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| IUBH |
| Hybrid Project Management in Digital Transformation |
| DLMADTHPDT01 |

Learning Objectives

The **Hybrid Project Management in Digital Transformation** course first provides an overview of the tasks and challenges that arise during the project management of digital change projects. These projects ensure that the strategic goals relating to digital transformation in companies and organizations are implemented. To this end, these projects introduce digital technologies, digitalize processes, connect suppliers and customers, and further develop products and services in such a way that new, innovative business models are created.

There are various project management philosophies in project management and the traditional and agile approaches are often understood to be opposing. Thus, hybrid approaches in project management aim to integrate the best of those traditional and agile approaches. Accordingly, this course presents the norms and standards in project management and lays a foundation regarding traditional and agile project management. Possible combinations based on this are illustrated and their implications on organizational structures, project teams, leadership styles, and tools used are shown. Finally, the application of this knowledge is demonstrated using practical examples from various industries and with different thematic focuses.

Unit 1 – Project Management and Digitalization

Study Goals

On completion of this unit, you will be able to ...

... categorize the change in the understanding of project management due to digital transformation.

... explain and apply the definition and classification of projects.

... recognize the distinction between project portfolio management, multi-project management, and program management.

... understand the *philosophies* and basic approaches in project management.

... recognize proven and new forms of project management that are used in digital change projects.

1. Project Management and Digitalization

Introduction

To benefit from the opportunities and capabilities of digital transformation, many companies and organizations define their digitalization strategy and set up digitalization programs, or establish their own digital units to function like start-ups. These are designed and implemented within the framework of projects. Project organization makes it possible to develop new digital solutions efficiently across departments and divisions, and even across companies. With this, projects are the form of work of the future: digitalized organizations work with projects that focus on products, customers, and services in a project and team-oriented manner (Reinhardt 2020, S. 133). As a result, they are clearly different from traditional organizations with their work structure based on functions and departments.

Project teams assume a central role in the implementation of digital transformation. They must handle the special challenges that such transformation projects involve and realize the project goals in alignment with the digitalization strategy (Feldmüller/Rieke 2019, S. 9). This unit addresses these challenges and presents basic project management terminology.

* 1. Change in the understanding of project management due to digital transformation

Digital transformation is fundamentally changing our economy and society. According to Krcmar/Oswald (2018, S. 5), digital transformation processes are inescapable, irreversible, of tremendous speed, and subject to high instability during execution. Our modern world is often described with the acronym  **VUCA** , i.e., as volatile, uncertain, complex, and ambiguous (vgl. Bendel 2019). Organizations face the challenge of actively shaping these transformation processes. Their task is to harness the potential of new, innovative technologies for themselves and their customers. The resulting effects on processes, products and services, and revenue models are fundamental and complex (Schallmo/Reinhart/Kuntz 2018, S. 53; Kirchner/Lemke/Brenner 2018, S. 28f. ).

**VUCA**

The acronym VUCA stands for V (volatility), U (uncertainty), C (complexity), A (ambiguity).

Digital transformation must be moved forward by a company’s management as a strategic company task (Kreutzer/Neugebauer/Pattloch 2017, S. 43f. ). Hess/Barthel (2017, S. 314) describe this as the management level of digital transformation. A **digitalization strategy**, aligned with the company strategy and company culture, depicts the individual roadmap. It describes how the potentials and challenges of digital transformation are handled in a company and establishes clear goals (Ross/Sebastian Ina M./Beath 2018, S. 3; Hess/Barthel 2017, S. 317). In doing so, it focuses on the transformation of products, processes, and business models that are possible and necessary as a result of new digital technologies (Matt/Hess/Benlian 2015, S. 339f.; Fleischmann et al. 2018, S. 10).

**Digitalization strategy**

A digitalization strategy establishes the direction and guard rails for the company's digital transformation.

Digital Change Projects

The task now is to shape the necessary transformation of a company. The digitalization strategy is put into practice by means of strategic programs and digitalization projects. Responsibility for implementing the digital transformation, i.e., for actually changing products, processes, and business models, thus lies with the change projects (Hess 2019, S. 6f.; Berger 2018, S. 256–259).

What is understood by a digitalization project or a digital change project strongly depends on the underlying understanding of *digitalization* and *digital transformation* (vgl. Homann-Vorderbrück/Sauer/Schröder 2018, S. 64). The following definition takes up the aspects considered thus far and understands it to mean projects “for the initial or improved use of digital technologies in a company's processes, products, and services, in interaction with the company environment, and for the development of corresponding competencies within the company” (Zimmermann 2017, S. 3).

**IoT**

The Internet of Things, or IoT for short, extends the traditional internet by linking physical objects with the virtual world. It is used, e.g., in the production environment.

Digital change projects are diverse (Hess 2019, S. 6f. ). Some are tasked with developing new, digital (or digitally enhanced) products and services quickly and flexibly, while others develop new, disruptive business models and implement alternative revenue models (Schallmo/Reinhart/Kuntz 2018, S. 61f. ). Further projects aim to digitalize business processes across the entire value chain of a company (Fleischmann et al. 2018, S. 10f. ). Not to be overlooked are also projects that lay the foundations for digital services, e.g., by establishing an infrastructure for **IoT** (Internet of Things) or preparing and networking the required data (Schneider/Wisselink/Czarnecki 2018). Digital change projects are more than traditional IT or organizational development projects (Hess 2019, S. 93-95).

Project Management Challenges

A number of challenges arise when planning projects for digital transformation that require new approaches and, in some cases, different competencies on the part of project managers and project staff (Wysocki 2019, S. 20-23). According to a study by Homann-Vorderbrück/Sauer/Schröder (2018, S. 67f.), the aspects of these challenges in particular are:

* **Change:** digital change projects require changes in processes and company culture. This can lead to anxiety among employees.
* **Lack of know-how:** the tasks in digital change projects usually have a high degree of novelty and require corresponding technical and IT knowledge.
* **Integration:** digital change projects affect the entire company. Many stakeholders from a variety of disciplines are to be involved.
* **Dynamics:** the framework conditions of projects and the digital technologies used change at high speed.
* **Data security:** when developing and introducing digital solutions, the data security aspect must be taken into account, particularly also in accordance with the applicable laws.

The challenges of the dynamics, novelty, and interdisciplinarity aspects in digital change projects are discussed in greater detail in the following. How these challenges are addressed with new forms of project management is explained in the further course of this unit. This particularly considers the aspect that the nature of collaboration and communication is changing.

**Dynamics**

Digital change projects are often highly dynamic, i.e., technologies and project framework conditions such as customer requirements are characterized by a high rate of change (Homann-Vorderbrück/Sauer/Schröder 2018, S. 68). Particularly in long-running projects, there is a great risk that the end result will no longer match the customer's expectations. Digital change projects must therefore take into account that customer requirements and general conditions can change at short notice over the course of a project. This requires process models that manage these changes constructively – that even welcome change (Wysocki 2019, S. 21). All the while, there is intense time pressure to bring new products and services to market faster than the competition. Accordingly, project management must abandon all tasks that do not add value to the project result (Wysocki 2019, S. 20).

Openness to new ideas, self-reliance, flexibility, and agility are important characteristics. In addition, customers expect new features on an ongoing basis – and this applies to both digital and traditional products. For example, Tesla customers are used to features being added regularly as over-the-air updates. Modern approaches to project management have a strong customer focus to ensure that projects can quickly and continuously create new customer benefits.

**Novelty**

Digital change projects often feature a high degree of novelty due to disruptive technologies and business models. The status quo is fundamentally challenged, resulting in no example to align with. For projects, this means that requirements cannot be specified in advance. The starting point is thus a product vision that is defined step by step. Furthermore, organizations often face the challenge of having little experience with the continually advancing technologies to be used (Fuchs et al. 2019, S. 198, Homann-Vorderbrück/Sauer/Schröder 2018, S. 68). Knowledge and skills must be built from the beginning.

This challenge is met with an experimental approach. This means that new technologies, methods, and organizational forms are tested in various application scenarios using prototypes or what is known as PoC (proof of concept). For this purpose, a small, but representative application range is selected from which valuable feedback is expected. For example, an app is first tested with pilot customers before being rolled out to other intended audiences.

**Interdisciplinarity and a Diversity of Stakeholders**

Digital change projects often affect the entire value chain of a company, resulting in cross-divisional or even cross-company projects. Alongside specialist departments, the IT department, and a digitalization unit, if available, are involved to build specialist and technical knowledge in the project team (Hess 2019, S. 92-94). Furthermore, there are also external partners who take on individual subtasks. This means that digital change projects must sufficiently involve many different people and stakeholders (Homann-Vorderbrück/Sauer/Schröder 2018, S. 68). Particular attention must also be paid to those who are critical of a change, e.g., for fear of being overwhelmed or losing their jobs (Falkenreck 2019, S. 14). Digital change projects therefore place high demands on communication and collaboration among those involved in a project (Falkenreck 2019, S. 20). During the composition of project teams, it is also important to ensure that the project members are enthusiastic about digitalization topics and curious about new trends and technologies, since they act as ambassadors for digital transformation within the company (Hess 2019, S. 96).

Self-Check Questions

1. How do digital change projects differ from pure IT projects or organizational development projects?

*Digital change projects are not isolated projects to solve a single, specific problem, such as the replacement of a legacy system in IT. They lead to changes at the cultural, process, and technical levels. To be successful, people from a wide range of areas must be involved with their specific know-how. It is therefore no longer sufficient to set up projects within a single area.*