developed in the deployment concept. In agile solution development, this may occur several times.

Basis/prerequisites

- Deployment measures realized
- Deployment concept
- Preliminary acceptance milestone

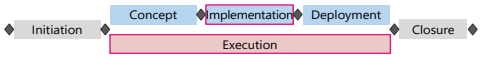
Activities

- Carry out the realized deployment measures.
- Check the effectiveness of the deployment measures.

Outcomes

- Deployment measures carried out

5.4.3.13 Realize deployment measures



Purpose

The deployment measures are realized based on the deployment concept.

Basic idea

The deployment measures and the deployment organization are realized.

- The development of training is an example of the realization of a deployment measure; the execution of the training takes place during the execute deployment measures task.
- The training of superusers who support deployment is an example of the realization of the deployment organization; they do not become active until deployment, however.

HERMES-specific

The emergency measures and the emergency organization defined in the deployment concept are realized. In agile solution development, realization may occur several times.

The realized deployment measures and emergency organization are checked in the decide on preliminary acceptance task.

Basis/prerequisites

- Deployment concept

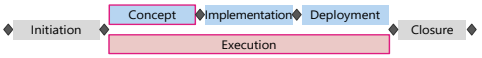
Activities

- Realize deployment measures and deployment organization (including emergency measures and emergency organization).

Outcomes

- Deployment measures realized

5.4.3.14 Design integration concept



Purpose

With the design of the integration concept, all relevant aspects with regard to subsequent integration of the system into the operating infrastructure are compiled and conceptualized to such an extent that the system integration can be prepared.

Basic idea

Integration must be designed so that the system can be integrated into the target environment.

HERMES-specific

The integration defined in the system architecture is further specified. The interfaces with peripheral systems and the transfer from one operating environment (e.g. development, test, integration, training) to another are specified.

System integration is planned and recorded in the integration concept.

If a system is procured, the final integration concept design takes place after the award of the contract.

Basis/prerequisites

- Solution requirements
- Solution architecture

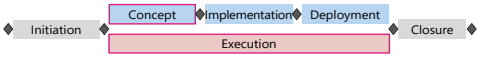
Activities

- Define system integration into the peripheral systems, create specifications for the interfaces and record them in the integration concept.
- Determine integration into the operating platforms.
- Design the transfer of software, data, etc. between operating platforms.
- Create an integration plan and record it in the integration concept.
- Verify the integration concept with prototypes (test installations) if necessary.
- Coordinate the integration concept with stakeholders.

Outcomes

- Integration concept

5.4.3.15 Design ISDP concept



Purpose

The ISDP concept creates the prerequisites for realizing and transferring the requirements for information security and data protection.

Basic idea

The ISDP concept completes the information security and data protection requirements. It includes a detailed and in-depth risk analysis. The protection measures are defined.

HERMES-specific

The IDSP concept is based, firstly, on the study and protection needs analysis outcomes developed in the initiation phase and, secondly, on the organizational and solution requirements outcomes. It must be handled in accordance with the requirements of the core organization concerning information protection.

Basis/prerequisites

- Protection needs analysis
- Study
- Solution requirements
- Organizational requirements

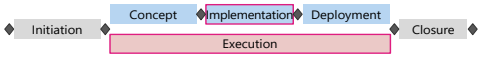
Activities

- Create a system description with the security-related components.
- Create a risk analysis, show how risks are addressed with overarching concepts, and identify residual risks.
- Create the emergency concept and processing regulations, and record them in the ISDP concept.
- Coordinate the ISDP concept with the controlling and compliance bodies.

Outcomes

- ISDP concept

5.4.3.16 Implement ISDP concept



Purpose

The protection measures defined in the ISDP concept are implemented. The implemented protection measures are a prerequisite for preliminary acceptance.

Basic idea

The implementation of the ISDP concept creates the prerequisites for the testing of the IT system and for its operation.

HERMES-specific

The protection measures defined in the ISDP concept are implemented in the corresponding modules, for example in the organization module and the IT system module. In agile solution development, implementation may occur several times.

In the deployment organization module, the outcomes of the implemented technical protection measures are checked before preliminary acceptance with the decide on preliminary acceptance task.

Basis/prerequisites

- ISDP concept
- ISDP concept milestone

Activities

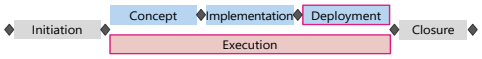
- Accompany the implementation of the protection measures.
- Document the implementation status in the ISDP concept.

- Update the residual risk assessment in the ISDP concept.
- Get approval for the ISDP concept with the residual risks from the project sponsor.

Outcomes

- ISDP measures realized
- ISDP concept

5.4.3.17 Transfer ISDP concept



Purpose

The ISDP concept is updated, checked, and transferred from the project organization to the core organization. This is one of the prerequisites for the decision on launch of operation.

Basic idea

The project sponsor must be able to identify with the updated and checked ISDP concept, approve it and support it in relation to the core organization, as well as accept the residual risks.

HERMES-specific

By approving and transferring the ISDP concept, the project sponsor and the executive board of the core organization accept the residual ISDP risks. In agile solution development, the transfer may occur several times.

With the subsequent decision on launch of operation, the project sponsor thus assumes responsibility for the risks of operation.

Basis/prerequisites

- ISDP measures realized
- ISDP concept

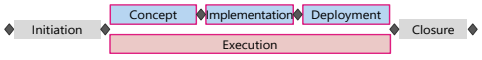
Activities

- Update the implementation status in the ISDP concept.
- Update the residual risk assessment in the ISDP concept.
- Have the ISDP concept checked by the competent controlling and compliance body and get feedback.
- Get approval for the ISDP concept with the residual risks from the project sponsor and the core organization's executive board.

Outcomes

- ISDP concept transferred
- ISDP concept

5.4.3.18 Agree on and steer goods/services



Purpose

The service level agreement creates a clearly regulated relationship between the project and the (internal or external) service providers on the one hand, and between the project organization and the core organization on the other. Deviations during the provision of goods/services are identified and dealt with.

Boundaries:

- If it is determined during the initiation phase that the entire project merely constitutes procurement and that no other project activities are involved, procurement is transferred directly to the purchasing unit of the core organization and the project is terminated. HERMES does not support procurement alone.
- Comprehensive procurement by means of open or selective procedures and public publication (e.g. a public call for tenders) is carried out through the procurement module in the case of product or system adaptation, otherwise outside the project organization directly by the purchasing unit of the core organization.
- An agreement on the acquisition of operation- and maintenance-specific services during the utilization phase of the system between the user and the future operator of the system – the service level agreement (SLA) – is drawn up in the IT operation module.

Basic idea

The project acquires various goods/services internal and external to the organization which must be agreed on and steered. Goods/services acquired by the project include, for example, employee services (human resources), premises, IT resources, training, etc.

The need for goods/services is identified and analyzed and, if necessary, a market survey is carried out. Questions such as the following are clarified:

- Is a call for tenders justified, what is the specific need for action?
- What resources are to be procured, in what numbers and, in the case of human resources, e.g. with what specialist focus?
- What is the current market situation, what is the general offer?
- What type of market is it?
  How many tenderers are expected?
  Which tenderers and suppliers may be considered?
  Do contracts already exist and for how long will they remain valid?
  What are the requirements for the tenderers?
- When should the procurement take place and for what duration of use?
- Has funding been secured (project budget)?

Based on this, quotes are obtained and agreements concluded.

If, however, the needs and market analysis shows that a comprehensive procurement by means of open or selective procedures and public publication is necessary, resource procurement is carried out using the procurement module.

The goods/services are periodically checked for compliance with the planning and agreements.

HERMES-specific

This task deals with the following four cases:

1. Procurement of internal goods/services without cost allocation
2. Procurement of internal goods/services with cost allocation
3. Procurement of external goods/services: negotiated procedure (with one or several offers).
4. Procurement of external goods/services: invitation procedure (with several offers and evaluation report).

The first four cases are dealt with as follows:

- Case 1 and case 2
  The procurement of internal goods/services of the core organization (i.e. without jurisdiction in the event of a dispute) is regulated with project agreements and project SLAs for operation during the project phases.
  The project agreement regulates the goods/services for project execution. The project SLA regulates the operation of the system (e.g. the test system) for operation during the project phases.

- Case 3
  The procurement of external goods/services with a negotiated procedure is regulated by means of quote requests, contracts, and SLAs specific to the service provider.
- Case 4
  The procurement of external goods/services with an invitation procedure is regulated by means of quote requests, contracts, and SLAs specific to the service provider. With the invitation procedure, an evaluation report is prepared for evaluating the offers.

Project agreements, project SLAs, SLAs specific to the service provider, and contracts are drawn up according to the requirements of the core organization. HERMES refers to these outcomes as an agreement.

During and upon completion of the provision of goods/services, a performance assessment is carried out and discussed with the project partners. It forms the basis for any steering measures. Deviations from the agreed goods/services or from the required needs are analyzed and dealt with in the manage changes task. Changes are initiated in good time to ensure compliance with the requirements (e.g. the legal basis). Significant problems are solved via the deal with problems and benefit from lessons learned task.

Basis/prerequisites

- Project initiation order
- Project management plan
- Execution order

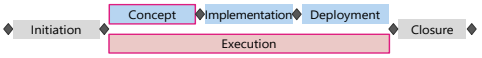
Activities

- Establish the required role profiles (skills requirements) and the capacity requirement for human resources based on the planned tasks and outcomes, and record them as a needs requirement.
- Determine the need for infrastructure (rooms, hardware, software, means of communication, etc.).
- Draft internal project agreements and SLAs.
- Create quote requests for external goods/services, obtain and evaluate quotes. In the case of an invitation procedure, produce an evaluation report.
- Coordinate agreements with the controlling and compliance bodies and/or have the latter check them before concluding the agreements.
- Assess goods/services during and upon completion of the provision of goods/services.

Outcomes

- Quote request
- Offer
- Evaluation report
- Agreement

5.4.3.19 Prepare solution requirements



Purpose

All relevant requirements for the solution and its deployment, operation, utilization, etc., are prepared.

In traditional solution development, the requirements form the basis for the development of the solution architecture or product concept.

In agile solution development, the fleshed out and prioritized requirements are the cornerstone for their successive continuation and completion.

Basic idea

The following outcomes are produced:

- The situation analysis is more in-depth than the status report from the study and shows the need for action.
- The solution requirements build on the objectives from the study and from the execution order, flesh out the rough requirements from the study, and expand on them based on the need for action identified in the situation analysis.

The formulated solution requirements are neutral with regard to the solution.

HERMES-specific

The solution requirements are designed and prioritized in sufficient detail in terms of content and planning to form a reliable basis for the development or procurement of the system. If the system is procured, the solution requirements are incorporated into the specifications.

In traditional solution development, the accepted solution requirements are updated, where needed, only by way of change management.

In agile solution development, the level of detail of the initially defined solution requirements varies depending on the criticality of a system element. The solution requirements are then continuously updated as part of the manage and control project task.

Basis/prerequisites

- Study
- Legal basis analysis
- Procurement analysis
- Protection needs analysis
- Execution order
- Stakeholder list

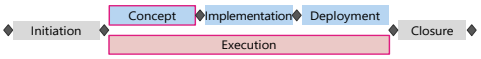
Activities

- Critically question the framework conditions from the execution order and analyze the influences on the project's success.
- Comprehensively supplement the status report from the study and go into more depth.
- Flesh out requirements, document them as solution requirements, and prioritize them clearly.
- Coordinate the solution requirements with the stakeholders.

Outcomes

- Situation analysis
- Solution requirements

5.4.3.20 Prepare solution architecture



Purpose

The solution architecture creates the basis for the implementation of the system.

Basic idea

The following outcomes are produced:

- The system concept
  creates the basis for and supplements the solution architecture. It describes solution concepts for specific issues (e.g. user administration and access rights, archiving).

- The solution architecture
  describes the system with its components and its structure, as well as the interfaces with peripheral systems. The solution architecture also describes the relationship between the IT architecture and the business processes.

In the system concept, several solution approaches are established and evaluated. The selected approaches are combined in the solution architecture to form a comprehensive solution.

HERMES-specific

The system concept is based directly on the solution requirements, on any organizational requirements, and on the study. It goes into more depth about the solution option described and selected in the study. Several subject-specific system concepts can be developed, each with different solution approaches.

The solution architecture is based on the system concept and forms the basis for the decision on solution architecture. It is fleshed out further in the course of solution development.

Basis/prerequisites

- Study
- Solution requirements
- Organizational requirements
- Prototype realized

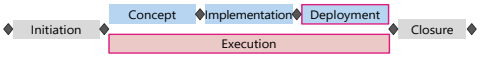
Activities

- Create system concepts.
- Prepare solution architecture.
- Integrate solution concepts into the solution architecture or reference them as appendices.
- Check the solution architecture with prototypes as needed.
- Coordinate the outcomes with the stakeholders.

Outcomes

- System concept
- Solution architecture

5.4.3.21 Conduct migration



Purpose

The migration from the old system to the new system is carried out.

Basic idea

The migration is carried out using the selected migration procedures. After migration, the quality of the migration is checked. Any necessary adjustments are made.

HERMES-specific

Successful migration is the prerequisite for migration acceptance.

Basis/prerequisites

- Detailed specifications
- Migration procedure realized

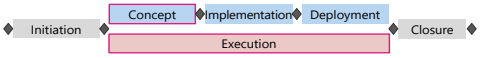
Activities

- Conduct migration with the migration procedures according to the migration concept.
- Implement quality assurance measures.
- Make necessary adjustments.

Outcomes

- Migration carried out

5.4.3.22 Design migration concept



Purpose

The migration concept creates the basis for the transfer of the old system to the new system and the decommissioning of the legacy system.

Basic idea

The focus of the system migration is on the migration of application data, i.e. data migration. Migrations can be technical (automatic) or organizational (manual).

The migration concept takes into account the quantities, frequencies, and quality of the data in the legacy system and its integration into the target system. Possible migration scenarios are analyzed and evaluated so that the appropriate migration procedures can be determined.

Migration considerations include aspects of the feasibility, economic efficiency, quality, and timing of a migration.

With data migration, the issues of legacy data archiving and system decommissioning must also be addressed. Data security and data protection aspects are taken into account.

HERMES-specific

The deployment strategy in the deployment concept determines the migration strategy (e.g. step-by-step deployment requires step-by-step migration).

Basis/prerequisites

- Solution requirements
- Deployment concept
- ISDP concept

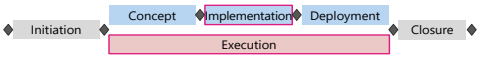
Activities

- Analyze the system and data.
- Design a migration concept based on the deployment concept.
- Check the impact on the deployment concept.
- Design the decommissioning of the legacy system and clarify data archiving if necessary.
- Review feasibility.
- Coordinate the migration concept with the stakeholders.

Outcomes

- Migration concept

5.4.3.23 Realize migration procedure



Purpose

The migration procedures are realized to such an extent that migration to the productive system can be carried out.

Basic idea

Different realization steps are carried out depending on the process.

HERMES-specific

The detailed specifications are developed on the basis of the migration concept. Migration quality has a major influence on the operational launch of the new system. Accordingly, quality assurance measures are of key importance.

The migration procedures are tested according to the test concept. This is done with the tests module.

Basis/prerequisites

- Migration concept

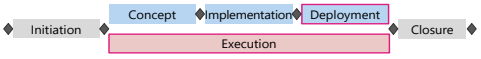
Activities

- Create detailed specifications for migration and decommissioning of the legacy system.
- Realize test infrastructure.
- Consider specifications regarding archiving, data security, and data protection.
- Realize migration procedure.
- Document migration procedure (e.g. with checklist).
- Review the migration procedure with the tests module.

Outcomes

- Detailed specifications
- Migration procedure realized

5.4.3.24 Activate organization



Purpose

With the activation, the new organization is put into effect. Employees work in their new roles according to the new business model and the new processes.

Basic idea

The business analyst activates the new organization so that users can work in their new roles according to the new business model and the new processes.

HERMES-specific

After the decision on launch of operation, the business analyst activates the new organization. The new organization comes into effect, and work is performed in accordance with the new organization.

The project organization accompanies and supports the organization during the initial utilization period.

The decision on acceptance is made once utilization is smooth and in accordance with the new business mode, the new process description, and the new organization description.

Basis/prerequisites

- Launch of operation milestone

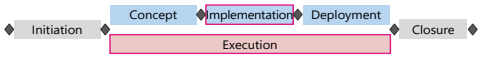
Activities

- Inform stakeholders at an early stage.
- Activate organization.
- Support the project organization during the initial utilization period.
- Analyze problems that arise and take or propose measures.
- If necessary, analyze and implement stabilization measures.

Outcomes

- Organization activated

5.4.3.25 Implement organization



Purpose

The organization is fully realized. The organizational and personnel/position-specific prerequisites are created to such an extent that the new organization can be activated.

Basic idea

The relevant elements of the business model, the organizational structure with all personnel/position-specific aspects, and the processes with all tools are realized to such an extent that the new organization can be activated.

HERMES-specific

The business model description, the process description, and the organization description are realized based on the organization concept, and the corresponding measures are implemented.

The business model description includes the business perspective and defines the framework for the process and organization description. The process description formulates the processes with the tools used. The organization description defines the organizational structure with a detailed organization chart, function descriptions, and personnel requirements. Based on the business model description, the process description, and the organization description, the measures are realized in order to establish the organization (communication channels, distribution channels, role assignments, recruitment, etc.).

In the deployment organization module, the outcomes of the realized organization are checked before preliminary acceptance with the decision on preliminary acceptance task.

Basis/prerequisites

- Organization concept
- Business model description
- Process description
- Organization description

Activities

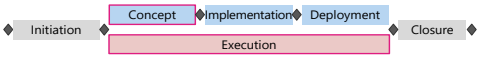
- Realize/complete business model description.
- Realize/complete process description.
- Realize/complete organization description.

- Define measures to establish and implement the organization.
- Incorporate any newly arising requirements for the solution (product, system) or its operation via change management.

Outcomes

- Process description
- Organization description
- Organization implemented

5.4.3.26 Establish organizational requirements



Purpose

All relevant requirements for the solution are developed.

Basic idea

The following outcomes are produced:

- The situation analysis is more in-depth than the status report from the study and shows the need for action.
- The organizational requirements build on the objectives from the study and from the execution order, flesh out the rough requirements from the study from an organizational and business perspective, and expand on them based on the need for action identified in the situation analysis.

The formulated organizational requirements are neutral with regard to the solution.

HERMES-specific

The organizational requirements are designed and prioritized in sufficient detail in terms of content and planning to form a reliable basis for the necessary adjustments to the existing organization and, if necessary, for the development or procurement of the solution. If the solution is procured, the organizational requirements are incorporated into the specifications.

The organizational requirements are the basis for the development of the organization concept and – where relevant – also for all other concepts in the project.

Basis/prerequisites

- Study
- Legal basis analysis
- Protection needs analysis
- Stakeholder list
- Procurement analysis

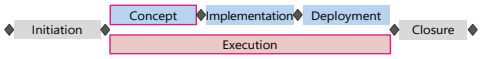
Activities

- Critically question the framework conditions from the execution order and analyze the influences on the project's success.
- Comprehensively supplement the status report from the study from a business perspective and go into more depth.
- Flesh out requirements, document them as organizational requirements, and prioritize them clearly.
- Coordinate the organizational requirements with the stakeholders.

Outcomes

- Situation analysis
- Organizational requirements

5.4.3.27 Draw up organization concept



Purpose

In the organization concept, the new organization is described and the procedure for its realization is defined.

Basic idea

The organization concept describes the business model and the organizational and process structure (processes) for business processing. It shows how the new organization is designed and which changes are made to what already exists. The process description comprises the core processes, management processes, and support processes. As needed, different organization options can be described and evaluated.

HERMES-specific

The organization concept is based directly on the organizational requirements, on any solution requirements (pure organization projects do not have solution requirements), and on the study. All organizational aspects are conceptually developed from a business perspective, first in the business model description and then in the organizational and process structure. The business model description defines the framework for the organizational and process structure. The organizational structure provides information about the new or adapted structures in the core organization; the process structure is where the process model is developed and the corresponding processes are identified and documented.

Based on the organization concept and the rough partial outcomes, the detailed business model description, process description, and organization description can then be undertaken, depending on the type of project and the available possibilities, in particular in connection with any parallel activities of the product and IT system modules.

Basis/prerequisites

- Study
- Organizational requirements
- Solution requirements

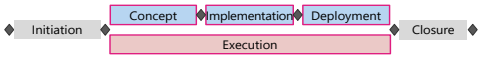
Activities

- Draw up organization concept with
  - Rough business model,
  - Rough organizational structure,
  - Rough process structure with process landscape and rough process description.
- Analyze impact on the organization and check for feasibility.
- Coordinate organization concept with the stakeholders.

Outcomes

- Organization concept
- Business model description
- Process description
- Organization description

5.4.3.28 Prepare phase release



Purpose

To enable the phase release to be given, the outcomes are summarized for the decision-makers and the next phase is planned.

Basic idea

At the end of a project phase, a decision is made on how the project is to proceed. For this purpose, the information required for decision-making is prepared for the decision-makers. The phase report in particular must show that all the necessary outcomes are available in the required quality.

HERMES-specific

The overall project planning is reviewed and the detailed planning for the next phase is prepared. The project management plan is updated.

Planning accuracy increases continuously over the course of the project thanks to in-depth knowledge of the project and the expected outcomes.

The phase report with the requests is compiled. It forms the basis for the project sponsor's decision on release of the next phase.

Basis/prerequisites

(T=traditional, A=agile)

	T	A
• Project management plan	T	A
• Project status report	T	A
• Change status list	T	A
• Lessons learned	T	A
• Release report		A

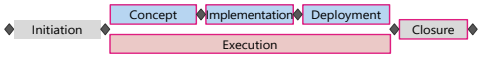
Activities

- Plan the next phase in detail.
- Verify the overall plan.
- Summarize outcomes of the course of the project, including changes, in the phase report and evaluate them in terms of quality.
- Update the project management plan and coordinate it with everyone involved as well as with the controlling and compliance bodies.
- Update the project status report as an appendix to the phase report.
- Create further prerequisites for phase release (e.g. ensuring adapted project organization and availability of resources).
- Submit requests for the acceptance of outcomes, next steps, the funds and resources to be released, etc.
- Initiate project steering decisions.

Outcomes

- Phase report
- Project management plan
- Project status report

5.4.3.29 Deal with problems and benefit from lessons learned



Purpose

Level-appropriate processing of problems helps to achieve the set objectives. Learning from experience supports continual improvement within the project and the core organization.

Basic idea

Identifying and solving problems at an early stage is an important prerequisite for achieving milestones and objectives. If the person working on the problem cannot solve it or cannot solve it in time, the problem is escalated immediately within the project organization.

The lessons learned from solving problems are useful as a pool of experience as the project progresses and also for other projects. The pool of experience and its use is part of a continual improvement process in the project and in the core organization. This does not take place only at the end of the project.

HERMES-specific

The escalation process is regulated project-specifically in the project management plan. The lessons learned are pooled in the lessons learned outcome. Evaluating the lessons learned is a team task.

The lessons learned, including the measures identified for solving problems, are incorporated into the manage and control project, prepare phase release, and prepare release closure tasks.

Basis/prerequisites

- Project management plan
- Lessons learned

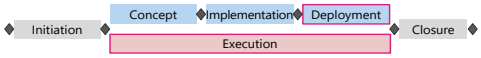
Activities

- Identify and evaluate problems.
- Define measures and monitor course of project.
- Initiate and manage escalations and implement de-escalation measures.
- Inform those involved about the solution.
- Regularly analyze the lessons learned from the course of the project and problem situations, and identify improvement measures for further project execution.
- Continually document the lessons learned in the lessons learned outcome and pass them on to the project sponsor (for the attention of the core organization).

Outcomes

- Lessons learned

5.4.3.30 Activate product



Purpose

Product activation releases the product for initial utilization and later acceptance.

Basic idea

The developer activates the product so that the user can use it productively. It includes all components necessary for operation.

HERMES-specific

After the decision on launch of operation, the product is activated by the developer and then used by users.

Users and, where applicable, operators are actively supported by the project during the initial utilization period until acceptance of the product.

Basis/prerequisites

- Launch of operation milestone
- Product developed or adapted

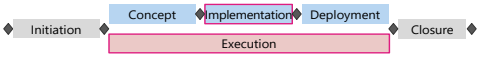
Activities

- Inform stakeholders at an early stage.
- Activate product.
- Support the project organization during the initial utilization period.
- Analyze problems that arise and take or propose measures.
- If necessary, analyze and implement stabilization measures.

Outcomes

- Product activated

5.4.3.31 Realize product



Purpose

The product is developed or adapted so that it meets the solution requirements and is ready for preliminary acceptance.

Basic idea

The detailed specifications are prepared on the basis of the solution requirements and the product concept. The product is realized:

- All elements relevant for the utilization are realized or made available.
- If a product is procured, the procured product is adapted and product enhancements are developed.
- If customized development is envisaged for the product, the product is developed.
- The product documentation and the user manual are produced.

Before the launch of operation, the product and the documentation are quality checked.

HERMES-specific

HERMES does not describe how the product is realized. This is highly dependent on the product.

Following the development or adaptation of the product, the product documentation and user manual are produced.

The perform quality assurance task in the project management and/or tests module can be used to perform quality assurance measures.

Basis/prerequisites

- Solution requirements
- Organizational requirements
- Product concept
- Product concept milestone

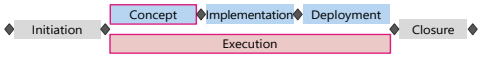
Activities

- Develop detailed specifications.
- Develop or customize product.
- Produce product documentation.
- Produce user manual.
- Prepare and implement quality assurance measures.

Outcomes

- Detailed specifications
- Product documentation
- User manual
- Product developed or adapted

5.4.3.32 Design product concept



Purpose

The design of the product concept forms the basis for realization of the product.

Basic idea

In the product concept, the product is described with its components and structure, possibly also with its relation to business processes. As needed, different product options can be described and evaluated.

HERMES-specific

The product concept is based directly on the solution requirements, any organizational requirements, and the study. In the product concept, the requirements and the description of the solution option selected in the study are fleshed out in the form of a specification. The product concept is designed in such detail in terms of content and planning that it forms a reliable basis for the realization (development or adaptation) of the product.

The product concept forms the basis for acceptance of the product over the further course of the project.

Basis/prerequisites

- Study
- Solution requirements
- Organizational requirements
- Prototype realized

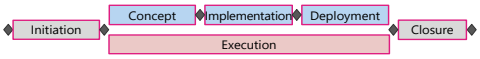
Activities

- Fine-tune requirements based on the option chosen.
- Flesh out the description of the selected option in the product concept.
- Verify the product concept with prototypes if necessary.
- Coordinate the product concept with the stakeholders.

Outcomes

- Product concept

5.4.3.33 Manage and control project



Purpose

Throughout the project, the project participants are coordinated and managed. The project status is continuously monitored, planning is updated, and information to that effect is communicated to project steering.

Basic idea

Management and control of the project are based on the planning. The planning describes how the set objectives will be achieved (target).

The project manager fleshes out the tasks and outcomes defined in the planning with work orders. This makes the work processes transparent and reduces the risk of misunderstandings. Under the traditional approach, the project manager handles and coordinates solution-specific concerns with the user representative; under the agile approach, this does not apply. The project manager provides for a functioning project organization appropriate to the circumstances, manages and supports the project participants, and coordinates the dependencies between the works.

The project's progress is periodically checked on the basis of the planning and the degree of outcome completion. The current project status (actual) is surveyed and compared with the planning (target/actual comparison). The effort, costs, and deadlines for the further course of the project are estimated and portrayed as a forecast. In the event of actual or predicted deviations from the planning, the project manager takes measures, supported by the user representative, to ensure that the set objectives are achieved. The impact of the measures is continuously assessed.

Information on the project status and forecasts is collected and compiled by the project management and communicated to project steering by means of reporting.

HERMES-specific

The project initiation order forms the basis for management and control of the project during the initiation phase.

In the subsequent phases, the information on project management and control and on the rules governing reporting is recorded in the project management plan. Reporting consists of reports and project meetings. Reports include the project status report as well as the phase and release reports created in other tasks. Further reports may be needed depending on the requirements of the core organization.

The work orders are assigned in advance to the responsible project team members based on the roles.

The solution requirements, the detailed specifications, and the release plan (in the project management plan) are continuously updated during agile solution development.

If significant project changes are required, they are handled in the manage changes task.

Basis/prerequisites

(T=traditional, A=agile)

	T	A
• Project initiation order	T	A
• Project management plan	T	A
• Execution order	T	A
• Lessons learned	T	A
• Solution requirements		A
• Detailed specifications		A

Activities

- Have changes identified during the initiation phase relating to the project initiation order approved by the project sponsor.
- After execution release, continuously update the project management plan.
- Hold kick-off meeting with everyone involved and create a project culture.
- Provide infrastructure.
- Plan and commission the tasks, outcomes, and resources.
- Determine framework conditions and specifications for reporting; define reporting with reports and project meetings in the project management plan and agree on them with the project sponsor.
- Draw up project status reports according to the requirements and prepare, conduct, and post-process meetings, and take minutes; record decisions.
- Continually coordinate project progress and important findings with the project sponsor.
- Manage project staff and ensure goal orientation and common understanding of procedures and outcomes.
- Issue work orders and coordinate with the user representative where necessary; coordinate the interdependencies between orders.
- Check progress (incl. QA measures and risks) by comparing actual values with planned values and making forecasts; analyze deviations from what was planned and initiate measures.

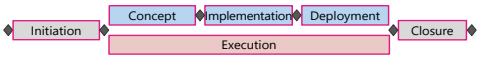
In agile solution development, update solution requirements, detailed specifications, and release plan (in the project management plan).

Outcomes

(T=traditional, A=agile)

	T	A
• Project management plan	T	A
• Work order	T	A
• Project status report	T	A
• Minutes	T	A
• Solution requirements		A
• Detailed specifications		A

5.4.3.34 Steer project



Purpose

Throughout the project, the project is monitored on the basis of reporting and, as needed, other information, and the achievement of the set objectives is ensured through adequate risk management and timely decision-making.

Basic idea

The project sponsor steers the project and is responsible for the project's success. The project sponsor is supported in this task by the other project steering roles. If it becomes apparent that the project's success cannot be achieved, the project sponsor terminates the project with a decision on project discontinuation.

To ensure the project's success, the project sponsor regularly monitors the progress of the project on the basis of the reports prepared by project management.

The project sponsor can commission overarching risk management of the project. To this end, the project sponsor appoints an independent body that reports directly to the sponsor. The independent body carries out risk management from a management perspective and decides on measures.

In the interest of efficient project execution, the project sponsor ensures rapid decision-making. The project sponsor plans and steers the decision-making processes in cooperation with the project manager and, if necessary, with other parties. The project sponsor includes the decision-makers in the project.

The project sponsor regulates and monitors reporting, which ensures formal standardized information between project management, project steering, and other bodies.

Problems that cannot be solved by the project management are escalated to project steering. Project steering treats these problems with the necessary priority and urgency.

HERMES-specific

The project sponsor defines the reporting requirements and checks progress based on the project management plan and the project status report of the project manager.

The project sponsor decides on significant measures and related adjustments to the project management plan, change requests, and risk-minimizing measures.

Basis/prerequisites

- Project initiation order
- Project management plan
- Execution order
- Phase report
- Release report
- Project status report

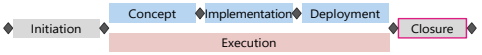
Activities

- Check progress.
  - Request project management plan and project status report.
  - Carry out target/actual comparisons, assess forecasts, analyze deviations, and identify the need for action.
  - Take measures.
- Risk management
  - Add further risks identified to the project and business risks in the project status report.
  - Analyze risks.
  - Decide on measures.
  - Check the implementation of measures and their impact.
  - Arrange for independent controlling, QA/risk management and/or project reviews and project audits to be carried out.
- Decisions
  - Plan and steer decision-making processes.
  - Make, communicate, and enforce project decisions.
  - Integrate stakeholders.
  - Make change request decisions.
  - Handle escalation.

Outcomes

- QA and risk report
- List of steering project decisions

5.4.3.35 Prepare project closure



Purpose

As part of the preparation for project closure, all final activities and measures are carried out and documented from a formal, organizational, and administrative perspective, open and future pending issues are recorded, and all necessary documents and outcomes are forwarded to the competent bodies so that the decision to dissolve the project organization and terminate the project can be made.

Basic idea

Document storage is purged and the project documentation is transferred to the core organization.

Project execution and the outcomes are evaluated.

All pending items arising from the project are transferred to those responsible in the core organization.

Note:

- To review the success of the project, it is necessary (e.g. for the user organization) to check sometime after project closure whether the expected impact has been achieved in the project sponsor's view. This includes an in-depth review of the achievement of objectives or a post calculation, for example.

HERMES-specific

The documentation of the lessons learned is completed. The final project evaluation is compiled.

Basis/prerequisites

- Project management plan
- Lessons learned
- Closure phase release milestone

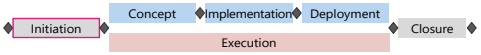
Activities

- Purge document storage.
- Transfer the system documentation relevant for operation, maintenance, and further development to the core organization and archive the project execution documentation (project plans, minutes, contracts, phase reports, etc.) in accordance with the storage regulations of the core organization.
- Return unrequired resources (infrastructure, etc.) to the core organization.
- Revoke access rights granted specifically for the project.
- Finalize expense recording systems, project accounts, reporting, etc.
- Compile final project evaluation.
- Finalize the lessons learned.
- As a pending item, determine what is to be investigated in the context of project success monitoring, what measures are to be envisaged for this purpose, and who is to carry them out.
- Transfer all pending items from the project, including necessary measures, to the core organization (e.g. for the attention of the application organization).

Outcomes

- Lessons learned
- Final project evaluation

5.4.3.36 Draw up project management plan



Purpose

The drawing up of the project management plan determines the overall planning of the project and the essential provisions and regulations on the basis of the planning and deadlines from the study, and it creates the prerequisites for drawing up the execution order.

Basic idea

The drawing up of the project management plan determines the initial overall planning of solution development and the essential regulations for the further course of the project, even before execution release.

The planning and processing of the various projects must be guided by the organization-specific requirements of the core organization.

HERMES-specific

The stakeholder list, the procurement analysis (where applicable), and the study with the decision on next steps form the basis for drawing up the project management plan. The project management plan is the prerequisite for project steering and control by the project sponsor and the coordination of the project with the requirements of the core organization.

The project management plan forms the basis for the management and control of the project by the project management. It is guided by the decision on next steps and determines how risk management or change management will be executed, how quality assurance of outcomes and processes/tasks will be ensured, and so on.

If an agile approach is planned, the project management plan determines whether optional releases are mandatory in the project or not. This decision is made by the project sponsor.

Before execution release, a master plan is created according to the principle of rolling planning, and the subsequent phase – concept or execution – is planned in detail. At the end of each phase or release, the next phase/release is planned in detail and the master plan is reviewed. This is done with the prepare phase release or prepare release closure task.

If the project is embedded in a program, the program management plan takes precedence. Project provisions of the project management plan must not run counter to the meaning and spirit of the corresponding program provisions. The exception to this rule is the choice between the traditional or agile approach to solution development. This must always be examined for each individual project and documented in the study.

Basis/prerequisites

- Stakeholder list
- Study
- Procurement analysis
- Next steps milestone

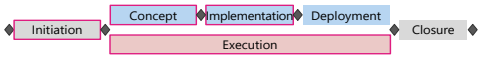
Activities

- Obtain information about the project and its environment.
- Draw up project management plan and in particular:
  - Define the risk management process and risk assessment metrics;
  - Determine and communicate the change process;
  - Set quality objectives for execution;
  - Define a review procedure for the outcomes and processes/tasks and record it in the review plan chapter;
  - Determine quality assurance review methods;
  - Adopt the procurement plan from the procurement analysis, check it, coordinate it with the study, adjust it if necessary, and record it;
  - Under an agile approach, explicitly state whether the decision on release is mandatory;
  - Determine execution organization
    - Project organization including development team (agile)
    - Role assignment for core and project organization

Outcomes

- Project management plan

5.4.3.37 Carry out prototyping



Purpose

With prototyping, simplified but largely functional solution approaches can be created and tested. This permits checking of the feasibility or usability of the focused solution, and where applicable its helpfulness and acceptance. In addition to the technical and functional criteria, the appearance or the dimensions and proportions of the product and the visualized idea for services can also be assessed.

Basic idea

The creation of a prototype – or perhaps only a model in the case of products – is a risk-minimizing measure. Prototyping can be carried out once or several times in different phases depending on the project situation. A prototype can be reusable or disposable. Depending on the findings, the next steps are determined.

HERMES-specific

As needed, prototyping is carried out once or several times over the course of the project. The required basis/prerequisites depend on the needs and the project status.

The objectives and the concept as well as the outcomes of the prototype are recorded in the prototype documentation.

The prototype is developed and the outcomes from the prototyping are evaluated.

Basis/prerequisites

-

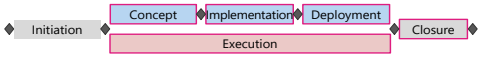
Activities

- Develop objectives, concept, and methodology for the prototype.
- Create prototype.
- Evaluate prototype.
- Document outcomes and conclusions and incorporate them into further planning.
- Destroy prototype or ensure reusability.

Outcomes

- Prototype realized
- Prototype documentation

5.4.3.38 Perform quality assurance



Purpose

Quality assurance ensures that the outcomes developed throughout the project are of the required quality.

Basic idea

In principle, quality assurance makes a distinction between "checking" and "testing":

- With respect to a system or product, checking includes the content-related and formal review of documents and compliance with agreed processes/tasks;
- Testing includes verifying the fulfillment of solution requirements and the applicability of the processes to the current system.

The quality of an outcome becomes evident during development. Several QA measures are often carried out during development in order to ensure the required quality.

Checking or testing at the end of the development process is used for the acceptance or approval of an outcome and confirms that the quality requirements for the outcome have been met.

HERMES-specific

The perform quality assurance task includes checking.
Testing, on the other hand, is the subject of the tests model.

Checking outcomes such as consultations, reviews, audits, etc., is performed in accordance with the project management plan. The project management plan also contains the review plan with the outcomes and their review procedure, as well as information on which role has to perform which review tasks under the traditional or agile approach.

The reviews are listed as activities in the work order for the creation of the corresponding outcome.

The outcomes of a review are recorded in the review report.

The project sponsor can ask the project management to carry out quality assurance. To this end, the project sponsor appoints an independent body that reports directly to the sponsor. This measure is performed in the project steering module with the steer project task.

Basis/prerequisites

- Project management plan
- Work order

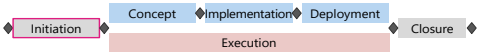
Activities

- Set quality objectives for the project phase or release – derived from the objectives to be achieved – in the project management plan.
- Record the review procedure and procedures in the work order in accordance with the project management plan and ensure that there is uniform understanding among all project participants.
- (Delegate and) carry out/have carried out reviews and record the outcomes in the review report.
- Evaluate the fitness for purpose of quality assurance and make adjustments if necessary.

Outcomes

- Project management plan
- Review report

5.4.3.39 Analyze legal basis



Purpose

Analysis of the legal basis ensures that the legal requirements for the project are met or that the measures are defined in such a way that they can be created.

Basic idea

The legal basis must be complied with in every project. It constitutes an immovable restriction for a project.

HERMES-specific

Project management ensures that the existence of a sufficient legal basis is clarified.

To this end, contact is made with the competent body (usually legal services or another unit responsible for legislative matters). In the absence of a sufficient legal basis, it is necessary – again in cooperation with the competent bodies – to clarify whether and how the necessary adjustments to the legal basis can be made.

Basis/prerequisites

- Project initiation release milestone
- Project initiation order
- Stakeholder list

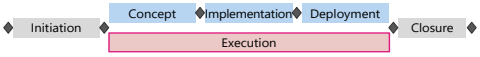
Activities

- Document the existing legal basis with regard to the future system.
- Analyze imminent changes to the existing legal basis.
- Identify possible gaps in the legal basis and work out proposals to fill the gaps with the competent bodies.
- Assess the impact on the study and project execution.
- Coordinate the legal basis analysis with the stakeholders.

Outcomes

- Legal basis analysis

5.4.3.40 Prepare release closure



Purpose

For the closure of a release, the outcomes are summarized and made available for reporting as part of the agile approach.

Basic idea

At the end of a release, information on the project status and forecast is delivered to project steering via reporting. If a decision on release has to be made in accordance with the project management plan, the information is required by the decision-makers for decision-making.

HERMES-specific

The release report is prepared. The overall success of the project is reviewed, the release that is coming to an end is described, the benefits are highlighted, and known errors are pointed out.

The release report forms the basis for reporting and for the project sponsor's decision on any next release.

The project management plan is updated.

Basis/prerequisites

- Project management plan
- Project status report
- Change status list
- Lessons learned

Activities

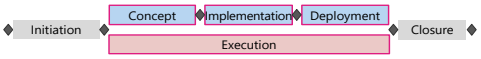
- Identify next release according to release plan (project management plan).
- Verify execution plan.

- Update the project management plan and coordinate it with everyone involved as well as with the controlling and compliance bodies.
- Summarize the outcomes of the release, including changes, in the release report.
- Update project status report as an appendix to the release report.
- Arrange for project steering decisions to be made.

Outcomes

- Release report
- Project management plan
- Project status report

5.4.3.41 Manage risks



Purpose

Risk management identifies risks at an early stage and defines measures to ensure project success.

Basic idea

Risks are possible future events that pose a problem if they occur. Project risks concern the course of the project. Operational risks affect the utilization of the project outcomes.

Risks are identified, analyzed, and evaluated. Depending on the significance of a risk, the strategy (e.g. avoidance, reduction, outsourcing, acceptance) and measures for dealing with the risk are defined.

HERMES-specific

Risks are managed within the framework of solution development according to the project management plan.

An in-depth risk assessment takes place at the end of each phase under the traditional approach and at the end of each release under the agile approach so that a decision on the release of the next phase or the next release can be made. The effective risks are recorded in the phase or release report and in the project status report, depending on the project.

The risk assessment is recorded in the QA and risk report.

As part of the steer project task, the project sponsor can commission superordinate risk management of the project.

Basis/prerequisites

- Project management plan
- Phase report
- Release report
- Project status report

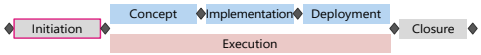
Activities

- Identify risks and group them into risk areas; analyze risks and assess their probability of occurrence and the extent of damage, and document this in the project status report.
- Define the strategy (e.g. avoidance, reduction, outsourcing, acceptance of the risk) for each risk in the project status report and define, commission, and monitor the measures.
- Periodically communicate the assessment of the risk situation to the relevant bodies and persons using the project status report.

Outcomes

- Project management plan
- Project status report

5.4.3.42 Analyze protection needs



Purpose

The protection needs analysis determines the information security and data protection requirements.

Basic idea

A protection needs analysis must be conducted for each IT project. This ensures that the ISDP aspects are taken into account from the start.

HERMES-specific

If the protection needs analysis shows that enhanced protection is necessary, an ISDP concept with an in-depth risk analysis must be designed during solution development.

Basis/prerequisites

- Project initiation release milestone
- Project initiation order
- Stakeholder list

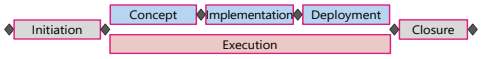
Activities

- Analyze information security and protection needs.
- Perform risk analysis.
- Review information security and data protection requirements and assess the impact on the study, project execution, and the envisaged solution.
- Coordinate protection needs analysis with the controlling and compliance bodies.

Outcomes

- Protection needs analysis

5.4.3.43 Manage and inform stakeholders



Purpose

Stakeholders are identified, contacted, gained for the project, their basic interests analyzed, and measures defined to ensure the project's success. Informing stakeholders ensures the institutionalized flow of information between the project and its environment. Informing stakeholders also includes project marketing.

Basic idea

The project manager and the project sponsor identify and analyze all persons or groups who have a legitimate interest in the course of the project or for whom it is important, due to their interests, how the future solution will work. The interests, expectations, and objectives of these affected stakeholders are compiled, analyzed, and examined for possible discrepancies and conflicts. To increase the chances of success, identified discrepancies or conflicts must be resolved as far as possible. If necessary, decision-making processes are planned and decisions are prepared.

The communication objectives and communication measures are planned and/or carried out, and their impact is regularly reviewed. Communication takes target groups and stakeholder interests into account.

HERMES-specific

The task is in principle the responsibility of the project manager. It is defined for each project in the project management plan.

The project manager compiles the stakeholder list together with the project sponsor and the stakeholder interests together with the user representative.

The identification of stakeholders including the stakeholder list and stakeholder interests are created for the first time in the initiation phase and are continually pursued over the course of the project.

The institutionalized information flow is defined in the communication plan as part of the project management plan.

Basis/prerequisites

- Project management plan
- Stakeholder list
- Stakeholder interests

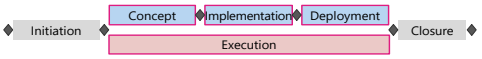
Activities

- Determine framework conditions and specifications for communication.
- Identify and analyze stakeholders, compile and update stakeholder list and stakeholder interests.
- Identify suitable stakeholders as potential project committee members and propose them to the project sponsor.
- Continuously manage stakeholders.
- Continuously inform project sponsor, user representative, and other authorized stakeholders.
- Define communication objectives, plan communication measures, and coordinate them with the project sponsor. Implement measures and measure impact. Continually update the communication plan in the project management plan.
- Create decision planning, coordinate it with the project sponsor, and integrate it into communication planning.

Outcomes

- Stakeholder list
- Stakeholder interests
- Project management plan

5.4.3.44 Advocate stakeholder interests



Purpose

Stakeholders play a key role in solution development, given that they contribute requirements and the user's perspective to development and in that way directly influence the development process. The representation of stakeholders and their interests during solution development promotes the acceptance and success of the new solution.

Basic idea

The identified and informed stakeholders are involved in the project to the extent that solution development can benefit directly from their knowledge, allowing the stakeholders to recognize the project results as their own solution. Stakeholders can be involved either through their representation in the project or through their direct participation in the solution as specialists.

HERMES-specific

The task is the responsibility of the user representative.

The impulses and functional requirements of the stakeholders are contributed via change management under the traditional approach, and as part of agile development under the agile approach.

The stakeholder interests compiled for the first time in the initiation phase are continuously pursued and analyzed over the course of the project.

Basis/prerequisites

- Stakeholder list
- Stakeholder interests

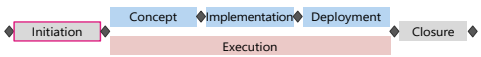
Activities

- Approach stakeholders, interview them, address specialized and solution-specific issues and problems together with them, obtain opinions from business practice.
- Receive suggestions and wishes from stakeholders and incorporate them into the project.
- Represent stakeholder interests in the project or allow stakeholders to participate directly in solution development.
- Update stakeholder interests.

Outcomes

- Stakeholder interests

5.4.3.45 Prepare study



Purpose

The purposes of the study include setting objectives, defining rough requirements, and establishing and evaluating solution options so that the decision on next steps can be made and documented in the study.

Basic idea

A project must be in line with the specifications (strategy and objectives) of the core organization. It must take account of the framework conditions, and its economic efficiency must be ensured.

The study is fleshed out to such an extent that planning accuracy for deadlines, costs, and effort is achieved that is appropriate for the time of the project. It must be possible to assess the risks and economic efficiency comprehensively.

HERMES-specific

In a first step, the status report and the development of possible objectives based on the status report are used to check whether a (new) solution is needed at all and accordingly whether a continuation of the project appears necessary. As the study is fleshed out further, including all accompanying outcomes, it is checked on an ongoing basis whether it makes sense to continue the project. If this is not the case, the initiation phase and the project are concluded.

The findings from the legal basis analysis and the protection needs analysis are adopted.

The set objectives and requirements form the basis for developing different options. The objectives are finalized. The requirements are described in such a way that the project content and project scope are clear and the evaluation criteria can be defined. The requirements are fleshed out as the project progresses further.

The options are described in the study on the basis of the objectives and requirements. Typical options include customized development on the one hand and the procurement of a solution available on the market on the other.

Any findings (e.g. from the market environment) arising from the procurement analysis, which must be prepared in parallel with the study, are used to develop options involving procurement. The options are described in sufficient detail for them to be evaluated. The evaluation criteria are defined for evaluating the options. These include the degree of objective achievement, coverage of requirements, and other evaluation criteria such as compliance with the requirements, feasibility, risks, and benefits. Depending on the option, the approach – traditional or agile – is defined.

The evaluation is comprehensibly documented and shows the current state of knowledge when the decision is made.

Before planning and scheduling, the suitable scenario for the development procedure (see Section 2 Scenarios) is selected and adapted as required.

Basis/prerequisites

- Project initiation release milestone
- Project initiation order
- Stakeholder list

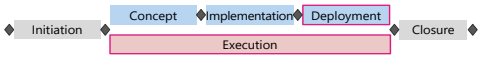
Activities

- Prepare the status report and record it in the study.
- Develop solution objectives and requirements, coordinate them with stakeholders, adjust the stakeholder list, and include them in the study.
- Identify conflicts of interest and resolve them with the project sponsor.
- Integrate market surveys and information from the procurement analysis into the study.
- Integrate the findings from the legal basis analysis and the protection needs analysis into the study.
- Describe solution options individually.
- Determine evaluation criteria and their weighting.
- Evaluate solution options based on the evaluation criteria.
- Select a suitable scenario, customize it further as needed, determine the project value, and define the approach (traditional/agile).
- Assess the impact of the decision on next steps on the project.
- Roughly plan project and deadlines, define rough cornerstones (milestones)
- Complete the study.
- Coordinate the study with the project sponsor and stakeholders, including the controlling and compliance bodies.

Outcomes

- Study
- Stakeholder list

5.4.3.46 Activate system



Purpose

The system activation is the prerequisite for the activation of the operation.

Basic idea

The system is activated so that operation can subsequently be activated.

HERMES-specific

After the decision on launch of operation, the developer activates the system.

Basis/prerequisites

- Launch of operation milestone

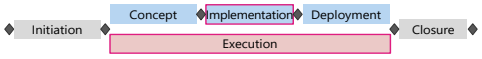
Activities

- Activate system.
- Provide support during the initial utilization period.
- Analyze problems that arise; define and decide on measures (bug fixing).
- If necessary, take stabilization measures.

Outcomes

- System activated

5.4.3.47 Integrate the system into operation



Purpose

The integration of the system into the operating infrastructure creates the prerequisites for carrying out the tests and for preliminary acceptance.

Basic idea

The system realized (developed or parameterized) is:

- integrated into the operating infrastructure technically and organizationally; and
- tested.

HERMES-specific

Based on the integration concept, only the system is integrated into the operating infrastructure. Testing is performed in the tests module. The links to peripheral systems are activated.

According to the integration plan in the integration and installation instructions outcome, the integration of the system can be done in several steps.

Basis/prerequisites

- Operating infrastructure realized
- Operating organization realized
- Test infrastructure realized
- Operating manual
- Integration concept
- Integration and installation instructions
- System developed or parameterized
- Interfaces realized

Activities

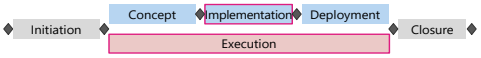
- Carry out and document integration steps according to the integration and installation

instructions.
- Implement and ensure transition from one operating platform (e.g. development, testing, training, production) to another.
- Document lessons learned from the integration process in the operating manual for later maintenance and further development.
- Include operating concept and integration concept outcomes as attachments to the operating manual.

Outcomes

- Operating manual
- System integrated

5.4.3.48 Realize system



Purpose

The system is developed or parameterized to the point where it meets the solution requirements and is ready for integration.

Basic idea

Based on the solution requirements of the system concept and the solution architecture, the detailed specifications are created. The system is realized:
- when a system is procured, the procured system is parameterized and system enhancements are developed;
- if customized development is envisaged for the system, the system is developed;
- the user manual is produced.

HERMES-specific

The developer tests the system during realization before the first delivery to the user and operator.

Tests after the first delivery are supported by the tests module. The documentation compiled so far, in particular the system concept and the solution architecture, is updated as necessary and the user manual is produced.

Basis/prerequisites

- Solution requirements
- System concept
- Solution architecture
- Solution architecture milestone
- ISDP concept milestone

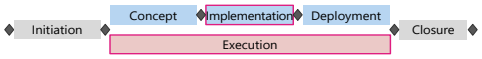
Activities

- Create detailed specifications.
- Develop or parameterize system.
- Arrange for quality assurance and testing to be conducted by developer.
- Update documentation.
- Produce user manual.
- Update system architecture.

Outcomes

- Detailed specifications
- System concept
- Solution architecture
- User manual
- System developed or parameterized

5.4.3.49 Prepare system integration



Purpose

System integration is prepared by the developer to enable the operator to integrate the system into operation.

Basic idea

The detailed specifications needed for integration are prepared.

HERMES-specific

Based on the integration concept, interfaces with peripheral systems and necessary adjustments to peripheral systems are realized.

Integration into operation is prepared on the basis of the operating concept and the operator's specifications. The integration and installation instructions are drawn up.

Basis/prerequisites

- Integration concept
- Solution architecture
- Operating concept

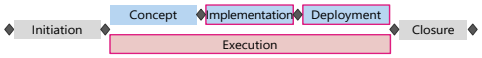
Activities

- Create detailed specifications.
- Develop interfaces.
- Coordinate adjustments to peripheral systems.
- Prepare integration into operation.
- Produce integration and installation instructions.
- Update system architecture.

Outcomes

- Interfaces realized
- Solution architecture
- Integration and installation instructions
- Detailed specifications

5.4.3.50 Conduct test



Purpose

Tests are conducted to ensure that the system meets the stipulated requirements. The tests are carried out and the test results are evaluated and recorded.

Basic idea

Provided that the preconditions for doing so are met, the first tests are carried out on the test system. Accordingly, the test infrastructure must have been realized beforehand.

HERMES-specific

The conduct test task comprises:

a) proper testing on the test system of the realized test infrastructure;
b) testing of the integrated system as part of the integrate the system into operation task;
c) testing the realized product as part of the realize product task;
d) testing the realized migration procedure as part of the realize migration procedure task; and
e) quality testing as part of the perform quality assurance task.

The tests are carried out according to the test case descriptions in the test concept. They are further specified as needed. The test results entered in the test report are evaluated according to criteria defined in the test concept. The test report is checked before the decision on preliminary acceptance.

As needed, the tests are repeated several times until the quality criteria are met. Open issues from the tests and the next steps in this regard are established by binding agreement. The test plan in the test concept is continually updated.

Basis/prerequisites

- Test concept
- Test infrastructure realized
- ISDP measures realized
- ISDP concept

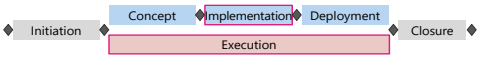
Activities

- Check whether the preliminary conditions for testing are met to start the tests.
- Perform tests according to the test concept.
- Log the test results and evaluate them according to criteria in the test concept.
- If necessary, correct defects and repeat tests.
- Agree on how to deal with unresolved issues.

Outcomes

- Test report
- Test concept

5.4.3.51 Realize test infrastructure



Purpose

The test infrastructure is provided before testing starts. It includes all elements necessary for test execution and the collection and evaluation of the test results.

Basic idea

Provide test infrastructure with test system, test data, and test tools (e.g., test management system for collecting and evaluating the results).

HERMES-specific

The test infrastructure is prepared in accordance with the responsibilities defined in the test concept. Quality assurance measures are used to check that the test infrastructure is ready and complete.

Basis/prerequisites

- Test concept
- Operating infrastructure realized

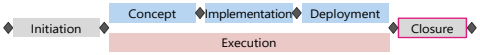
Activities

- Provide test infrastructure according to the test concept.
- Ensure the quality of the test infrastructure.
- Release the test infrastructure for testing.

Outcomes

- Test infrastructure realized

5.4.3.52 Transfer test infrastructure



Purpose

After project closure, tests are conducted during the utilization and maintenance phase for corrections and for further developments. For that reason, the test infrastructure including the test concept must be transferred to the core organization.

Basic idea

To enable maintenance and further development of the system during the utilization phase after the end of the project, the test infrastructure including the test concept must be transferred to the core organization before project closure.

HERMES-specific

The test concept and test infrastructure are transferred after acceptance, but before project closure. They are transferred by the project organization to those responsible for operation and further development at the user, developer, and operator.

Basis/prerequisites

- Acceptance milestone
- Test concept

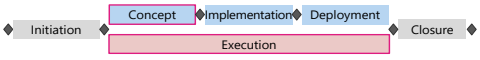
Activities

- Adjust the test concept with test case descriptions and test data or update it with findings from the tests.
- Inform and train those responsible.
- Carry out formal transfer.
- Record transfer in the minutes.

Outcomes

- Test concept
- Test infrastructure transferred
- Minutes

5.4.3.53 Design test concept



Purpose

The test concept creates the prerequisites for the systematic and efficient organization and execution of the tests.

Basic idea

Testing solutions requires specific test management. This is described by the test concept.

The test concept with the test plan and test case descriptions is the basis on which the test organization and test infrastructure are provided and the tests are carried out.

HERMES-specific

The basis for the test concept is provided by the solution requirements and by the corresponding concepts.

The development of the test concept requires close cooperation between the user, developer, and operator, given that they have to make further essential contributions to the testing process in addition to the information from the basic documents. The test concept must be jointly accepted and then implemented.

Basis/prerequisites

- Solution requirements
- Organizational requirements
- Product concept
- System concept
- Operating concept
- Migration concept

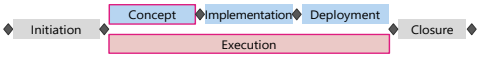
Activities

- Establish quality features and requirements or, if already available, verify and record them in the test concept.
- Define test objectives and test types, and record them in the test concept.
- Describe test infrastructure with test system, test data, and test tools.
- Prepare test objects, test organization, test case descriptions, and test plan as part of the test concept.
- Coordinate the test concept with the stakeholders.

Outcomes

- Test concept

5.4.3.54 Draw up agreement



Purpose

The agreement is drawn up on the basis of the tender documentation including appendices such as the draft contract, the general terms and conditions, and the offer.

Basic idea

A project agreement, a contract, or service level agreements (SLAs) govern cooperation between different project participants such as the user (project sponsor), developer, and operator and can be concluded for one or more phases.

HERMES-specific

This task is related to the agree on and steer goods/services task, with which the contract is concluded and the goods/services are steered.

Once the agreement is concluded, the goods/services are periodically checked for compliance with the planning and agreements. This is dealt with in the agree on and steer goods/services task.

Basis/prerequisites

- Tender documentation
- Project management plan

- Offer
- Contract award milestone

Activities

- Draw up agreement.
- Have the core organization or controlling and compliance bodies review the agreement.
- Ensure contract execution.

Outcomes

- Agreement

6 Roles

6.1 Introduction

6.1.1 Role model

HERMES defines a role model and describes standardized roles in order to create a uniform understanding across the whole organization. A distinction is made between stand-alone projects and projects embedded in a program. All described roles are exclusively HERMES roles.

The role model distinguishes between the role groups of the core organization and the roles and role groups of the project organization. Figure 26 shows the role model of a core organization with the role groups of executive board, project management competence center, and controlling and compliance bodies, along with a project organization (traditional/agile) with the minimum required roles of project sponsor, project management, and user representative (shaded in gray). Other roles may be used as needed.

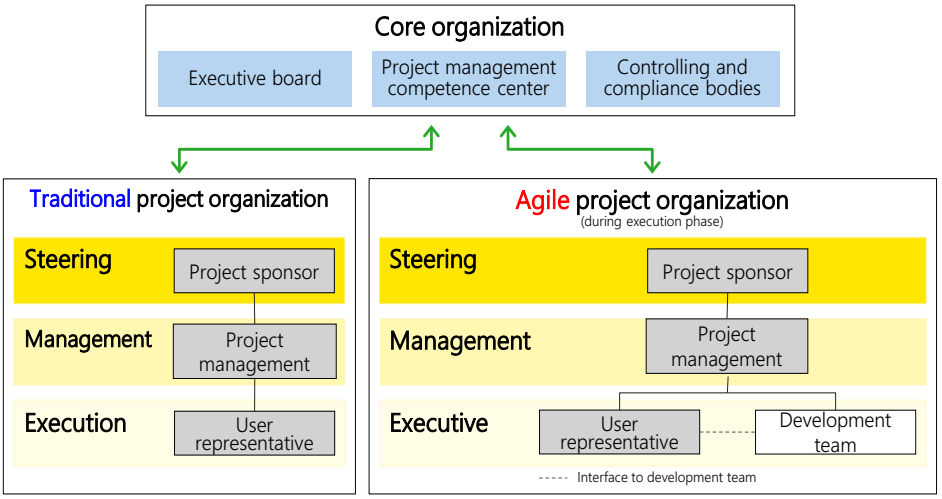


Figure 26: Core organization and project organization with minimum required roles (gray)

In agile project organization, the role of user representative functions as an interface to the development team. The role holder assumes specialist responsibility by additionally taking on a corresponding proprietary role in the development team (dashed line). This must be taken into account when setting up the agile project organization, including the development team role group.

6.1.2 Core organization

The core organization is the organization of the sponsor, where the project is located, and of the subsequent user, where the solution will be used. It is a legal entity that defines strategies and requirements for projects. The core organization provides the necessary resources such as infrastructure, finances, and personnel for the project.

The term "core organization" is defined broadly in HERMES. A core organization can be, for example, an administration, a school, an institute, an association, or a company. In the case of state or large communal administrations, corporate groups, complex companies, etc., the role of core organization can be played by individual organizational units or even individual departments.

As Figure 26 shows, three permanent role groups are relevant for all stand-alone projects in the core organization:

- Executive board
  steers the portfolio from a strategic perspective, prioritizes projects, and assigns infrastructure as well as human and financial resources to the specific project.
- Project management competence center
  provides and further develops methods, tools, coaching, and other goods and services for project and program management.
- Controlling and compliance bodies
  define requirements and check compliance from the perspective of the overall organization. Such bodies include financial control, auditing, IT controlling, and the relevant bodies for solution architecture and ISDP, for example.

The roles of the role groups listed vary depending on the core organization.

6.1.3 Project organization

6.1.3.1 Overview

The project organization is a one-off, temporary, and often interdisciplinary organization that is closely linked to the core organization. It is put into effect with the project initiation order and dissolved with the decision on project closure at the latest.

The project organization is continuously adapted to the needs of the project over the course of project execution, especially with the execution order. Depending on how the project unfolds, additional project participants may join the project organization. For example, an external tenderer of a product is not determined until after procurement and then becomes part of the project organization. The agile project organization applies only during the execution phase. In the initiation and closure phases, the project organization remains traditional, which does not prevent the project team from using agile techniques for appropriate tasks.

The project organization consists of various roles. They regulate the tasks, powers, and responsibilities of those involved in the project. Each role is specified with a role description.

6.1.3.2 Partner groups

Each role is assigned to one or more partner groups. The HERMES project organization comprises the partner groups of user, developer, and operator:

- User
  The user is the owner of the project and uses the solution to handle business processes. Users are responsible for defining their requirements for the solution, and they test and accept the product/system or solution.
- Developer
  The developer as a service provider either develops or supplies and integrates the solution. The developer is responsible for development or delivery and integration according to the specifications in terms of quality, time, and costs.
- Operator
  The operator as a service provider integrates the technical solution into the operating environment, ensures the operating organization, and operates the system. The operator is responsible for the provision of the operating infrastructure, operational integration, the operating organization, and operation in accordance with the agreements.

In practice, projects are often supported by suppliers or external service providers. In particular, the roles of the developer partner group are often filled by external service providers. If various services of the core organization are outsourced, the operators, for example, and increasingly even the users (e.g. by means of project manager pools), can also be external service providers.

Despite this, the role holders must always and exclusively represent the role view of their partner group in order to rule out any conflicts of interest. This is especially important if, for example, due to a lack of user skills or insufficient project resources, decisive roles of the project are performed by specialists from other partner groups.

Each partner group of users, developers, or operators has its own power and responsibility to decide on representation in the project by service providers from outside the partner group.

6.1.3.3 Hierarchy levels

Each role is assigned to one of the hierarchy levels of steering, management, or execution:

- Steering roles
  steer the project as a whole across the organization and ensure that the set objectives are achieved.
- Management roles
  draw up project foundations, manage project and employees.
- Execution roles
  develop the solution and implement quality assurance measures.

Figure 27 shows the assignment of roles to the hierarchy levels shown in yellow in a typical traditional and agile project organization.

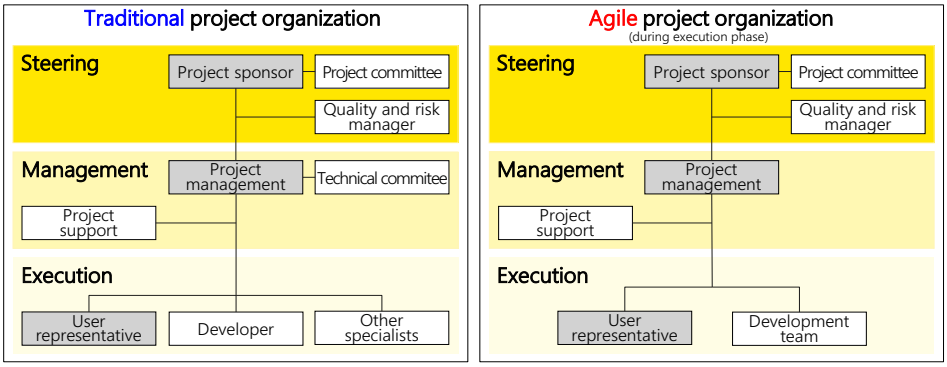


Figure 27: Role assignment to hierarchy levels of a traditional or agile project organization

6.1.3.4 Project roles in programs

Project view

The extension of project management to include program management is discussed in the appendix to this reference manual. The following explanations look at program management from the project perspective.

Programs

The (three-phase) HERMES phase model for programs is a prerequisite for the integration of projects into the program (see Figure 28). Programs comprise several projects that pursue a common objective and are executed overlapping in time. The program ensures cross-project steering and management of the projects. The phase model for projects facilitates the coordination and steering of the projects within a program.

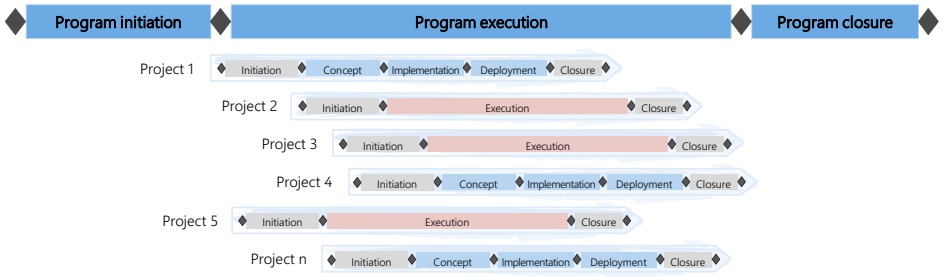


Figure 28: Projects combined into programs

The program sponsor steers the program. Depending on the form of the program organization (see Figure 29), the program management manages the program and coordinates the cross-project aspects and the dependencies between the projects. Each project is managed by its own project management. The user representative defines the solution.

The steering of the project can be supported by a project committee (under the direction of the project sponsor) and/or at a superordinate level by a program committee (under the direction of the program sponsor). From the perspective of the controlling and compliance bodies, each individual project is an independent controlling object with specifications in terms of costs, time, and outcomes.

The program closure program phase can be released only once all projects are completed.

Forms of organization

If a project becomes part of a program, the project organization must be integrated into the program organization and various project organization roles have to be adjusted or replaced. These primarily concern the roles of the project sponsor and the project management. The adjustments can vary depending on the organization form chosen for the program. The effects are mainly in the areas of steering, management, and control.

The adjusted role descriptions for the program are recorded in the project management plan.

The diagram in Figure 29 schematically shows three conceivable forms of organization: one as a stand-alone project, and two as parts of a program.

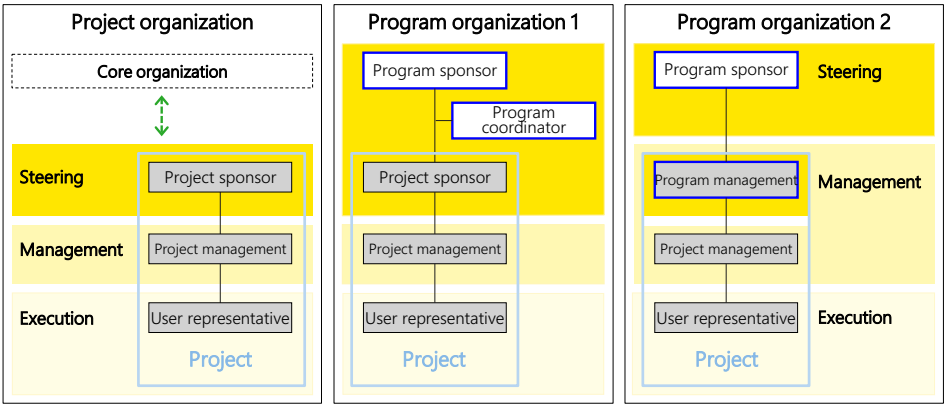


Figure 29: Three possible basic variants of project organization

The minimum roles to be filled in the project are shown in gray. Program-specific roles are outlined in blue and are not discussed further here.

The following description discusses the three organizational forms shown in Figure 29 from the project perspective. The discussion is rudimentary and for a general understanding only.

Project organization

A certain core organization is responsible for the success of the project:

- The project sponsor is responsible for the success of the project and steers the project;
- The project management manages the project on behalf of the project sponsor;
- The user representative is responsible for the solution.

Program organization 1

Several core organizations are responsible for the success of the projects assigned to them:

- The program management runs and coordinates the project and the project management from the perspective of the overarching program and continuously coordinates with the project sponsor.
- The project sponsor is responsible for the success of the respective project, upholds the interests of its core organization, steers the project on behalf of the program sponsor and works with the program sponsor to address and resolve any conflicts of interest that may arise between the objectives of the program and those of the core organization;
- The project management manages the project on behalf of the project sponsor, executes the program-specific instructions of the program management and coordinates the project management plan with the program managment;
- The user representative is responsible for the solution.

This type of program organization changes the roles of the project sponsor and the project management. Each project sponsor reports to both their own core organization and to the program sponsor and must take both instances into account when making decisions. The project management is coordinated by the program management.

Program organization 2

A certain core organization is responsible for the success of the program and all projects involved in it:

- The program management (from a project perspective at the steering hierarchy level, from a program perspective at the management hierarchy level), steers the project and manages (see role description of project sponsor) the project management, but the responsibility for the project success lies with the program sponsor;
- The project management manages the project on behalf of the program management and coordinates the project management plan with them;
- The user representative is responsible for the solution.

This type of program organization has no sponsor at the project level, replacing the project sponsor with the program management. The program management assumes all tasks and duties of the project sponsor within a project. The project management is thus subordinate to a program management, which is assigned to the steering hierarchy level in the project organization, and to the management level in the program organization.

6.2 Overview of roles

6.2.1 Standard roles

The following table lists all standard roles and shows their assignment to the hierarchy level and the partner group.

Hierarchy level	Roles * = minimum roles to be filled	User	Developer	Operator
Steering	Steering roles	X	X	X
	Project sponsor*	X		
	Project committee	X	X	X
	Quality and risk manager	X		
Management	Management roles	X	X	X
	Project management*	X		
	Sub-project manager	X		
	Project support	X	X	
	Technical committee	X	X	X
Execution	Execution roles	X	X	X
	User representative*	X		
	Operations manager			X
	Business analyst	X	X	
	Developer		X	
	Development team	X	X	X
	ISDP manager	X		
	IT architect	X	X	X
	Tester	X	X	X
	Test manager	X	X	X

Table 19: Roles and their assignment to the hierarchy level and the partner group

The minimum roles to be filled, marked with an asterisk (*), are required in order to meet the governance requirements. These three roles are indispensable for the project, regardless of the selected approach (traditional or agile), and must be located in the user partner group. They must be filled in every project:

- The project sponsor has overall responsibility for the project and the achievement of the objectives.
- The project management has sole management responsibility; in agile solution development, however, the project management may not interfere with the self-organization of the development team.
- The user representative is responsible for development of the product/specialist solution.

Other mandatory roles are assigned depending on project requirements.

The execution roles, also referred to in organization charts as specialists (with the exception of the user representative), are numerous and not exhaustive. Depending on the core organization or the type of project, further project-specific execution roles may be added.

Under the agile approach, all execution roles involved in the project are combined in the development team during the execution phase. The development team role is a role group.

6.2.2 Customized roles

Supplementing the standard roles available, it is also possible to integrate own specialist, organization-specific, or project-specific roles into own projects. This is supported by HERMES online and is especially relevant when new modules are developed and provided with new tasks and outcomes. Examples of customized roles are integration manager, logistician, real estate manager, purchaser, and facility manager.

6.2.3 Role assignment

6.2.3.1 General explanations

The role assignment is defined for each role required in the project.

Role assignment is in accordance with the project requirements. It takes into account the experience required in the project, the capacity needed, and the availability of the role holders. The concrete project organization and role assignment are recorded in the project management plan.

In order to comply with project governance, the following principles must be observed when assigning the roles:

- One person can take on several roles, provided that no conflicts of interest arise as a result.
- One role can be held by several people, provided that the role allows multiple holders. For example, there are usually several testers in a project, but only one project sponsor.

Information on role assignment for selected roles at the hierarchy levels of steering, management, and execution is provided below.

6.2.3.2 Steering

Project sponsor

- The project sponsor must be located with the user.
- The project sponsor must be a single natural person from the core organization.
- The project sponsor initializes, finances, and steers the entire project.
- The project sponsor is the project's representative with regard to the executive board of the core organization and the controlling and compliance bodies and must be located at a correspondingly high hierarchy level in the core organization.
- The project sponsor ensures that the stakeholders identified by the project management who are important to the success of the project are represented in the project.
- The roles of project sponsor and project management may not be held by the same person.

Project committee

- The project sponsor appoints the members of the project committee.
- Organizations relevant to the success of the project are represented in the project committee.
- The project sponsor determines the voting rights of the project committee members.

Quality and risk manager

- Depending on the size of the project and the risks, the project sponsor appoints a quality and risk management body, which reports directly to the project sponsor.
- The independent organization providing the quality and risk manager does not assume any further roles in the project and must ensure the independence of the mandate.

6.2.3.3 Management

Project management

- The project sponsor appoints the project management.
- The project management must be located with the user and solely represent the user's interests in the project. This also applies if the role holder is organizationally subordinated or located elsewhere (e.g. external recruitment or pool organization). Provision by partner groups of developers or operators should be avoided due to potential conflicts of interest and because of the need to ensure governance.
- The project management manages the project and is responsible for the smooth progress of the project including all sub-projects.
- The project management can also be a sub-project manager.
- If the project management additionally takes on an execution role, the project sponsor must ensure that sufficient capacity is available for project management.

Sub-project manager

- The project management appoints the sub-project manager.
- The sub-project manager must be located with the user and solely represent the user's interests in the project. This also applies if the role holder is organizationally subordinated or located elsewhere. Provision by partner groups of developers or operators may be considered (the project management has overall responsibility).
- The sub-project manager manages the sub-project and is responsible for smooth progress of the project vis-à-vis the project management.
- If the sub-project manager additionally takes on an execution role, the project management must ensure that sufficient capacity is available for sub-project management.

6.2.3.4 Execution

General

The responsibilities, powers, and skills of all execution roles remain the same regardless of whether the roles are part of a project team or a sub-project team.

User representative

- The project sponsor appoints the user representative.
- The user representative must be located with the user. The role should not be provided by developers or operators due to potential conflicts of interest.
- The user representative is responsible for the specialist design of the solution.
- If the user representative additionally takes on a further execution role, the project sponsor must ensure that sufficient capacity is available for user representation.
- The user representative is constrained by the assigned resources when developing the solution.

Business analyst

- The business analyst can, based on their expertise, also take on the role of user representative. However, this requires in-depth knowledge of the specialist area in question for which the solution is being developed.

Tester

- Each partner group represented in the project (user, developer, operator) tests in its area of responsibility.

Test manager

- Each partner group represented in the project (user, developer, operator) can appoint a test manager in its area of responsibility.

6.3 Explanation regarding role description

The roles describe the responsibility, powers, and required skills of those involved in the project. They form the basis for a common understanding. The roles are assigned to specific tasks and outcomes.

For each role, a role description is provided that is always structured in the same way:

- Description
  conveys an understanding of the role.
- Responsibility
  describes, where applicable, the responsibility of the role.
- Powers
  describe, where applicable, the powers of the role.

- Skills
  describe what knowledge a person needs in order to perform the role. When describing skills, no distinction is made between knowledge and experience, given that the level of skills required is highly dependent on the project.
- Relationships (where relevant)
  show for each module the specific tasks for which the role is responsible and which other roles are involved in the creation of the outcome. If the role has no task responsibility, relationships are not listed.
  - The role responsible for the task is also responsible for achieving the outcomes and for the outcomes themselves.
  - The roles involved in achieving the outcomes are not exhaustive and have to be defined according to the specific project.

6.4 Description of the roles

6.4.1 Steering roles

6.4.1.1 Project sponsor

Description

The project sponsor is responsible for the outcomes of the project and the achievement of the set objectives within the set framework conditions.

Responsibility

- Initiation and steering of the project
- Overall responsibility for the project and objective achievement
- Reconciliation of the project objectives with the overarching strategies, requirements, and objectives of the core organization
- Provision of resources (financial, human, infrastructure) and assurance that they are used efficiently
- Timely decisions on requests and measures
- Chairing of the project committee and appointment of its members
- Appointment and steering of the project management, definition of the project management's powers
- Assurance of sufficient participation by the specialist area

Powers

- Decision-making power within the framework of the allocation of powers by the core organization
- Allocation of financial and human resources, as well as infrastructure, to the project
- Escalation to the core organization

Skills

- Business understanding and knowledge of the specialist area
- Knowledge of the core organization requirements for the project (e.g. for procurement, financing, controlling, security), for project steering, and for the project organization
- Business administration knowledge to ensure the efficient and effective use of financial and human resources
- In-depth knowledge of project initiation and project management
- Knowledge of HERMES, attested to by course attendance
- Communication skills to represent the project internally and externally, manage stakeholders, and resolve conflicts
- Decisiveness and assertiveness

Relationships

Module	Task	Outcome	Involved in creation of outcome
Project steering	Decide on project initiation release	Project initiation release checklist	Project sponsor, project management
		Project initiation order	Project sponsor, project management
		Project initiation release milestone	Project sponsor, project management
		List of steering project decisions	Project sponsor, project management
	Decide on execution release	Execution release checklist	Project sponsor, project management, quality and risk manager
		Execution order	Project sponsor, project management, user representative
		Execution release milestone	Project sponsor, project management, project committee
		List of steering project decisions	Project sponsor, project management
	Steer project	QA and risk report	Project sponsor, quality and risk manager
		List of steering project decisions	Project sponsor, project management, project committee
	Decide on phase release	Phase release checklist	Project sponsor, project management, quality and risk manager
		QA and risk report	Project sponsor, quality and risk manager
		Phase release milestone	Project sponsor, project management, project committee, user representative
		List of steering project decisions	Project sponsor, project management
	Decide on release	Release checklist	Project sponsor, project management, user representative, quality and risk manager
		QA and risk report	Project sponsor, quality and risk manager
		Release milestone	Project sponsor, project management, project committee, user representative
		List of steering project decisions	Project sponsor, project management
	Decide on project discontinuation	Project discontinuation checklist	Project sponsor, project management, user representative, quality and risk manager
		Lessons learned	Project sponsor, project management, user representative
		Final project evaluation	Project sponsor, project management
		Project closure milestone	Project sponsor, project management, user representative, project committee
		List of steering project decisions	Project sponsor, project management
	Decide on closure phase release	Closure phase release checklist	Project sponsor, project management, quality and risk manager
		QA and risk report	Project sponsor, quality and risk manager
		Closure phase release milestone	Project sponsor, project management, project committee, user representative
		List of steering project decisions	Project sponsor, project management
	Decide on project closure	Project closure checklist	Project sponsor, project management, quality and risk manager
		QA and risk report	Project sponsor, quality and risk manager
		Project closure milestone	Project sponsor, project management, project committee
		List of steering project decisions	Project sponsor, project management

Module	Task	Outcome	Involved in creation of outcome
Procurement	Decide on call for tenders	Tender checklist	Project sponsor, project management, user representative, quality and risk manager
		Tender milestone	Project sponsor, project management, project committee, user representative
		List of steering project decisions	Project sponsor, project management
	Decide on contract award	Contract award checklist	Project sponsor, project management, user representative, quality and risk manager
		Publication	Project sponsor, project management
		Contract award milestone	Project sponsor, project management, project committee, user representative
		List of steering project decisions	Project sponsor, project management
Deployment organization	Decide on launch of operation	Launch of operation checklist	Project sponsor, project management, quality and risk manager
		Launch of operation milestone	Project sponsor, project management, project committee
		List of steering project decisions	Project sponsor, project management

Table 20: Tasks for which the project sponsor is responsible and other roles involved in creating the outcomes

6.4.1.2 Project committee

Description

The project committee is a role group.. The members of the project committee support the project sponsor in performing the project sponsor's tasks and raise the concerns of the organization they represent in the committee. The project sponsor organizes and chairs the meetings of the project committee.

Responsibility

- Advice and support for the project sponsor in performing the project sponsor's tasks
- Support for the project and its anchoring in the organization represented by the project committee member
- Early raising of concerns of the organization represented
- Participation in the development of solutions to problems

Powers

- Can request a project review or project audit
- Power to issue recommendations:
  - Recommendations on closure and release of phases to the project sponsor
  - Recommendations on risk-minimizing measures to the project sponsor (e.g. on appointment of project controlling or the quality and risk manager)
- Can gather all the information needed to steer and assess the project
- If eligible to vote, may participate in voting

Skills

- Knowledge of the specialist area
- In-depth knowledge of the special field represented
- Business administration knowledge to ensure the efficient and effective use of financial and human resources
- In-depth knowledge of project steering
- Knowledge of HERMES, ideally by means of course attendance
- Ability to work in a team, to communicate, and to resolve conflicts

6.4.1.3 Quality and risk manager

Description

The quality and risk manager supports the project sponsor with an independent assessment of the project and recommends measures to achieve the project objectives.

Responsibility

- Assessment of compliance with the requirements of the core organization
- Assessment of the procedure and the outcomes of project management, project organization, and cooperation in the project
- Comprehensive assessment of the processes of project steering, project management, and project execution in regard to all project participants
- Evaluation of the project outcomes from a qualitative perspective
- Assessment of the project status and forecasts
- Assessment of risks
- Recommendation of measures to deal with risks and achieve the project objectives
- Transparent reporting to the project sponsor

Powers

- Recommendations on closure and release of phases to the project sponsor
- Recommendations on measures to the project sponsor
- Can gather all the information needed to assess the project (with direct access to all project participants)

Skills

- In-depth knowledge of project management, particularly concerning the aspects of controlling, quality assurance, and risk management
- Business administration knowledge
- In-depth knowledge of HERMES, attested to by a certificate
- Ability to work in a team, to communicate, and to resolve conflicts
- Good writing skills, e.g. to create reports

6.4.2 Management roles

6.4.2.1 Technical committee

Description

The technical committee is role group, which under the traditional approach supports the project management with the evaluation of outcomes.

The members of the technical committee raise the concerns of the organizational unit they represent. The project management organizes and chairs the meetings of the technical committee.

Responsibility

- Advice and support for the project management in the evaluation of specialist issues and outcomes
- Support for the project and its anchoring in the organization represented by the technical committee member
- Early raising of concerns of the organization represented

Powers

- Gives recommendations on outcomes to the project management
- Gives recommendations on quality assurance measures to the project management
- Can access all required information

Skills

- In-depth knowledge of the specialist area and special field represented
- Business administration knowledge for evaluating and prioritizing requirements and assessing options and economic efficiency
- Ability to work in a team, to communicate, and to resolve conflicts

6.4.2.2 Project management

Description

The project management manages the project on behalf of the project sponsor. The project management manages and coordinates the project regardless of the specialist focus of the solution and the chosen development approach.

Responsibility

- Management of the project to achieve the set objectives (time, cost, quality) and procedure objectives
- Economical and sustainable use of resources
- Management of reporting and provision of comprehensive, regular, and situational information to project steering so that the relevant steering and decision-making tasks can be performed
- Identification and recruitment of stakeholders for the project, analysis of their basic interests
- Management of quality and risk management
- Ensuring timely involvement of the responsible controlling and compliance bodies so that their legitimate requirements are met
- Arrangement of the methods, practices, and tools to be used in the project in addition to HERMES and assurance of their use
- Implementation of steering and management decisions
- Performance of procurement in accordance with the requirements
- Verification of compliance by the contracting parties in the project with the SLA (service level agreement)

Powers

- Can access all project information
- Authority to use the resources released
- Sole project management responsibility and authority to give instructions, without interfering in the self-organization of the development team during agile solution development
- Decision-making power within the framework defined with the project sponsor
- In consultation with the project sponsor:
  - Division of the project into sub-projects,
  - Appointment of sub-project managers, and
  - Delegation of management tasks.

Skills

- Knowledge of the project environment
- Knowledge of the core organization's requirements in terms of the project and operation of the application (e.g. for procurement, financing, controlling, security) or in terms of application of the project
- In-depth project management knowledge (main criterion)
- In-depth knowledge of HERMES, attested to by a certificate
- Good knowledge of the methods and practices used in the project

- Business administration knowledge to assess options and economic efficiency and to ensure the efficient and effective use of financial and human resources
- Decisiveness and assertiveness
- Managerial skills
- Communication skills
  - to represent the project internally and externally;
  - to manage stakeholders and resolve conflicts;
  - to be able to communicate in a manner appropriate to the level (e.g., during presentations in the project committee, before committees of the core organization, etc.)
- Good writing skills, e.g. to create project reports

Relationships

Module	Tasks	Outcome	Involved in creation of outcome
Project management	Manage and control project	Project management plan	Project management
		Work order	Project management, user representative; project support; technical committee
		Project status report	Project management; project support
		Minutes	Project management, user representative; project support
		Solution requirements	Project management, user representative
		Detailed specifications	Project management, user representative
	Manage and inform stakeholders	Stakeholder list	Project management, project sponsor, business analyst; project support
		Stakeholder interests	Project management, user representative
		Project management plan	Project management
	Draw up project management plan	Project management plan	Project management, project sponsor
	Draw up project execution order	Execution order	Project management, user representative; project support
	Manage changes	Change request	Project management, user representative, business analyst; project support; technical committee
		Change status list	Project management, user representative; project support
		Project management plan	Project management
		Solution requirements	Project management, user representative
	Agree on and steer goods/services	Quote request	Project management; project support
		Offer	Project management; project support
		Evaluation report	Project management, user representative; project support
		Agreement	Project management, project sponsor; project support
	Deal with problems and benefit from lessons learned	Lessons learned	Project management, project sponsor, user representative
	Perform quality assurance	Project management plan	Project management
		Review report	Project management, user representative; project support
	Manage risks	Project management plan	Project management
		Project status report	Project management; project support

Module	Tasks	Outcome	Involved in creation of outcome
	Prepare phase release	Phase report	Project management, user representative; project support
		Project management plan	Project management
		Project status report	Project management; project support
	Prepare release closure	Release report	Project management, user representative; project support
		Project management plan	Project management
		Project status report	Project management; project support
	Prepare project closure	Lessons learned	Project management, project sponsor, user representative
		Final project evaluation	Project management; project support
Project foundations	Analyze legal basis	Legal basis analysis	Project management
	Prepare study	Study	Project management, user representative, business analyst, IT architect; project support
		Stakeholder list	Project management, project sponsor, user representative, business analyst; project support
	Decide on next steps	Next steps checklist	Project management, user representative, quality and risk manager; project support
		Study	Project management, user representative; project support
		Next steps milestone	Project management, user representative
		List of management project decisions	Project management, user representative; project support
Product	Decide on product concept	Product concept checklist	Project management, quality and risk manager; project support; technical committee
		Product concept milestone	Project management, user representative
		List of management project decisions	Project management; project support
IT system	Decide on solution architecture	Solution architecture checklist	Project management, quality and risk manager; project support; technical committee
		Solution architecture milestone	Project management, user representative
		List of management project decisions	Project management; project support
Procurement	Issue call for tenders	Offer	Project management, user representative, operations manager, developer
		Tender documentation	Project management, user representative
	Draw up agreement	Agreement	Project management, project sponsor, user representative; project support
Deployment organization	Decide on preliminary acceptance	Preliminary acceptance checklist	Project management, quality and risk manager; project support
		Acceptance report	Project management, user representative, operations manager, developer, quality and risk manager; project support
		Preliminary acceptance milestone	Project management, user representative
		List of management project decisions	Project management, user representative; project support

Module	Tasks	Outcome	Involved in creation of outcome
	Decide on acceptance	Acceptance checklist	Project management, quality and risk manager; project support
		Acceptance report	Project management, user representative, operations manager, developer, quality and risk manager; project support
		Acceptance milestone	Project management, user representative
		List of management project decisions	Project management, user representative; project support
IT migration	Decide on acceptance of migration	Migration acceptance checklist	Project management, quality and risk manager; project support; technical committee
		Acceptance report	Project management, user representative, operations manager, developer, quality and risk manager; project support
		Migration acceptance milestone	Project management, user representative
		List of management project decisions	Project management, user representative; project support
ISDP	Decide on ISDP concept	ISDP concept checklist	Project management, quality and risk manager; project support; technical committee
		ISDP concept milestone	Project management, user representative
		List of management project decisions	Project management; project support

Table 21: Tasks for which the project management is responsible and other roles involved in creating the outcomes

6.4.2.3 Project support

Description

Project support assists the project management in dealing with organizational and administrative matters. The role is also referred to as project office (PO).

Responsibility

- Responsibility for activities delegated to the role

Powers

- Within the scope of the activities delegated to the role, can:
  - Request, provide, and prepare information
  - Make arrangements

Skills

- Knowledge of the project environment
- In-depth project management knowledge
- Knowledge of the methods and practices to be applied in project support's tasks
- In-depth knowledge of HERMES, attested to by a certificate
- Business administration knowledge
- Ability to work in a team, to communicate, and to resolve conflicts
- Good writing skills and ability to create documentation

6.4.2.4 Sub-project manager

Description

The sub-project manager is responsible for the sub-project as mandated by the project management. The sub-project manager has all the powers required to carry out the activities delegated by the project management.

Responsibility

- Management of the sub-project to achieve the objectives agreed with the project management (time, cost, quality)
- Adherence to the guidelines agreed with the project management in own sub-project

- Economical and sustainable use of resources in own area
- Management of reporting in own sub-project and comprehensive, regular, and situational information to the project management, so that the project management can fulfill the relevant management and communication tasks
- Implementation of steering and management decisions

Powers

- Can access all information relating to own sub-project
- Authority to use the resources released for the sub-project
- Sole management responsibility and authority to give instructions in the sub-project, without interfering in the self-organization of the development team during agile approach
- Decision-making power within the scope defined with the project management (within the framework of the project management's powers)

Skills

- Knowledge of the project environment
- Knowledge of the core organization's requirements in terms of the project and operation of the application or in terms of application of the project
- In-depth project management knowledge
- In-depth knowledge of HERMES, attested to by a certificate
- Knowledge of the methods and practices used in the project
- Knowledge of methods and techniques to assess options and economic efficiency
- Decisiveness and assertiveness
- Managerial skills
- Communication skills
- Adequate writing skills

6.4.3 Execution roles

6.4.3.1 User representative

Description

The user representative represents the users and their interests in the project, manages the unambiguous specialist solution requirements agreed with the specialist areas as a stable basis for implementation, and is responsible for the specialist success of the development. The user representative is the contact person for both the developers and the stakeholders, constituting a binding communication channel within the project organization. The user representative is appointed by the project sponsor and is managed by the project management, but is autonomous during solution development in specialist and solution-specific questions and decisions within the budget.

Under the agile approach, the user representative serves as an interface to the development team. In such cases, the role holder assumes specialist responsibility in the development team by additionally assuming the role of product owner, familiar in the agile environment. All detailed tasks and responsibilities in the agile development team are defined by the agile method used.

Responsibility

- Responsibility for the solution
- Establishment of all solution-specific requirements
- Responsibility for the solution requirements
- Maintaining transparency and making solution requirements available to all those involved in the project

- Contributing the complete specialist requirements and functionality coordinated with the specialist areas and customers; representing stakeholder interests
- Maximizing the added value of the development work (maximizing the value of the solution)
- Ensuring the scope of goods/services and the specialist success of the solution
- Involvement of stakeholders in solution development according to the stakeholder list
- Compliance with ISDP requirements
- Responsibility for communication with the development team (interface, agile)

Powers

- Can access all required information
- Decision on the characteristics of the solution including the quality requirements
- Definition of the acceptance criteria
- Collaboration with stakeholders and development team
- Participation in defining requirements and concluding SLAs

Skills

- In-depth knowledge of the specialist area
- Knowledge of project management and of HERMES
- In-depth knowledge of traditional and agile development management
- Knowledge of the development management, design, and specification methods and practices
- Basic knowledge of business administration
- Knowledge of the project environment
- Knowledge of the core organization's requirements in terms of operation of the application (e.g. for procurements, financing, controlling, security) or in terms of application of the project
- Ability to establish, formulate, evaluate, and prioritize requirements and prepare change requests
- Good writing skills
- Abstraction and simplification ability
- Ability to work in a team, to communicate, and to resolve conflicts
- Visionary thinking
- Assertiveness
- Natural authority

Relationships

Module	Task	Outcome	Involved in creation of outcome
Project foundations	Prepare procurement analysis	Procurement analysis	User representative, project management
Procurement	Prepare call for tenders	Tender documentation	User representative, project management
	Evaluate tenders	Evaluation report	User representative, project management
		Tender report	User representative, project management
Organization	Advocate stakeholder interests	Stakeholder interests	User representative
Product	Prepare solution requirements	Situation analysis	User representative, business analyst
		Solution requirements	User representative, business analyst
	Advocate stakeholder interests	Stakeholder interests	User representative
	Design product concept	Product concept	User representative, business analyst

Module	Task	Outcome	Involved in creation of outcome
IT system	Prepare solution requirements	Situation analysis	User representative, IT architect, business analyst
		Solution requirements	User representative, IT architect, business analyst
	Advocate stakeholder interests	Stakeholder interests	User representative
Deployment organization	Design deployment concept	Deployment concept	User representative, project management, business analyst
		Project management plan	User representative, project management
	Realize deployment measures	Deployment measures realized	User representative, project management, business analyst
	Execute deployment measures	Deployment measures carried out	User representative, project management, business analyst
ISDP	Implement ISDP concept	ISDP concept	User representative, project management, operations manager, ISDP manager, developer
		ISDP measures realized	User representative, project management, operations manager, ISDP manager, IT architect

Table 22: Tasks for which the user representative is responsible and other roles involved in creating the outcomes

6.4.3.2 Operations manager

Description

The operations manager represents the operator partner group in the project and is responsible for setting up operation with the operating platforms and operating organization. The operations manager ensures the technical and organizational integration and operation of the system on the various system platforms during the project phases and operation.

Responsibility

- Provision of the goods and services agreed with the operator while adhering to the set deadlines and budgets
- Contribution of the operator's requirements
- Compliance with the operator's ISDP requirements

Powers

- Can access all required information
- Authority to give instructions to the operator with regard to own specialist areas

Skills

- In-depth knowledge of operation
- Knowledge of the core organization's requirements for the project and the operation of the application (e.g. technical and organizational requirements)
- Ability to develop requirements, specifications, concepts, and operating documentation
- Business administration knowledge for assessing options and economic efficiency
- In-depth knowledge of HERMES, attested to by a certificate
- Good writing skills, e.g. to create operating documentation
- Ability to work in a team, to communicate, and to resolve conflicts
- Management of specialists in own area of responsibility

Relationships

Module	Task	Outcome	Involved in creation of outcome
Tests	Realize test infrastructure	Test infrastructure realized	Operations manager, user representative, business analyst, test manager
IT operation	Design operating concept	Operating concept	Operations manager, IT architect
	Realize operation	Operating manual	Operations manager
		Operating infrastructure realized	Operations manager
		Operating organization realized	Operations manager
	Integrate the system into operation	Operating manual	Operations manager
		System integrated	Operations manager, developer
	Activate operation	Operating manual	Operations manager
		Operation activated	Operations manager, developer

Table 23: Tasks for which the operations manager is responsible and other roles involved in creating the outcomes

6.4.3.3 Business analyst

Description

The business analyst, often also referred to as the business organizer, forms the interface between the user and developer/operator partner groups. The business analyst establishes, questions, analyzes, and prioritizes user needs and requirements based on business processes and structures and transforms them into organizational requirements. These are used by the developer and operator as a basis for the design and operation of the product or system. Conversely, the business analyst takes solution-specific aspects into account in the design of the envisaged organization.

Responsibility

- Establishment of all organizational requirements
- Responsibility for the organizational requirements
- Definition of the business processes and organizational structure
- Ensuring the involvement of various specialists

Powers

- Can access all required information
- Collaboration with all partner groups
- Design, implementation, and activation of the organization

Skills

- In-depth knowledge of the specialist area
- Knowledge of the requirements of the core organization for the project and the operation of the application (e.g. for procurement, financing, controlling, security) or for application of the product
- In-depth knowledge of business analysis and relevant methods and techniques
- Business administration knowledge in organizational theory and for evaluating options and economic efficiency
- Ability to establish, formulate, evaluate, and prioritize requirements
- Project management knowledge
- In-depth knowledge of HERMES, attested to by a certificate
- Ability to work in a team, to communicate, and to resolve conflicts
- Good writing skills
- Management of specialists in own area of responsibility

Relationships

Module	Task	Outcome	Involved in creation of outcome
Organization	Establish organizational requirements	Situation analysis	Business analyst, user representative
		Organizational requirements	Business analyst, user representative
	Draw up organization concept	Organization concept	Business analyst, user representative
		Business model description	Business analyst, user representative
		Process description	Business analyst, user representative
		Organization description	Business analyst, user representative
	Implement organization	Process description	Business analyst, user representative
		Organization description	Business analyst, user representative
		Organization implemented	Business analyst
	Activate organization	Organization activated	Business analyst, user representative

Table 24: Tasks for which the business analyst is responsible and other roles involved in creating the outcomes

6.4.3.4 Developer

Description

The role of developer is comprehensive and refers to the product developer and the IT developer in one. The developer realizes the product or system according to the solution requirements and the preceding concepts. The developer activates the product or system.

Responsibility

- Responsibility for realization of the product or system

Powers

- Can access all required information

Skills

- In-depth knowledge of the special field of product or software development
- In-depth knowledge of design, specification, development, testing, and integration methods and practices
- Knowledge of HERMES
- Ability to work in a team, to communicate, and to resolve conflicts

Relationships

Module	Task	Outcome	Involved in creation of outcome
Project foundations	Carry out prototyping	Prototype realized	Developer, user representative, IT architect
		Prototype documentation	Developer, IT architect
Product	Carry out prototyping	Prototype realized	Developer, user representative
		Prototype documentation	Developer
	Realize product	Detailed specifications	Developer, user representative, business analyst
		Product documentation	Developer
		User manual	Developer, user representative
		Product developed or adapted	Developer, user representative, business analyst
	Activate product	Product activated	Developer, user representative, business analyst

Module	Task	Outcome	Involved in creation of outcome
IT system	Carry out prototyping	Prototype realized	Developer, user representative, IT architect
		Prototype documentation	Developer
	Realize system	Detailed specifications	Developer, user representative, business analyst, IT architect
		System concept	Developer, operations manager, IT architect, user representative
		Solution architecture	Developer, operations manager, IT architect
		User manual	Developer, user representative
		System developed or parameterized	Developer, user representative, business analyst, IT architect
	Prepare system integration	Interfaces realized	Developer, operations manager
		Solution architecture	Developer, operations manager, IT architect
		Integration and installation instructions	Developer, operations manager
		Detailed specifications	Developer, business analyst, IT architect
	Activate system	System activated	Developer, operations manager, user representative, business analyst
IT migration	Realize migration procedure	Detailed specifications	Developer, business analyst, IT architect
		Migration procedure realized	Developer, operations manager
	Conduct migration	Migration carried out	Developer, operations manager, business analyst

Table 25: Tasks for which the developer is responsible and other roles involved in creating the outcomes

6.4.3.5 Development team

Description

The development team is an interdisciplinary role group that applies exclusively during the agile approach in the execution phase. The composition of the role group depends on the type of project, the outcomes to be created, and the agile development method to be used. Depending on the project, all execution roles may be used in the development team. When establishing the agile project organization, the specialist responsibility of the user representative must be taken into account through incorporation of the role in the development team.

Project management responsibility lies with the project management, which may not, however, interfere with the self-organization of the development team. The development team organizes itself.

No responsibilities, powers, skills, or relationships are defined for the development team:

- The development team works within the encapsulated development approach.
- The development team is composed of all the execution roles necessary to develop the outcomes and achieve the milestones.
- In principle, all execution roles may occur in the development team depending on the project.

Responsibility

- According to the descriptions of the roles participating in the development team

Powers

- According to the descriptions of the roles participating in the development team

Skills

- According to the descriptions of the roles participating in the development team

6.4.3.6 ISDP manager

Description

The ISDP manager is responsible for the aspects of information security and data protection in the project.

Responsibility

- Assurance that the information security requirements and data protection measures are taken into account and implemented in the project
- Promotion of understanding/awareness of ISDP in the project

Powers

- Can access all required project information
- Issuing of security-related specifications for dealing with data and information during project execution

Skills

- In-depth knowledge of the special field of ISDP
- Knowledge of the legal basis and the requirements of the core organization
- Knowledge of IT standards, architectures, methods, and practices
- In-depth knowledge of the methods and practices to be applied in own field of activities
- Business administration knowledge for evaluating options and economic efficiency
- Process management knowledge
- In-depth knowledge of HERMES, preferably attested to by a certificate
- Ability to work in a team, to communicate, and to resolve conflicts
- Good writing skills, e.g. to create reports

Relationships

Module	Task	Outcome	Involved in creation of outcome
Project foundations	Analyze protection needs	Protection needs analysis	ISDP manager, project management
ISDP	Design ISDP concept	ISDP concept	ISDP manager, operations manager, IT architect
	Transfer ISDP concept	ISDP concept transferred	ISDP manager, project management, user representative, operations manager
		ISDP concept	ISDP manager, project sponsor, project management, user representative, operations manager, IT architect

Table 26: Tasks for which the ISDP manager is responsible and other roles involved in creating the outcomes

6.4.3.7 IT architect

Description

The IT architect designs the solution architecture of the system to be created. The IT architect defines the solution components of the system and their interfaces with the peripheral systems.

Responsibility

- Overall responsibility for the technical aspects of system being developed
- Assurance of compliance with the existing standards and architecture requirements and performance of audits

Powers

- Authority to give instructions
- Decision-making power regarding the solution architecture

Skills

- Knowledge of the specialist area
- In-depth knowledge of the special field of IT architecture
- In-depth knowledge of IT standards, architectures, methods, and practices
- Business administration knowledge for evaluating options and economic efficiency
- Project management knowledge
- Knowledge of HERMES
- Ability to work in a team, to communicate, and to resolve conflicts
- Very good writing skills, e.g. to create solution architecture documentation

Relationships

Module	Task	Outcome	Involved in creation of outcome
IT system	Prepare solution architecture	System concept	IT architect, business analyst, user representative, developer
		Solution architecture	IT architect, operations manager, developer
	Design integration concept	Integration concept	IT architect, operations manager, business analyst, developer
IT migration	Design migration concept	Migration concept	IT architect, business analyst, developer
	Decommission the legacy system	Legacy system removed	IT architect, project management; operations manager, business analyst

Table 27: Tasks for which the IT architect is responsible and other roles involved in creating the outcomes

6.4.3.8 Tester

Description

The tester participates in the creation of test case descriptions, carries out tests, and assesses and logs the outcomes.

Responsibility

- Support for the test manager in the creation of test case descriptions
- Performance of tests for one or more test objects
- Evaluation and recording of the test results in the form of test reports

Powers

- Can access all required information
- Decision-making power to classify the test results according to the defect categories defined in the test plan

Skills

- In-depth knowledge of the specialist area (specialist processes, organizational requirements, solution requirements, etc., in own test area)
- Knowledge of testing and test methods
- Quick comprehension and thorough working methods
- Assertiveness
- Ability to work in a team, to communicate, and to resolve conflicts

6.4.3.9 Test manager

Description

The test manager designs, plans, and coordinates testing. The test manager ensures that the test fundamentals are developed in the form of the test concept and transfers testing to the subsequent operation.

Responsibility

- Assurance that the various requirements such as organizational requirements and solution requirements regarding the quality of the system are met

Powers

- Defines the test methods and test organization
- Determines employee and system deployment for testing and orders tests to be conducted

Skills

- Knowledge of the specialist area
- In-depth knowledge of the test objects (specialist processes, technology, etc.)
- In-depth knowledge of the special field of quality assurance and testing with the corresponding methods and practices
- Knowledge of the design and implementation of IT solutions
- Knowledge of project management
- In-depth knowledge of change management
- In-depth knowledge of HERMES, attested to by a certificate
- Decisiveness and assertiveness
- Ability to work in a team, to communicate, and to resolve conflicts
- Good writing skills, e.g. to create test concepts and test reports

Relationships

Module	Task	Outcome	Involved in creation of outcome
Tests	Design test concept	Test concept	Test manager, tester, user representative, operations manager, business analyst, developer
	Conduct test	Test report	Test manager, tester
		Test concept	Test manager, tester, user representative, operations manager, business analyst, developer
	Transfer test infrastructure	Test concept	Test manager, project management
		Test infrastructure transferred	Test manager, project management
		Minutes	Test manager, project management

Table 28: Tasks for which the test manager is responsible and other roles involved in creating the outcomes

7 User information

7.1 Introduction

This section assists in the proper use of HERMES project management. To support users, this section contains information that allows for a deeper understanding of HERMES, explains application cases, provides guidelines of sorts for specific cases, and so on.

7.2 Information overview

The user information for HERMES is divided into two categories:

a) Explanations
   The explanations on HERMES show how specific topics are integrated into HERMES. They illustrate interrelationships and enable a deeper understanding of methods.

b) Notes on application cases
   The notes on application cases show how HERMES should be implemented in specific situations. They ensure safe application and help to reduce the scope for interpretation.

The table shows the information per category.

Category	Information
Explanations	Governance
	Sustainability
	Project management and development management
	Financial steering and management
Application cases	**Fehler! Verweisquelle konnte nicht gefunden werden.**
	Implementation units under traditional approach
	Application with other methods and practices
	Integration of HERMES into the core organization

Table 29: User information per category

7.3 Explanation regarding the information description

The description of information does not follow a fixed or uniform structure. Each note is structured according to needs and forms an independent topic unit.

7.4 Description of information

7.4.1 Governance

7.4.1.1 Project governance

Governance is generally understood to mean "responsible corporate management and control". It must be implemented in particular by the management of the core organization.

Project governance is part of corporate governance. The following characteristics of good project governance represent requirements for project steering and project management:

- Effective and functional project planning, project steering, and project management
- Constructive cooperation between project organization and core organization
- Consideration of stakeholder interests
- Alignment of the set objectives with requirements of the core organization
- Solid basis for correct, efficient, and transparent decisions

- Institutionalized and timely flow of information, transparency in project communication
- Comprehensibility of project implementation and any changes of objectives
- Appropriate approach to risks
- Functional and adequate project organization and infrastructure
- Efficient and sustainable use of resources

HERMES project management is designed to ensure good project governance.

7.4.1.2 Implementation of significant changes

Creation of the solution

In the implementation of corporate planning supported by HERMES project management, significant changes are realized by means of projects.

During the initiation phase, more depth is provided for the business planning outlines. At the end of the phase, an execution order is drawn up so that the project sponsor, in coordination with the core organization, can decide whether to approve continuation of the project and how to approach solution development.

The core organization appoints and fills the decisive roles of the project from its own ranks or from the user partner group: first the project sponsor and then, through the project sponsor, the project management, and the user representative. The executive board and the controlling and compliance bodies are involved in the project through decision-making tasks and reporting. The project sponsor is responsible for continuous communication between the core and project organization; the project management is responsible for identifying and possibly for gaining stakeholders for the project and informing them; and the user representative is responsible for involving them in project execution. Within the project, the project sponsor is the highest decision-making authority.

Utilization of the solution

Utilization

- of the created product or service begins with activation of the product and the organization,
- of the created system with the activation of the operation, and
- of the created organization with the activation of the organization.

The prerequisites for sustainable utilization are created in the project. The project is closed once the operation is stable, the solution has been accepted, and all necessary final tasks have been performed. During the transition from project to application organization, it is ensured that the roles required for utilization are assigned. These often include the roles of user representative and operations manager. The project is transformed into the application. If the core organization maintains the same portfolio for both projects and applications, as indeed is envisaged in the HERMES portfolio management, only the status changes from project to application. However, it should be taken into account that the project and the application overlap in the portfolio. This is particularly the case in the development of agile solutions. The executive board of the user and that of the developer or operator remain in contact also during the utilization period. The check to see whether the originally set objectives have been achieved is carried out during the utilization stage.

7.4.1.3 Comprehensibility of the selected approach

Responsible project execution also involves choosing the appropriate approach. The decision as to whether the project approach is traditional or agile must be made at the project level, given that each project has its own characteristics. This also applies to projects within a program. Even several IT projects that are being handled in parallel may have different framework conditions that require different approaches.

Different methods and techniques can be used for the choice of approach. The requirements of controlling and compliance bodies must be met. The choice of approach must be comprehensible.

7.4.1.4 Self-determination of users over the project

In some cases, it has become customary for the service providers or the partner groups of developers or operators to have a significant influence on the project, even to the extent of dominating them. Firstly, this contradicts the understanding of roles and partners in HERMES. Secondly, the users cannot fully assume their responsibility in the project and are accordingly unable to protect their interests.

The core organization/user partner group – as the owner of the project and user of the solution – provides the financial resources for the project. This gives it the right to decide freely and without limitation by the other partner groups on the project structure, the management method applied, as well as the approach, and to fill the minimum number of roles with its own staff or staff employed by them. However, it must also make use of these rights and consistently assert them/itself. This in turn is part of its obligation.

With respect to the self-determination of users over the project, the following project roles are especially relevant:

- Project sponsor
  - Defines the framework for project initiation and for solution development.
  - Determines the assignment of roles, especially the user partner group.
  - Decides on the type of development approach.
  - Asserts the interests of the project sponsor's core organization.
- Project management
  - Prepares the steering decisions.
  - Safeguards the interests of the core organization.
  - Manages the roles of all partner groups.
  - Enforces the selected approach.
  - Ensures reporting.
- User representative
  - Prepares the steering and management decisions.
  - Evaluates options in the interest of the core organization.
  - Supports the project management in safeguarding the interests of the core organization and in reporting.

In the core organization, the following role groups in particular deal with self-determination:

- Controlling and compliance bodies
  - Evaluate compliance with the requirements with respect to the approach set out in the execution order.
- Executive board
  - Checks whether the core organization's requirements and objectives with respect to the project are being met.

7.4.1.5 Integration into the portfolio

Figure 30 shows a possible subordination of the portfolio within the core organization. The project portfolio is often located

a) in the project management competence center or
b) in the controlling and compliance bodies.

As a rule, however, responsibility lies with the executive board.

The governance requirement concerning efficient and sustainable use of resources means that an assessment is carried out to ascertain whether a project should be initiated and its execution should later be released. One task of the core organization is to steer and control all of the organization's projects on an overarching basis. This is done with project portfolio management. It includes the overarching prioritization and coordination of projects, the allocation of resources to projects, and decisions on which projects are initiated, executed, halted, and terminated. From the company's perspective, it is advantageous to merge the project portfolio and the application portfolio into a superordinate product portfolio.

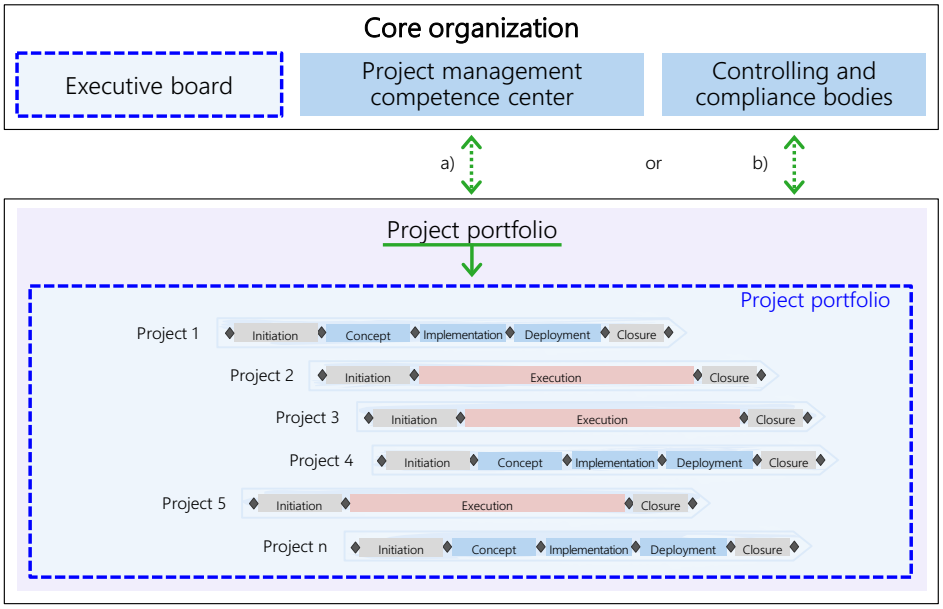


Figure 30: Two common ways to assign the portfolio in organizational terms

One of the ways in which HERMES supports the integration of projects – and of applications – into portfolio management is with the phase model (consistent project structure), phases and releases, milestones, and reporting.

7.4.1.6 Reporting

The project governance requirement concerning transparent communication necessitates reporting. Reporting also supports the project governance requirement concerning traceability and comprehensibility of the project. Reporting is carried out periodically along the phases according to the requirements of the core organization.

Reporting formally regulates the flow of information within the project organization and vis-à-vis the core organization. Timely reporting is a prerequisite to enable the competent bodies in the project organization and core organization to carry out their tasks responsibly.

The transparency achieved with reporting is of benefit not only for the core organization and the project sponsor, but also for the project manager, given that it documents the quality of project execution:

- Project status report
  Project status reports are prepared periodically from the beginning of a project until its closure. In time frames defined by the core organization, the project manager uses the project status report to inform the project sponsor and the core organization about the project status (plan/actual comparison) and the expected next steps (forecast).

- Phase report
  At the end of the concept, implementation, deployment, and execution phases, the phase outcomes and the planning of the further course of the project are prepared for the project sponsor in such a way that the project sponsor can decide on how to proceed (usually on phase release).
- Release report (agile)
  During the execution phase, the outcomes of the release are prepared for the project sponsor at the end of each release in such a way that the sponsor is informed about the success of the release as well as progress and overall development. If it was determined in the initiation phase that decisions on release must be made, the release report serves as a decision-making tool.
- Final project evaluation
  At the end of the closure phase, the final project evaluation is created. It provides the basis for continual improvement in the core organization based on the lessons learned.

As Figure 31 shows, reporting stays uniform within the project organization and in relation to the core organization, regardless of which development approach is selected. This ensures that governance is maintained in reporting for both the traditional and the agile development approach.

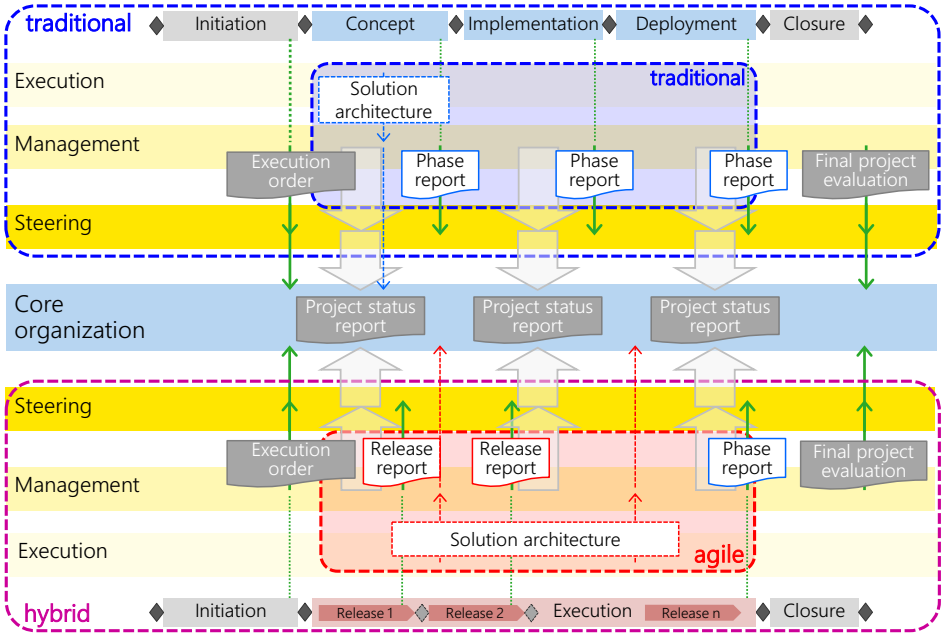


Figure 31: Encapsulated reporting structure that is uniform in relation to the core organization

Supplementing reporting, defined specialist outcomes are forwarded to the controlling and compliance bodies for review (e.g. solution architecture).

7.4.1.7 Meeting the project governance requirements

Review subject matter

When assessing a project, one of the checks is whether the project meets the requirements for good project governance.

The following list describes for each requirement how the individual HERMES method components support the meeting of the requirements.

Effective project steering and management

- Roles
  Roles are a key method component for meeting the requirements for effective project steering and management:
  - Responsibility for tasks and outcomes is assigned to the defined roles in the project.
  - The roles are assigned to the hierarchy levels of steering, management, and execution. This further highlights the responsibility of the roles.
  - The roles are fleshed out with role descriptions. They describe the tasks, powers, and responsibility, as well as the skills required to perform the role.
  - A role of quality and risk manager is defined to support the role of the project sponsor. The quality and risk manager carries out independent assessments of project execution and makes recommendations.
  - A role group of project committee is defined to support the role of the project sponsor. The project committee enables the stakeholders to be integrated into the project organization at the steering hierarchy level.
  - In the traditional approach, a role group of technical committee is defined to support the role of the project management. This enables the stakeholders to be included in the project organization both in the management area and at the technical level.
  - The project organization section describes which aspects are to be taken into account when assigning roles in order to ensure effective project steering and management.
- Modules and tasks
  The steering and management tasks are described in detail. They are grouped in the project steering and project management modules and are therefore clearly visible for the project sponsor, project management, and other project participants.
  This ensures a high degree of transparency with regard to tasks and outcomes for which the project sponsor and project management are responsible.
- Outcomes
  Every project has certain outcomes – the minimum required documents – that have to be achieved to enable it to be steered and managed. These include the execution order and the project management plan, for example. The minimum required documents from a governance perspective are defined in the outcomes section.
- Reporting
  Project steering requires reliable information on planning, project status, and forecasts. These are provided via reporting.

Consideration of stakeholder interests

- Roles
  The roles of project steering (project sponsor), project management, and specialist product development (user representative) are responsible for the corresponding tasks.
- Tasks
  - The manage and inform stakeholders task ensures that stakeholders are identified and their interests are analyzed.
  - The advocate stakeholder interests task ensures that stakeholders can contribute their ideas and demands to the project and are involved in the development process as needed.
- Outcomes
  The stakeholder list and stakeholder interests are first established in the initiation phase and are continuously pursued over the course of the project.

Cooperation between the project organization and core organization

- HERMES and portfolio management
  HERMES supports the integration of projects into portfolio management.

- Phases and milestones
  The phases and milestones (with quality gates) support cooperation (e.g. with regard to clear interfaces).
- Roles
  The role model establishes a clear link between the project organization and the core organization with its controlling and compliance bodies.
- Tasks
  Several tasks support cooperation between the project organization and core organization. For example:
  - the decision-making tasks for project initiation release, execution release, phase release, release, und project closure;
  - the agree on and steer goods/services task;
  - the decide on solution architecture task;
  - the decide on ISDP concept task.

Alignment of the set objectives with requirements of the core organization

- Phases/releases
  Before the execution release at the end of the initiation phase and the respective release or phase release, the objectives are aligned with the strategies and objectives of the core organization within the framework of the relevant decision-making tasks.

Transparency in project communication

- Tasks
  Communication planning is created with the manage and inform stakeholders task. Communication is target-group-oriented.
- Reporting
  Reporting ensures project-internal communication between the project management and the project sponsor, and also provides a realistic and timely overview and holistic evaluation for the core organization.

Comprehensibility of the course of the project

- Outcomes
  The outcomes achieved as the project progresses document the course of the project.
  - Periodic reporting, which includes the project status report and the phase report, documents the progress of the project.
  - Project decisions are recorded and minutes are taken of meetings.
  - The lessons learned are continuously recorded.
  - the final project evaluation, planned and actual comparisons are carried out (target/actual comparison), and key findings are recorded.
  - The project management plan is continuously updated and documents the respective planning status.
  - Procurements are documented with an evaluation report.
  - Changes are managed and recorded in the change status list.

Appropriate approach to risks

- Outcomes
  The project status report contains the current risk assessment and informs the recipients about the project management's assessment.
- Tasks
  Risk management is continuously managed with the manage risks task.
- Roles
  At the project steering hierarchy level, the role of quality and risk manager supports the project sponsor with an independent assessment of the project.
- Phases/releases
  If, at the end of a phase or release, the risks are deemed unacceptable, a decision on next steps must be made, and the project may have to be terminated.

- Modules and scenarios
  Modules and scenarios support all project participants and the core organization with a common understanding of how a project with a specific characteristic is handled. In this way, misunderstandings can be prevented and project risks can be reduced overall.

Efficient and sustainable use of resources

- Modules and scenarios
  Modules and scenarios enable efficient project planning.
- Initiation phase
  At the end of the initiation phase, a check is carried out to see whether it is wise to continue the project by means of an execution order. Possible reasons for not doing so are lack of economic efficiency, excessive risks, infeasibility, and lack of alignment with the objectives and strategies of the organization.
- Phases, releases, and milestones
  At the end of the phases or at the end of the release, a check is carried out within the framework of solution development to see whether it is wise to continue the project. Possible reasons for discontinuation include excessive risks, lack of benefits, escalating costs, etc.
- User information
  The sustainability section describes how projects are implemented sustainably, how sustainable outcomes are achieved and which criteria are used to assess sustainability.

7.4.2 Sustainability

7.4.2.1 Understanding of sustainability

The foundation of sustainability is the sustainability concept of the World Commission on Environment and Development (Brundtland Commission). This defines that sustainable development should satisfy the needs of the present, but must not endanger the needs of future generations. To accomplish this, economic, social, and ecological processes must be brought into harmony with each other. Sustainable development strives to achieve a balanced and sustainable relationship between nature and its capacity to renew itself and the demands placed on it by the population.

The implications of today's actions for the future must accordingly be taken into account. For example, the consumption of the environment and resources must be reduced to a sustainable level for the long term while maintaining economic capacity and social cohesion. All these sustainability requirements also affect the projects. When defining the objectives to be achieved, the project must not be limited to economic efficiency alone, but must also include society and the environment. In this respect, successful project management also has a positive impact on sustainable development.

From a sustainability and life-cycle perspective in the area of information and communication technologies, the focus is primarily on energy and resource efficiency as well as working conditions in producing countries. Special attention is paid to procurement by defining ecological and social award criteria. For information technologies, an important role is also played by long-term data security, data protection, data integrity, and access to knowledge.

7.4.2.2 Sustainability with HERMES

HERMES as a complete project

HERMES supports the sustainability of the solution. The method components are described with regard to sustainability aspects below.

Phases

It is important to enshrine sustainability objectives when defining strategic objectives. These are included in the project as a requirement during the initiation phase.

- For the project sponsor, one of the decision-making criteria for the execution release is whether and how the project meets the sustainability requirements and objectives. As a result, unsustainable projects are not even released for continuation.
- In addition to compliance with the requirements and alignment with the strategic objectives, the achievement of the sustainability objectives is also taken into account as an evaluation criterion for each decision on release or phase release.

Outcomes

All outcomes required for sustainable operation are developed in the project. These include the organization with its processes, as well as the outcomes for maintenance and further development, including the user manual, operating manual, product concept, solution architecture, and detailed specifications. The test infrastructure and test tools are transferred from the project to the core organization for further development after project closure.

The following outcomes support sustainability in decision-making:

- Study
  Evaluation criteria for the decision on next steps (choice of solution option)
- Tender documentation (specifications)
  List of criteria for evaluating the solution and tenderers
- Checklists
  Review points and criteria in the decision-making process

Tasks

Several tasks specifically support sustainability in the project, for example:

- Decision-making tasks such as:
  - Decisions on execution release, phase release, release, and project closure;
  - Decision on next steps;
  - Decision on solution architecture;
- Agree on and steer goods/services task;
- Manage and inform stakeholders task;
- Prepare procurement analysis task;
- Procurement module tasks.

Modules

In the procurement module, the sustainability objectives and requirements are included in the list of criteria for the procurement of services and products and are included in the evaluation.

Roles

With their powers and responsibility, roles can promote a conscious approach to resources. The understanding needed for this is created already when defining the objectives. Accordingly, all roles and their tasks are decisive for the project's sustainability.

The following three roles are particularly relevant with regard to sustainability objectives:

- Project sponsor
  - Defines the objectives in line with the strategy and sustainability requirements.
  - Prioritizes the solution objectives, resolves conflicts between objectives, and incorporates them into solution requirements and organizational requirements.
  - Regularly checks the implementation of requirements and the achievement of objectives.
  - Ensures the involvement of stakeholders and their requirements.
  - Ensures the long-term resources needed for operation.
- Project management
  - Enshrines sustainability awareness in the project.
  - Considers sustainability criteria when making decisions.

- Ensures the careful use of resources.
- When assigning roles, ensures that specialists have the skills needed to fill the roles and closes any skills gaps
  (in the agile approach, this falls within the powers of the development team).

- User representative
  - Integrates the sustainability objectives into the solution requirements and prioritizes them.
  - Anchors sustainability awareness in solution development.
  - Understands the value creation of development work to include sustainability.
  - Considers the interests of stakeholders.
  - Supports the project sponsor in defining sustainability objectives.
  - Incorporates sustainability into the procurement process.
  - Ensures that sustainability aspects are factored in when defining requirements.
  - Sees to a value-oriented prioritization of requirements.
    - The sustainability objectives are included in the evaluation of the requirements.
  - Evaluates options also from a sustainability perspective.

In the project organization, the following execution roles in particular are concerned with sustainability:

- Business analyst
  - Determines the sustainability requirements of the core organization.
  - Integrates the sustainability objectives into the organizational requirements.
  - Considers the sustainability aspects when drawing up the organization concept.
  - Accompanies the user representative in the formulation of the sustainability objectives.
- Operations manager
  - Considers sustainability aspects when defining the operation-related requirements.
  - Considers sustainability aspects when designing the operating concept.
  - Ensures sustainable operation.

In the core organization, the following role groups in particular deal with sustainability:

- Controlling and compliance bodies
  - Assess compliance with the requirements and the achievement of the sustainability objectives.
  - Check the product concept.
  - Check the solution architecture.
    - Homogeneous architectures should make it possible to ensure the long-term operation and further development of systems.
- Executive board
  - Prioritizes the projects in the portfolio also using criteria that take sustainability into account.
  - Checks whether the sustainability requirements and objectives can be realistically achieved with the project.

7.4.3 Project management and development management

7.4.3.1 Project management

As Figure 32 shows, HERMES distinguishes between traditional and hybrid project management.

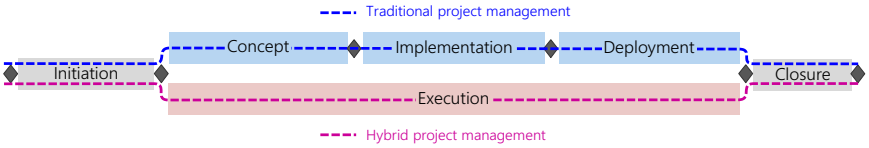


Figure 32: HERMES offers traditional and hybrid project management

This means solution development can take a traditional, agile, and (in special cases) also hybrid approach:

- Traditional product management supports traditional development management;
- Hybrid project management supports agile and hybrid development management. It is a combination of traditional project management and an agile development approach.

7.4.3.2 Agile development management

Agile development methods are not project management methods, but rather development management methods. Because projects under HERMES must fulfill certain framework conditions from the beginning, such as compliance with governance, smooth embedding of the project in the existing planning and controlling processes of the core organization (fundamental mission of HERMES), and common language/uniform terminology, pure agile development does not fulfill these requirements placed on HERMES. For that reason, the agile method is embedded in hybrid project management suitable for this purpose.

Figure 33 shows the hybrid part of the HERMES phase model with agile development management.

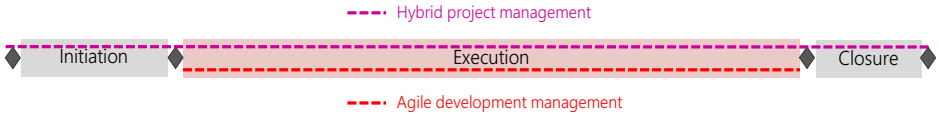


Figure 33: Phase model with agile development

The understanding of roles in hybrid project management is based on both traditional project management and agile development methods. The project sponsor, including the project committee and the quality and risk manager at the steering hierarchy level, and the project management, including the technical committee and project support at the management hierarchy level, work in accordance with traditional project management; the development team at the execution hierarchy level works in accordance with agile techniques. The user representative assumes an additional interface function.

7.4.3.3 Hybrid development management

The development in the project, i.e. solution development, can be undertaken either with the traditional or with the agile approach. In practice, however, there are cases in which a project is undertaken with a combination of both approaches.

Because all method components are coordinated with each other, HERMES project management also supports this "hybrid" approach. However, this requires corresponding tailoring at the end of the initiation phase, given that the hybrid component must be adapted to the corresponding needs. Figure 34 shows two conceivable options under a hybrid development approach.

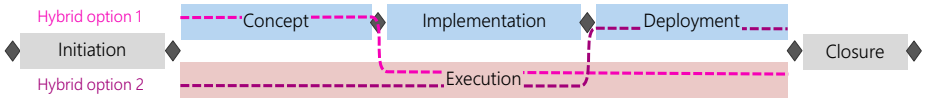


Figure 34: Hybrid development approach – example options

7.4.4 Financial steering and management

7.4.4.1 General

The project's financial steering and management starts with the decision on project initiation release and ends with the decision on project closure, in some cases with the decision on project discontinuation.

7.4.4.2 Funding

As the owner of the project, the core organization provides the financial resources for the project. The initiation phase constitutes preliminary goods/services for the entire project, financed using the project budget or line budget. The outlay for the initiation phase is included as preliminary goods/services in the project's economic efficiency considerations.

The planning of resource requirements and financing is carried out for the entire project. A master plan is created in the initiation phase, and this is continuously checked and adjusted. In the traditional approach, the binding investment and operating costs must be known at the end of the concept phase. These also factor in the costs of covering project risks.

In the agile approach, key figures for operating costs are fleshed out successively from release to release and reported on a release-by-release basis. The expected investment costs or the total budget for the solution development, plus the costs for the closure phase, are in principle defined as fixed in the execution order.

The operating costs are financed using the project budget during project execution and then using the line budget.

7.4.4.3 Steering

With the decision on execution release, the investment budget required for execution is approved by the core organization. The project sponsor assumes responsibility for this and, in the traditional approach, releases the financial resources in phases. This release is steered by means of the phase release decision-making tasks.

In the agile approach, there is no need for a successive release of finances. These are fixed for the solution development or defined as a cost ceiling and are released once with the execution order. Within the framework of agile development, the estimated remaining outlay is compared with the actual remaining outlay by means of a burndown chart and communicated by means of a release report.

The project sponsor is responsible for financial steering and ensures the economic efficiency of the project. The project sponsor accordingly steers the project costs and the future operating costs. Reporting provides all the information the project sponsor needs to assess the project status and cost developments. Given that the budget is fixed in the agile environment, financial control and project success are measured and ensured by other instruments.

If necessary, the project sponsor appoints an independent quality and risk manager for steering support.

The project management is responsible for the financial management of the project. The project management takes care of project accounting and prepares the information for steering.

Through the manage changes task, the project management ensures that changes in requirements and scope, as well as their impact on costs, personnel requirements, and deadlines, are identified, analyzed, requested, and decided in a timely manner. Planning is adjusted accordingly.

7.4.5 Planning

7.4.5.1 Planning basis and procedure

Planning forms the basis for the efficient and effective use of resources required in the project. It is the prerequisite for managing and steering the project. It supports communication and the reconciliation of activities among the project participants.

After conducting the study with the objectives and the decision on next steps in the initiation phase, the first step in execution planning is execution structuring. The project management selects the appropriate scenario in HERMES online in accordance with the decision on next steps. The scenario with its method components provides a basic structure that is adopted for solution development and adapted to the specific circumstances of the project.

The planning outcomes are recorded in the project management plan. It is the key instrument for managing the project and includes all the plans for the project. It is created in the initiation phase and continually updated in subsequent phases.

After the decision on execution release, the paths of the traditional and agile approach diverge. In traditional solution development, planning is done by the project management according to the principle of rolling planning; in agile solution development, further planning is done autonomously by the development team.

7.4.5.2 Initial planning of solution development

In the initiation phase, the continuation of the project is planned. The execution structuring is created and the outcomes of the further course of the project are defined on the basis of the study. The human and financial resources are planned only in enough detail to ensure their availability for the entire project.

First, the execution structure plan is developed according to the following procedure:

1. Create a study, define scope and boundaries for solution development.
2. In HERMES online:
   a. Select scenario and adjust if necessary (within the scope of the study).
   b. Create and export execution structure plan.
   c. Integrate execution structure plan into the project management plan.
3. Supplement solution-specific outcomes and tasks.
4. Adapt roles in the project management plan to the scenario.

The project management plan is then drawn up with the following steps – they do not necessarily have to be carried out in this order and can be taken more than once:

- Define risk management;
- Create QA plan and review plan;
- Estimate outlay for outcomes;
- Determine interdependencies;
- Create a schedule (where applicable, also provide release plan (agile));
  - Ensure resources for the duration of the entire project with the agree on and steer goods/services task;
  - Factor in qualification and availability of resources when estimating outlay and duration;
  - Estimate the duration of the tasks;
- Plan the use of resources;
- Create a communication plan;
- Create a cost plan;
- Check project management plan with QA measure;
- Coordinate the project management plan with stakeholders and verify it as a basis for the execution order.

7.4.5.3 Planning in traditional solution development

From rough to detailed

The distinction according to phases and the fleshing out and extension of the procedure component "from rough to detailed" comes from systems engineering[10] and is one of the foundations of the traditional phased approach of HERMES. In traditional solution development, planning, steering, and management are based on the principle of rolling planning. Towards the end of the concept and implementation phases, the next phase is planned in detail before the decision on phase release is made, and the rough planning is reviewed.

Detailed planning for the next phase

The following activities are carried out:

- Review the execution structure plan and complete tasks and outcomes;
- Flesh out tasks and outcomes;
- Define work packages for the next phase and specify persons responsible for each work package;
- Flesh out the work package activities and outcomes;
- Verify outlay estimates based on work packages;
- Flesh out resource planning;
- Flesh out the phase schedule;
- Create decision plan;
- Flesh out review plan;
- Flesh out communication plan;
- Update the risk list and measures;
- Verify the overall plan;
- Check project management plan with QA measure;
- Coordinate the project management plan with stakeholders.

Planning and steering with work packages

The detailed planning of a traditional phase is based on work packages. They are the prerequisite for controlling and steering the project. The following notes apply for work packages:

- Several work packages can be created from one task.
- One or more outcomes result from a work package. These are achieved in activities. When creating a work package order, the described activities are further refined.
- Upon completion of the work package, the outcomes have been subjected to the QA measures defined in the review plan or test concept and have been accepted.
- A person is assigned responsibility for a work package. Several people can collaborate within a work package.
- A work package typically lasts between two and six weeks.

Planning accuracy over the course of the project

At the beginning of the project, the knowledge about a potential solution is by no means zero. Already at the beginning of the initiation phase, planning is possible with only a low degree of accuracy. By proceeding in phases, i.e. from rough to detailed, the outcomes are continuously fleshed out. As a result, knowledge increases, uncertainty is reduced, and planning accuracy increases over the further course of the project. The increasing knowledge (with the level of detail of the outcomes) and planning accuracy are directly related. The planning accuracy to be achieved at a specific point in time determines the level of detail at which the outcomes are to be prepared.

Figure 35 shows how knowledge about the solution increases and how planning inaccuracy decreases over the course of the project.

[10] See n. 2, p. 9

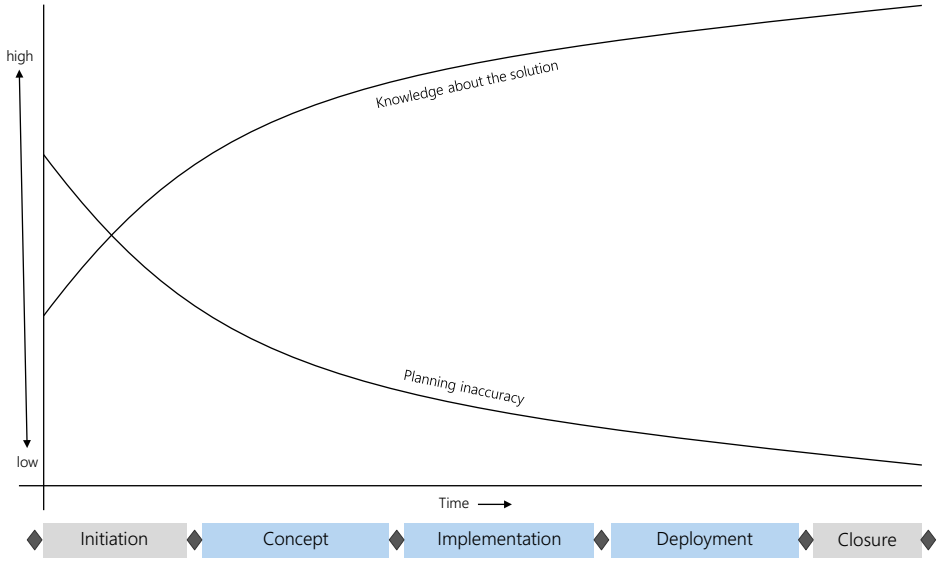


Figure 35: Increasing knowledge/decreasing planning inaccuracy

HERMES cannot specify how detailed planning should be at a specific point in time, given that this is highly dependent on the situation and on the characteristics and complexity of the project. This should instead be specified by the project sponsor and the controlling and compliance bodies of the core organization.

Estimates should generally indicate planning accuracy details, and reserves should be included in the execution order and project management plan on that basis. For this purpose, the estimate assumptions must be documented in order to meet the governance requirement concerning transparent communication.

7.4.5.4 Planning in agile solution development

In agile solution development, other mechanisms come into play; the aspect from rough to detailed takes place within the framework of iterative processing and is carried out autonomously by the development team at the hierarchy level of execution. Agile release planning is linked to the schedule in the project management plan. On the project side, planning at the management level is limited to coordinating aspects and is activated again only in the closure phase.

7.4.6 Implementation units under traditional approach

If the traditional solution development of an IT project becomes so complex that the implementation of the whole scope seems questionable, or if initial outcomes for use are to be delivered as quickly as possible, the implementation and deployment phases can be broken down into several implementation units.

The traditional approach of HERMES project management enables both sequential and overlapping in time or parallel development in implementation units. The release of the first implementation unit is the implementation phase release, which requires regular closure of the concept phase. Each implementation unit covers the two phases of implementation and deployment.

An implementation unit comprises all technical and organizational outcomes of the project that are required for deployment of the system or a part of it. At the end of an implementation unit, the product or system is used productively.

Figure 36 schematically shows the overlap in time between implementation units as independent control units, each with an implementation and deployment phase.

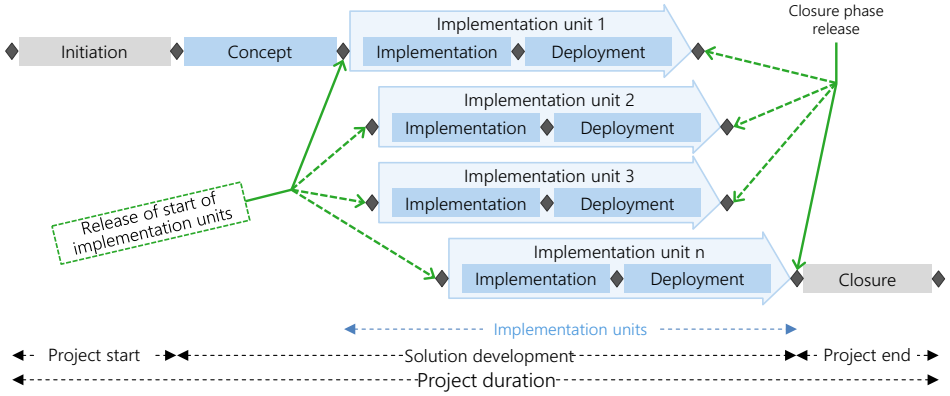


Figure 36: Implementation units overlapping in time using traditional approach

The following points need to be observed with respect to implementation units:

- The initiation and concept phases are completed. Implementation units can be started after the concept phase. After that point, the project takes place in the phases and milestones of the respective implementation unit. There is no superordinate phase model.
- Although the number of implementation units is not limited by HERMES, the duration of the project should not be unlimited. For this reason, the implementation units are planned as a whole in the concept phase.
- Each implementation unit covers the implementation and deployment phases. Each implementation unit goes through the decision-making tasks of steering and management.
- The start of an implementation unit must be released by project steering. This requires an updated project management plan.
- From a controlling perspective, implementation units are planned and controlled separately in terms of costs, deadlines, and outcomes. They form independent control units. Accordingly, reporting should be geared to the implementation units.
- It makes sense for a final evaluation of the implementation unit to be carried out at the end of every implementation unit and the lessons learnt to be documented and used.

Provided that each implementation unit could be finished with a formal phase closure, at the end of the last implementation unit a decision is made on effective release of the next closure phase. In the closure phase, the corresponding tasks and outcomes are carried out. This includes the final project evaluation of all implementation units.

7.4.7 Application with other methods and practices

HERMES defines the outcomes and the general course of the project. However, it does not prescribe which methods and practices must be used to produce the outcomes.

HERMES is thus supplemented by subject-specific methods and practices over the course of the project (see Figure 37). Users, developers, and operators define these and coordinate them with the tasks, outcomes, and roles according to HERMES.

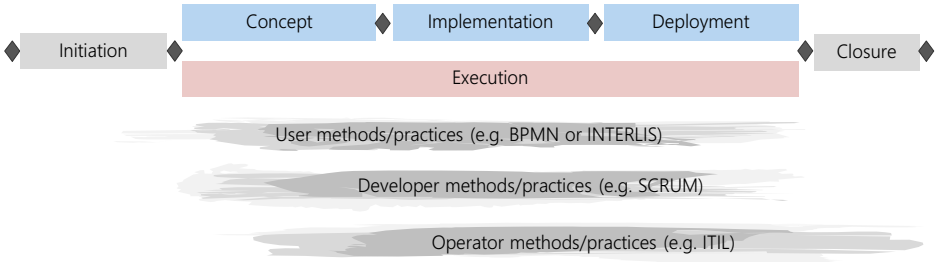


Figure 37: Use of supplementary methods and practices

For the participants, especially in the context of solution development, this gives rise to new dimensions that universalize the applicability and usability of HERMES and still fully accommodate the individual method protagonists. For example, the user can specify that they will use an open source tool for conceptual data modeling, or the developer can employ the agile development method favored in the developer's core organization for the development process.

The following points must be observed when supplementary methods and practices are used:

- The tasks, outcomes, and roles of project steering and project management are always based on HERMES and cannot be replaced by other methods.
- The HERMES phase model remains in place.
- The milestones are set and cannot be changed.
- Specifications on the use of methods and practices are recorded in the project management plan.

7.4.8 Integration of HERMES into the core organization

7.4.8.1 General

Since each core organization has its own specific characteristics, it is often essential and advantageous to adapt the method to its needs to ensure efficient project management.

The following objectives are pursued with the integration of HERMES into the core organization:

- Specific core organization processes and requirements that HERMES is not aware of are taken into account.
- The project manager, the user representative, and other project participants receive even better support. They have a framework defined specifically for the organization.
- Project management efficiency is increased, given that processes and requirements do not have to be reinvented for every project.
- Quality is increased with the more extensive integration of practices into the method, of other methods, and of tools. In particular, the widely used agile development methods are deprived of their project management deficits. Thanks to HERMES, they fully adapt to the organization.
- HERMES training can incorporate organization-specific adaptations and accordingly be more effective. With regard to certification, it is recommended in particular not to change the HERMES terminology excessively.

7.4.8.2 Procedure

HERMES is best integrated into the core organization by way of a project.

The project can be carried out on the basis of the service/product adaptation scenario. In doing so, the aspects of the deployment organization are also taken into account in training, and the organization with the processes for operation and further development of project management are created and activated.

The adaptation is made by the project management competence center.

7.4.8.3 Adapting the method

Integration of important elements into the method

The core organization's requirements are integrated into the method, e.g.

- Requirements arising from organization-specific processes
- Decision-making process traditional/agile, necessary information for decision-making
- Requirements of other decision-making processes
- Reporting requirements (project status report, phase report, release report)
- Requirements for SLAs, contracts, and agreements
- Security and data protection aspects
- Aspects of the solution architecture

The specific methods and practices for producing outcomes are integrated into the method, e.g.

- Presentation of requirements engineering outcomes
- Presentation of data modeling outcomes (e.g. using INTERLIS, UML[11])
- Presentation of business process modeling outcomes (e.g. using BPMN[12])
- Embedding of agile development method (e.g. using SCRUM)
- Practices for integration into operation (e.g. with the help of ITIL[13])

The method components are adapted if necessary. The following points should be observed in the process:

Phases and milestones

- The defined phases must not be omitted, but they may be subdivided.
- The milestones must not be omitted, but they are guided by the procedure and any subdivision of the phases.
- The names of the method components must not be changed.

Outcomes with document templates and tasks

- Minimum required documents (outcomes) must not be omitted.
- Several individual outcomes can be integrated into a single document.
- Outcomes can be split.
- Additional outcomes can be defined.
- HERMES document templates can be replaced with organization-specific document templates, with document templates from GEVER systems,[14] or with other solutions.
- Outcomes can be described in greater detail in the document template.
- Multiple document templates can be created for a single outcome.
- Document templates must include the contents defined in the method outcome description, but they can be extended and fleshed out.
- The new tasks needed to create the outcomes must be described.

[11] Unified Modeling Language (UML), designed by the Object Management Group for object-oriented modeling, is a graphical description language for the presentation of software systems such as database applications, real-time systems, and workflow applications.

[12] Business Process Model and Notation (BPMN), designed by the Object Management Group, is a graphical description language for creating business process models, flowcharts, and workflows.

[13] Information Technology Infrastructure Library (ITIL) is an IT service management framework consisting of best practice processes for the provision of IT services.

[14] Abbreviation of the German "*Geschäftsverwaltung*", used in administration for workflow systems with electronic records and process management.

Modules, scenarios

- New modules and scenarios can be created.
- The defined HERMES scenarios and modules can be extended with outcomes and the associated tasks, but not reduced. If outcomes or tasks are removed from a scenario or module, this results in a customized scenario.

Roles

- Roles can be described in greater detail as long as the essential task area is identical.
- Further roles can be defined. A role description is mandatory for each new role.
- New roles must be assigned to one of the hierarchy levels and a partner group.
- Minimum roles to be filled as well as their assignment to the user partner group must not be changed.

Checklists

- The contents of all checklists can be freely adapted and expanded.
- Checklist components described in decision-making tasks cannot be omitted.
- Separate individual checklists can also be defined in addition.

Once the organization-specific adaptations have been made, scenarios are created for projects with the same characteristics.

Appendix A – Table of contents

Appendix B – Figures

Appendix C – Tables

Appendix D – Vocabulary

Phases – Phasen – Phases – Fasi

	English Phases	Deutsch Phasen	Française Phases	Italiano Fasi	
1.4.4.1	Closure	Abschluss	Clôture	Conclusione	24
1.4.2.1	Concept	Konzept	Conception	Progettazione	22
1.4.2.3	Deployment	Einführung	Déploiement	Introduzione	23
1.4.3.1	Execution	Umsetzung	Mise en œuvre	Attuazione	23
1.4.2.2	Implementation	Realisierung	Réalisation	Realizzazione	22
1.4.1.1	Initiation	Initialisierung	Initialisation	Avvio	21

Table 30: HERMES phases vocabulary, 4 languages

Scenarios – Szenarien – Scénarios – Scenari

	English Scenarios	Deutsch Szenarien	Française Scénarios	Italiano Scenari	
2.4.2.2	IT adaptation	IT-Adaption	Adaptation IT	Adeguamento IT	30
2.4.2.1	IT development	IT-Entwicklung	Développement IT	Sviluppo IT	30
2.4.3.1	Organizational adjustment	Organisationsanpassung	Adaptation de l'organisation	Adeguamento dell'organizzazione	31
2.4.1.2	Service/product adaptation	Dienstleistung/Produkt Adaption	Adaptation de la prestation/du produit	Adeguamento del servizio / prodotto	29
2.4.1.1	Service/product development	Dienstleistung/Produkt Entwicklung	Développement de la prestation/du produit	Sviluppo del servizio / prodotto	28

Table 31: HERMES scenarios vocabulary, 4 languages

Modules – Module – Modules – Moduli

	English Modules	Deutsch Module	Française Modules	Italiano Moduli	
3.4.2.7	Deployment organization	Einführungsorganisation	Organisation du déploiement	Organizzazione dell'introduzione	39
3.4.2.10	ISDP	ISDS	SIPD	SIPD	40
3.4.2.8	IT migration	IT-Migration	Migration informatique	Migrazione IT	39
3.4.2.9	IT operation	IT-Betrieb	Exploitation informatique	Esercizio IT	40
3.4.2.5	IT system	IT-System	Système informatique	Sistema IT	38
3.4.2.3	Organization	Organisation	Organisation	Organizzazione	36
3.4.2.2	Procurement	Beschaffung	Achat	Acquisto	36
3.4.2.4	Product	Produkt	Produit	Prodotto	37
3.4.2.1	Project foundations	Projektgrundlagen	Bases du projet	Basi del progetto	35
3.4.1.2	Project management	Projektführung	Conduite du projet	Gestione del progetto	34
3.4.1.1	Project steering	Projektsteuerung	Pilotage du projet	Conduzione del progetto	33
3.4.2.6	Tests	Tests	Tests	Test	38

Table 32: HERMES modules vocabulary, 4 languages

Outcomes – Ergebnisse – Résultats – Risultati

	English Outcomes	Deutsch Ergebnisse	Française Résultats	Italiano Risultati	
4.4.1.12	Acceptance checklist	Checkliste Abnahme	Liste de contrôle Réception	Lista di controllo Accettazione	49
4.4.2.9	Acceptance milestone	Meilenstein Abnahme	Jalon Réception	Pietra miliare Accettazione	70
4.4.1.1	Acceptance report	Abnahmeprotokoll	Procès-verbal de réception	Verbale di accettazione	44
4.4.1.55	Agreement	Vereinbarung	Accord	Accordo	68
4.4.1.17	Business model description	Geschäftsmodellbeschreibung	Description du modèle d'affaires	Descrizione del modello operativo	52
4.4.1.2	Change request	Änderungsantrag	Demande de modification	Domanda di modifica	44
4.4.1.3	Change status list	Änderungsstatusliste	Liste de l'état des modifications	Lista Stato delle modifiche	45
4.4.1.12	Checklists	Checklisten	Listes de contrôle	Liste di controllo	49
4.4.1.12	Closure phase release checklist	Checkliste Phasenfreigabe Abschluss	Liste de contrôle Libération de la phase de clôture	Lista di controllo Avvio della fase Conclusione	49
4.4.2.9	Closure phase release milestone	Meilenstein Phasenfreigabe Abschluss	Jalon Libération de la phase de clôture	Pietra miliare Avvio della fase Conclusione	70
4.4.1.12	Contract award checklist	Checkliste Zuschlag	Liste de contrôle Adjudication	Lista di controllo Aggiudicazione	50
4.4.2.9	Contract award milestone	Meilenstein Zuschlag	Jalon Adjudication	Pietra miliare Aggiudicazione	71
4.4.1.15	Deployment concept	Einführungskonzept	Concept de déploiement	Progettazione dell'introduzione	51
4.4.2.5	Deployment measures carried out	Einführungsmassnahmen durchgeführt	Mesures de déploiement effectuées	Misure d'introduzione attuate	69
4.4.2.6	Deployment measures realized	Einführungsmassnahmen realisiert	Mesures de déploiement réalisées	Misure d'introduzione realizzate	69
4.4.1.13	Detailed specifications	Detailspezifikation	Spécification détaillée	Specifica dettagliata	50
4.4.1.16	Evaluation report	Evaluationsbericht	Rapport d'évaluation	Rapporto di valutazione	52
4.4.1.36	Final project evaluation	Projektschlussbeurteilung	Evaluation finale du projet	Valutazione finale del progetto	60
4.4.1.18	Integration and installation instructions	Integrations- und Installationsanleitung	Guide d'intégration et d'installation	Guida per l'integrazione e l'installazione	53
4.4.1.19	Integration concept	Integrationskonzept	Concept d'intégration	Progettazione dell'integrazione	53
4.4.2.17	Interfaces realized	Schnittstellen realisiert	Interfaces réalisées	Interfacce realizzate	72
4.4.1.20	ISDP concept	ISDS-Konzept	Concept SIPD	Piano SIPD	53
4.4.1.12	ISDP concept checklist	Checkliste ISDS-Konzept	Liste de contrôle Concept SIPD	Lista di controllo Piano SIPD	49
4.4.2.9	ISDP concept milestone	Meilenstein ISDS-Konzept	Jalon Concept SIPD	Pietra miliare Piano SIPD	70
4.4.2.7	ISDP concept transferred	ISDS-Konzept überführt	Concept SIPD transféré	Piano SIPD trasferito	69
4.4.2.8	ISDP measures realized	ISDS-Massnahmen realisiert	Mesures SIPD réalisées	Misure SIPD realizzate	69
4.4.1.12	Launch of operation checklist	Checkliste Betriebsaufnahme	Liste de contrôle Mise en service	Lista di controllo Messa in esercizio	49
4.4.2.9	Launch of operation milestone	Meilenstein Betriebsaufnahme	Jalon Mise en service	Pietra miliare Messa in esercizio	70
4.4.2.1	Legacy system removed	Altsystem entfernt	Ancien système hors service	Vecchio sistema disinstallato	68
4.4.1.44	Legal basis analysis	Rechtsgrundlagenanalyse	Analyse des bases légales	Analisi delle basi legali	63
4.4.1.33	Lessons learned	Projekterfahrungen	Expériences acquises	Esperienze del progetto	59
4.4.1.21	List of management project decisions	Liste Projektentscheide Führung	Liste Décisions de conduite	Lista Decisioni della gestione	54
4.4.1.22	List of steering project decisions	Liste Projektentscheide Steuerung	Liste Décisions de pilotage	Lista Decisioni della conduzione	54
4.4.1.12	Migration acceptance checklist	Checkliste Abnahme Migration	Liste de contrôle Réception de la migration	Lista di controllo Accettazione della migrazione	49
4.4.2.9	Migration acceptance milestone	Meilenstein Abnahme Migration	Jalon Réception de la migration	Pietra miliare Accettazione della migrazione	70
4.4.2.10	Migration carried out	Migration durchgeführt	Migration effectuée	Migrazione effettuata	71

	English Outcomes	Deutsch Ergebnisse	Française Résultats	Italiano Risultati	
4.4.1.25	Migration concept	Migrationskonzept	Concept de migration	Progettazione della migrazione	56
4.4.2.11	Migration procedure realized	Migrationsverfahren realisiert	Procédure de migration réalisée	Procedura di migrazione realizzata	71
4.4.2.9	Milestones	Meilensteine	Jalons	Pietra miliare	69
4.4.1.38	Minutes	Protokoll	Procès-verbal	Verbale	61
4.4.1.12	Next steps checklist	Checkliste Weiteres Vorgehen	Liste de contrôle Suite de la procédure	Lista di controllo Continuazione	50
4.4.2.9	Next steps milestone	Meilenstein Weiteres Vorgehen	Jalon Suite de la procédure	Pietra miliare Continuazione	71
4.4.1.4	Offer	Angebot	Offre	Offerta	45
4.4.1.11	Operating concept	Betriebskonzept	Concept d'exploitation	Piano di esercizio	48
4.4.2.3	Operating infrastructure realized	Betriebsinfrastruktur realisiert	Infrastructure d'exploitation réalisée	Infrastruttura di esercizio realizzata	69
4.4.1.10	Operating manual	Betriebshandbuch	Manuel d'exploitation	Manuale di esercizio	48
4.4.2.4	Operating organization realized	Betriebsorganisation realisiert	Organisation de l'exploitation réalisée	Organizzazione di esercizio realizzata	69
4.4.2.2	Operation activated	Betrieb aktiviert	Exploitation activée	Esercizio attivato	69
4.4.2.12	Organization activated	Organisation aktiviert	Organisation activée	Organizzazione attivata	71
4.4.1.29	Organization concept	Organisationskonzept	Concept d'organisation	Progettazione dell'organizzazione	57
4.4.1.28	Organization description	Organisationsbeschreibung	Description de l'organisation	Descrizione dell'organizzazione	57
4.4.2.13	Organization implemented	Organisation umgesetzt	Organisation mise en œuvre	Organizzazione attuata	71
4.4.1.27	Organizational requirements	Organisationsanforderungen	Exigences organisationnelles	Requisiti dell'organizzazione	56
4.4.1.12	Phase release checklist	Checkliste Phasenfreigabe	Liste de contrôle Libération de la phase	Lista di controllo Avvio di fase	49
4.4.2.9	Phase release milestone	Meilenstein Phasenfreigabe	Jalon Libération de la phase	Pietra miliare Avvio della fase	70
4.4.1.30	Phase report	Phasenbericht	Rapport de phase	Rapporto di fase	58
4.4.1.12	Preliminary acceptance checklist	Checkliste Vorabnahme	Liste de contrôle Préréception	Lista di controllo Accettazione preliminare	50
4.4.2.9	Preliminary acceptance milestone	Meilenstein Vorabnahme	Jalon Préréception	Pietra miliare Accettazione preliminare	70
4.4.1.40	Process description	Prozessbeschreibung	Description de processus	Descrizione del processo	62
4.4.1.9	Procurement analysis	Beschaffungsanalyse	Analyse de l'appel d'offres	Analisi dell'acquisto	47
4.4.2.14	Product activated	Produkt aktiviert	Produit activé	Prodotto attivato	71
4.4.1.32	Product concept	Produktkonzept	Concept du produit	Progettazione del prodotto	58
4.4.1.12	Product concept checklist	Checkliste Produktkonzept	Liste de contrôle Concept du produit	Lista di controllo Progettazione del prodotto	49
4.4.2.9	Product concept milestone	Meilenstein Produktkonzept	Jalon Concept du produit	Pietra miliare Progettazione del prodotto	70
4.4.2.15	Product developed or adapted	Produkt entwickelt oder angepasst	Produit développé ou adapté	Prodotto sviluppato o adeguato	71
4.4.1.31	Product documentation	Produktdokumentation	Documentation du produit	Documentazione del prodotto	58
4.4.1.12	Project closure checklist	Checkliste Projektabschluss	Liste de contrôle Clôture du projet	Lista di controllo Conclusione del progetto	50
4.4.2.9	Project closure milestone	Meilenstein Projektabschluss	Jalon Clôture du projet	Pietra miliare Conclusione del progetto	70
4.4.1.12	Project discontinuation checklist	Checkliste Projektabbruch	Liste de contrôle Interruption du projet	Lista di controllo Interruzione del progetto	49
4.4.1.14	Execution order	Durchführungsauftrag	Mandat d'exécution	Mandato di esecuzione	51
4.4.1.12	Execution release checklist	Checkliste Durchführungsfreigabe	Liste de contrôle Libération de l'exécution	Lista di controllo Avvio di esecuzione	49
4.4.2.9	Execution release milestone	Meilenstein Durchführungsfreigabe	Jalon Libération de l'exécution	Pietra miliare Avvio di esecuzione	70
4.4.1.34	Project initiation order	Projektinitialisierungsauftrag	Mandat d'initialisation du projet	Mandato di avvio del progetto	59
4.4.1.12	Project initiation release checklist	Checkliste Projektinitialisierungsfreigabe	Liste de contrôle Libération de l'initialisation du projet	Lista di controllo Avvio del progetto	50

	English Outcomes	Deutsch Ergebnisse	Française Résultats	Italiano Risultati	
4.4.2.9	Project initiation release milestone	Meilenstein Projektinitialisierungsfreigabe	Jalon Libération de l'initialisation du projet	Pietra miliare Avvio del progetto	70
4.4.1.35	Project management plan	Projektmanagementplan	Plan de gestion du projet	Piano di gestione progettuale	59
4.4.1.37	Project status report	Projektstatusbericht	Rapport sur l'état du projet	Rapporto sullo stato del progetto	61
4.4.1.46	Protection needs analysis	Schutzbedarfsanalyse	Analyse des besoins de protection	Analisi delle esigenze di protezione	64
4.4.1.39	Prototype documentation	Prototypdokumentation	Documentation du prototype	Documentazione del prototipo	62
4.4.2.16	Prototype realized	Prototyp realisiert	Prototype réalisé	Prototipo realizzato	71
4.4.1.42	Publication	Publikation	Publication	Pubblicazione	63
4.4.1.43	QA and risk report	QS- und Risikobericht	Rapport sur la qualité et les risques	Rapporto Controllo qualità e rischi	63
4.4.1.26	Quote request	Offertanfrage	Demande d'offres	Domanda di offerta	56
4.4.1.12	Release checklist	Checkliste Releasefreigabe	Liste de contrôle Libération du release	Lista di controllo Avvio del rilascio	50
4.4.2.9	Release milestone	Meilenstein Releasefreigabe	Jalon Libération du release	Pietra miliare Avvio del rilascio	70
4.4.1.45	Release report	Releasebericht	Rapport de release	Rapporto di rilascio	63
4.4.1.41	Review report	Prüfprotokoll	Procès-verbal de vérification	Rapporto di verifica	62
4.4.1.47	Service level agreement	Service Level Agreement	Accord sur le niveau de service	Accordo sui livelli di servizio	64
4.4.1.48	Situation analysis	Situationsanalyse	Analyse de la situation	Analisi della situazione	65
4.4.1.24	Solution architecture	Lösungsarchitektur	Architecture de la solution	Architettura della soluzione	55
4.4.1.12	Solution architecture checklist	Checkliste Lösungsarchitektur	Liste de contrôle Architecture de la solution	Lista di controllo Architettura della soluzione	49
4.4.2.9	Solution architecture milestone	Meilenstein Lösungsarchitektur	Jalon Architecture de la solution	Pietra miliare Architettura della soluzione	70
4.4.1.23	Solution requirements	Lösungsanforderungen	Exigences envers la solution	Requisiti della soluzione	54
4.4.1.49	Stakeholder interests	Stakeholderinteressen	Intérêts des parties prenantes	Interessi degli stakeholder	65
4.4.1.50	Stakeholder list	Stakeholderliste	Liste des parties prenantes	Lista Stakeholder (portatori di interessi)	66
4.4.1.51	Study	Studie	Étude	Studio	66
4.4.2.18	System activated	System aktiviert	Système activé	Sistema attivato	72
4.4.1.52	System concept	Systemkonzept	Concept du système	Piano del sistema	67
4.4.2.19	System developed or parameterized	System entwickelt oder parametrisiert	Système développé ou paramétré	Sistema sviluppato o parametrizzato	72
4.4.2.20	System integrated	System integriert	Système intégré	Sistema integrato	72
4.4.1.12	Tender checklist	Checkliste Ausschreibung	Liste de contrôle Appel d'offres	Lista di controllo Bando di concorso	49
4.4.1.8	Tender documentation	Ausschreibungsunterlagen	Dossier d'appel d'offres	Documentazione del bando di concorso	46
4.4.2.9	Tender milestone	Meilenstein Ausschreibung	Jalon Appel d'offres	Pietra miliare Gara d'appalto	70
4.4.1.5	Tender report	Angebotsprotokoll	Procès-verbal des offres	Verbale dell'offerta	45
4.4.1.53	Test concept	Testkonzept	Concept de test	Progettazione dei test	67
4.4.2.21	Test infrastructure realized	Testinfrastruktur realisiert	Infrastructure de test réalisée	Infrastruttura di test realizzata	72
4.4.2.22	Test infrastructure transferred	Testinfrastruktur überführt	Infrastructure de test transférée	Infrastruttura di test trasferita	72
4.4.1.54	Test report	Testprotokoll	Procès-verbal de test	Verbale dei test	68
4.4.1.6	User manual	Anwendungshandbuch	Manuel d'utilisation	Manuale d'uso	45
4.4.1.7	Work order	Arbeitsauftrag	Mandat de travail	Mandato di lavoro	46

Table 33: HERMES outcomes vocabulary, 4 languages

Tasks – Aufgaben – Tâches – Compiti

	English Tasks	Deutsch Aufgaben	Française Tâches	Italiano Compiti	
5.4.3.7	Activate operation	Betrieb aktivieren	Activer l'exploitation	Attivare l'esercizio	98
5.4.3.24	Activate organization	Organisation aktivieren	Activer l'organisation	Attivare l'organizzazione	112
5.4.3.30	Activate product	Produkt aktivieren	Activer le produit	Attivare il prodotto	117
5.4.3.46	Activate system	System aktivieren	Activer le système	Attivare il sistema	133
5.4.3.44	Advocate stakeholder interests	Stakeholderinteressen vertreten	Représenter les intérêts des parties prenantes	Rappresentare gli interessi degli stakeholder	130
5.4.3.18	Agree on and steer goods/services	Leistungen vereinbaren und steuern	Définir et piloter les prestations	Concordare e gestire le prestazioni	106
5.4.3.39	Analyze legal basis	Rechtsgrundlagenanalyse erarbeiten	Élaborer l'analyse des bases légales	Elaborare l'analisi delle basi legali	126
5.4.3.42	Analyze protection needs	Schutzbedarfsanalyse erarbeiten	Élaborer l'analyse des besoins de protection	Elaborare l'analisi delle esigenze di protezione	129
5.4.3.37	Carry out prototyping	Prototyping durchführen	Effectuer le prototypage	Eseguire la prototipazione	125
5.4.3.21	Conduct migration	Migration durchführen	Effectuer la migration	Eseguire la migrazione	110
5.4.3.50	Conduct test	Test durchführen	Effectuer les tests	Eseguire i test	135
5.4.3.29	Deal with problems and benefit from lessons learned	Probleme behandeln und Erfahrungen nutzen	Traiter les problèmes et mettre à profit les expériences	Trattare i problemi e valorizzare le esperienze	117
5.4.2.2	Decide on acceptance	Entscheid Abnahme treffen	Décider de la réception	Decisione Accettazione	88
5.4.2.1	Decide on acceptance of migration	Entscheid Abnahme Migration treffen	Décider de la réception de la migration	Decisione Accettazione della migrazione	88
5.4.1.1	Decide on call for tenders	Entscheid Ausschreibung treffen	Décider de l'appel d'offres	Decisione Bando di concorso	78
5.4.1.4	Decide on closure phase release	Entscheid Phasenfreigabe Abschluss treffen	Décider de la libération de la phase de clôture	Decisione Avvio della fase Conclusione	80
5.4.1.10	Decide on contract award	Entscheid Zuschlag treffen	Décider de l'adjudication	Decisione Aggiudicazione	87
5.4.2.3	Decide on ISDP concept	Entscheid ISDS-Konzept treffen	Décider du concept SIPD	Decisione Piano SIPD	89
5.4.1.2	Decide on launch of operation	Entscheid Betriebsaufnahme treffen	Décider de la mise en service	Decisione Messa in esercizio	78
5.4.2.7	Decide on next steps	Entscheid Weiteres Vorgehen treffen	Décider de la suite de la procédure	Decisione Continuazione	92
5.4.1.5	Decide on phase release	Entscheid Phasenfreigabe treffen	Décider de la libération de la phase	Decisione Avvio della fase	81
5.4.2.6	Decide on preliminary acceptance	Entscheid Vorabnahme treffen	Décider de la préréception	Decisione Accettazione preliminare	91
5.4.2.5	Decide on product concept	Entscheid Produktkonzept treffen	Décider du concept du produit	Decisione Progettazione del prodotto	90
5.4.1.7	Decide on project closure	Entscheid Projektabschluss treffen	Décider de la clôture du projet	Decisione Conclusione del progetto	84
5.4.1.6	Decide on project discontinuation	Entscheid Projektabbruch treffen	Décider l'interruption du projet	Decisione Interruzione del progetto	82
5.4.1.3	Decide on execution release	Entscheid Durchführungsfreigabe treffen	Décider de la libération de l'exécution	Decisione Avvio dell'esecuzione	79
5.4.1.8	Decide on project initiation release	Entscheid Projektinitialisierungsfreigabe treffen	Décider de la libération de l'initialisation du projet	Decisione Avvio del progetto	85
5.4.1.9	Decide on release	Entscheid Releasefreigabe treffen	Décider de la libération du release	Decisione Avvio del rilascio	86
5.4.2.4	Decide on solution architecture	Entscheid Lösungsarchitektur treffen	Décider de l'architecture de la solution	Decisione Architettura della soluzione	90
5.4.3.1	Decommission the legacy system	Altsystem ausser Betrieb setzen	Mettre l'ancien système hors service	Disattivare il vecchio sistema	93
5.4.3.11	Design deployment concept	Einführungskonzept erarbeiten	Élaborer le concept de déploiement	Elaborare la progettazione dell'introduzione	101
5.4.3.14	Design integration concept	Integrationskonzept erarbeiten	Élaborer le concept d'intégration	Elaborare la progettazione dell'integrazione	104
5.4.3.15	Design ISDP concept	ISDS-Konzept erarbeiten	Élaborer le concept SIPD	Elaborare il piano SIPD	104
5.4.3.22	Design migration concept	Migrationskonzept erarbeiten	Élaborer le concept de migration	Elaborare la progettazione della migrazione	111
5.4.3.9	Design operating concept	Betriebskonzept erarbeiten	Élaborer le concept d'exploitation	Elaborare il piano di esercizio	100

	English Tasks	Deutsch Aufgaben	Française Tâches	Italiano Compiti	
5.4.3.32	Design product concept	Produktkonzept erarbeiten	Élaborer le concept du produit	Elaborare la progettazione del prodotto	119
5.4.3.53	Design test concept	Testkonzept erarbeiten	Élaborer le concept de test	Elaborare la progettazione dei test	137
5.4.3.54	Draw up agreement	Vereinbarung erarbeiten	Élaborer l'accord	Elaborare l'accordo	138
5.4.3.27	Draw up organization concept	Organisationskonzept erarbeiten	Élaborer le concept d'organisation	Elaborare la progettazione dell'organizzazione	115
5.4.3.10	Draw up project execution order	Durchführungsauftrag erarbeiten	Élaborer le mandat d'exécution	Elaborare il mandato di esecuzione del progetto	101
5.4.3.36	Draw up project management plan	Projektmanagementplan erarbeiten	Élaborer le plan de gestion du projet	Elaborare il piano di gestione progettuale	123
5.4.3.26	Establish organizational requirements	Organisationsanforderungen erarbeiten	Élaborer les exigences organisationnelles	Elaborare i requisiti dell'organizzazione	114
5.4.3.3	Evaluate tenders	Angebote bewerten	Évaluer les offres	Valutare le offerte	95
5.4.3.12	Execute deployment measures	Einführungsmassnahmen durchführen	Effectuer les mesures de déploiement	Eseguire le misure d'introduzione	103
5.4.3.16	Implement ISDP concept	ISDS-Konzept realisieren	Réaliser le concept SIPD	Realizzare il piano SIPD	105
5.4.3.25	Implement organization	Organisation umsetzen	Réaliser l'organisation	Attuare l'organizzazione	113
5.4.3.47	Integrate the system into operation	System in Betrieb integrieren	Intégrer le système en fonctionnement	Integrare il sistema nell'esercizio	133
5.4.3.4	Issue call for tenders	Ausschreibung durchführen	Effectuer l'appel d'offres	Pubblicare il bando di concorso	95
5.4.3.33	Manage and control project	Projekt führen und kontrollieren	Conduire et contrôler le projet	Gestire e controllare il progetto	120
5.4.3.43	Manage and inform stakeholders	Stakeholder managen und informieren	Gérer et informer les parties prenantes	Gestire e informare gli stakeholder	129
5.4.3.2	Manage changes	Änderungen managen	Gérer les modifications	Gestire le modifiche	94
5.4.3.41	Manage risks	Risiken managen	Gérer les risques	Gestire i rischi	128
5.4.3.38	Perform quality assurance	Qualitätssicherung führen	Conduire l'assurance de la qualité	Gestire la garanzia della qualità	125
5.4.3.5	Prepare call for tenders	Ausschreibung erarbeiten	Élaborer l'appel d'offres	Elaborare il bando di concorso	96
5.4.3.13	Realize deployment measures	Einführungsmassnahmen realisieren	Réaliser les mesures de déploiement	Realizzare le misure d'introduzione	103
5.4.3.28	Prepare phase release	Phasenfreigabe vorbereiten	Préparer la libération de la phase	Preparare l'avvio della fase	116
5.4.3.6	Prepare procurement analysis	Beschaffungsanalyse erarbeiten	Élaborer l'analyse de l'appel d'offres	Elaborare l'analisi dell'acquisto	97
5.4.3.35	Prepare project closure	Projektabschluss vorbereiten	Préparer la clôture du projet	Preparare la conclusione del progetto	122
5.4.3.40	Prepare release closure	Releaseabschluss vorbereiten	Préparer la clôture du release	Preparare la conclusione del rilascio	127
5.4.3.20	Prepare solution architecture	Lösungsarchitektur erarbeiten	Élaborer l'architecture de la solution	Elaborare l'architettura della soluzione	109
5.4.3.19	Prepare solution requirements	Lösungsanforderungen erarbeiten	Élaborer les exigences envers la solution	Elaborare i requisiti della soluzione	108
5.4.3.45	Prepare study	Studie erarbeiten	Élaborer l'étude	Elaborare lo studio	131
5.4.3.49	Prepare system integration	Systemintegration vorbereiten	Préparer l'intégration du système	Preparare l'integrazione del sistema	135
5.4.3.23	Realize migration procedure	Migrationsverfahren realisieren	Réaliser la procédure de migration	Realizzare la procedura di migrazione	112
5.4.3.8	Realize operation	Betrieb realisieren	Réaliser l'environnement d'exploitation	Realizzare l'esercizio	99
5.4.3.31	Realize product	Produkt realisieren	Réaliser le produit	Realizzare il prodotto	118
5.4.3.48	Realize system	System realisieren	Réaliser le système	Realizzare il sistema	134
5.4.3.51	Realize test infrastructure	Testinfrastruktur realisieren	Réaliser l'infrastructure de test	Realizzare l'infrastruttura per i test	136
5.4.3.34	Steer project	Projekt steuern	Piloter le projet	Condurre il progetto	121
5.4.3.17	Transfer ISDP concept	ISDS-Konzept überführen	Transférer le concept SIPD	Trasferire il piano SIPD	106
5.4.3.52	Transfer test infrastructure	Testinfrastruktur überführen	Transférer l'infrastructure de test	Trasferire l'infrastruttura per i test	137

Table 34: HERMES tasks vocabulary, 4 languages

Roles – Rollen – Rôles – Ruoli

	English Roles	Deutsch Rollen	Française Rôles	Italiano Ruoli	
6.4.3.3	Business analyst	Business Analyst	Business analyst	Business analyst	159
6.4.3.4	Developer	Entwickler	Développeur	Sviluppatore	160
6.4.3.5	Development team	Entwicklungsteam	Équipe de développement	Team di sviluppo	161
6.4.3.6	ISDP manager	ISDS-Verantwortlicher	Responsable SIPD	Responsabile SIPD	162
6.4.3.7	IT architect	IT-Architekt	Architecte informatique	Architetto IT	162
6.4.3.2	Operations manager	Betriebsverantwortlicher	Responsable de l'exploitation	Responsabile dell'esercizio	158
6.4.1.2	Project committee	Projektausschuss	Comité de pilotage	Comitato di progetto	150
6.4.2.2	Project management	Projektleiter	Chef de projet	Capoprogetto	152
6.4.1.1	Project sponsor	Auftraggeber	Mandant	Committente	148
6.4.2.3	Project support	Projektunterstützung	Assistance de projet	Supporto di progetto	155
6.4.1.3	Quality and risk manager	Qualitäts- und Risikomanager	Gestionnaire de la qualité et des risques	Gestore della qualità e dei rischi	151
6.4.2.4	Sub-project manager	Teilprojektleiter	Chef de sous-projet	Responsabile di sotto-progetto	155
6.4.2.1	Technical committee	Fachausschuss	Comité spécialisé	Comitato esperti	151
6.4.3.9	Test manager	Testverantwortlicher	Responsable des tests	Responsabile dei test	163
6.4.3.8	Tester	Tester	Testeur	Collaudatore	163
6.4.3.1	User representative	Anwendervertreter	Représentant des utilisateurs	Rappresentante degli utenti	156

Table 35: HERMES roles vocabulary, 4 languages

Index of HERMES project management method components

The project management method for products, services, IT, and organization.

HERMES can be applied immediately and offers:

- Modular structure for concrete project processes;
- Online tool for method support;
- Document templates, including checklists, for efficient project management;
- Scenarios for easier execution planning.

HERMES is simple and understandable and provides:

- Clear task descriptions with activities;
- Concrete role descriptions for cross-organizational cooperation;
- Document templates for quick and clearly presented outcomes.

HERMES as a management tool supports:

- The project sponsor with regard to governance and sustainability;
- The project and program manager with planning, checking, and management;
- The user representative and specialists with project execution;
- Management with the higher-level strategic steering of projects and programs.

This reference manual is the standard for projects of the Federal Administration and many cantons, communes, and companies. HERMES is also the eCH standard for e-government projects and programs.

Program management as part of project management is dealt with in a separate appendix.

HERMES is recommended for all types of programs and projects.

HERMES covers all dimensions of modern program and project management, such as procurement management; stakeholder management; communication and reporting; risk and quality management; traditional, agile, and hybrid development; governance and sustainability. Moreover, program- and project-specific procedures are described.