



Simulation game “SME Digital”

How does the successful introduction of digital requirements management (RM) in SMEs succeed?

Accompanying
brochure

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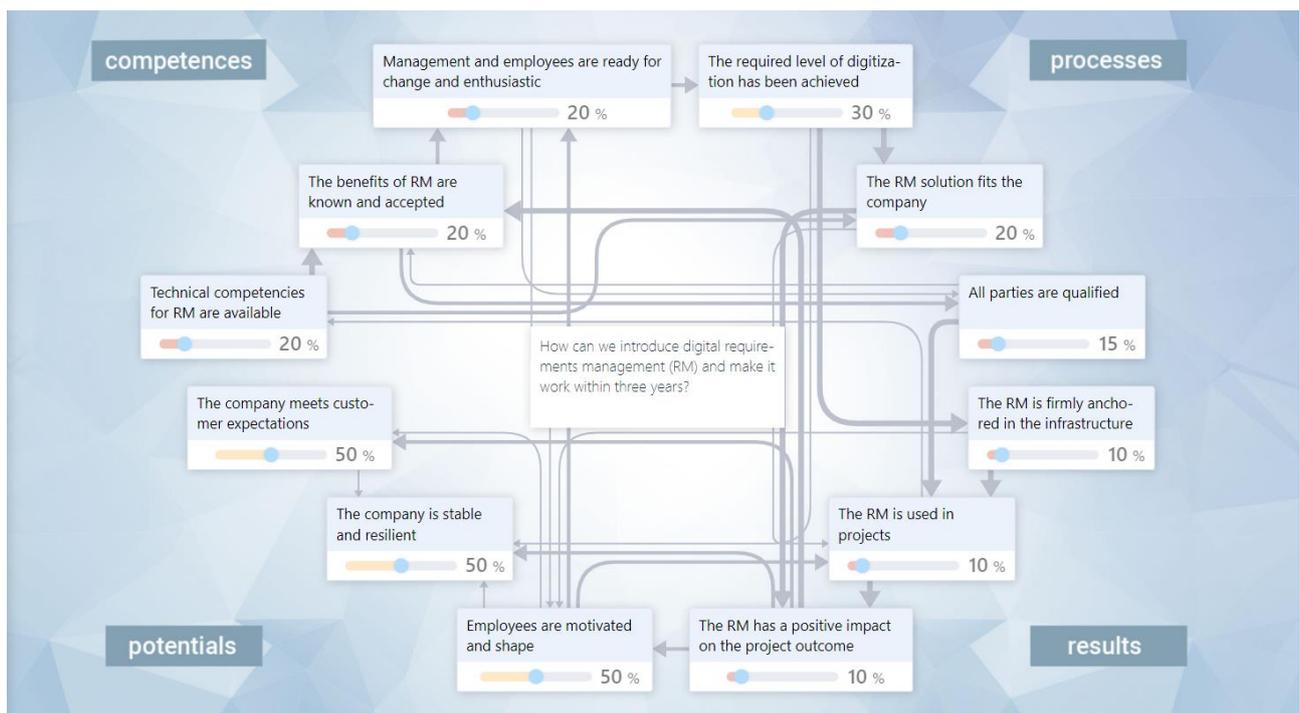
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Part 1: Introduction

General information

The simulation game "SME Digital" deals with the question of how digital requirements management (RM) can be introduced and made effective in an SME within three years. In addition to learning about all the relevant aspects that need to be taken into account during the implementation, the focus also lies on methods and procedures for involving and supporting employees in this process.



At the center of the simulation game is an interactive target model in which different perspectives on the issue are taken into account and interrelated. The goal is to improve the Total Performance of this system (i.e., the sum of the individual scores) as much as possible. In doing so, it is crucial not to focus only on individual aspects and lose sight of other goals, as this can lead to unforeseen incidents and setbacks.

The game is divided into a total of 20 simulation rounds, each representing a quarter. In each round, actions can be taken to achieve the game objective. Actions have a positive effect on individual goals of the system - via the effect arrows, these direct changes are passed on to the next simulation round in the target model. Taking actions consumes resources that are only available within a certain framework. Some actions are also linked to conditions and are only available if certain prerequisites are met.

Game scenario

The milling Meier GmbH

The company FRÄSEN Meier GmbH manufactures CNC-controlled milling machines in the Dortmund area. Founded in 1948 by Markus Meier, the family business is currently managed by his grandson Tobias Meier.

With its approximately 40 employees, the family-owned company achieved a turnover of €3.5 million in 2019. 80% of its customers come from North Rhine-Westphalia (NRW). Tobias Meier has a degree in business administration, has been managing the company for 7 years now and is also responsible for sales. The management board also includes his wife Martina Meier, who as a trained office administrator is mainly responsible for administration and personnel matters, and his younger brother Fabian Meier, who as a mechanical engineer is responsible for development and production.

Current challenges

The competition in the German-speaking countries is getting bigger and bigger for the company. Therefore, the management has decided to offer the products on the Asian market as well. The turnover achieved there increased strongly in the last 5 years. However, almost half of the products delivered to Asia require rework and do not meet customer expectations there. This results in high costs and also the image of FRÄSEN Meier GmbH suffers. The dissatisfaction of customers in Asia can be explained mainly by new areas of application of the milling machines, as well as misunderstandings in the operating logic and communication.

Due to the many years of very personal cooperation with predominantly regional customers, their specific expectations and requirements are known within the company and were therefore never explicitly recorded and documented. As a result, the company now lacks well-rehearsed processes and tools to deal with the new challenges and fully exploit the given market potential.

Digital requirements management - but how?

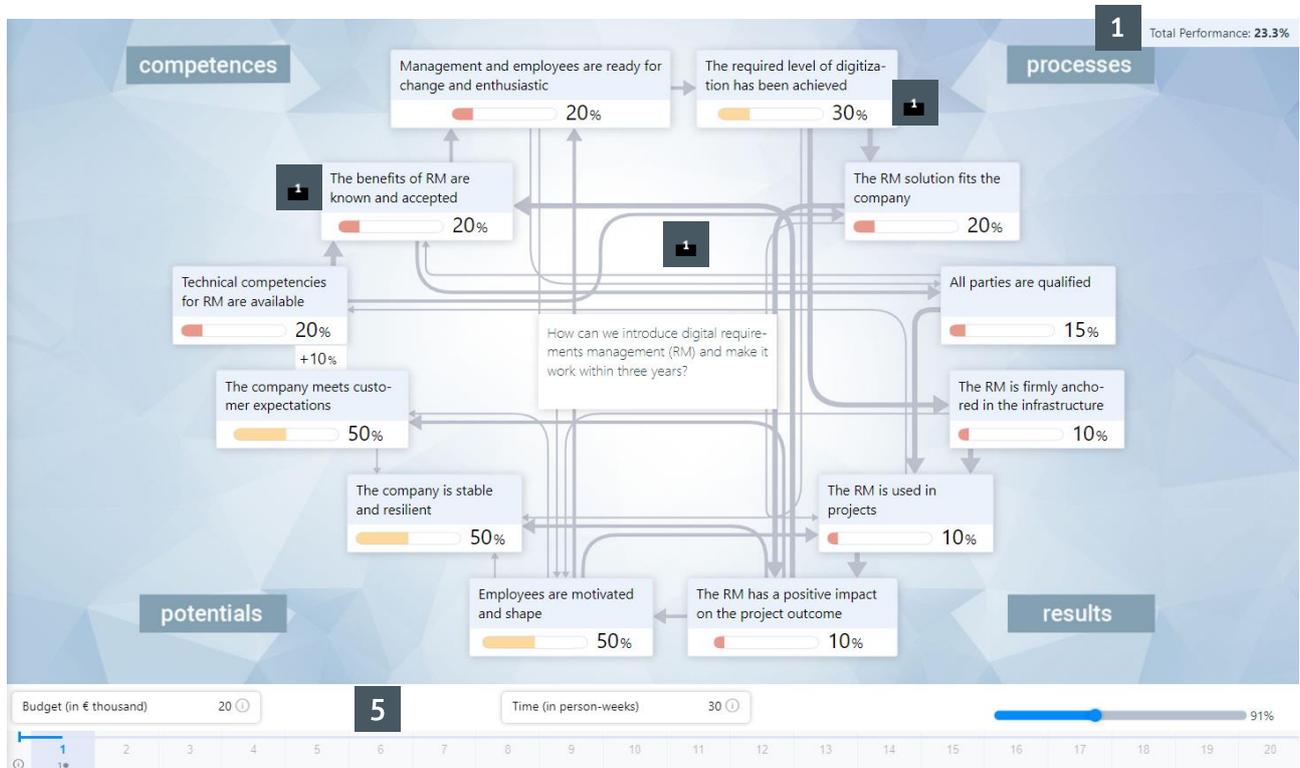
By chance, Fabian Meier becomes aware of the topic of requirements management and recognizes the potential in it to make company processes more effective and customer-oriented. Together with Tobias and Martina, he discusses the framework conditions required for the introduction of digital requirements management. In the process, they realize that not only do they need to build up content-related skills, but also that the low level of digitization to date represents a major hurdle - but at the same time it is an important step for the further development of their company. They therefore decide to give the topic a chance and jointly agree on the resources they can and want to invest.

Project framework and resources

Fabien Meier takes on the task of driving the topic and sets himself the goal of introducing digital requirements management within three years and bringing it to fruition. He has an annual budget of around €20,000 at his disposal and personnel resources of around 30 person-weeks per year. Accompany Fabian Meier on his journey and put FRÄSEN Meier GmbH on course for the future.

Target model

The target model consists of twelve interlinked targets whose individual conditions result in the Total Performance. This so-called interdependency network shows incoming and outgoing arrows for each target, which visualize the effects between the targets. The impact network forms the center for the implementation of all decisions and thus also the basis for all further evaluations.



1) Display of the Total Performance

The Total Performance of the target system results from the current conditions of the individual targets. The goal of the game is to improve the Total Performance.

2) Condition of the individual targets

The condition of a target always lies between 0 and 100%, whereby 100% describes the desired target condition. Incidents and actions can change the condition of a target positively or negatively. This change (improvement or deterioration) is then passed on to other targets via the outgoing effect arrows according to the stored strength.

3) Targets

Double-click on a target to open further information on it. In addition to a more detailed description of the target and its indicators (measured variables), you will also find further information on the condition and relations of the target. Moreover, all actions and incidents that have an impact on the target can be viewed.

4) Relations

By double-clicking on a relation, information about it can be opened. There, a short description of the relationship can be viewed. In addition, the relation is described in more detail with regard to its strength,

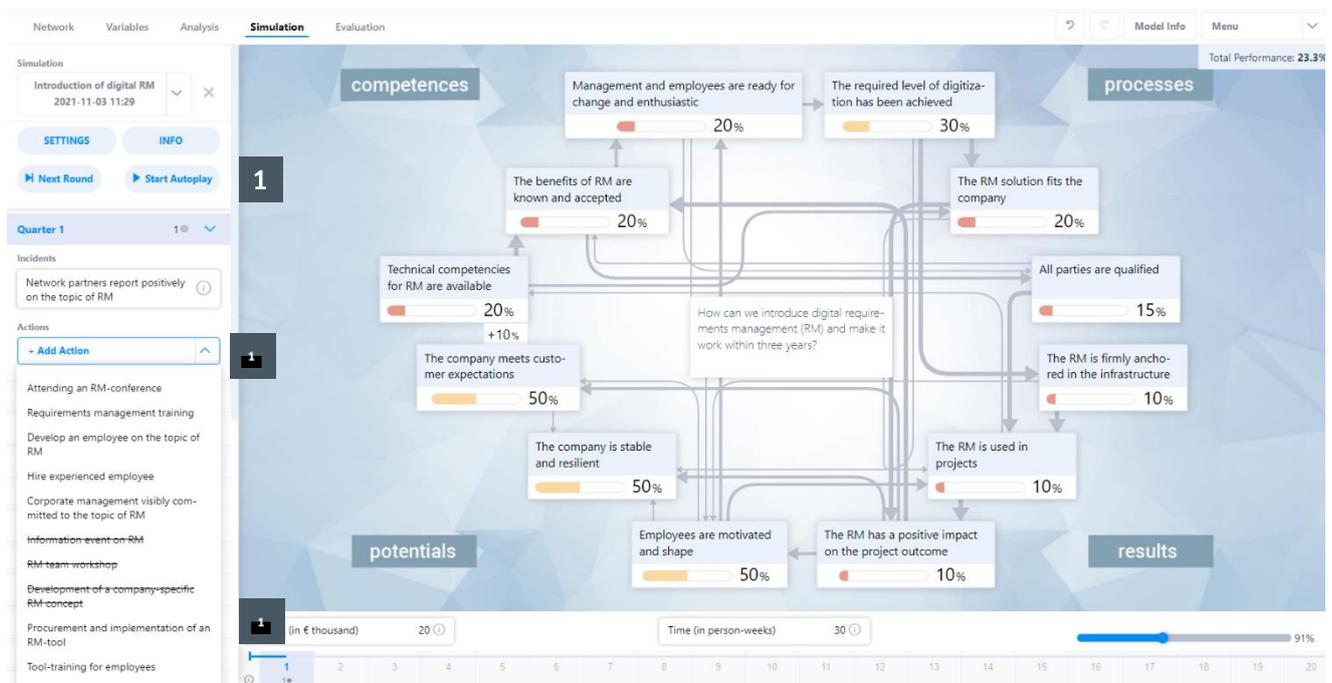
influence curve and possible time delays. The strength of the relationship indicates how strongly a target can influence another target in total, if the condition improves from 0 to 100%.

5) Resources available

Below the target model, the currently available resources are displayed. By clicking on the resources, further information about them can be displayed, such as a description of the unit.

Simulation process

In the simulation game, action strategies are simulated over time to improve the Total Performance of the system. Start a new game round by creating a new simulation. At the start of the game, the game scenario is displayed - the "Start" button is used to prepare the first simulation round.



The simulation interface

- 1) **Control of the simulation:** In the menu on the left side, the button "Next Round" can be used to perform the next simulation round. As soon as the button is clicked, the selected actions of the current game round and the announced incidents are simulated in the system. Subsequently, new incidents are announced. In the target model, below the individual targets, it is shown how the target will change in the next simulation round due to the relations and the occurring incidents. Selected actions are not included in this value.
- 2) **Action selection:** In the simulation plan on the left side, the current game round is highlighted in blue. The "Add Action" button can be used to add actions that will be triggered in the respective simulation round. Actions can be selected for the current game round as well as pre-planned for upcoming rounds. When selecting an action, further information on its resource consumption and effects will be displayed first. A repeated click on the action adds it to the simulation round.

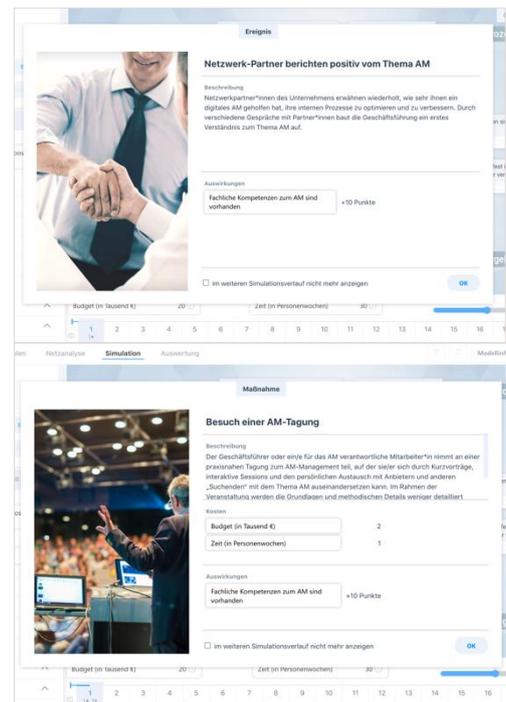
3) **Timeline:** In the timeline below the target model, the progress of the simulation can be tracked. The current game round is highlighted in blue. By clicking on game rounds that have already been played, the system can be rewound step by step in order to be able to retrace changes. In addition, information on incidents and actions can be called up for each game round.

Incidents

Incidents are not triggered by the player, but occur automatically based on stored triggers. An incident can negatively or positively influence the condition of a target as well as the available resources. As soon as an incident occurs, an information screen is displayed describing the incident and the direct effects of the incident.

Actions

Actions are activated by the player. Any number of actions can be played as a bundle of actions per game round, and their effects are added up. Some actions are linked to certain conditions (e.g. the condition of an objective) and are therefore not available in every game round. These actions appear crossed out in the list of action selections. Each action has individual effects and consumes different amounts of resources.

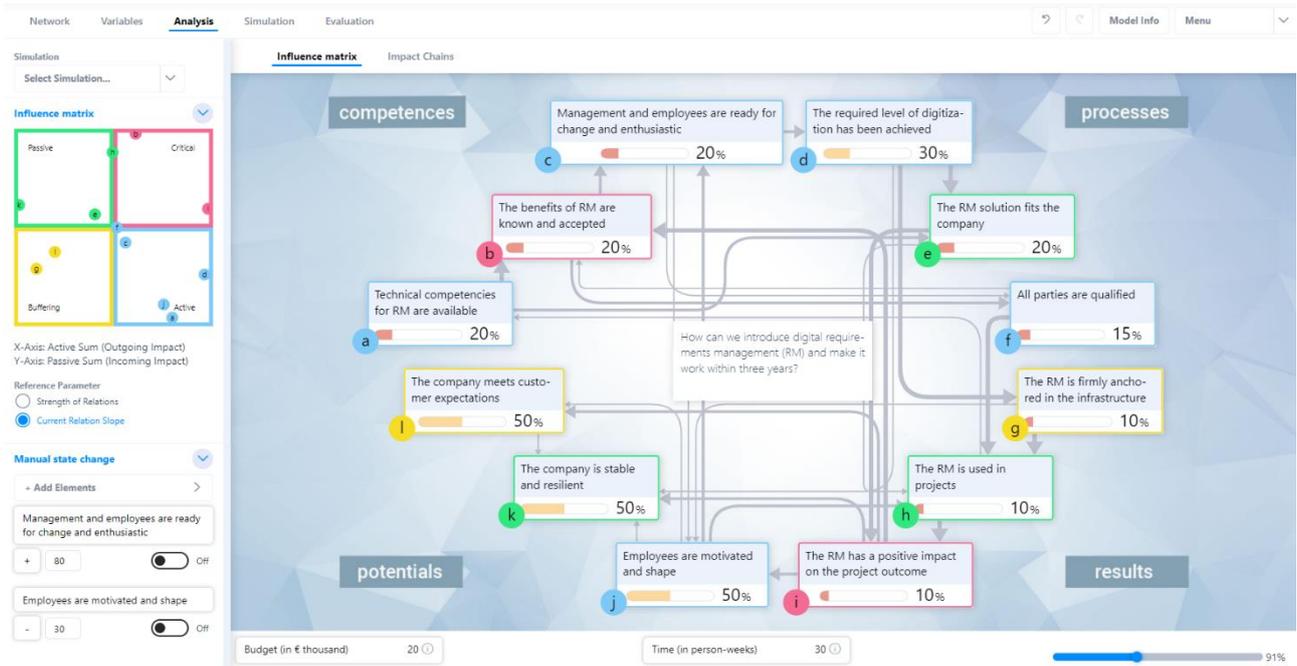


Analysis and evaluation

Before, during and after the simulation, several analysis tools are available to support the interaction with the target model and to identify key levers and dependencies.

Influence Matrix

In the influence matrix, the targets are represented according to their active and passive sums. The active sum indicates how strong the influence of a target is on other targets (outgoing relations), the passive sum in turn shows how strongly a target is influenced by other targets of the target model (incoming relations).



Impact chains

In the section impact chains, different paths of impulses in the network can be shown. By selecting two targets, all paths of influence between them can be identified and analyzed. If the same target is selected twice, all impact chains of this target are displayed. With the help of the impact chains, it can be shown, for example, how strongly and with which time delay the improvement of the action capabilities contributes to the concrete project results.

Evaluation

During and after the simulation, the current result as well as the simulation progression over time can be displayed in the "Evaluation" area in form of various diagrams. The diagrams can be configured individually to compare the development of different targets - even across several simulations.



Part 2: Target descriptions

1 Technical competencies for RM are available

The company has know-how on the basic benefits, processes and methods of RM. This makes it possible to reflect on and evaluate the existing possibilities and to identify suitable procedures and RM tools for the company.

Indicators

- The company has knowledge about the processes and methods of requirements management
- The company has the ability to evaluate and select appropriate tools

Initial condition:

20% - The contents of the topic "RM" are intuitively anchored in the manager and he applies this unconsciously. However, he cannot formalize or describe them concretely.

Affects the goals ...

- The benefits of RM are known and accepted: Through the professional knowledge of RM regarding benefits and possible applications, it becomes more accessible and tangible for the employees.
- The RM solution fits the company: Technical RM competencies make it possible to design the company-specific version of RM.

2 The benefits of RM are known and accepted

All employees of the company are aware of the basic objective of RM and know what added value it can generate. The employees associate positive experiences with RM and do not see it as an additional expense, but recognize it as making work easier.

Indicators

- All employees know the objective of RM
- Examples of the benefits and effects of RM are available and known
- Employees gain their first positive experience with RM through Quick-Wins

Initial condition:

20% - In the company, RM is not recognized as a conscious process.

Affects the goals ...

- Management and employees are ready for change and enthusiastic: The added value of RM experienced by employees has a direct impact on their willingness to change, which is relevant for this.

- All parties are qualified: Employee's acceptance directly impacts employee's willingness to learn and openness to RM.

3 Management and employees are ready for change and enthusiastic

The company is open to change and further development. Managers understand their role for the company and take it seriously. All employees are familiar with the overall corporate goals and identify with a common value system. The company pulls together and sticks together.

Indicators:

- The management task is perceived and has a high priority
- Openness to change is part of the corporate culture
- The company lives common goals and values

Initial condition:

20% - The company is successful and tradition-conscious. The structures are hierarchical. Market potentials are not exploited.

Affects the goals ...

- The required level of digitization has been achieved: The digitization of processes is positively supported by the willingness to change and openness of the employees.
- All parties are qualified: The open corporate culture and the common goals and values have a positive effect on the cooperation of the employees.
- Employees are motivated and shape: An open corporate culture is a direct enabler for employee commitment and creative freedom.

4 The required level of digitization has been achieved

Digital RM is not the first digital process to be introduced into the company and to function independently of analog processes. Rather, all important core processes have already been digitized to the required extent and are seamlessly intertwined. All employees are sufficiently qualified and equipped (methodically and technically) to be able to interact with the digital tools used.

Indicators:

- All important core processes are digitized
- Sufficient digital know-how of companies and employees is available
- Accessibility to digital tools by all employees is ensured

Initial condition:

30% - Many employees do not have access to digital tools at their workplace (e.g. work cell phone). Individual processes are digitized, but there are still gaps.

Affects the goals ...

- The RM-solution fits the company: If the end-to-end digitized core processes are transparent and known, digital RM can dock onto them more easily. Company-specific challenges to RM tools can thus be described and implemented more easily.
- RM is firmly anchored in the infrastructure: End-to-end digitization ensures the right framework conditions in the infrastructure so that digital RM can be seamlessly integrated.
- The company is stable and resilient: The digitization of core processes creates coherent and stable processes that can nevertheless be adapted quickly and flexibly to changing conditions if necessary.

5 The RM solution fits the company

The concept developed for digital RM is tailored to the individual company's needs. RM can thus be meaningfully integrated into existing processes and effectively complement them. The tools used make the work easier and do not generate additional work due to formalization or workarounds.

Indicators:

- The company processes are coherent and known among each other
- Type and scope of RM is coherent with the company
- The tool is adapted to the processes and not the processes to the tool

Initial condition:

20% - The RM currently consists only of individual textual documents (offer, specifications, ...) that are not directly linked to each other. Many contents are passed on by verbal agreements and are therefore strongly dependent on the person.

Affects the goals ...

- RM is used in the projects: The RM-solution fits the organization and way of working in the projects and is a useful working tool that can be used in all projects without additional effort.
- RM has a positive impact on the project outcome: A company-specific RM-solution ensures that RM is not only used in the projects, but actually comes to fruition and thus generates added value.

6 All parties are qualified

All parties (employees and managers) are qualified to successfully handle the RM. This includes both the methodological and technical competencies for handling the tools used, as well as the right way of thinking and working. The effective and open cooperation of all participants becomes a matter of course in the company.

Indicators:

- All parties have internalized the mindset and processes
- All parties can (technically) operate the tools

- The necessary cooperation between all parties involved is established and actively practiced

Initial condition:

15% - Today, all processes are strongly focused on single persons. Tasks are distributed centrally via the management.

Affects the goals ...

- The benefits of RM are known and accepted: Employees who are familiar with the RM-process, methods and tools used, accept them more easily and can see the benefits behind them.
- RM is used in the projects: As soon as the employees have internalized the RM methodically and technically and can apply it at any time, it becomes applicable in the projects.

7 The RM is firmly anchored in the infrastructure

Digital RM has been introduced throughout the company and is reliably available to all participants. All technical responsibilities and the interfaces to other tools and processes have been clarified. Employees are not dependent on workarounds or manual rework in their daily work.

Indicators:

- Technical access is reliably ensured for all employees
- The operation and maintenance of the RM is ensured
- There are no system breaks in the company

Initial condition:

10% - Many RM-relevant documents (e.g. quotations) are not accessible to employees today. There are no continuous process chains.

Affects the goals ...

- RM is used in the projects: If digital RM is reliably available to all employees and seamlessly integrated into the existing system landscape, it provides reliable support in all project phases.
- Employees are motivated and shape: The employees feel supported in their work and thus valued by a functioning and reliable infrastructure.

8 The RM is used in projects

Digital RM is used consistently and as a matter of course in all projects. It is an integral part of daily work and is not seen as an additional task. RM is not only used by individual employees, but by all participants across all project phases.

Indicators:

- RM is not understood as an additional task

- RM is used in all phases of the project
- RM is understood as a working tool and not as a documentation tool

Initial condition:

10% - Today, RM is only used for order clarification and quotation preparation - the results do not fully flow into the following process phases.

Affects the goals ...

- Technical competencies for RM are available: Company-specific experience is gained through the practical use of digital RM in the projects. This improves the company's know-how regarding RM and thus enables the optimization of the existing RM solution in the long term.
- RM has a positive effect on the project outcome: If digital RM is used consistently in projects across all phases, there are fewer misunderstandings and communication gaps. This reduces the project effort.

9 The RM has a positive impact on the project outcome

The use of digital RM has a positive influence on the project results achieved. Employees save time by using RM, misunderstandings between departments are reduced, coordination with customers is smoother and projects can be carried out more effectively overall.

Indicators:

- Fewer internal change loops in the project
- Fewer complaints from the customer
- Reduced project effort

Initial condition:

10% - There are always avoidable change loops in the projects, which are triggered by misunderstandings and lack of clarity in communication. This also frequently leads to delays in the schedule.

Affects the goals ...

- The benefits of RM are known and accepted: In the project, employees can experience the benefits and added value of digital RM for themselves and thus gain positive experience.
- Employees are motivated and shape: If the project result is improved, the employees experience their effectiveness and the meaning of their work.
- The company is stable and resilient: If the project effort is reduced, projects can be implemented successfully from an economic point of view and any fluctuations can be better absorbed.
- The company meets customer expectations: An effective RM-process enables customer-centric development and production, improving the customer experience.

10 Employees are motivated and shape

Employees recognize the added value of digital RM, value it as a way of making their work easier, and feel supported in their activities. They are aware of their individual contribution to the overall result of the company and feel valued by functioning processes and workflows. As a result, employee satisfaction is increased overall and employees are committed to the company.

Indicators:

- The employees are aware of the meaning and purpose of their activity
- The employees experience their effectiveness
- The employees actively contribute to the further development of the company

Initial condition:

50% - The prevailing work climate is generally good. However, the company is hierarchical and tasks are distributed centrally by the management. This means that there is little creative freedom for the employees.

Affects the goals ...

- Management and employees are ready for change and enthusiastic: Creative and committed employees are more open to change and promote a vibrant corporate culture.
- The RM is used in projects: When employees experience their effectiveness and the meaning of their work through the use of digital RM in projects, this in turn motivates them to use digital RM consistently.
- The company is stable and resilient: Thanks to the high level of commitment and activity of the employees, any need for action can be identified and shaped at an early stage.
- The company meets customer expectations: Committed and attentive employees convince on the human level and anticipate customer wishes at an early stage.

11 The company is stable and resilient

All corporate processes interlock stably and are coherent with each other. As a result, the company can react more flexibly to internal and external changes and reduce friction losses. Projects can be implemented successfully and the liquidity of the company can be secured in the long term.

Indicators:

- The RM represents a repeatable and "person-independent" process
- The RM supports an economical execution of the projects
- Clear digital processes make the company changeable and flexible

Initial condition:

The company's order situation is very good and stable. However, the current processes are very dependent on individual people - their failure would cause great difficulties for the company.

Does not affect any other targets.

12 The company meets customer expectations

The company's products fulfill both explicit and implicit customer wishes and needs, thus generating long-term customer satisfaction. The company is perceived as a reliable business partner and enjoys the trust of its customers.

Indicators:

- The customer is satisfied with the quality of the products
- Assured deadlines can be met
- The products meet the actual customer need

Initial condition:

50% - The products are in good demand and customers are generally satisfied with the quality of the products. However, there are repeated problems with delivery reliability and misunderstandings in communication.

Affects the goals ...

- The company is stable and resilient: Positive user experiences generate loyal customer relationships and ensure a stable order situation.

Part 3: Description of the actions

Attending an RM-conference



The managing director or an employee responsible for RM attends a hands-on RM management conference where he/she can engage with the topic of RM through short presentations, interactive sessions and personal exchange with providers and other "seekers". Within the event, the basics and methodological details are described in less detail than, for example, in an RM training course, but at the same time a broader perspective on the topic is provided.

Resource consumption:

Budget (in thousand €)	-2
Time (in person-weeks)	-1

Impacts:

Technical competencies for RM are available	+10
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Requirements management training



The managing director or an employee responsible for RM takes part in a comprehensive training course on requirements management in order to become familiar with the basic terminology, processes and tools. The training provides a very good theoretical introduction to the topic - but the transfer of what has been learned into practice must be done by oneself.

Resource consumption:

Budget (in thousand €)	-5
Time (in person-weeks)	-2

Impacts:

Technical competencies for RM are available	+15
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Develop an employee on the topic of RM



An experienced employee of the company is given responsibility for RM. The employee is given sufficient freedom and capacity to deal with the topic and to develop it for the company. The employee does not yet have any knowledge in RM and must first acquire it. However, he/she knows the company and its processes very well and is thus able to transport the content more easily into the company. This has a positive effect on the acceptance of the topic in the company.

Resource consumption:

Budget (in thousand €)	-4
Time (in person-weeks)	-12

Impacts:

Technical competencies for RM are available	+15
The benefits of RM are known and accepted	+10
The RM-solution fits the company	+5

Hire experienced employee



In order to cover and drive the topic of RM in the company, a new employee is hired who already has specific experience with RM. This brings a great deal of expertise on this topic into the company - however, the new employee does not yet know the company's previous procedures and processes and must first familiarize himself/herself with them. Acceptance by other employees must therefore be promoted through additional actions.

Resource consumption:

Budget (in thousand €)	-12
Time (in person-weeks)	-4

Impacts:

Technical competencies for RM are available	+20
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Corporate management visibly committed to the topic of RM



The corporate management takes a clear position on the topic of RM and promotes it personally. As a result, the topic is represented authentically in the company. Employees thus recognize the importance of the topic and are more open to change.

Resource consumption:

Budget (in thousand €)	0
Time (in person-weeks)	-2

Impacts:

Management and employees are ready for change and enthusiastic	+15
The benefits of RM are known and accepted	+10

Conditions:

Action can be used maximum 3 times.

Information event on RM



In an internal information event for all employees, the topic of RM is presented, and positive practical examples are shown. The content is presented briefly and concisely in a lecture, which is followed by a short discussion with the employees on questions of understanding. The aim of the event is to enable employees to understand the topic of RM, to become familiar with the terminology and to be aware of the added value of the project.

Resource consumption:

Budget (in thousand €)	0
Time (in person-weeks)	-4

Impacts:

The benefits of RM are known and accepted	+10
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Conditions:

Condition of the target "Technical competencies to RM are available" is greater than 50%.

RM team workshop

With the support of an external expert, an interactive workshop is organized in which a large proportion of the employees are picked up on the topic of RM and can deal with practical examples. The aim of the workshop for employees is to not only deal intensively with the topic of RM, but to also exchange ideas and reflect on the content together. This enables them to gain insight into the needs and challenges of other business areas and to better understand their own role in the process. In addition to building knowledge about the added value of RM, this also has the effect of promoting the framework conditions for an open corporate culture based on shared values.

Resource consumption:

Budget (in thousand €)	-4
Time (in person-weeks)	-10

Impacts:

Technical competencies for RM are available	+10
The benefits of RM are known and accepted	+15
Management and employees are ready for change and enthusiastic	+15

Conditions:

Action "Corporate management is visibly committed to the topic of RM" was used at least once.

Development of a company-specific RM concept



The person responsible for RM in the company develops an individual RM-concept for the company that meets the specific requirements. This avoids additional work for the employees and the digital RM-solution fits seamlessly into the existing company processes and complements them profitably. The RM can thus unfold its full effect and becomes a valuable working tool in the company.

Resource consumption:

Budget (in thousand €)	0
Time (in person-weeks)	-8

Impacts:

The RM-solution fits the company	+15
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Conditions:

- Condition of the target "Technical competencies to RM are available" is greater than 70%.
- The action can be used maximum once.

Procurement and implementation of an RM-tool



An RM-solution available on the market is selected and introduced in the company. The tool is installed centrally and all project managers/team leaders receive a brief introduction to the tool and are given the task of passing this knowledge on to their teams. The RM-tool is to be used in all projects from now on.

Resource consumption:

Budget (in thousand €)	-8
Time (in person-weeks)	-8

Impacts:

All parties are qualified	+10
The RM is used in the projects	+10

Conditions

Action can be used maximum once.

Tool-training for employees



All employees concerned will be trained in the use of the digital RM-solution and will receive technical support in using the tool.

Resource consumption:

Budget (in thousand €)	-4
Time (in person-weeks)	-4

Impacts:

All parties are qualified	+10
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Process-training for employees



All employees concerned are trained on the RM-process. They know the procedures and interrelationships of the RM-process and understand the role they themselves play in this process. They get to know all relevant contact persons and know their own tasks and responsibilities.

Resource consumption:

Budget (in thousand €)	-4
Time (in person-weeks)	-8

Impacts:

All parties are qualified	+15
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Development of a digitization concept



In order to drive digitization forward in the company and digitize all relevant core processes, the first step is to conduct an assessment of the ACTUAL processes and their degree of digitization. On this basis, a holistic digitization strategy is developed for the company, which is divided into several steps and ensures that all necessary framework conditions are created step by step. Through a participatory process, the employees are involved and recognize the opportunities of digitization. Not until the planned packages are implemented can the points developed take effect.

Resource consumption:

Budget (in thousand €)	0
Time (in person-weeks)	-12

Impacts:

The required level of digitization has been achieved	+2
Management and employees are ready for change and enthusiastic	+5

Conditions:

Action can be used maximum once.

Implementation of the digitization strategy - Stage 1



The first step is to create the necessary technical infrastructure throughout the company on the basis of the digitization strategy that has been drawn up. This includes setting up personal e-mail addresses, a shared calendar system, and a flexible telephone system with multiple numbers for different contact persons.

Resource consumption:

Budget (in thousand €)	-4
Time (in person-weeks)	-6

Impacts:

The required level of digitization has been achieved	+12
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Conditions:

- Action "Development of a digitization concept" was used at least once.
- The action can be used maximum once.

Implementation of the digitization strategy - Stage 2

The second stage of the digitization strategy developed involves setting up a shared filing system with general access. Coherent document management creates the digital basis for networked collaboration throughout the company. It thus represents an important basis for a digital RM.

Resource consumption:

Budget (in thousand €)	-4
Time (in person-weeks)	-6

Impacts:

The required level of digitization has been achieved	+12
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Conditions:

- Action "Implementation of the digitization strategy - Stage 1" was used at least once.
- The action can be used maximum once.

Implementation of the digitization strategy - Stage 3

The third stage of the digitization strategy developed involves the complete digitization of all relevant core processes. This includes, among other things, the introduction of a company-wide CRM system, a digital walking map, a goods logistics system and others. These systems can only be implemented effectively if all the necessary framework conditions are in place.

Resource consumption:

Budget (in thousand €)	-4
Time (in person-weeks)	-6

Impacts:

The required level of digitization has been achieved	+12
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Conditions:

- Action "Implementation of the digitization strategy - Stage 2" was used at least once.
- The action can be used maximum once.

Procurement of smartphones and laptops

All employees are equipped with the necessary hardware for the use of digital solutions. Depending on the area of responsibility, this includes either permanently installed computers, laptops or smartphones. As a result, all employees have secure access to the necessary tools and there are no bottlenecks or manual overrides when maintaining content.

Resource consumption:

Budget (in thousand €)	-8
Time (in person-weeks)	-2

Impacts:

The required level of digitization has been achieved	+10
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Conditions:

The action can be used maximum once.

Fill position of IT manager



The company commissions an external IT service provider to maintain and operate the digital solutions used in the company. An internal employee is developed as a contact person to bundle communication with the service provider.

Resource consumption:

Budget (in thousand €)	-12
Time (in person-weeks)	-4

Impacts:

The required level of digitization has been achieved	+5
The RM is firmly anchored in the infrastructure	+15

Conditions:

The action can be used maximum once.

Hiring a working student for IT maintenance



To support the setup and maintenance of the IT systems, an IT-savvy working student will be hired to support the company with 12 hours per week in addition to her/his studies. She/he will be the contact person for technical problems with the tools and will also assist with questions regarding correct operation.

Resource consumption:

Budget (in thousand €)	-2
Time (in person-weeks)	-4

Impacts:

The required level of digitization has been achieved	+5
The RM is firmly anchored in the infrastructure	+10

Conditions:

The action can be used maximum twice.

Subsequent incident:

The incident "change of working student" occurs after 3 simulation rounds with a probability of 70%.

Optimization of the interfaces in the infrastructure



The interface of the digital RM-tool is optimized to the company's framework conditions. This avoids system discontinuities and eliminates the need for manual rework between systems.

Resource consumption:

Budget (in thousand €)	-4
Time (in person-weeks)	-4

Impacts:

The RM is firmly anchored in the infrastructure	+20
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Conditions:

Condition of the target "The required level of digitization has been achieved" is greater than 70%.

Incorporation of lessons learned from the application



Together with the operational project staff, the existing digital RM-solution is analyzed and reflected upon after its use in projects. As a result, optimization potentials become known and the RM-solution can be improved.

Resource consumption:

Budget (in thousand €)	0
Time (in person-weeks)	-4

Impacts:

The RM-solution fits the company	+10
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Conditions:

Condition of the target "The RM is used in projects" is greater than 60%.

Introduction of a mentor concept for the RM

The company is introducing a mentoring program in which employees who have already gained experience in the use of digital RM are available to other employees as permanent contacts for the process and tool and provide them with collegial support. This not only offers employees methodological and technical support, but also connects employees from different teams and departments and promotes exchange and open collaboration. In addition, employees who have been mentored by a mentor for a certain period of time can subsequently become mentors themselves and thus supplement their project activities in a meaningful way. In this way, they feel more closely connected to the company and experience an appreciation of their work and skills.

Resource consumption:

Budget (in thousand €)	0
Time (in person-weeks)	-8

Impacts:

All parties are qualified	+15
Employees are motivated and shape	+10

Conditions:

- Condition of the goal "All parties are qualified" is greater than 50%.
- The action can be used maximum once.

Budget expansion for the further development of the RM



Based on the successes to date, the management decides to further optimize digital RM in order to be able to exploit the full potential. An additional annual budget is made available for this purpose.

Resource consumption:

Budget (in thousand €)	0
Time (in person-weeks)	0

Impacts:

Budget (in thousand €)	+10
Time (in person-weeks)	+20

Conditions:

- Condition of the target "The RM has a positive impact on the project outcome" is greater than 60%.
- Condition of the target "The RM has a positive impact on the project outcome" is less than 90%.
- The action can only be used between simulation round 11 and 20.
- The action can be used maximum once.

Part 4: Description of the incidents

Network partners report positively on the topic of RM



The company's network partners repeatedly mention how much digital RM has helped them to optimize and improve their internal processes. Through various discussions with partners, the management builds up an initial understanding of the topic of RM.

Impacts:

Technical competencies for RM are available	+10
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Trigger:

Incident is triggered in round 1 with a probability of 100%.

Annual budget RM



An annual budget of approximately €20,000 and personnel resources of about 30 person-weeks per year are available for the introduction of a digital RM. The project is scheduled to run for a total of three years.

Impacts:

Budget (in thousand €)	+20
Time (in person-weeks)	+30

Trigger:

- Incident is triggered in round 4 with a probability of 100%.
- Incident is triggered in round 8 with a probability of 100%.

RM manager leaves the company



An employee who was familiar with the topic of RM leaves the company and takes a new direction. Her/his departure unsettles other employees who wonder what this means for the topic of RM in the company and who can answer future questions.

Impacts:

Technical competencies for RM are available	-15
The benefits of RM are known and accepted	-10

Trigger:

- The incident is triggered between round 3 and 12 with a probability of 15% if the action "Develop an employee on the topic of RM" has been used at least once.
- The incident is triggered between round 3 and 12 with a probability of 25% if the action "Hire experienced employee" has been used at least once.
- The incident can occur maximum once.

RM-tool does not fit the company



The introduced RM-tool does not meet the individual needs of the company and does not fit established processes and workflows. As a result, there is always additional work in the projects when using the tool and the use of the RM-tool does not come to fruition.

Impacts:

The required level of digitization has been achieved	-15
The RM is used in projects	-15
Employees are motivated and shape	-5

Trigger:

- The incident occurs when the condition of the target "The RM-solution fits the company" is less than 50% and the condition of the target "Technical competencies for RM are available" is less than 70% and the action "Procurement and introduction of an RM-tool" has been used at least once.
- The incident can occur maximum once.

Employees refuse to use the RM- tool



The employees do not understand the benefits of the introduced RM-tool and do not want to change their way of working or adapt to the new processes. This creates a bad mood in the projects and reduces the motivation of the employees.

Impacts:

All parties are qualified	-10
The RM is used in projects	-10
Employees are motivated and shape	-10

Trigger:

- The incident occurs when the condition of the target "Management and employees are ready for change and enthusiastic" is less than 50% and the action "Procurement and introduction of an RM- tool" has been used at least once.
- The incident occurs when the condition of the target "The benefits of RM are known and accepted" is less than 50% and the action "Procurement and implementation of an RM-tool" has been used at least once.
- The incident can occur maximum once.

The tool does not work as planned



Technical difficulties regularly arise when using the implemented RM-tool. Due to the poor integration into the infrastructure, the tool is not accessible to all employees and requires a lot of effort to maintain. As a result, employees lose the desire to work with the tool and use it much less, which means that the tool cannot be effective.

Impacts:

The benefits of RM are known and accepted	-20
The RM is used in projects	-15
Employees are motivated and shape	-10

Trigger:

The incident occurs with a probability of 80% if the condition of the target "RM is firmly anchored in the infrastructure" is less than 50% and the condition of the target "RM is used in the projects" is greater than 50% and the action "Procurement and introduction of an RM-tool" has been used at least once.

Data loss due to operating errors

The digital RM-tool is increasingly being used in projects, but many employees are not yet sufficiently familiar with how the tool works. This leads to errors in the use of the tool, resulting in the loss of important data. As a result, employees are very insecure and no longer trust themselves to use the tool consistently.

Impacts:

The benefits of RM are known and accepted	-10
The RM is used in projects	-15
Management and employees are ready for change and enthusiastic	-15

Trigger:

- The incident occurs with a probability of 50% if the condition of the target "All parties are qualified" is less than 40% as well as the condition of the target "The RM is used in projects" is greater than 40% and the action "Procurement and introduction of an RM-tool" has been used at least once.
- The incident can occur maximum twice.

New employees do not find their way around

New employees in the company find it difficult to fully understand the RM-process and to act accordingly. As a result, they do not find the right access to the RM-tools used, leading to gaps in the documentation and manual corrections have to be made in projects. The new employees express the wish for more methodological and technical support - e.g. by an experienced contact person.

Impacts:

All parties are qualified	-15
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The benefits of RM are known and accepted	-10
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Trigger:

- The incident occurs between simulation round 12 and 16 if the condition of the target "All parties are qualified" is less than 75% and the action "Procurement and introduction of an RM-tool" has been used at least once and the action "Introduction of a mentor concept for RM" at most 0 times.
- The incident can occur maximum once.

Change of the working student



The working student who was responsible for maintaining the IT systems leaves the company because he/she has finished his/her studies and is looking for a new challenge. Due to a time lag, the handover to her/his successor does not work smoothly and errors and inconsistencies occur in the maintenance of the tools.

Impacts:

The required level of digitization has been achieved	-3
The RM is firmly anchored in the infrastructure	-7

Trigger:

The incident occurs as a subsequent event of the action "Hiring a student worker for IT maintenance" (after 3 simulation rounds at 70%).

A key customer demands transparent RM



A major customer of the company insists on using a transparent RM for their project.

Impacts:

The RM is used in projects	+15
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Trigger:

- The incident can occur in each round with a probability of 15% if the action "Procurement and implementation of an RM-tool" has been used at least once.
- The incident can occur maximum twice.

Wave of cancellations

The atmosphere in the company is tense. Many employees are dissatisfied with their tasks and do not feel taken seriously enough. Within a short period of time, several experienced employees leave the company due to the limited shaping possibilities, which further aggravates the atmosphere and makes all other employees feel very insecure.

Impacts:

Technical competencies for RM are available	-20
The company is stable and resilient	-5
Management and employees are ready for change and enthusiastic	-15

Trigger:

- The incident occurs with a probability of 50% if the condition of the goal "Employees are motivated and create" is less than 35%.
- The incident can occur maximum once.