

ROLAND GAREIS
LORENZ GAREIS

PROJECT PROGRAM CHANGE

A Textbook and Handbook for Intrapreneurs
in Project-Oriented Organizations

Values
FOR
BUSINESS VALUE

 **CRC Press**
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PROJECT PROGRAM CHANGE



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Foreword

The aim was to create a project and program management initiative. It was late 1990, and I was on the phone with Dave Hornestay. He was a senior executive at NASA Headquarters and in the process of explaining to me their strong interest in having me come downtown to start creating a learning initiative focused on increasing the likelihood of project success. This was a few years after Challenger, and ideas were being explored about regaining capability and excellence.

It seemed like an absurd request. My organization psychology background was squarely about learning, team development, change management, and leadership. Project management at the time was about methods, formulas, and disciplined execution. I picked up several books about project management and was astounded and turned off to note the lack of writing about people, leadership, and strategy. I vowed as a first action to start a curriculum without project books. No need to reinforce the mistaken.

In reading *PROJECT.PROGRAM.CHANGE*, it has become clear how significantly things have changed! This is not a surprise, as I have known the authors for many years. They have been leading proponents of a practice of projects that squarely focuses on the strategic, human, adaptive, and integrated.

The book you hold in your hand represents an integrated, systemic, and balanced view of programs and projects that incorporates strategic, social, and execution factors necessary for success. A simple review of the table of contents illustrates a holistic understanding of modern project work. The challenge is about addressing the dilemmas of management and leadership. There is emphasis on planning, phases, roles, coordination, as well as team performance, culture, social competence, and developing necessary capabilities. There is recognition that project risk is within strategic, economic, technical, social platforms.

It is the right approach and one to be expected from experienced practitioners like Roland and Lorenz Gareis. My association with Team Gareis goes back to their successful and even joyful *Happy Projects!* series of conferences. It is a stretch to call projects “happy,” and yet through carefully orchestrated engagements that weave the thoughtful, with the disciplined, with the social, they make it work and have done so for a long time. These are events that I eagerly anticipated as the former NASA Director of NASA Academy, as they annually would bring together a thoughtful community of project professionals and explore a diverse, but relevant, array of topics in a setting of active conversation. The chance to participate in a stimulating Viennese environment only made the discussions better, covering topics that would span the

breadth of issues that are now covered in this book. For me this book represents the captured and shared knowledge of those conversations. The book represents wisdom from authors who have experience, practice, and dedication to excellence in program and project management.

This is a book that covers the necessities for program and project success. For any reader it is an excellent starting point. It also provides a foundation for asking difficult and provocative questions about leading a modern project. Such provocation is to be expected from natural rebels such as Roland and Lorenz. They are smart, deliberate, and smooth in their presentation, but any reading of the material will lead to the realization that leadership in this domain will require innovation, agility, and disruption.

Project Program Change and Success

This is a book intended to offer insights and learning on organizations, projects, and team success. The tools are focused around projects, programs, and change, yet the ultimate destination is organization success through business value. Many of the readers will be looking for answers. Some will come looking to learn as a starting point with hopes that the book will provide a strong foundation. What does the book say about success? Let me offer a few of the things that reinforced my personal experience.

1. Projects, Programs, Changes Require a Variety of Approaches

PROJECT.PROGRAM.CHANGE covers a lot of territory. There is a wide spectrum of disciplined methods that one would expect from a project management book. There is also a heavy emphasis on people, team, and social collaboration so that the human emphasis is strong. A third vital strand is about strategy, systems, culture, and process. These are often considered competing efforts, yet the strength of this work is that it demands the reader to understand that modern work is about balancing apparently different approaches. You can be innovative, adaptive, concerned about people, and still use disciplined tools that support structure and method.

2. Strategic Management is Essential

Let's look at the message on the importance of strategic managing. The beginning of any successful execution is accuracy of strategic insight. It is crazy to think that separating strategy from execution can promote a successful outcome. Yet for decades the notion has been spread that they are two completely separate things, done by different levels of an organization.

As the authors discuss, "The objective of the strategic managing of an organization is to ensure the sustainable development of this organization within this context." This opening sentence leads to a full discussion about the strategic implications of a project and the methods that must be considered. It accurately leads to consideration

of project, program, and portfolio factors. Ultimately, it portrays the challenge and dynamics of the interaction between strategic organization business drivers with the reality of project implementation and real-time data. Projects are therefore best considered investments that are measured through value to an organization.

3. Culture, Change, and the Importance of Social Collaboration

The movement of a project is depicted in social, team, collaborative components. This is vital, in that we know success comes from the leadership and collaborative elements. Project management is not a logical, process-driven machine. It is ultimately about people, and this makes it dynamic, interpersonal, and messy. This is the most emblematic distinction of our current age of work. It is done across immense communities of discipline excellence, and the challenge is not finding the talent (finding talent is no longer hard, hiring it and maintaining it on a team may be a different story), it is managing how people collaborate. Success is the residue of effective design emphasizing collaborative cultures.

4. Performance Happens at the Team Level

One of my biggest mistakes in the early years of building the NASA Program and Project Leadership Academy was an exclusive focus on individual training and development. This was a common bias in the past, and it required painful mission failures to Mars in the late 1990s to recognize that having capable, competent, and confident individuals was the key ingredient for project success. This should have been obvious, since I had witnessed teams of exceptional talent stunningly fail due to dysfunctional interpersonal exchange. I had conversely noticed that some of our most effective teams were composed of solid (not great) individual talent that worked together extremely well. This led to my conclusion that performance happens at the team level. The sheer importance of project team design and development is perhaps the most common property of project outcome, and it is covered with thought.

Diversity of method, strategic connection to execution, social collaboration, and project team design are the broad factors that most resonate with my thinking about what makes projects, programs, change proceed toward success. The work of Gareis and Gareis in truth goes much further. It addresses the full complement of essentials for a leader and practitioner who endeavors the challenges of this work. You will undoubtedly recognize and value other critical ingredients of this book. I can say that if this were the book that I first read back in 1990, I would have easily embraced the field with excitement and passion. It is a challenging, complex, and diverse field of work, and *PROJECT.PROGRAM.CHANGE* ably shares the knowledge of wise teachers. Read on!

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Preface

How the Book *PROJECT.PROGRAM.CHANGE* Came About

In recent years, projects as temporary organizations and the use of project management in industry and public administration have become increasingly important.

At the same time, criticisms of project management are also being voiced: The use of project management methods is too bureaucratic; there is too little customer and stakeholder orientation; the processes lasted too long; there was not enough response to changes in the business environment; etc. Agile approaches that promote flexibility, empowerment, and customer orientation are offered as alternatives. Frequent and rapid communication with digital media is required.

Over the last few years, we have continued to develop our approaches to project, program, and change managing: The concepts of sustainable development, empowerment, management for stakeholders, and agility, as well as requirements management, business analysis, and benefits realization management have also been included. The values underlying the management approaches have been defined and interpreted for the different management approaches. However, we have not yet adequately communicated these further developments!

We decided to publish *PROJEKT.PROGRAMM.CHANGE* to present observations from our management and consulting practice, to illustrate new relations between management approaches, and to clarify these approaches. This book represents a further development of the book *Happy Projects!*, which was first published in 2003. We want to offer readers a journey from *Happy Projects!* to “Values for Business Value”. So in April 2017, the German version of the book was published. Now, about one year later, the English version is available for interested readers.

Readers of *PROJECT.PROGRAM.CHANGE*

This book is intended as a handbook for “intrapreneurs” of project-oriented organizations—namely, for project managers, program managers, change managers, and the owners of projects, programs, and changes. In addition, it is a textbook for management trainers and consultants, for researchers and teachers in universities and colleges, as well as for students.

Information as a Difference That Makes a Difference (Gregory Bateson)

The book *PROJECT.PROGRAM.CHANGE* provides information for the management community. Dealing appropriately with the dynamics and complexity in project-oriented organizations, securing quick wins in changes, using synergies in programs, involving stakeholders in management at an early state, applying methods consistently, and supplying contextual information to provide sense for members of organizations are examples of how readers might behave “differently” after processing the information provided in this book.

Chapter 1 presents possible perceptions of projects and programs, distinguishes small projects, projects, and programs from non-projects, and analyzes the contexts and benefits of projects and programs. This forms a basis for the distinction between mechanistic and systemic project management approaches provided in Chapter 2. Chapters 3 and 4 describe prerequisites for managing projects—namely, strategic managing and investing as well as managing requirements in sequential and iterative approaches.

Projects must be initiated professionally to provide a basis for efficient and effective project managing. The objectives, process, roles, and methods of the business process “Project initiating” are described in Chapter 5. The objectives, process, contexts, values, and benefits of the business process “Project managing” are presented in Chapter 6. The sub-processes of project managing—namely, project starting, project coordinating, project controlling, project transforming or repositioning, and project closing, and the methods to be used for these sub-processes, are described operationally in Chapters 9 to 12. Prior to this, Chapters 7 and 8 deal with models for designing project organizations, developing project-specific cultures, teamwork, and leadership in projects. Practical examples of the application of project management methods are provided by a case study “Values4Business Value”.

The business processes “Program initiating”, “Program managing”, “Change initiating”, and “Change managing” are dealt with in Chapters 13 and 14. The objectives, processes, roles, and methods to be used to perform these processes are described. A case study of an energy company is used to illustrate program managing. The integrative performance of project, program, and change managing is important. The relationships between these approaches are analyzed.

The subject of Chapters 15 and 16 is managing a project-oriented organization. Strategies, structures, and cultures of a project-oriented organization are presented. Specific business processes of a project-oriented organization—namely, “Project portfolio managing” and “Project (or Program) consulting”—as well as different processes for managing project personnel, are considered in detail. A vision for a project-oriented society is offered in Chapter 17.

The accompanying case studies of RGC’s “Values4Business Value” shows that the management approaches presented are also relevant for small and medium-sized companies. Case studies of large telecom or utility companies are also presented.

Reading the Book

PROJECT.PROGRAM.CHANGE is not necessarily intended to be read in order from the first page to the last. Thus we would like to advise readers on how to read it efficiently.

Advice for Project Management Beginners

- > Beginners in the topic—for example, students of project management or people who are preparing for a basic project management certification, can concentrate on Chapters 1 and 5–12. These cover basic concepts, processes, and methods as well as roles, organizational forms, communication formats, and leadership styles for projects.
- > The other chapters can be skipped in the first instance and used to deepen understanding at a later stage.

Advice for Managers of Project-Oriented Organizations

- > Managers who work as project, program, and change managers or owners and managers of management offices or expert pools should read everything.
- > Sorry, but it pays off . . .

Advice for Those Interested in the New Application of Theoretical Models

- > People who are interested in theory, such as well-informed managers of project-oriented companies, researchers, teachers, consultants, and trainers, can focus on new developments and newly established relations.
 - o For example, Chapter 2 covers project management approaches and new values, Chapter 3 covers strategic management and investing, and Chapter 4 covers various methods for managing requirements.
 - o In Chapter 6, the interpretation of values for project initiating and project managing, in Chapter 7 the use of Scrum sub-teams in projects, and in Chapters 13 and 14 the relation between project, program, and change managing should be of particular interest.
 - o The interpretation of values for project portfolio management in Chapter 16 should also satisfy the curious . . .

... And for Our Fans

- > Our fans will find new developments in each chapter, and in particular, attempts to implement the values of a systemic management paradigm.
- > We would be very grateful for further ideas and feedback from you!

The Unique Selling Proposition of the Book

The book *PROJECT.PROGRAM.CHANGE* provides information about:

- > social system theory and radical constructivism as the epistemological context of project, program, and change managing,
- > using projects, programs, and changes to implement organizational strategies and investments,
- > the importance of project, program, and change initiating for the successful performance of projects,
- > the managing of requirements in sequential and iterative approaches,
- > fulfilling solution requirements “by projects”,
- > the perception of project, program, and change managing as business processes of the project-oriented organization,
- > the objectives, methods, and roles of the business processes “Project managing”, “Program managing”, and “Change managing”,
- > the values underlying the systemic management approach—for example, holistic boundaries, sustainable development, agility, empowerment, and resilience,
- > the difference between processing change requests and change managing,
- > the strategies, structures, and cultures of a project-oriented organization, and
- > the redefinition of project, program, and change managers as “intrapreneurs” of project-oriented organizations.

The book *PROJECT.PROGRAM.CHANGE* presents selected concepts and models from the literature, but above all from the observations and experiences of the authors as managers and consultants. Its strong practical orientation is also the result of reflections and discussions with the peer review group established for reflecting on the topics covered in the book.

Production Process of the Book

The book publication was a major objective of the change “Values4Business Value”, whose objective was the further development and communication of the RGC management approaches. The approaches were further developed by study of the literature, analysis of documents, interviews, brainstorming workshops, prototyping, presentations, reflection workshops, and self-observation.

As always, the production of this book was tedious and exhausting, but also pleasurable and fulfilling. It was tedious and exhausting because . . .

- > The writing required a lot of discipline. Starting each new chapter required an act of overcoming.
- > Of course, feedback from the peer review group had to be taken seriously and therefore necessitated significant changes.

- > Contracts with RGC customers always had priority over internal innovation projects. Thus there were many “disturbances” which interrupted the rhythm of writing.
- > Learning was necessary. We always apply new methods ourselves in RGC so that we can treat a topic or a method authentically in training and consulting situations, but also so that we can publish it. The opportunities for reflection provided, for example, by using an iterative approach in the change “Values4Business Value”, provided valuable experience. This learning led to changes in the objectives and a substantial lengthening of the project duration.

At the same time, producing the book was pleasurable and fulfilling, because . . .

- > The further development of management approaches was a great creative process.
- > The further development of the content provided unique opportunities for the authors to communicate with each other and with RGC colleagues, members of the peer review group, and customers.
- > The quick wins achieved provided immediate “business value” for our customers and ourselves.
- > The work had a very satisfying, tangible result.
- > The finished book expresses essential parts of RGC’s identity.
- > And because we expect that *PROJECT.PROGRAM.CHANGE* will be a classic for the next 10 to 15 years.

The book’s development process is illustrated in detail in the accompanying case study with examples and interpretations of the sub-processes of project and change managing.

Once the production of the German book was completed, we were happy that Taylor & Francis developed this English version of the book with us.



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- > Mag. (FH) Ulrike Danzmayr, Central Administration for Personnel, Organization, and Protocol at the Federal Ministry of Finance
- > Bernhard Engl, Responsible for organizational development and cultural and system development at Rubner Holding AG
- > Prof. (FH) Dr. Gerhard Ortner, Professor of Project Management, IT, and Business Management at the technical college BFI in Vienna
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Happy Projects!
Roland and Lorenz Gareis
Vienna, March 2018



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1 Projects and Programs

The project management literature provides different definitions for projects and programs. Different perceptions of projects, such as perceiving projects as tasks, as temporary organizations, and as social systems, lead to different expectations regarding the way projects are managed and further on to different project management approaches.

A general clarification of the term “project” and the operationalization of project definitions in different organizational contexts are required. Small projects, projects, and programs are to be differentiated, so the adequate organization for performing different business processes can be selected.

Projects and programs are performed in contexts, which influence their success. Contexts are, for example, the strategies, structures, and cultures of the project-oriented organization, the investment implemented by a project or program, and the change delivered by projects.

The benefits provided by projects and programs are to be differentiated from the benefits provided by project managing and program managing.

1 Projects and Programs

- 1.1 Perceptions of Projects and Programs
- 1.2 Definitions of Projects and Programs
- 1.3 Categorization: Small Project, Project and Program, Non-Project
- 1.4 Projects and Programs: Contexts
- 1.5 Projects and Programs: Benefits

1.1 Perception of Projects and Programs

The project management literature and international project management standards provide different definitions for projects and programs.^{1,2,3,4} This is relevant insofar as different project perceptions and definitions result in different project management approaches.

Perceiving projects as tasks with particular characteristics leads to a specific project management understanding—that is, of the objectives of project management to be achieved, the project management tasks to be fulfilled, the project dimensions to be managed, and the project management methods to be used. Perceiving projects as tasks leads to a different understanding of project management than perceiving projects as temporary organizations and as social systems.

Perceiving Projects as Tasks with Particular Characteristics

Traditionally, projects are seen as tasks with particular characteristics. These particular characteristics are the medium scope of the tasks to be fulfilled, the relative uniqueness of these tasks, their short-term to medium-term duration, as well as their associated risks and strategic importance. Projects are understood as goal-determined tasks, because goals relating to the scope, schedule, and costs can be planned and controlled.

Perceiving Projects as Temporary Organizations

Projects can be seen as temporary organizations established in order to perform relatively unique, short-term to medium-term, risky, and strategically important business processes of medium scope. Here projects are understood as temporary organizations for performing business processes with particular characteristics.

As with other organizations, projects have specific identities, expressed through specific project structures and project contexts. Due to the temporary nature of projects, establishing a project during project starting and dissolving it during project closing acquire particular significance.

Perceiving Projects as Social Systems

Perceiving projects as temporary organizations allows them to be also perceived as social systems. According to the social systems theory, organizations, and therefore

¹ Project Management Institute, 2013.

² International Project Management Association, 2006.

³ Projekt Management Austria, 2008.

⁴ DIN 69901-5: 2009-1, 2009.

also projects, are social systems which are clearly separate from, yet at the same time related to, their contexts. The specific characteristics of social systems, such as their social complexity, dynamics, and self-reference, are also relevant for projects. In the RGC project management approach presented here, projects are understood as both temporary organizations and social systems.



Projects can either be perceived as tasks with particular characteristics or as temporary organizations and social systems. These different project perceptions lead to different project management approaches.

As stated by Luhmann,⁵ “A system is [. . .] anything in which it is possible to distinguish between inside and outside. The inside-outside distinction implies that an order is determined, one which cannot be arbitrarily expanded, but whose internal structure and particular form of its relationships creates boundaries”.

Luhmann principally divides social systems into interactions, organizations, and societies. Here a further distinction is made between permanent organizations such as companies, divisions, and departments, and temporary organizations such as projects and programs, which can also be perceived as social systems (see Fig. 1.1).

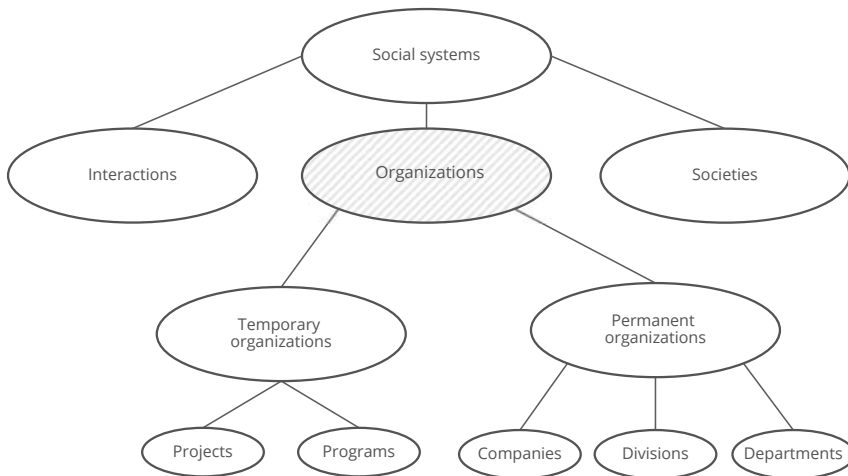


Fig. 1.1: Projects and programs as temporary organizations and social systems.

The reason for differentiating between different social systems is that drawing boundaries creates systems which are less complex than their particular environment.⁶ Projects as subsystems of companies are less complex than the company as a whole. By reducing complexity each social system can be successfully managed.

⁵ Luhmann, N., 1964, p. 24

⁶ Cf. Kasper, H. 1990, p.156

Excursus: Projects and Programs as Social Systems

A social system is characterized as having specific structures which differentiate it from its environment, while simultaneously placing it in contexts which create dependencies. Context dimensions are the stakeholder relations (see Fig. 1.2), the superordinate social system, the history of the social system, and expectations about its future.

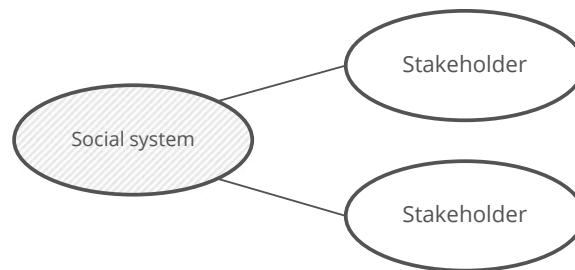


Fig. 1.2: Social system and its stakeholders.

An organization has both external and internal stakeholders. Project stakeholders external to a company include customers, suppliers, competitors, and media, while stakeholders within a company may include the management and individual departments. Every social system is shaped by its history. Many of a system's "peculiarities" can only be explained and understood with reference to past events. On the other hand, it is also future expectations of the social system which determine current actions. Consequently, the results of analyses of the pre-project and post-project phases provide the orientation for action in a project. A project's "superordinate" social system is the organization undertaking that particular project. A project contributes to fulfilling this organization's objectives and strategies.

Social systems are complex, self-referencing, and dynamic, and so these characteristics apply to both projects and programs. Luhmann understands communications as elements of social systems. He defines the following factors for evaluating a social system's degree of complexity:

- > Number of system elements
- > Number of potential relationships between these elements
- > Diverseness of these relationships
- > Development of these three factors over time

The formation of social systems both reduces and builds up complexity. The ability of a social system to survive is largely determined by its ability to develop an appropriate degree of complexity as a means of adequately dealing with the complexity of its environment. In project management practice, it is observed that the willingness to develop the appropriate level of project complexity is often small. For example, the involvement of project stakeholders in project management, the analysis of project risks, and the consideration of ecological and social consequences of project management are often not practiced.

"A system can be described as self-referencing when the elements of which it is composed regenerate themselves". Projects and programs are able to reflect. Thus project communications lead to new communications. Aggregations of communications lead to project roles, project rules, etc. "The dynamics of system processes depend to a large part on the dynamics of the environment, as well as the degree to which the system is open to this environment". Due to their relative uniqueness, projects and programs are generally very dynamic.

The boundaries of social systems, their structures, and their contexts are social constructs. Constructivism deals with the creation of realities by people or social systems. Watzlawick⁷ states that there is no objective reality, but rather only subjective constructions of reality. Social systems theory and constructivism are the two theoretical models which offer a basis for systemic thought. Social systems theory deals with the “world of objects”, and constructivism with human recognition, thought, and judgment.

1.2 Definitions of Projects and Programs

Project Definition

A project is a temporary organization to perform a relatively unique, short-term to medium-term, strategically important business process of medium scope.

Projects are used to perform relatively unique business processes. The more unique the objectives and tasks of the process to be performed, the greater the associated risks. There is often little opportunity to make judgments based on experience. Projects are of short to medium duration. They should be performed as quickly as possible—that is, within a period of several months up to one year. The duration of a project depends basically on the project type. For example, a conception project should not last longer than three to five months. Infrastructure projects, such as construction or engineering projects, are an exception to this general “rule” and usually have a duration of over a year. Longer project durations can be avoided by “constructing” a chain of projects or even programs.

Program Definition

A program is a temporary organization to perform a unique, medium-term business process which is large in scope and of significant strategic importance. A project is no longer sufficient for performing processes with these characteristics. Programs include several projects linked by overall program objectives. Objectives of programs may be to fulfill services (a contracting program), to establish a new infrastructure (a construction or an IT program), or to reorganize (reorganization program). The term “program” is used in an organizational sense, not to be confused, for example, with a software or TV program.



Definition: Project and Program

A project is a temporary organization to perform a relatively unique, short-term to medium-term, strategically important business process of medium scope.

A program is a temporary organization to perform a unique, medium-term business process which is large in scope and of significant strategic importance. Programs include several projects linked by overall program objectives.

⁷ Watzlawick, P. 1976

Business Processes, Projects, and Programs

The relationship between business processes and projects and programs is, that in order to ensure the success of the fulfillment of selected business processes, these shall not be performed by the permanent line organization, but by temporary organizations. This assures the appropriate management attention for their successful fulfillment. A differentiation between those business processes to be performed by the permanent organization and those performed by temporary organizations is made.

The process map of an organization provides the basis for identifying those business processes which require projects or programs for their fulfillment. It is possible to distinguish between primary, secondary, and tertiary processes. Projects for performing primary processes are tendering projects and contracting projects. Projects for performing secondary processes are, for example, product developing projects or reorganizing projects.

In the past, many industries, such as construction, engineering, and IT, used projects in order to perform primary processes. It is only in recent years that a broader project orientation, and consequently the use of projects to perform secondary and tertiary processes, has become perceptible.

Another relationship between business processes and projects is, that both project initiating and project managing are business processes. Their process quality can be defined and controlled. Further similar methods can be applied in process managing and project managing, including defining boundaries, analyzing stakeholders, breakdown structuring, and responsibility charts.

Excursus: Business Process Management

A business process can be understood as a logical flow of tasks with defined objectives and with defined start and end events. A process requires cooperation between several roles of one or more organizations. Elements of processes are tasks and decisions, as well as their interdependencies. A process extends across departments or divisions and, therefore, proceeds horizontally through one or more organizations (see Fig. 1.3).

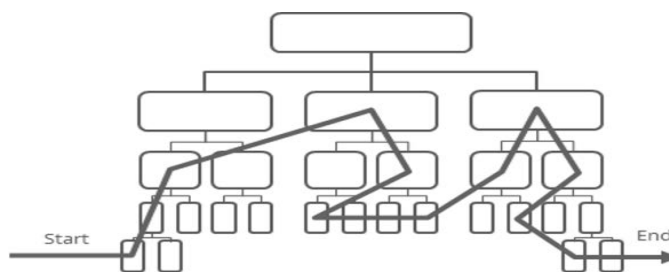


Fig. 1.3: Business process as logical flow of tasks to be performed by one or more organizational units.

Business processes can be distinguished into core, support, and management processes, or into primary, secondary, and tertiary processes. Differentiation into primary, secondary, and tertiary processes is made depending upon the relevance of the processes for clients of the organization. Primary processes are business processes associated with services for clients. Secondary processes directly support the primary processes. Tertiary processes support the primary processes only indirectly. The typical primary processes in an IT company, for example, are tendering and contracting. A typical secondary process is product developing. A typical tertiary process is strategic planning.

Business process management includes modelling, controlling, and optimizing business process portfolios and individual business processes. Business process management ensures an integrative process view, team orientation, concentration on core competences, elimination of activities which do not create value, and minimization of the process costs.

Process-oriented management approaches are lean management, total quality management and business process re-engineering. The paradigm shift in management characterized by client orientation, teamwork and networking with suppliers and partners promotes a business process approach.

Macro-business process management focuses on an organization's process portfolio, differentiates between process types, and creates links between processes. The tasks of macro-process management include preparing process management standards, identifying processes, structuring the process portfolio, the definition of process managers, and qualification of the process management personnel. Business processes are derived from an organization's objectives and strategies.

Micro-business process management considers the single processes in an organization. Micro-process management methods include process descriptions, process breakdown plans, flow charts and responsibility charts, process ratios and process reports. Process managers are needed to perform micro-process management. Process managers can be supported by process management teams. A process management office can be responsible for macro-process management. A distinction must be made between the process management roles outlined above and the roles for performing single processes.

With a dynamic, team-oriented approach, business process management leads to a new understanding of management within organizations. Business process management not only supports decision-making for process optimizations, it also strives to influence the behavior of those performing the process. Consequently, process management promotes organizational learning within a company.

1.3 Categorization: Small Project, Project and Program, Non-Project

By differentiating business processes according to their strategic importance, scope, organizational units involved, etc., it is possible to define the appropriate organizations for their performance. Possible organizations for performing business processes are the permanent line organization and temporary organizations, namely small projects, projects and programs.

The line organization is most suitable for the performance of routine processes. Business processes which are small to medium in scope and of little strategic importance, such as performing a small event, preparing a brochure, or processing a smaller contract, can be performed as small projects. Small projects use fewer project management methods and the project plans are less detailed than those required for projects. For example, it is usually sufficient to develop the work breakdown structure down to the third level. Small projects require a less differentiated project organization design than projects. The role of project owner is fulfilled by a single person rather than a team, and usually only a few sub-teams are required. In small projects the project marketing activities will be less intensive than in projects.

Business processes to be performed by projects are of medium to high strategic importance to the performing organization. Contracting, for example, safeguards the short-term to mid-term financial survival of an organization and is therefore strategically important. In contrast, developing new products or entering a strategic alliance have long-term consequences and are therefore also strategically important.

It is not possible to determine absolutely which business processes are to be performed as small projects, projects or programs. The relevant operationalization must take place within the specific organizational context. For example, what may be categorized as a project in a small company may be considered a routine process for a large company.

The characteristics of business processes, namely their strategic importance, duration, organization involved, etc., make it possible to categorize the organizations for their performance (small project, project or program). Table 1.1 shows an example of such categorization in an Austrian bank. In other companies these specifics will differ, above all for the accruing of external costs.

Table 1.1: Categorizing Organizations for Performing Business Processes (Example)

Criterion	Small Project	Project	Program
Strategic importance	low	medium	medium to high
Duration	at least 2 months	at least 3 months	at least 12 months
Organizations involved	at least 3 organizations (inclusive external partners)	at least 5 organizations (inclusive external partners)	at least 7 organizations (inclusive external partners)
Personnel resources	at least 150 person-days	at least 250 person-days	at least 700 person-days
External costs	at least 0,05 Mio €	at least 0,5 Mio €	at least 2 Mio €

Business processes which don't require projects for their performance are undertaken either by permanent organizational units within the line organization or by working

groups. Permanent organizational units are departments, profit centers and service centers. The professionalism of the business processes not performed as projects can be ensured using appropriate business process management. Working groups are groups of limited duration established to fulfill specific assignments. Typical working group objectives are, for example, analyzing weak points in a business process or improving quality in a business process (“quality circle”). Working groups are usually deployed for a short-term and work in a less formal way than projects.



It is not possible to determine absolutely, which business processes are to be performed by small projects, projects or programs. This decision has to be made in the specific organizational context. What may be a process to be performed by the line organization in one case might require a project in another context.

1.4 Projects and Programs: Contexts

Projects and programs are performed within contexts. These must be considered if projects and programs are to be successful.

Key contexts are the strategies, structures and cultures of each project-performing organization, the investment underlying the project or program, and the changes which projects and programs are intended to bring about. This results in relations of project and program managing to strategic managing, to investment planning and investment controlling, to change managing, and to managing the project-oriented organization.



As these contexts are important to the success of projects and programs, they will be examined in detail in following chapters. Strategic managing and investment planning and controlling are examined in Chapter 3, change managing in Chapter 14, and the managing of project-oriented organizations in Chapters 15 and 16.

1.5 Projects and Programs: Benefits

Performing business processes by small projects, projects and programs helps to assure a company’s competitiveness. Projects and programs should create the necessary organizational complexity needed to fulfill business processes efficiently, provide adequate organizational structures and methods, and ensure the necessary degree of management attention.

Globalized markets, new technological developments, the need for new cooperative relationships with clients and suppliers, and changing values in society all serve to enhance the complexity of the social environment in which organizations operate. Ashby’s law of “Required Variety” states that “only variety can absorb variety”.⁸

⁸ Ashby, W.R., 1970, p. 94.

Consequently, organizations must establish an appropriate level of inner complexity in order to reflect the complexity of the social environment. The organizational differentiation resulting from the use of projects and programs helps to build up this complexity.

Appropriately organizing creates competitive advantages for organizations.⁹ Projects and programs are used and dissolved after the results have been achieved. Project team members are recruited, equipped with the necessary competences to achieve objectives, and then released from the project after project closing. In each case organizations are created which are adequate for the specific need, and used on a temporary basis.

In accordance with Bateson's understanding of information as "a difference which makes a difference"¹⁰, the organizational use of the term "project" makes a difference. By assigning the label "project", an appropriate degree of management attention is assured. Only once a project has been formally defined within the corporate context is professional project management to be applied. This should ensure that the objectives of the project are achieved.

In practice the term "project" is often applied in an inflationary manner—that is, in reference to tasks not worthy of the term. This leads to misunderstandings relating to the use of project management. In daily life the term "program" is used in a variety of ways. Its application as an organizational term still has to be further established. For example, an annual investment program or a company's strategic focus are not programs in the organizational sense. Programs offer new opportunities for differentiation in the management of project-oriented organizations.

In practice, the term "project" is commonly used for temporary organizations which should be managed as programs. In order to highlight the difference in scope and complexity of such organizations, some companies describe these as the "total project" or "major project" and so also manage them as projects. The result is a loss of the organizational potentials which arise through differentiating between projects and programs. The use of programs to perform comprehensive and medium-term business processes ensures higher quality, lower costs, shorter durations and less risk than when these business processes are performed as projects.

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⁹ Cf. Senge, P., 1994, p. 10 ff.

¹⁰ Bateson, G., 1990, p. 274.

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2 Project Management Approaches and New Values

Different perceptions of projects lead to different project management approaches. A mechanistic as well as a systemic project management approach are both represented in the project management literature. According to a mechanistic approach, project management is often reduced to management of the “magic triangle” of project scope, project schedule, and project costs. It is understood as “method toolbox”.

Project management—as well as management in general—is based on values. The theories and the values underlying the project management approaches must be presented to obtain clarity about their differentiation. In this chapter, the values of a systemic project management approach are interpreted considering new values, such as agile, resilient, and sustainable development.

2 Project Management Approaches and New Values

- 2.1 Mechanistic vs. Systemic Management Paradigm
- 2.2 Mechanistic Project Management
- 2.3 Systemic Project Management
- 2.4 New Management Values

2.1 Mechanistic vs. Systemic Management Paradigm

A scientific paradigm can be defined as a coherent bundle of theoretical principles, questions and methods shared by many scientists, which lasts for extended periods in the development of a science.¹ “In management, a paradigm can be viewed as a managerial way of thinking and acting”.² A distinction can be made between a mechanistic paradigm and a systemic paradigm.³

A mechanistic management paradigm is based on the perception of an organization as a trivial system, as a machine. A systemic management paradigm, on the other hand, perceives an organization as a complex system, as a living organism (see Table 2.1).

Table 2.1: Trivial System vs. Complex System

Trivial system: Organization as a machine	Complex system: Organization as an organism
<ul style="list-style-type: none"> > Understandable > Predictable > Context-independent > Controllable with “residual risk” > Can be influenced directly (in order to improve) > Using standards 	<ul style="list-style-type: none"> > Not (completely) understandable > Unpredictable > Context-dependent > Not controllable, but manageable > Can only be influenced indirectly (by adapting the context) > Accepting differences

A mechanistic management assumes that organizations are understandable, predictable, context-independent, and manageable. This means, for example, that organizations in different cultures “function” in the same way—that management is achieved by the specification of standards and direct influence on employees.

In contrast to this, Malik, for example, sees systemic management as the design and steering of whole institutions in their environment rather than direct management of employees, as the management of many rather than the management of few, as an indirect influence at the meta level instead of direct action at the object level, as action under the criterion of controllability rather than optimality, and acting on the basis of limited information rather than complete knowledge.⁴

The systemic management paradigm is influenced by the models of the “Learning Organization”,⁵ but also by “Lean Management”,⁶ and “Total Quality Management”⁷ (see Table 2.2).

¹ Asendorpf, J. B., 2009, p. 14.

² Němeček, P., Kocmanová, A., 2008, p. 562.

³ See Kasper, H., 1995.

⁴ See Malik, F., 2004.

⁵ See Senge, P., 2006.

⁶ See Womack, J. et al., 1990.

⁷ See Juran, J. M., 1991.

Table 2.2 Influences on the Systemic Management Paradigm

Influence: The Learning Organization
> Differentiation between individual, collective and organizational learning
> Perception of the organization as a competitive factor
> Need to learn and to unlearn
> Continuous and discontinuous learning
Influence: Lean Management
> Process-orientation
> Focus on core competencies
> Flat, lean organizational structure
> Teamwork
> Networking and cooperating
> Continuous development
Influence: Total Quality Management
> Customer-orientation
> Product quality and process quality
> Quality control, quality assurance and quality management.

A management paradigm can be described by presenting the values underlying the management as well as the management objectives, processes, and methods. The values are central, as they are influencing the other dimensions.

2.2 Mechanistic Project Management

The perception of projects as tasks with special characteristics (see Chapter 1) promotes an orientation towards planning and controlling in project management.⁸ The main focus is the question of how to carry out a task. Methods for work planning, such as REFA methods⁹ or Operations Research methods,¹⁰ form the theoretical basis for this “traditional” mechanistic project management.

⁸ Steinle et. al., 1995, p. 354.

⁹ See Camra, J.J., 1976.

¹⁰ See Hillier, F.S., 2001.

For decades, project management was understood as the use of networking techniques for planning and controlling project scope, project schedule, and project costs. Because of the uncertainties associated with unique tasks, risk management methods are also used in traditional project management.

Organizationally, the distribution of formal decision-making powers between project manager, line manager, and project team member appears to have the greatest importance in traditional project management. Pure project organization, matrix project organization, and influence project organization are offered as standards for resolving this area of tension.¹¹ It is argued that projects require project organization for task management, but that they are not independent temporary organizations. The role of the project owner, which is so important for the success of a project, is not seen as part of this, or is not adequately performed.

The objectives of traditional project management are fulfilling the project scope within the constraints of the project schedule and the project costs. These dimensions are represented as a “magic triangle” (see Fig. 2.1).

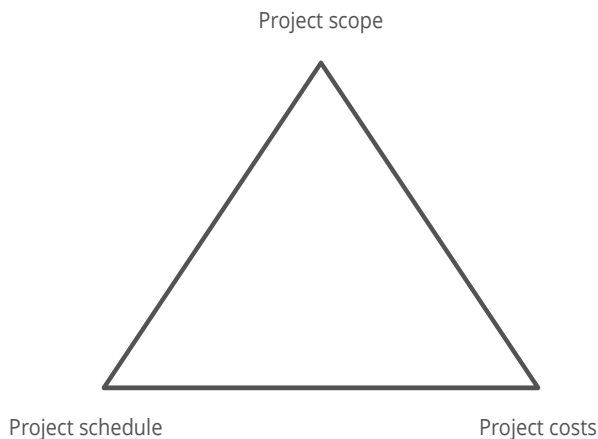


Fig. 2.1: Traditional project dimensions to be managed (“magic triangle”).

Project management is understood as a set of methods for managing a project and not as a business process to be designed. Project management methods are used to control and not to structure communications. The focus is not on teamwork. Project managers see themselves above all as “experts” and not as “leaders” with business value responsibility. Project decisions are made according to the hierarchy of the project organization. “Traditional” project management can thus be seen as a mechanistic project management approach.

¹¹ See Reschke, H., 1989.

2.3 Systemic Project Management

Influence of Organization Theory on Project Management

The perception of projects as temporary organizations promotes the awareness that each project requires a specific organizational design that goes beyond the regulation of decision-making powers for the project manager. An adequate, situational design of the project organization helps to ensure the success of the project.

The organizational design of projects includes the definition of project-specific roles, the development of project organization charts, the establishment of project-specific communication formats, and the agreement of project-specific rules. Concepts such as customer orientation, empowerment, flat organizational structures, teamwork, organizational learning, process orientation, and networking can be implemented in projects. Seeing projects as temporary organizations also promotes project-specific culture development. The targeted selection of a project name, the development of a project-specific language, the formulation of project-specific slogans are relevant project management methods.

Influence of Social Systems Theory on Project Management

The perception of projects as social systems makes it possible to apply concepts and models from the social systems theory for project management. “Systemic” project management is not based on traditional project management, but puts its objectives, processes, methods, and roles into a new context, interprets them, and promotes the development of new concepts and models.

A systemic understanding of project management is derived as a result of the need to manage the boundaries and contexts as well as the complexity and dynamics of projects. Instead of planning and controlling scope, schedule, and costs, what is relevant are the construction of project boundaries and project contexts, the building up and reducing of complexity, and the management of the dynamics of projects.

In constructing project boundaries, a holistic project view is to be ensured. An integrated view of technical, organizational, personnel, and marketing-related solutions is promoted in order to ensure sustainable business value. Project stakeholder analysis, analysis of the pre-project and post-project phases, and analysis of the project’s relationships with other projects and with company strategies are used for the management of the project context relations.

Projects require an appropriate degree of complexity to enable connectivity with the (infinitely) complex environment. The building up and reducing of complexity is therefore a project management function. The use of diverse communication formats, such as project workshops, meetings of the project team and of sub-teams, as well as project

owner meetings, promotes the building up of complexity. Further organizational possibilities for building up complexity are the differentiation of project roles, the definition of interrelationships between the roles, and the inclusion of different specialist disciplines and representatives of different hierarchical levels in the project team.

The application of different project management methods allows one to construct different project realities. An appropriate project complexity is achieved by relating the different project management methods to each other in a “multi-method approach”.

Redundant structures must be created to ensure continuity in the project. Project complexity is also reduced by agreeing on common project objectives, by defining project-specific rules and standards, by developing project plans, and by conducting integrative project team meetings. The different communication formats of a project contribute to the self-reference of the project. Visualizations such as a work breakdown structure, a milestone plan, and a project stakeholder analysis support these communications.

Reflections are meta-communications—that is, communications about communications. Reflections are necessary in order to promote changes in a project. Time, space, and appropriate social know-how are necessary for reflections. The structures necessary for performing a project are therefore formed, questioned, possibly adapted, and newly formed according to new needs in a cyclic process (see Fig. 2.2).

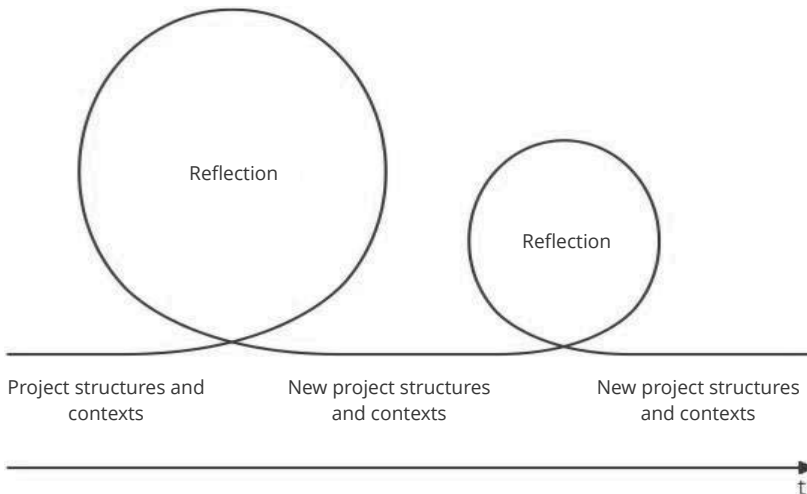


Fig. 2.2: Management of the dynamics of projects.

The dynamics of a project emerge not only from its self-reference but also from interventions of stakeholders of the project. Examples of interventions of stakeholders include new legal requirements imposed by authorities, changes by the customer regarding the scope of services, cancellations by suppliers, an unexpected media echo, lack of motivation in the project team, etc.

The possibility of changing a project depends on its relationships with stakeholders. Momentum of a project can only be achieved when the functionality of the (relative) project autonomy is recognized. The interventions in a project by the stakeholders of the permanent organization therefore should be limited.

Self-referential processes of a project or interventions by project stakeholders can lead to continuous or discontinuous changes of the project. Continuous changes of a project are taken into account by project controlling. Continuous changes are reflected in adapted project structures such as additional project objectives, newly defined project roles, new project schedules, etc., but also in new contextual relationships.

A discontinuous development of a project as a result of a project crisis or a project chance necessitates a change in the project identity. Discontinuous developments are carried out by specific subprocesses of project managing—namely, “transforming a project” or “repositioning a project”.

Influence of Constructivism on Project Management

The definition of the boundaries of a project, the assessment of the status of a project at a controlling date, and the definition of a project crisis all are constructions of project realities. A common view of the project status, for instance, provides the basis for a common agreement on measures to direct the project.

Constructions are not right or wrong, but are or are not “viable”. A construction is viable if it is possible to function with its help in a specific context. A practicable or usable view is striven for in a specific situation.

Constructions in project meetings are performed through observations and interpretations by the observers. Observers of projects can be members of the project organization but also by representatives of stakeholders. Each observation is carried out by an operation of the observing system, which applies certain observation criteria. In order to assess the project status, one can, for example, look at the progress and adherence to deadlines, but the atmosphere in the project team or the quality of relationships with project stakeholders could also be considered.

Social constructions are the result of a power-influenced negotiation process. This means that the project owner’s opinion regarding the project status influences the overall judgment more strongly than that of a project contributor. Constructions can change. For this reason, for example, project controlling meetings are carried out at periodic intervals.

People act on the basis of the importance that events and situations have for them. But there is no “correct” social significance of things and situations. The significance is always context specific. The same situations can have a completely different significance in different contexts and thus lead to different constructs.



According to a mechanistic project management approach, project scope, project schedule, and project costs are the dimensions of a project to be managed. This approach is characterized by an orientation toward planning and controlling.

The systemic project management approach understands the construction of project boundaries and project contexts, the building up and reducing of complexity, and the management of the dynamics of projects as project management objectives.

A description of the development of project management since 1950 can be found in Table 2.3. The traditional mechanistic project management approach continues to be of great importance in practice, even if a newer systemic approach exists.

Table 2.3: Development of Project Management Since 1950

Criterion	Since 1950	Since 1990	Since 2010
Perception of projects	As unique tasks	As temporary organizations and social systems	As temporary organizations and social systems
Management focus	Managing the project scope, schedule and costs	Managing the project scope, schedule and costs, the project organization and the project context relations	Managing the project scope, schedule and costs, the project organization and the project context relations, considering the relations to requirements, programs, and changes
Understanding of project management	Toolbox of project management methods	A business process of the project-oriented organization	A business process of the project-oriented organization
Project success criteria	Performing the project scope under consideration of schedule and costs constraints	Performing the project scope under consideration of schedule and costs constraints; meeting content-related project objectives	Performing the project scope under consideration of schedule and costs constraints; meeting content-related project objectives; contributing to the optimization of the business value of the company
Project types	Major projects with technical objectives	Small, medium and large projects with technical objectives; regional development projects; contracting, marketing, organizational development, etc. projects	Small, medium and large projects with technical objectives; regional development projects; contracting, marketing, organizational development, etc. projects
Role of the project manager	Technical expert, administrator	Content-related expert, administrator	Manager, intrapreneur
Project-performing industries	Military, aviation, construction, engineering, IT	All industries	All industries, public sector

2.4 New Management Values

Values are relatively stable beliefs about the desirable or necessary characteristics of a social system. Values are therefore ideal constructs. They should have a highly binding character, provide meaning, and give orientation to the members of an organization.

Organizations function on the basis of values, which determine the behavior of their members. Values can be observed, for example, in the organization's priorities. An operationalization of values in the corresponding organizational context can be achieved by defining principles and rules.

Definition: Values

Values are relatively stable beliefs about the desirable or necessary characteristics of a social system. They are ideal constructs.

The values of the management paradigm on which the RGC management approaches are based are shown in Figure 2.3.

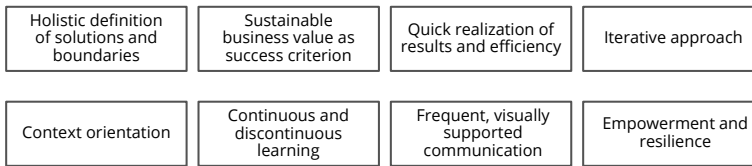


Fig. 2.3: Values on which the RGC management approaches are based.

The RGC management approaches can be described on the basis of the values shown in Figure 2.3. Detailed descriptions can be found for project management in Chapter 6, for program management in Chapter 13, for change management in Chapter 14, and for project portfolio management in Chapter 16.

The values of the concepts of agility, resilience, and sustainable development have been incorporated into the RGC management values. The relatively new values of these concepts are described below.

Values of the Concept "Agility"

Agility can be defined as the ability to change quickly in response to new market conditions. Both permanent and temporary organizations have the ability to be agile. Agility is therefore also relevant for projects and programs.

The agility of an organization expresses itself in its objectives, business processes, methods, roles, and stakeholder relations.

Table 2.4: Agile Manifesto and Agile Principles

Agile Manifesto
<ul style="list-style-type: none"> > Individuals and interactions over processes and tools > Working software over comprehensive documentation > Customer collaboration over contract negotiation > Responding to change over following a plan
Agile Principles
<ul style="list-style-type: none"> > Our highest priority is to satisfy the customer through early and continuous delivery of valuable software. > Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage. > Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale. > Business people and developers must work together daily throughout the project. > Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done. > The most efficient and effective method of conveying information to and within a development team is face-to-face conversation. > Working software is the primary measure of progress. > Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely. > Continuous attention to technical excellence and good design enhances agility. > Simplicity – the art of maximizing the amount of work not done – is essential. > The best architectures, requirements, and designs emerge from self-organizing teams. > At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.

Definition: Agility

Agility is the ability to change quickly in response to new market conditions.

The agility of projects does not assume the use of agile methods such as Scrum or Kanban. Projects are agile if they take into account agile values and therefore, for example, take an iterative approach, communicate intensively, reflect regularly, etc. An iterative approach means that similar activities are carried out repeatedly in order to approach an overall objective. However, there is also the possibility of using agile methods in projects. Scrum, for example, can be used for the management of specific phases of a project (see Chapter 4).

Definition: Iterative Approach

In an iterative approach, activities are repeated in order to approach an objective. Uncertainty should be adequately managed, and the quality of a solution and the associated business value should be optimized. An iterative approach does not mean that planning is abandoned. Rather, one can only be temporarily sure of one's own approach. Uncertainty is gradually reduced, acceptance is achieved.

One of the strengths of agile methods such as Scrum is the explicit definition of the values underlying the methods. In 2001, a group of software developers published the Agile Manifesto, presented in Table 2.4, along with twelve agile principles.¹²

The central statements of the Agile Manifesto require an interpretation. "Individuals and interactions over processes and tools" means that emphasis is laid on communication, on many (short) meetings, and on the empowerment of employees, rather than on the development of extensive rules. "Working software over comprehensive documentation" means that achieving objectives is more important than documentation. Documentation is still needed, but it is not the top priority. Achievement of objectives is understood as the creation of business value.

"Customer collaboration over contract negotiation" means that an intensive collaboration with the customer is striven for during development, that an understanding of customer requirements and the rapid gathering of customer feedback is important, and that the involvement of additional stakeholders in the cooperation process is also desired. "Responding to change over following a plan" ultimately means that, although defined solution requirements cannot be changed during an iteration, new requirements can be defined and priorities changed after an iteration.

There are similarities between systemic and agile approaches. Thus, for example, self-organization and reflection are characteristics of social systems and they are also agile principles.

Values of the Concept "Resilience"

Resilience can be defined as the robustness of organizations, but also as robustness of teams and individuals. Resilient organizations are characterized by structures that ensure their resilience. Prevention, adaptation, innovation, and culture development can contribute to the resilience of an organization:¹³

- > Prevention: A capacity to resist to negative external effects is built up as a precautionary measure.
- > Adaptation: A short-term adaptation in order to return to an original position is made.

¹² Beck, K. et al., 2001.

¹³ See Wieland, A., Wallenburg, C. M., 2013.

- > Innovation: Innovations are implemented in order to exploit benefits.
- > Culture development: An organizational culture, which is optimistic, ready to learn, fault-tolerant, but also prepared for confrontation, is assured.

It is possible to distinguish between a proactive form and a reactive form of resilience. The reactive form corresponds to the concept of agility. Agility and resilience are therefore directly related.

Resilience management encompasses all measures with the objective of strengthening the resilience of an organization against external influences. Examples of this are the creation of flexible organizational structures, extensive training of employees, regular feedbacks during everyday business, and frequent communications (in informal networks).

Definition: Resilience

Resilience is the capacity to resist or the robustness of an organization, a team, or an individual to external influences.

Values of the Concept “Sustainable Development”

Sustainable development has received a lot of attention as a result of the “Brundtland Report”, published in 1987 by the World Commission on Environment and Development. This report defines sustainable development as “a development that meets the needs of the present without compromising the ability of future generations to meet their own needs”.¹⁴

Sustainable development as a normative concept represents values and ethical considerations.¹⁵ Relevant basic values are justice within and between generations, transparency, fairness, trust, and innovation.¹⁶

The political concept of sustainable development has been developed for society in general. The values have been defined for society and therefore cannot be transferred to companies without interpretation.

The application of the concept to companies is referred to as corporate sustainability or corporate social responsibility. Over the past few years, companies have committed themselves to implementing the concept of sustainable development. This should go beyond compliance with legal requirements. Critics like Porter and Kramer argue that many of the initiatives of corporate sustainability can be seen as mere lip service.¹⁷ Philanthropic activities are often offered to do “good things” for society. Serious

¹⁴ World Commission on Environment and Development (WCED), 1987, p. 41.

¹⁵ See Adams, W. M., 2006; Davidson, J., 2000; Martens, P., 2006; Meadowcroft, J., 2007; Robinson, J., 2004.

¹⁶ See Global Reporting Initiative, 2011.

¹⁷ See Porter, M. E., Kramer, M. R., 2011.

sustainable development, however, means integrating the principles of sustainable development into the services, products, and processes of organizations, which means rethinking the business.

A process-based understanding of sustainable development is principle based. It takes into account the economic, ecologic, and social; short, medium, and long term; local, regional, and global consequences of developments.¹⁸ The challenge is to “balance” these principles.

Definition: Sustainable Development

Sustainable development is development that takes into account and balances economic, ecologic, and social; short, medium, and long term; as well as local, regional, and global consequences.

These principles of sustainable development are relevant not only to permanent organizations, but also to temporary organizations—namely, projects and programs. Initial studies contribute to an understanding of the link between sustainable development and projects. The focus is on the project content, so-called “green projects”, and on the consequences of the project results. So, for example, “impact assessments” are developed for this purpose.¹⁹ Little consideration, however, is given to the principles of sustainable development in project initiation and project management.²⁰



Agility, sustainability, and resilience are relatively new values in management. Taking these values into account influences the objectives, processes, methods, and roles of management approaches.

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¹⁸ Gareis, R. et al, 2013.

¹⁹ See Martinuzzi, A. and Krumay, B., 2012.

²⁰ See also Silvius, G. et al, 2012.