

# Results of the 8<sup>th</sup> MPM-Benchmarking Study

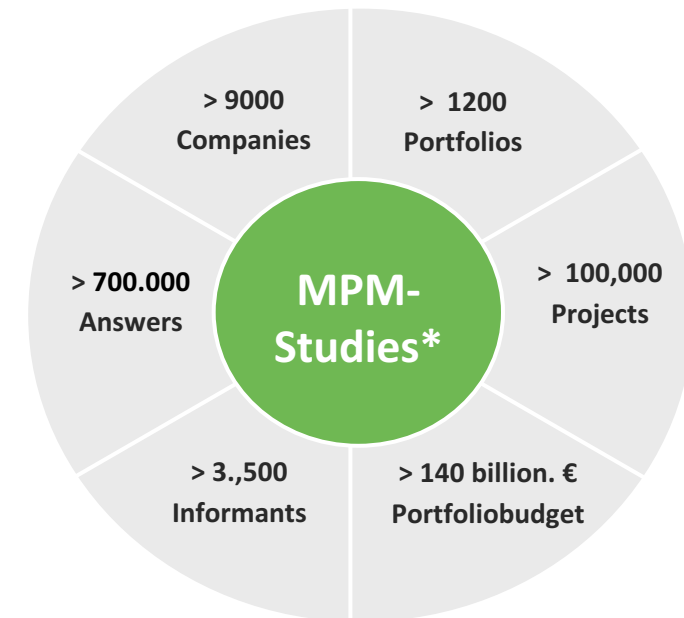
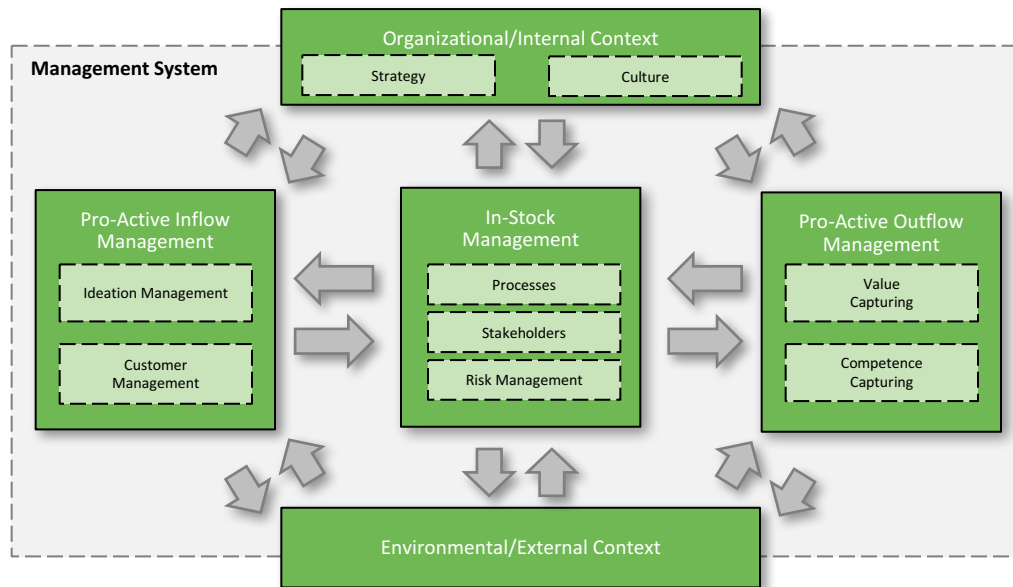
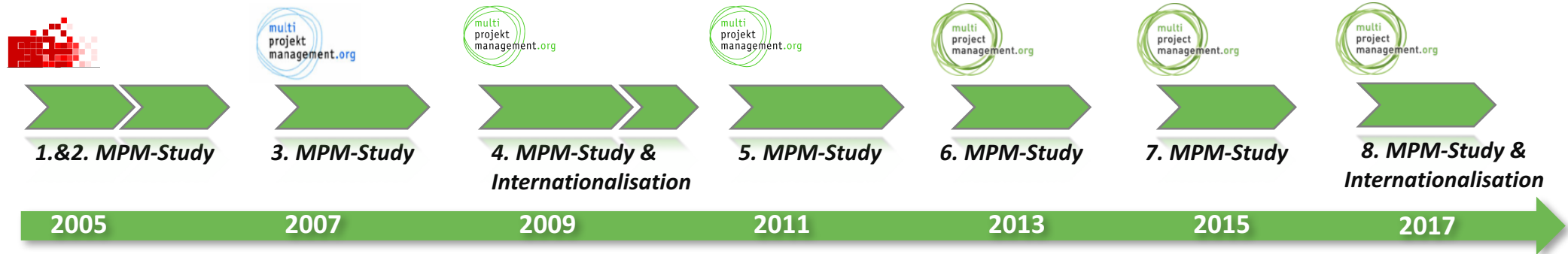
Alexander Kock, Hans Georg Gemünden, Jasmin Bumanowski, Babette Schulz

Copenhagen, 11/01/2017



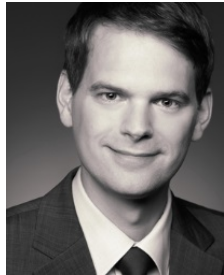
# The Multi-project Management (MPM) Benchmarking Studies

We have been researching the success factors of Multi-project Management for over ten years.



\* Cumulated values over the first seven studies

## The international team of the 8<sup>th</sup> study.



**Alexander Kock**  
Technische Universität Darmstadt



**Joana Geraldi**  
DTU



**Patrick Lehner**  
Zürcher Hochschule für  
Angewandte Wissenschaften



**Hans Georg Gemünden**  
BI - Norwegian Business School



**Babette Schulz**  
Technische Universität Berlin



**Catherine Killen**  
University of Technology Sydney



**Jasmin Bumanowski**  
Technische Universität Darmstadt



TECHNISCHE  
UNIVERSITÄT  
DARMSTADT



# Study design

Approach and performance measurement

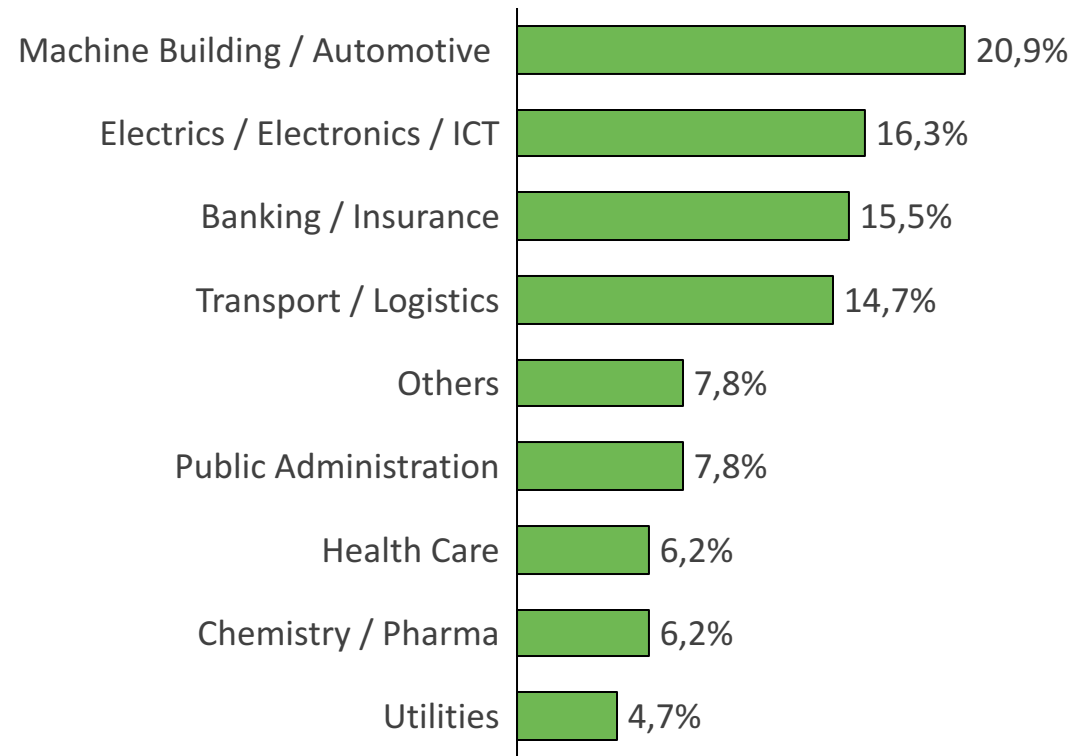




## Study design

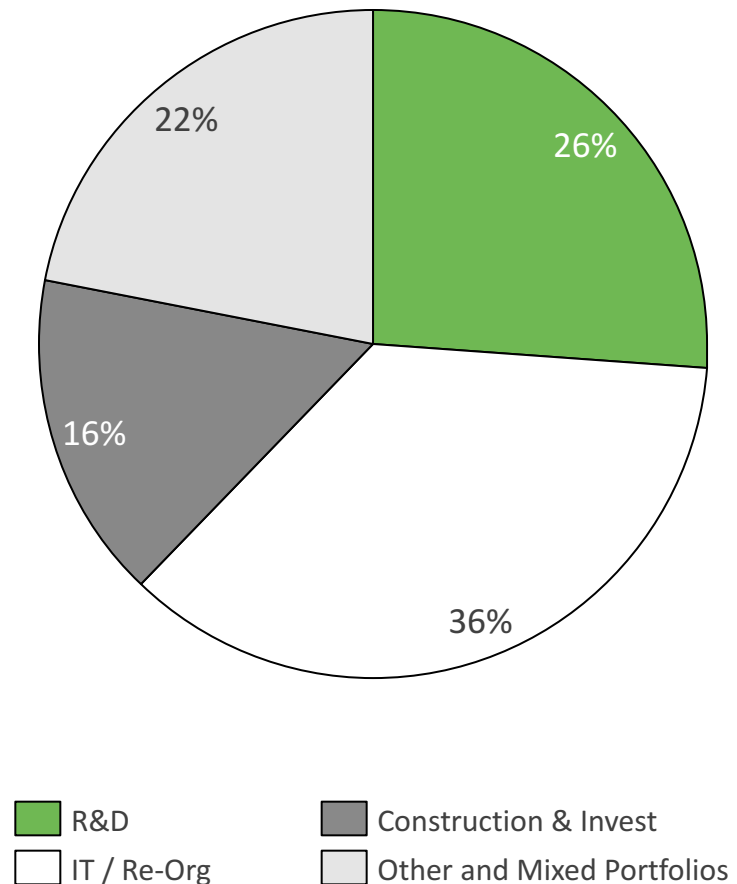
The examined portfolios come from a variety of industries and have different focuses.

### Participants by industries



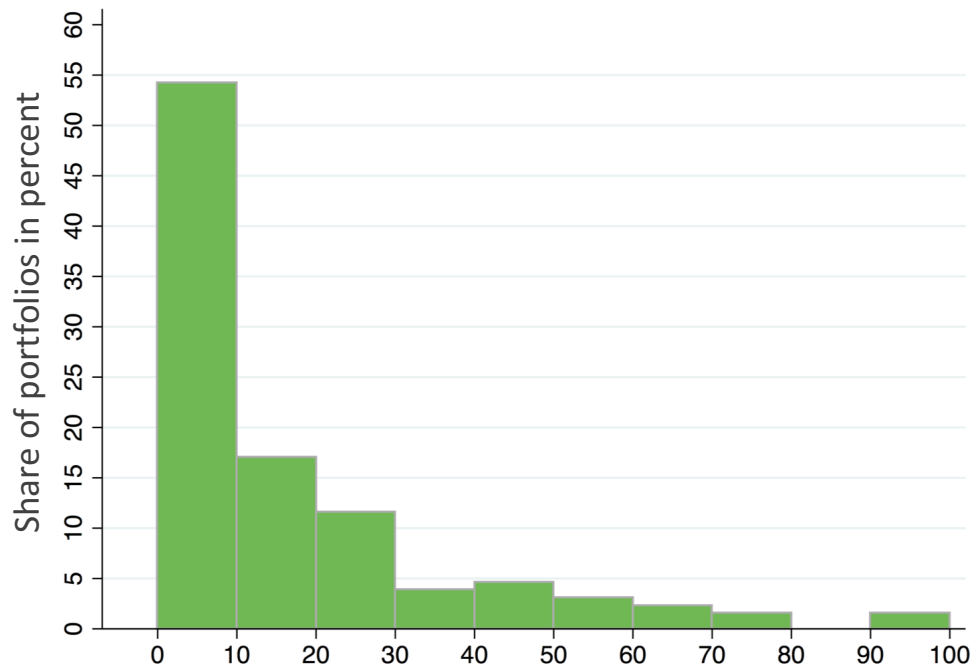
n = 138 Portfolios

### Portfolio focus



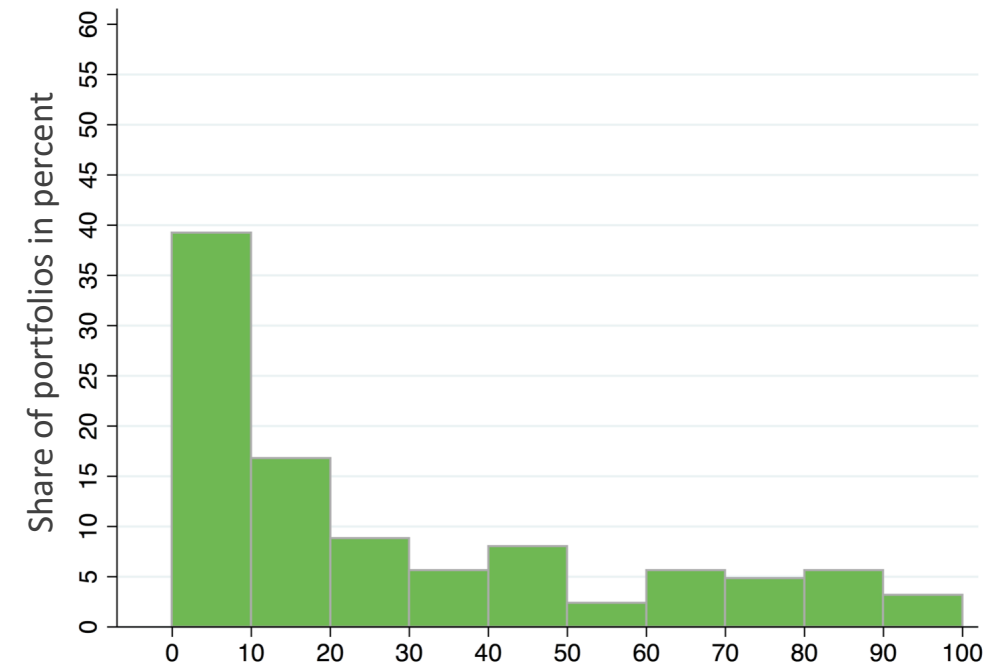
Digital transformation projects are still relatively rare; agile/ hybrid methods are applied regularly.

### Share of digital tranformation projects\*



The average share is 19 %, the median is 10 %.

### Share of projects with agile/hybrid PM methods\*\*



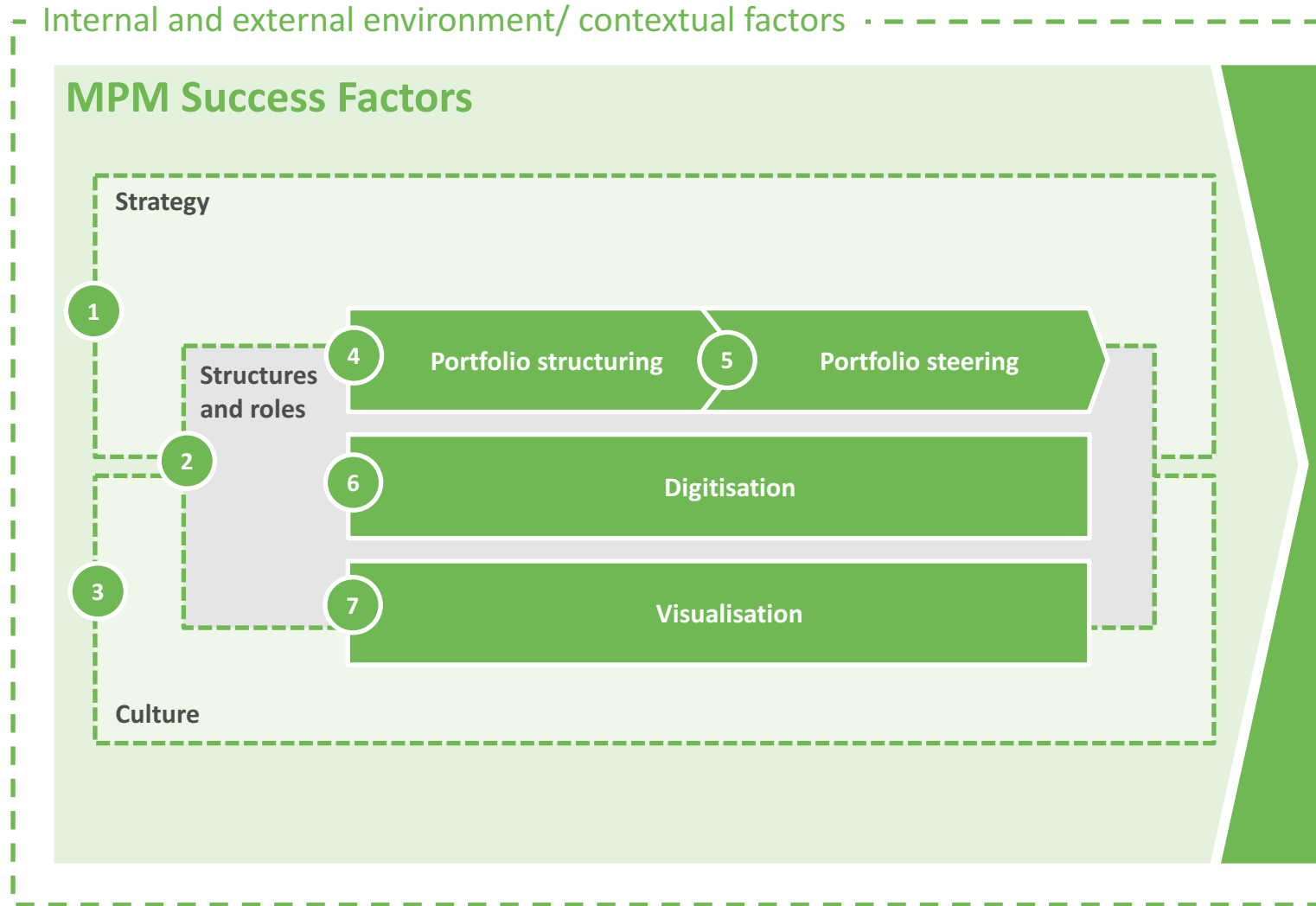
The average share is 30 %, the median is 20 %.

\* A digital tranformation project means a far reaching change for employees, products or processes by the use of digital technologies.

\*\* Agile PM methods are e.g. SCRUM, SAFe. Hybrid PM methods combine practices of agile methods (e. g. iterative cycles) with classic PM methods (e.g. waterfall approach).

## Study design

Success factors were identified and analysed by a comprehensive performance assessment.



## MPM Performance

MPI\*

MPM quality



Project portfolio success



Business success



\*MPI = Multi-project Management Performance Index

## Study design

The MPM Performance Index (MPI) is the central success measure and consists of three dimensions.

### Multiprojektmanagement Performance Index\*

#### MPM Quality



Collaboration quality

Information quality

Decision making quality

Allocation quality

Termination quality

#### Project Portfolio Success



Strategic fit

Use of synergies

Portfolio balance

Ø Single-project success

#### Business Success



Ø Economic success of the projects

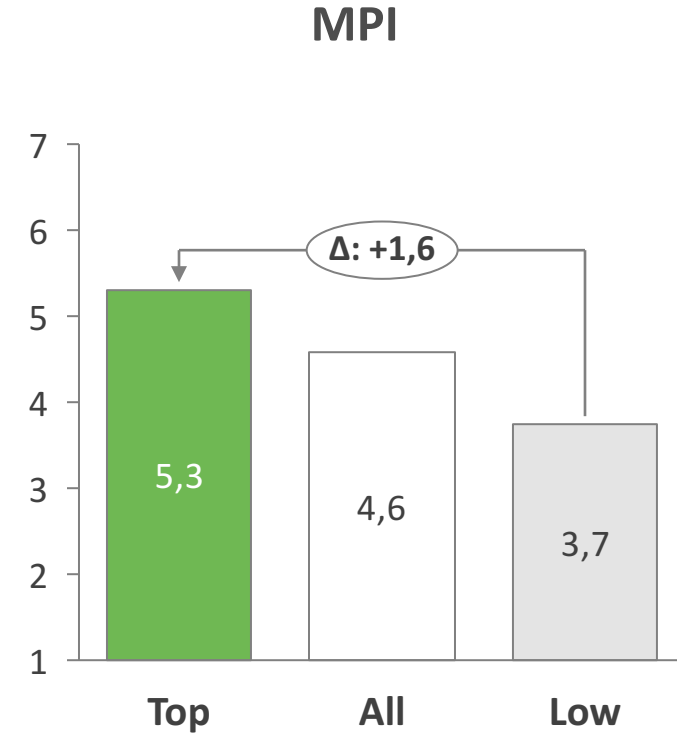
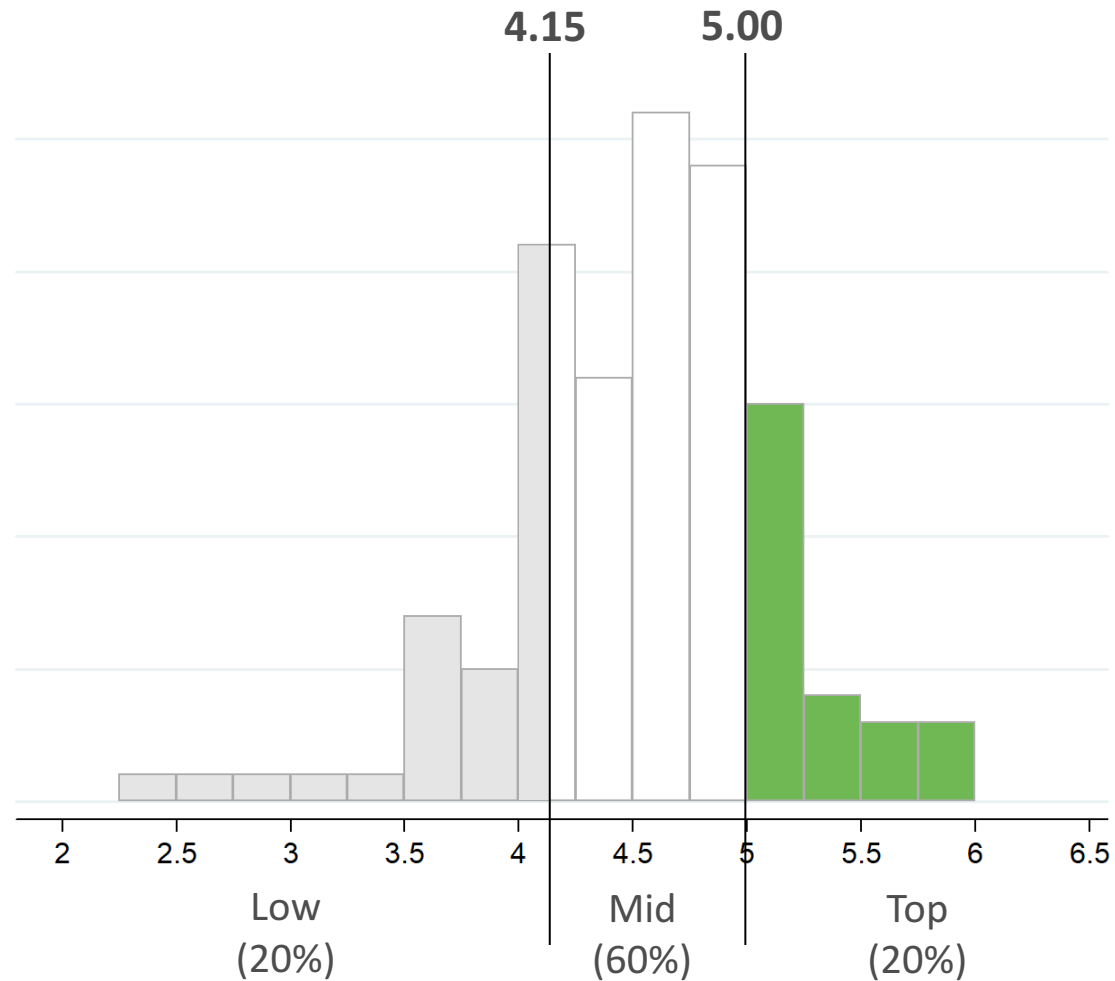
Economic success of the business unit

Future orientation

\*The MPI is created using a step-by-step aggregation of the dimensions of the lowest and second level. The dimensions on the lowest level are based on 3-5 single questions each, which were evaluated by both the decision maker and the coordinator on a scale from 1 to 7 (in total 47 questions each). Top performers have an average MPI of 5,3 and low performers of 3,7.

## MPM Performance

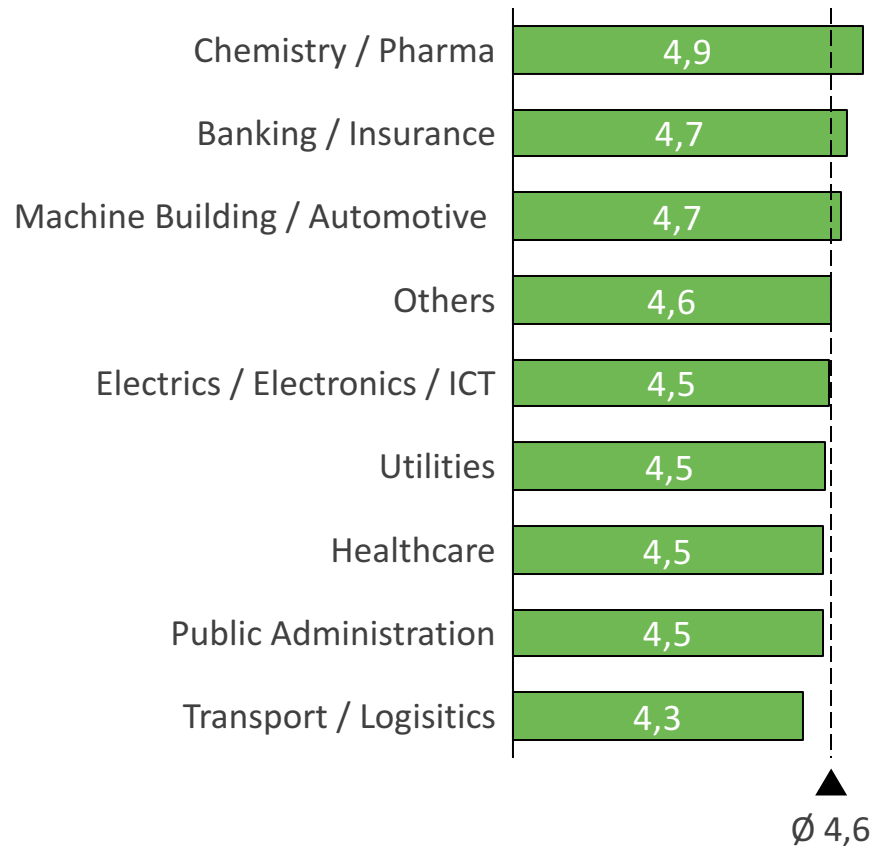
On the basis of the MPM performance index the study participants were classified into three groups.



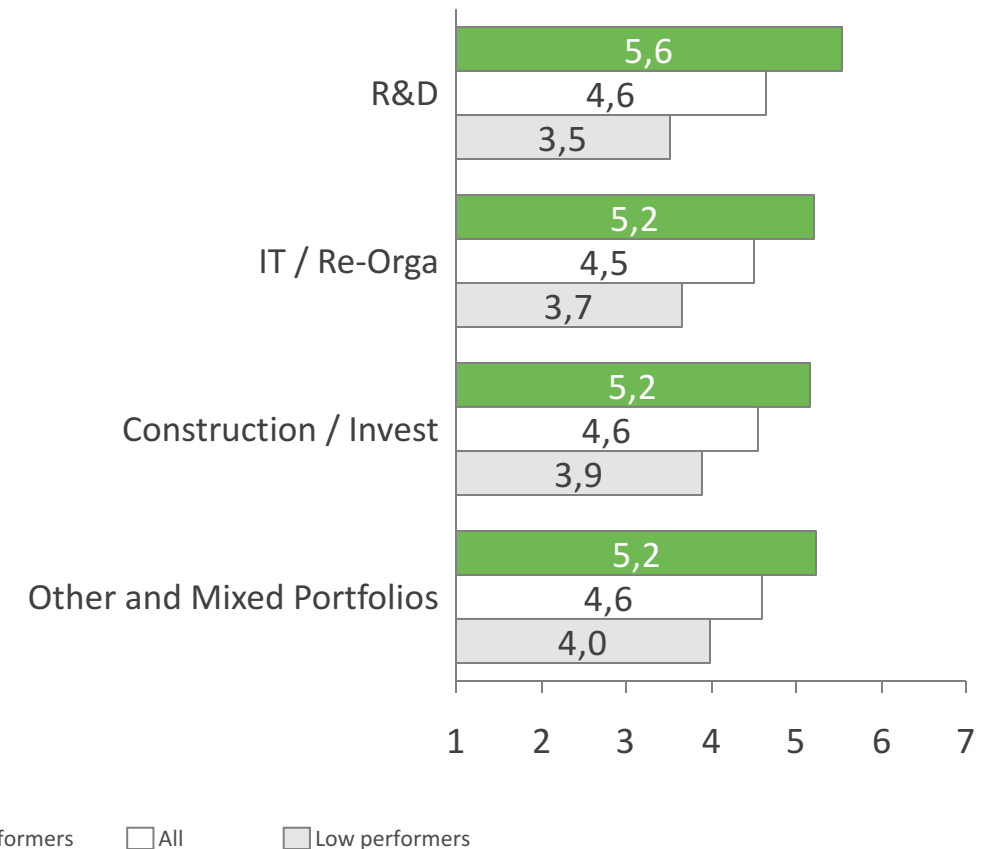
## MPM Performance

No significant differences between industries or different portfolio focuses.

### MPI by industry



### MPI by portfolio focus

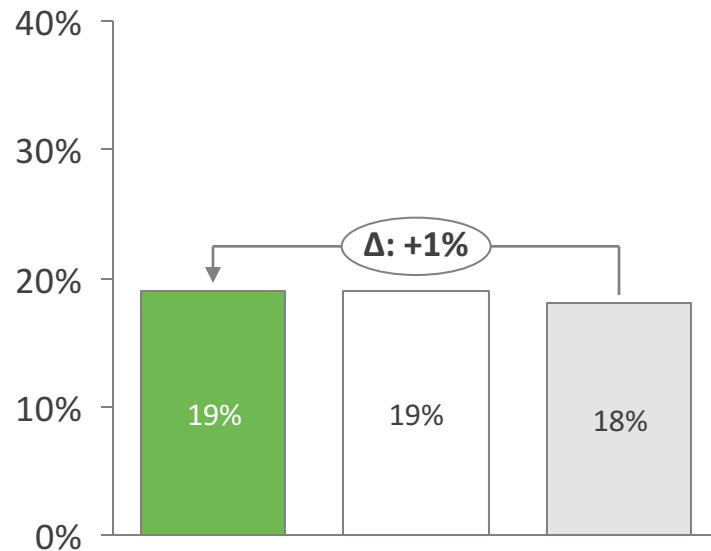




## MPM Performance

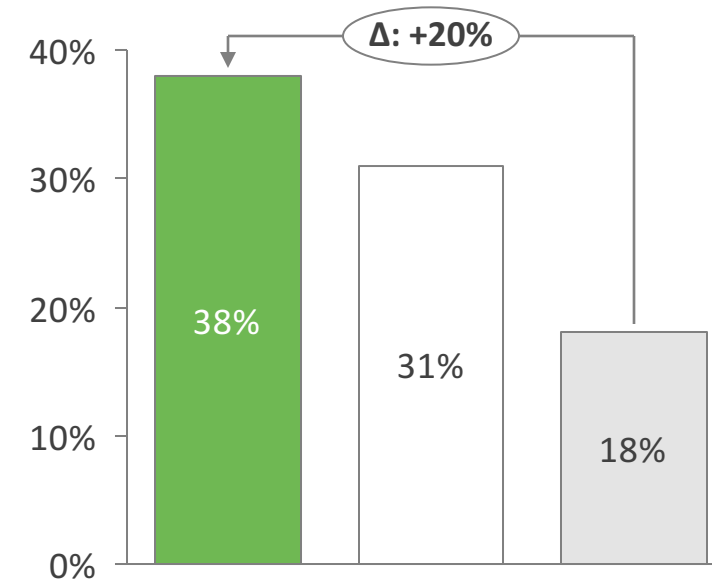
**Top performers do not have more digital projects in their portfolio compared to low performers, however, they focus more strongly on agile and hybrid PM approaches.**

### Share of digital transformation projects\*



\* A digital transformation project means a far reaching change for employees, products or processes by the use of digital technologies.

### Share of projects with agile/ hybrid PM methods\*\*

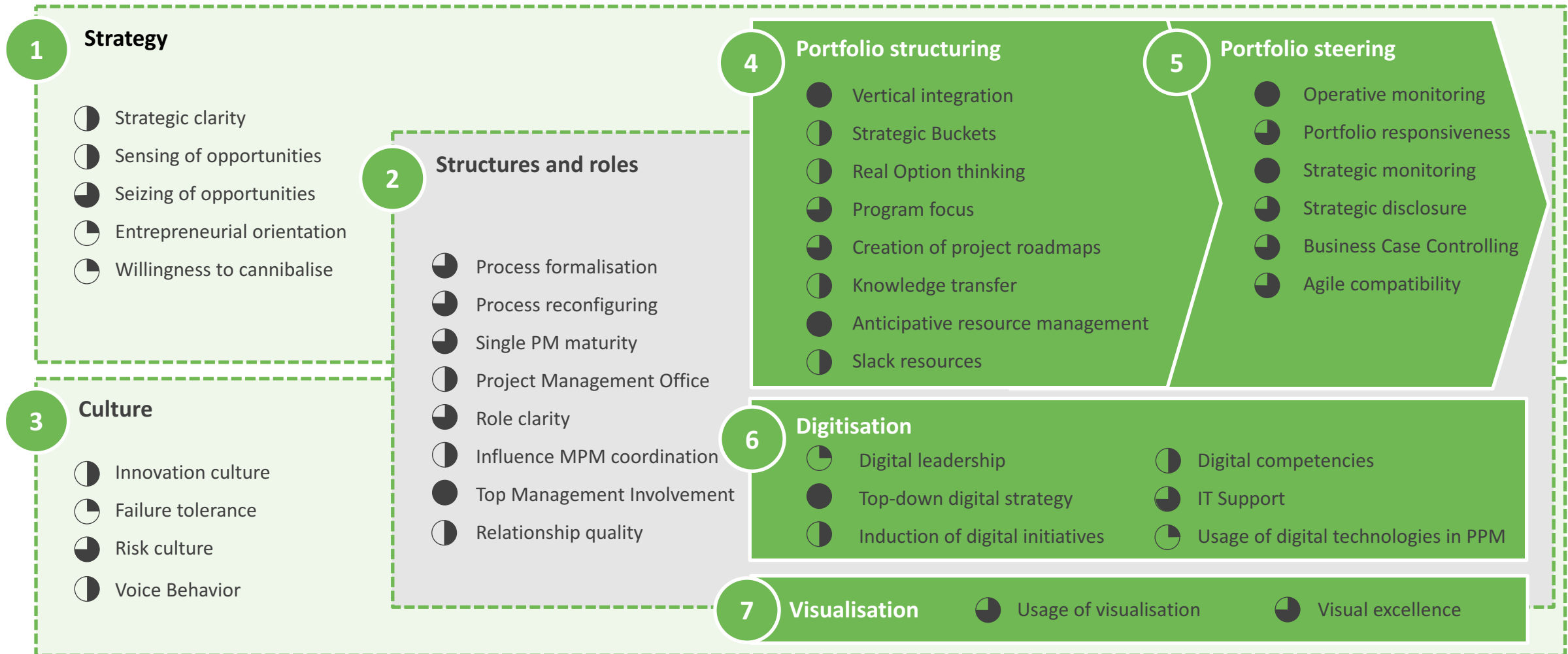


\*\* Agile PM methods are e.g. SCRUM, SAFe. Hybrid PM methods combine practices of agile methods (e. g. iterative cycles) with classic PM methods (e.g. waterfall approach).

■ Top performers    □ All    ■ Low performers

## Summary of the success factors

Success factors are those practices and characteristics that have a strong influence on MPM performance.



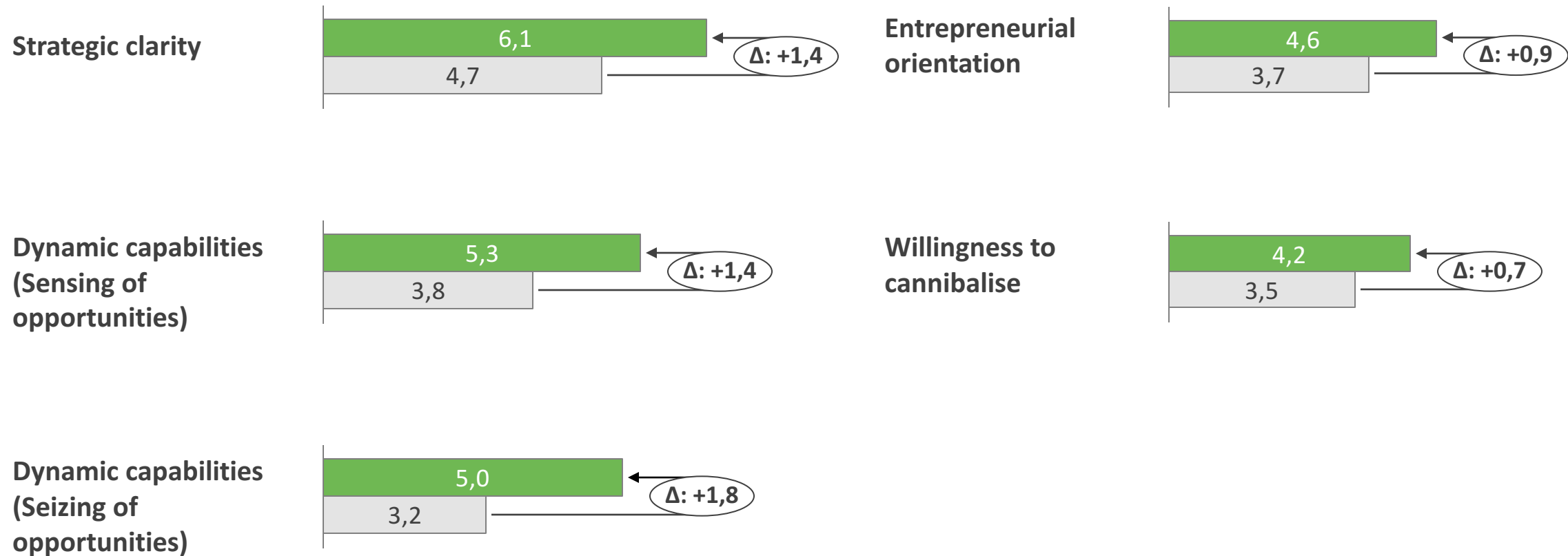
●●●● Strength of the general correlation with success: Each quarter represents a delta between top and low performers of 0.5 points.

# MPM Success factors

Success factors of strategy, structures and culture



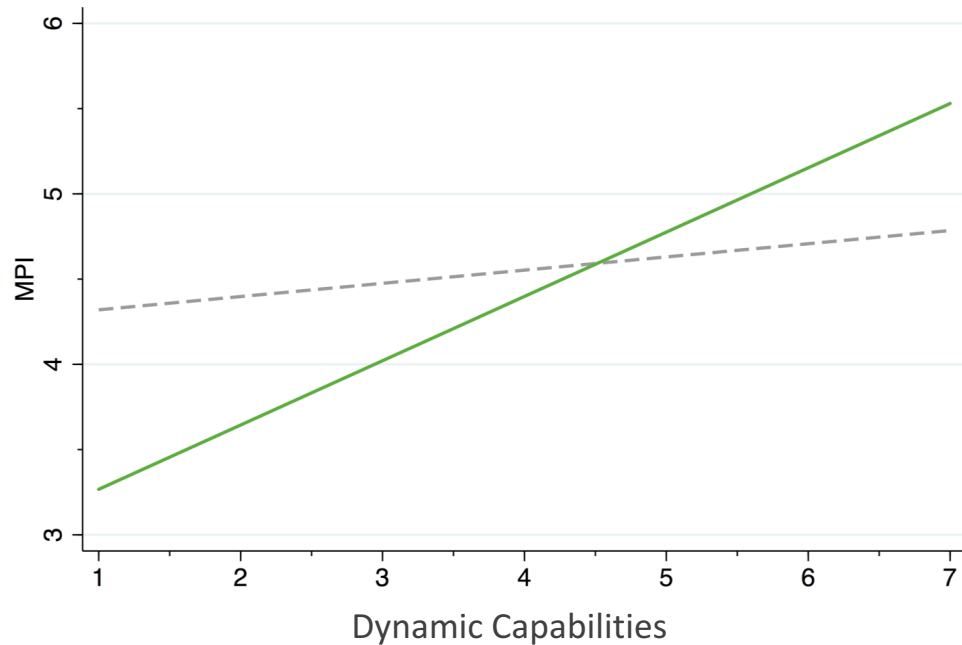
Top performers have a clear strategy, dynamic capabilities, and an entrepreneurial orientation.



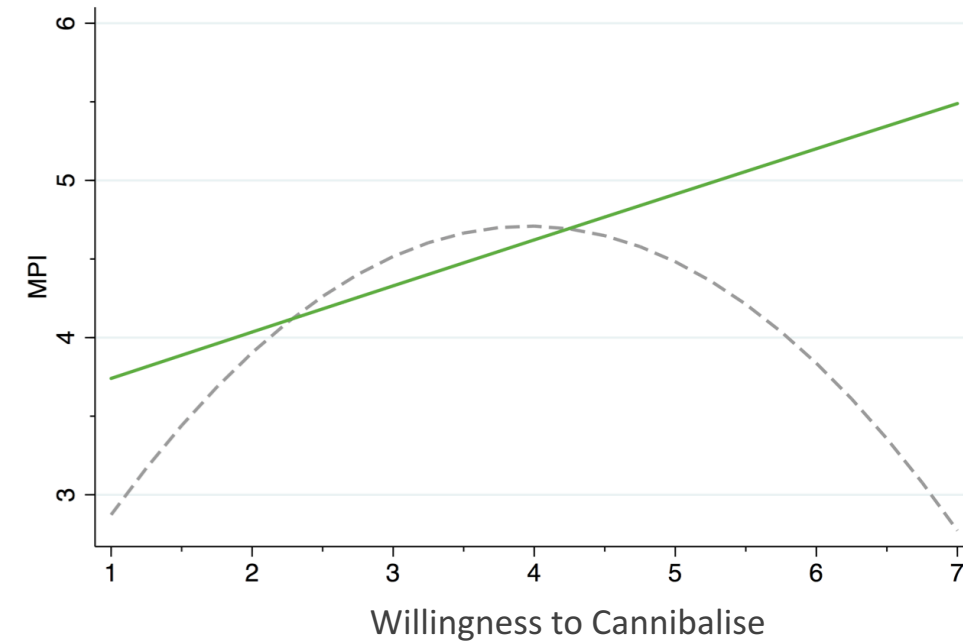
## 1 Strategy

The importance of strategic success factors rises in a volatile firm environment.

### Dynamic capabilities



### Willingness to cannibalise

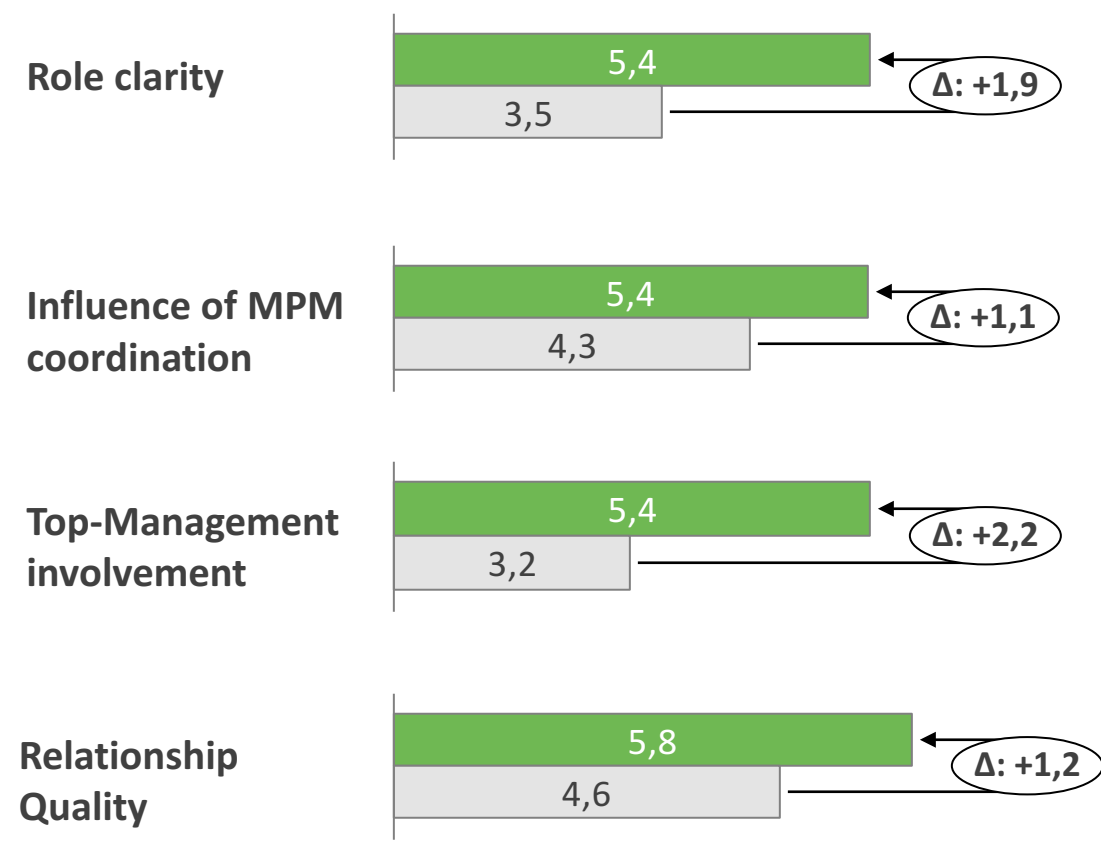
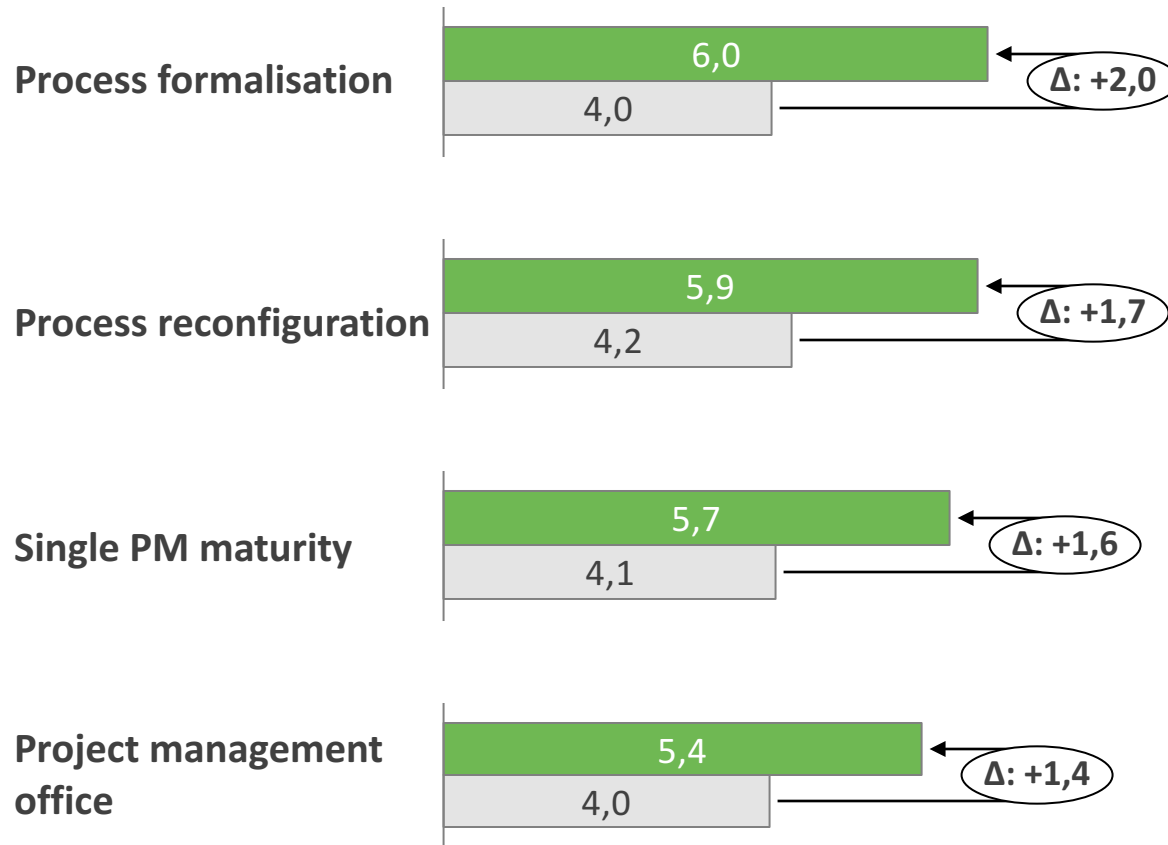


— High environmental  
turbulence

- - - Low environmental  
turbulence

## 2 Structures and roles

Clear processes and structures plus well-defined and competent roles are necessary for good MPM.



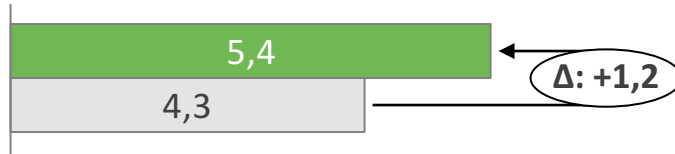
■ Top performers ■ Low performers



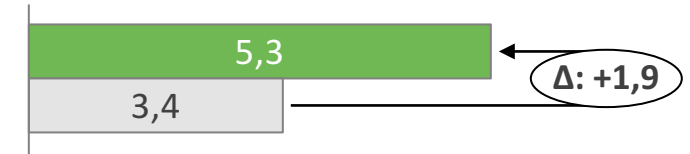
### 3 Culture

Successful MPM is based on an open innovation and risk culture.

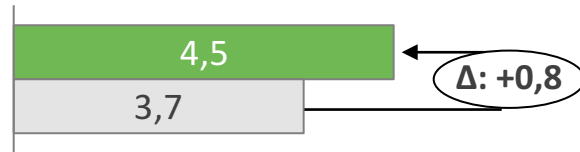
Innovation culture



Risk culture



Failure culture

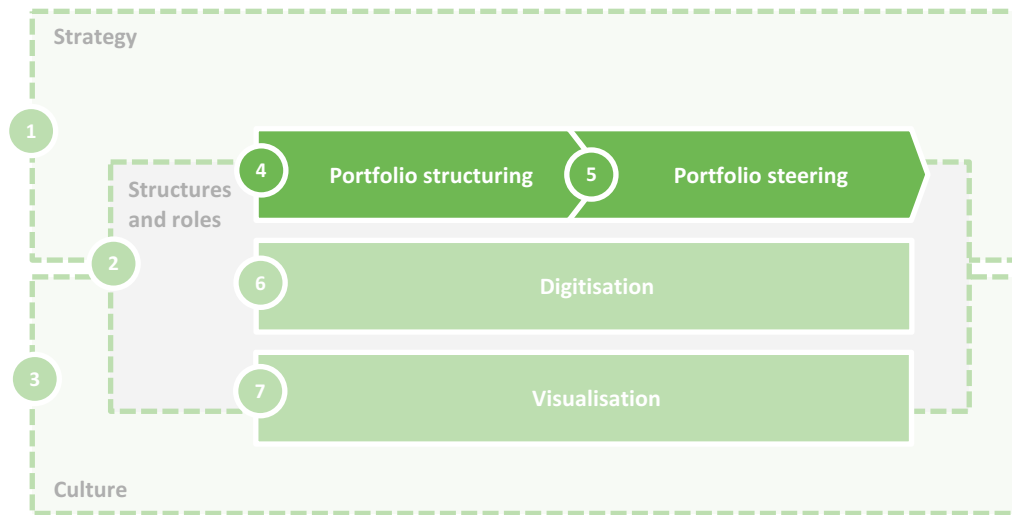


Voice Behavior



# MPM Success factors

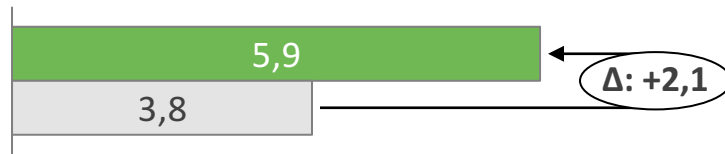
## Success factors of the portfolio process



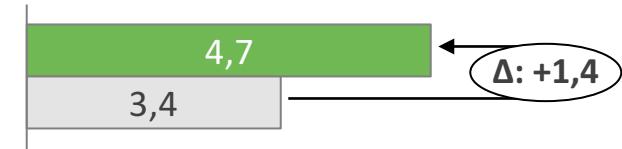
## 4 Portfolio structuring

Top performers coordinate portfolio planning with their strategy, follow a real options logic in their project investments, and purposefully plan project roadmaps.

Vertical integration



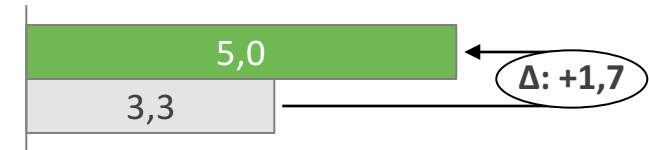
Knowledge transfer  
from previous projects



Real Options Logic



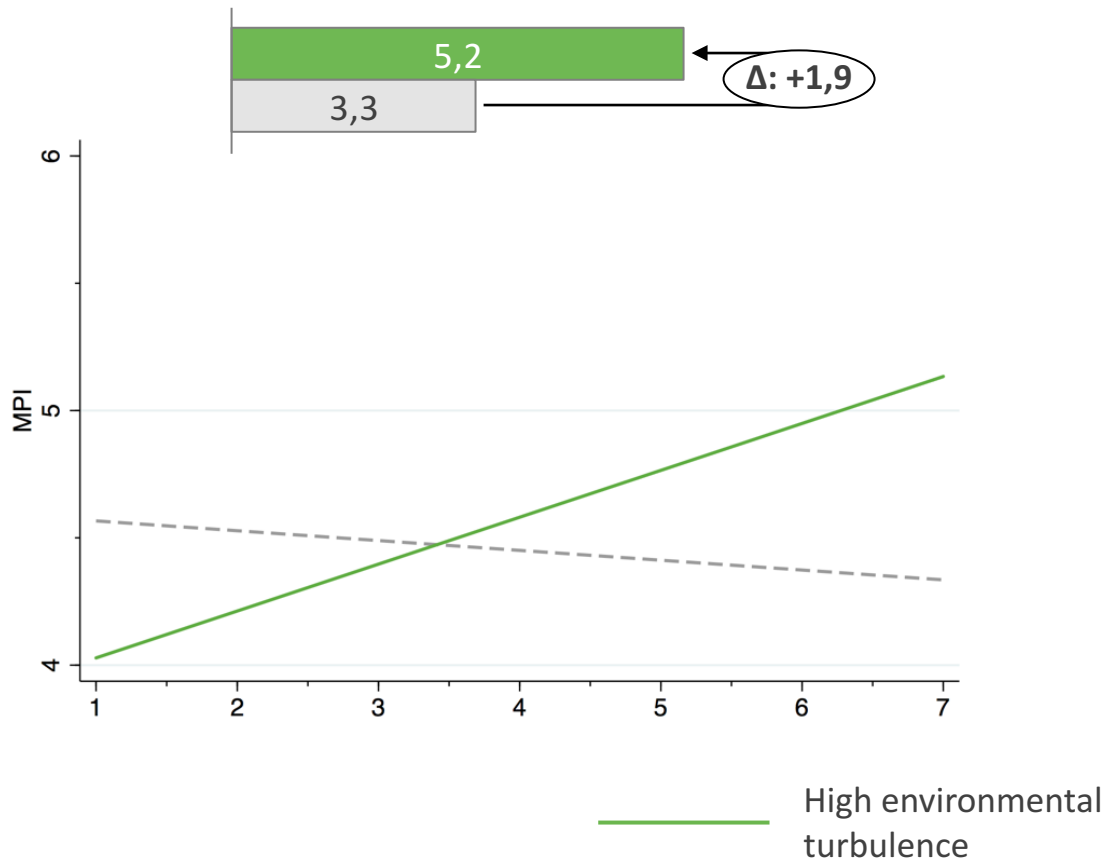
Creation of project  
roadmaps



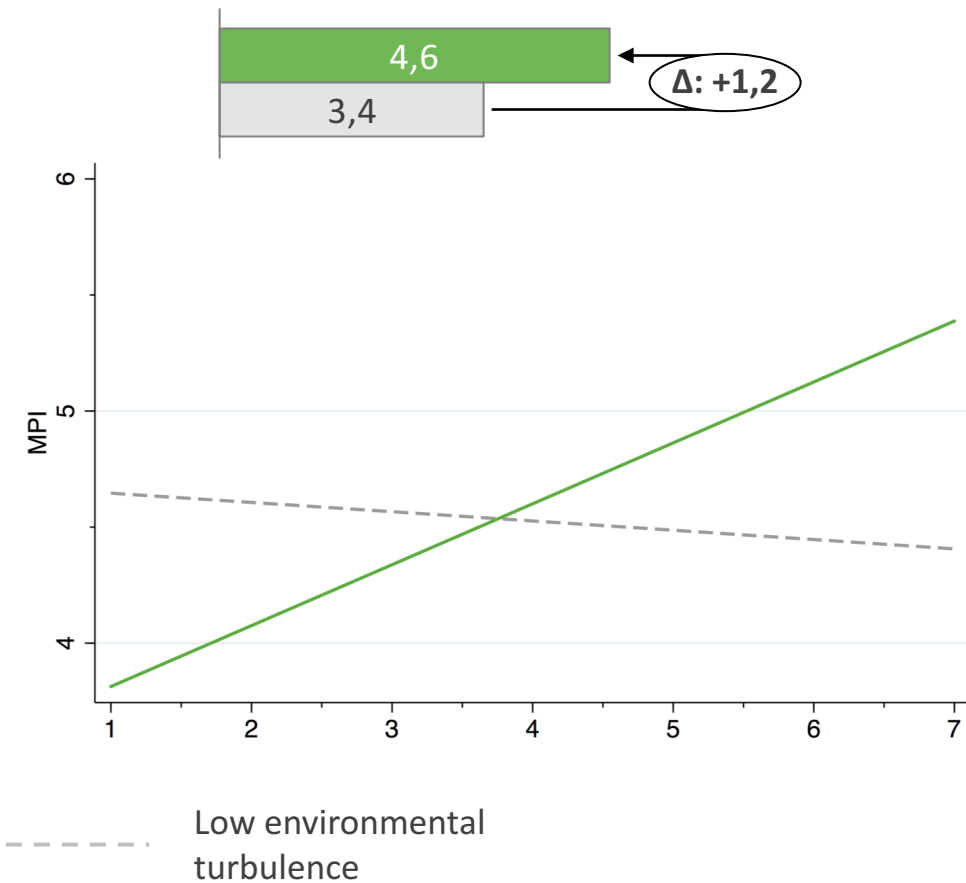
## 4 Portfolio structuring

Top performers define topical footprints in their portfolios which is especially rewarded in highly turbulent environments.

### Program focus

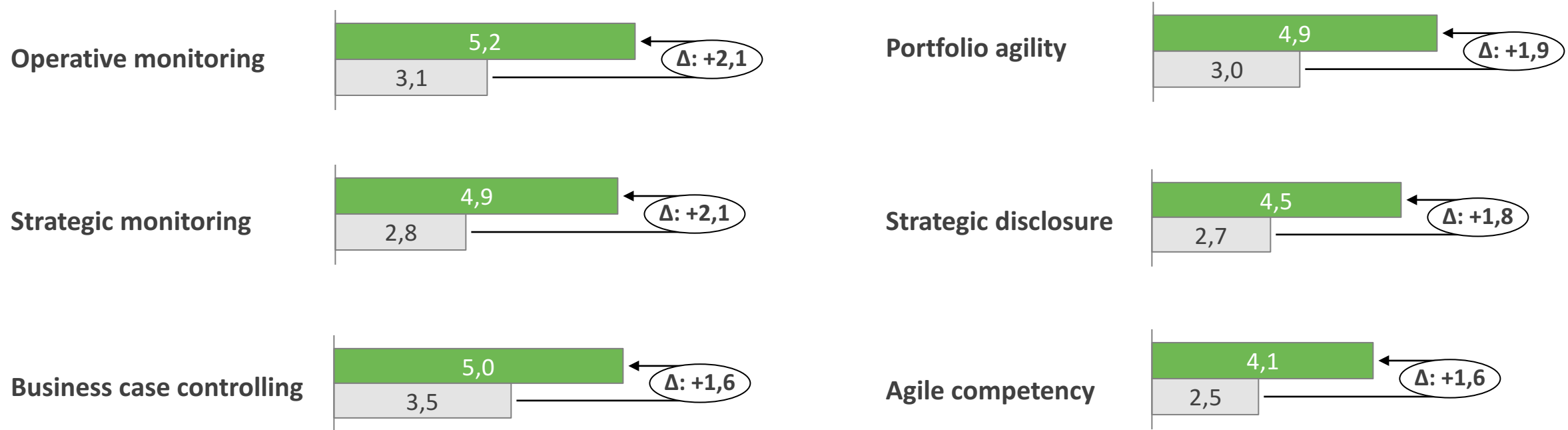


### Strategic Buckets



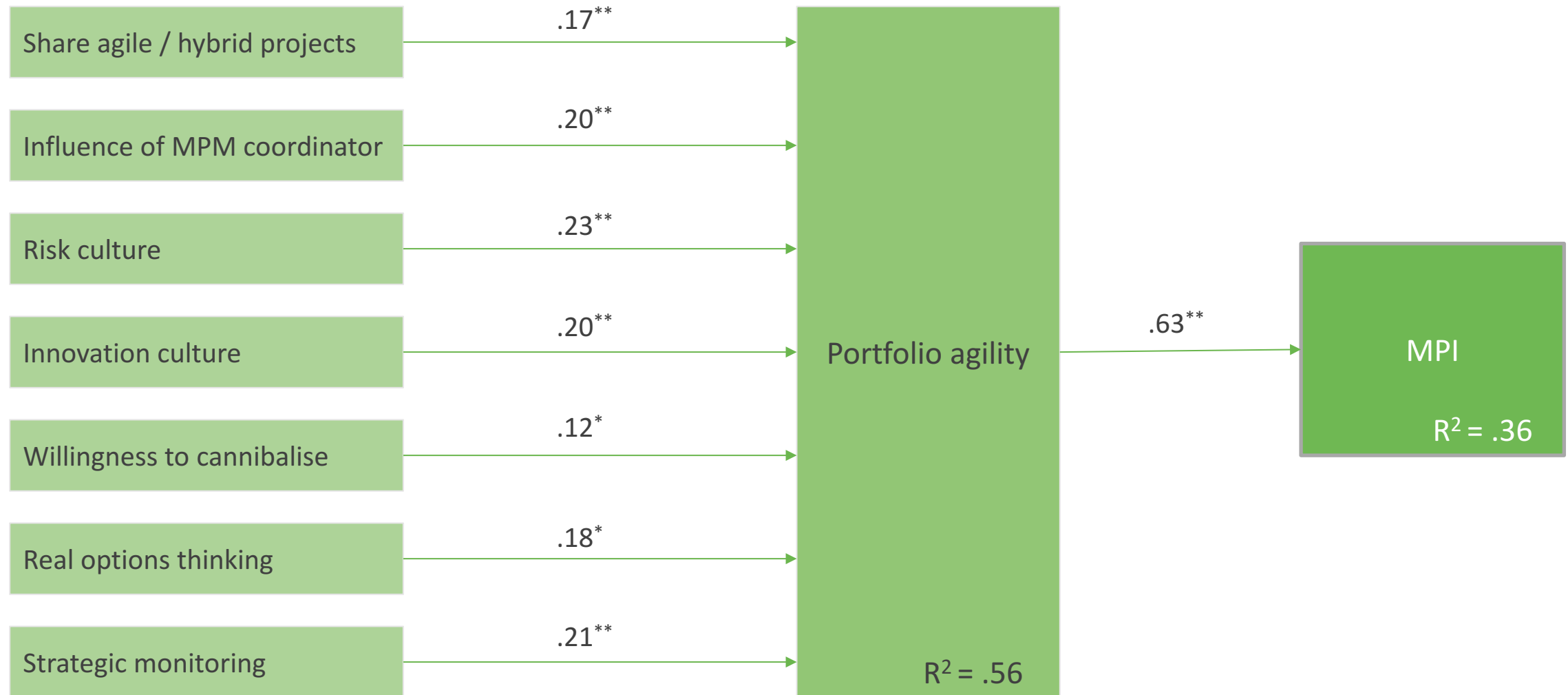
## 5 Portfolio steering

Top performers evaluate their portfolio more intensively and more often and can react to changes more quickly.



## 5 Portfolio steering

Portfolio agility is not only driven by agile projects but more importantly by strategic and cultural factors.

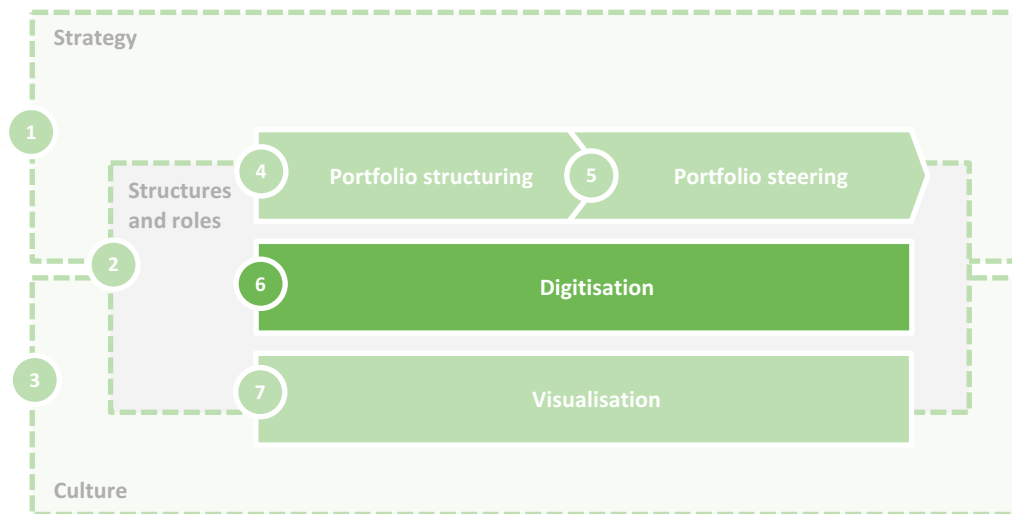


Standardised regression coefficients, \* $p < .05$ ; \*\* $p < .01$



# MPM Success factors

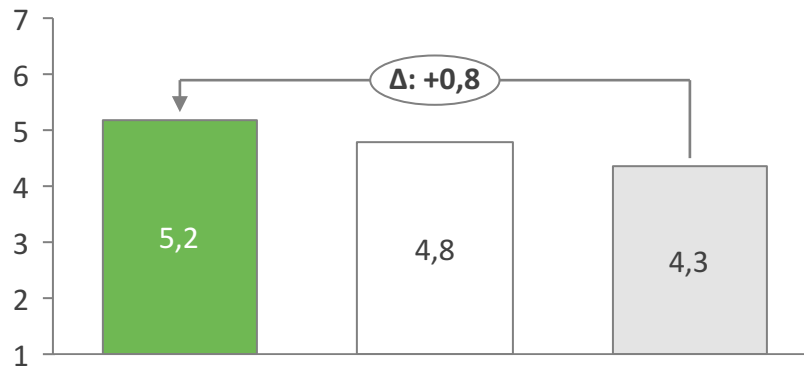
## Success factors of digitisation and visualisation



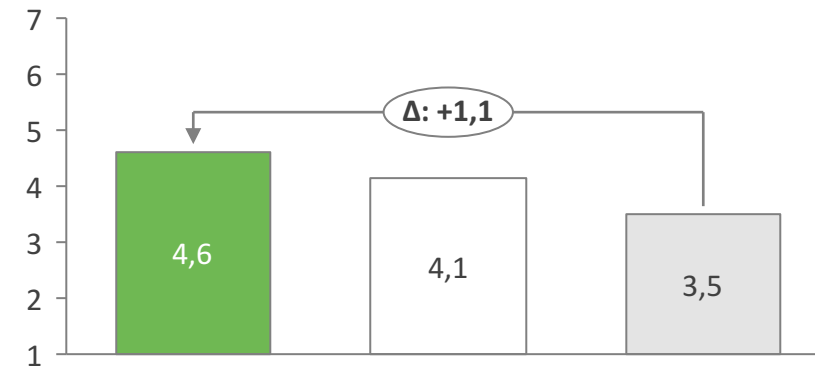
## 6 Digitisation

Top performers rather pursue a first-mover strategy concerning their digitisation and systematically build up digital competencies.

### Digital leadership

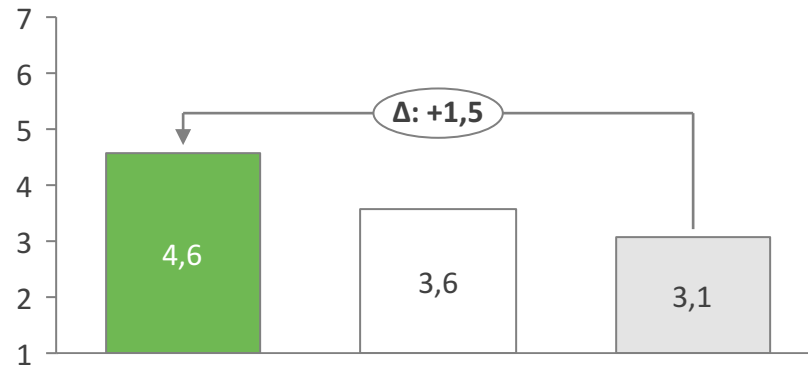


### Digital competencies



Top performers use specific software to support their portfolio management; however, the usage of newer digital technologies is rather low.

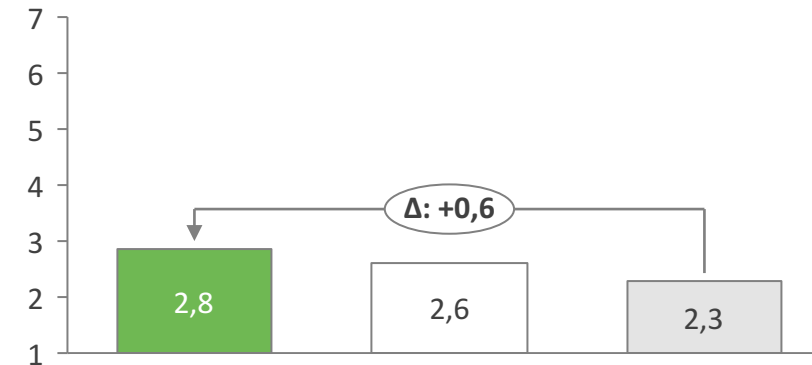
## IT-Support



Specific software supports us ...

- ... to generate and evaluate project ideas.
- ... in project selection and prioritisation.
- ... in resource allocation and detection of bottlenecks.
- ... in risk identification and assessment in our project portfolio.
- ... in synergy identification in our project portfolio.
- ... to monitor and control project portfolio performance.
- ... in the recording of employees' competences.

## Usage digital technologies in PPM



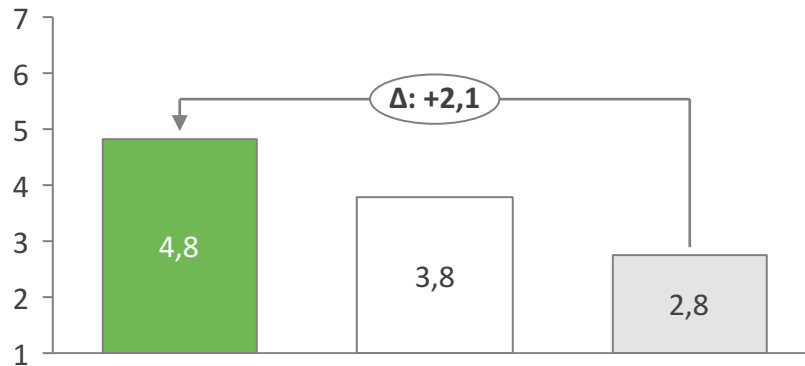
How strongly do you use the following technologies to support PPM?

- Big Data/ Data Lakes/ Information Systems
- Predictive Analytics
- Cloud-Computing
- Social Media
- Mobile Technology

## 6 Digitisation

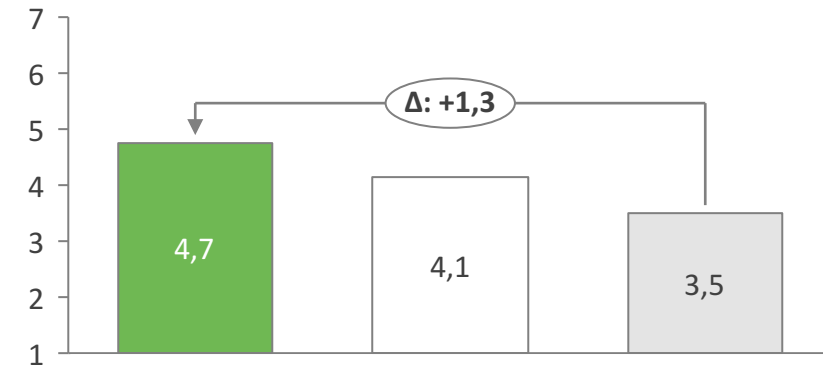
**Top performers pursue a systematic, top-down digitisation strategy but simultaneously incorporate bottom-up impulses for digital initiatives from their portfolio.**

### Top-down digital strategy



- The digital transformation of our company follows a clearly defined strategic plan.
- We promote digital innovation in a systematic and focused manner.
- We clearly communicate our digital strategy to all business divisions.
- We ensure that the organisation's digital strategy is systematically implemented through projects.

### Bottom-up Induction of digital initiatives

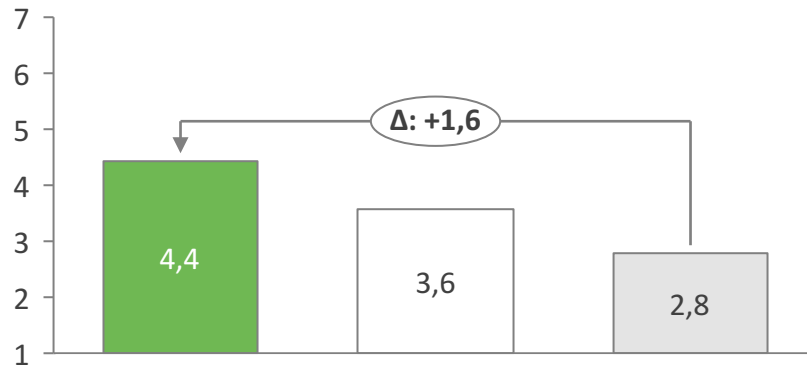


- We generate ideas for DT-projects from existing projects.
- We systematically evaluate new technologies and changes in customer behaviour to identify digital innovations (such as products and business models).
- Initiatives for DT-projects originate from needs and problems in the existing business.
- We motivate employees to identify opportunities and risks of digitisation in their work environment.

## 7 Visualisation

Top performers use a variety of visualisations for different portfolio activities, and they benefit more strongly from high-quality visualisations.

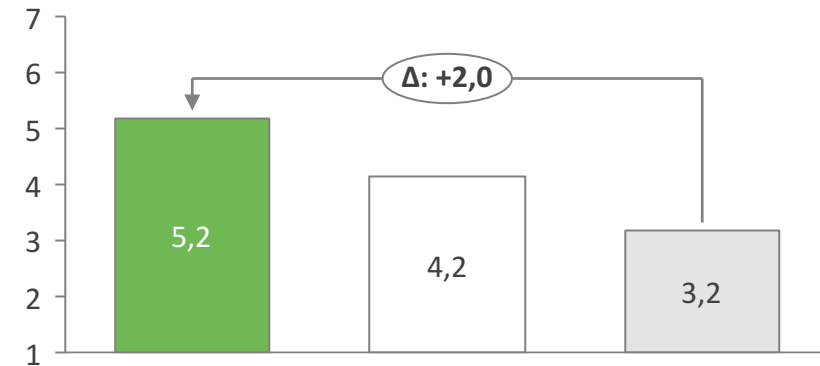
### Usage of visualisation



Please evaluate the extent to which you use visualisations to\*:

- Compare projects according to relevant criteria
- Assess alignment between projects and strategic goals
- Balance project portfolio according to relevant criteria
- Identify synergies between projects
- Identify potential cascading risks across the project portfolio
- Identify bottlenecks
- Support human resource allocation decisions
- Compare alternative project portfolio configurations
- Manage our project portfolio pipeline
- Monitor project portfolio performance
- Conduct 'what-if' analyses of portfolio decisions

### Visualisation excellence



- Our visualisations are convenient and easy to use.
- We are satisfied with how we visualise the information from our projects and portfolios.
- Our visualisations allow analysis of large amount of information.
- We trust our visualisations.
- Our visualisations indicate the quality of the data.
- Our visualisations are stimulating and thought-provoking.

■ Top performers    □ All    ■ Low performers

## Results from single project analysis

Success factors in the management of digital and agile projects

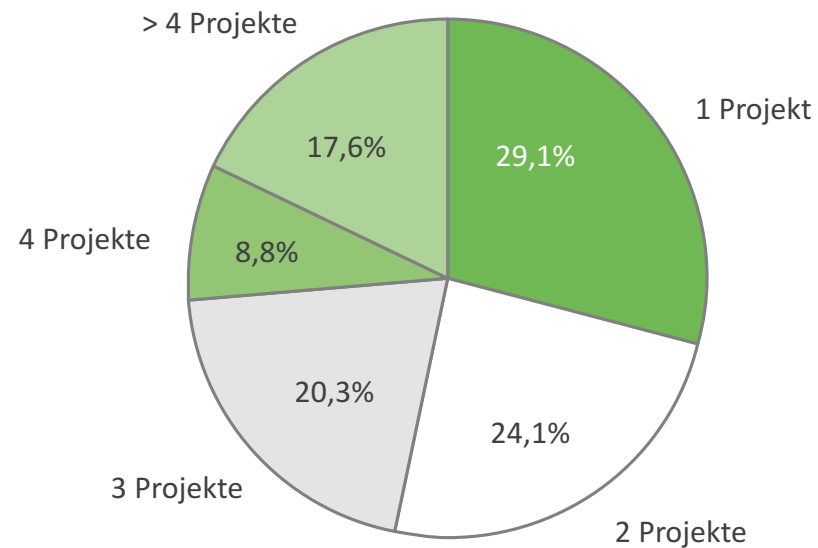




## Single project results

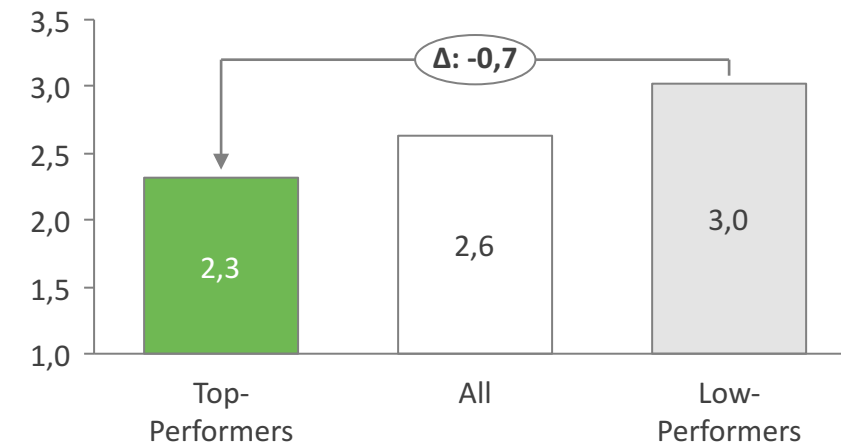
The requirements for project managers differ across firms.

### Number of projects lead in parallel



On average, project managers manage 2.6 projects in parallel.  
70% of the time is used for project management.

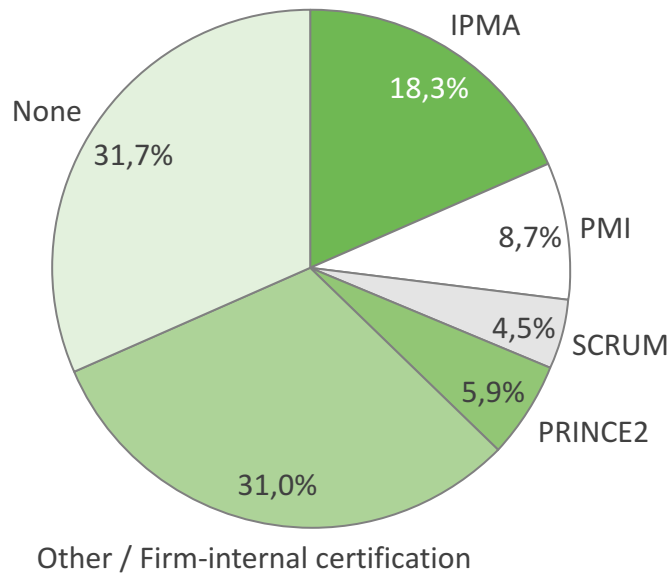
### Comparison of top and low performers



## Single project results

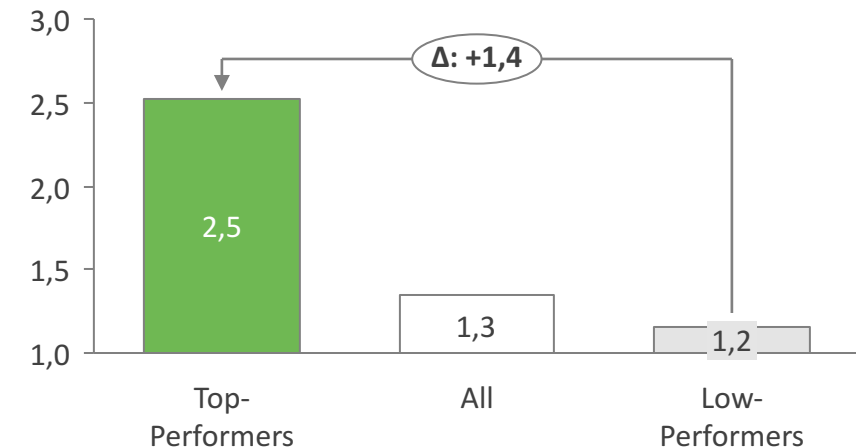
**Certification is not related to success, but experience with agile project management is.**

### Certifications



No correlation between certification and MPM or single project success.

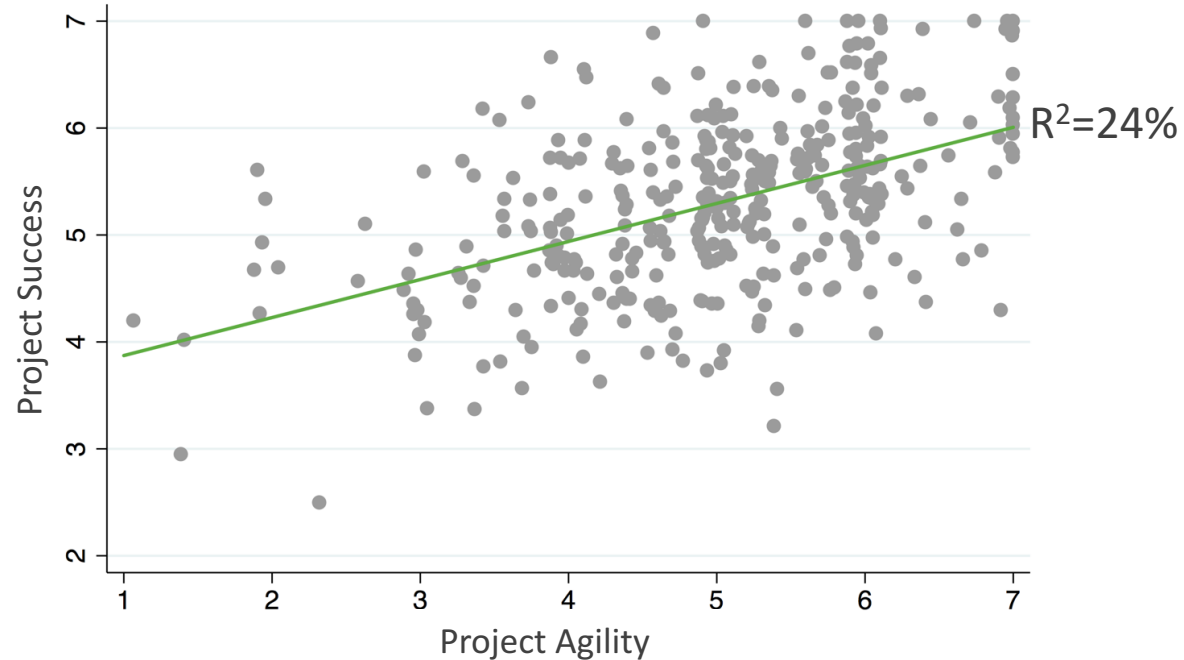
### Average experience (in years) of project members in working with agile PM



## Single project results

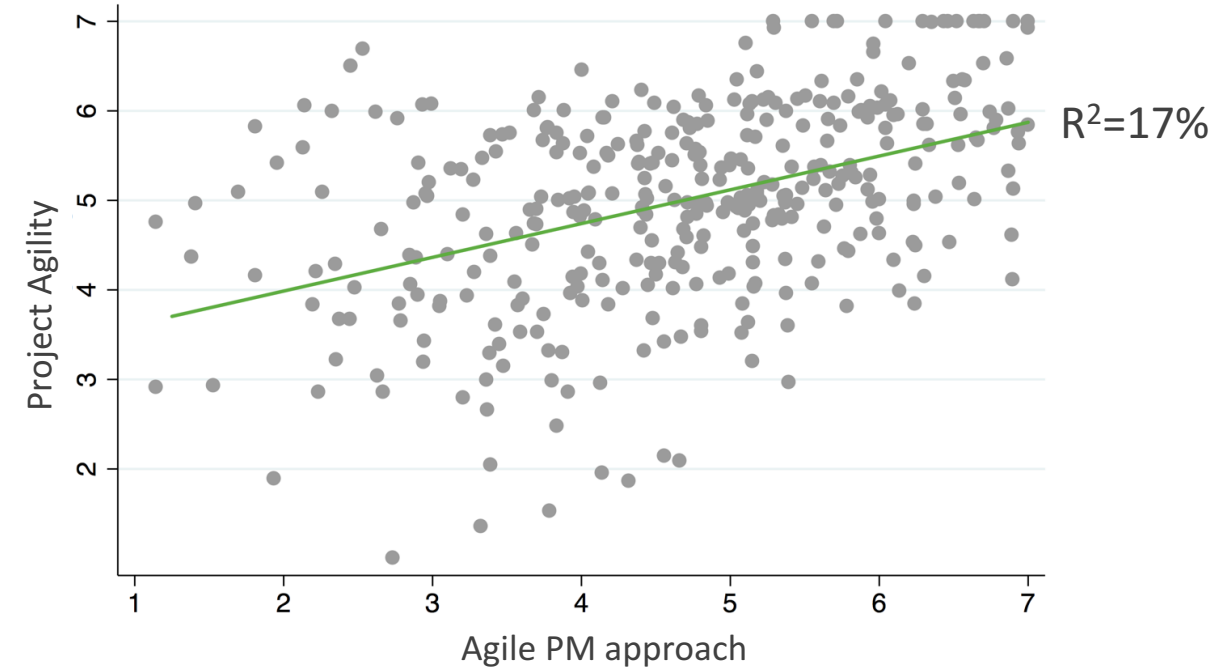
Flexible and adjustable projects are more successful;  
agile project management approaches can help with this.

### Agility of the project



Reaction speed and adaptability (e.g. to changes in project environment, new technological challenges, ...)

### Agile project management approach

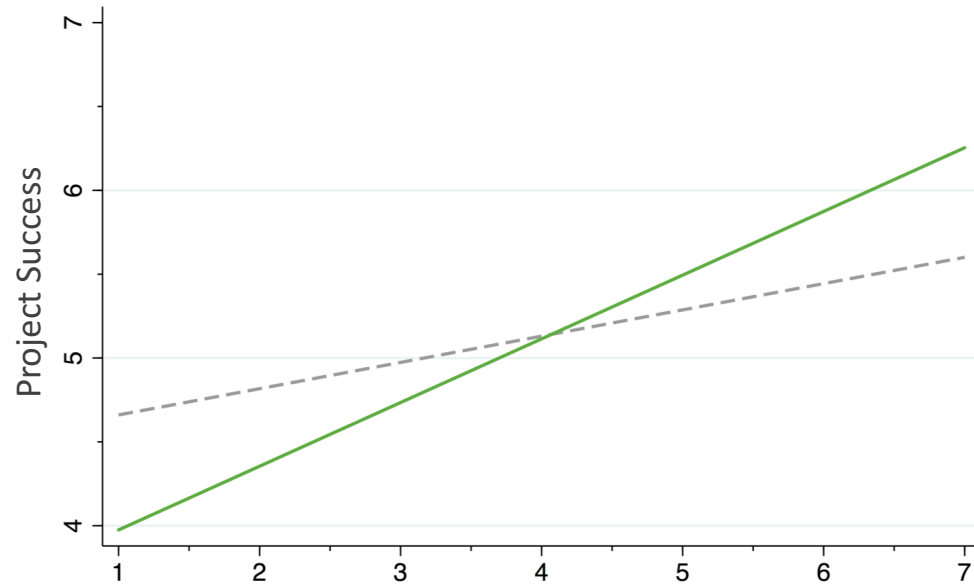


Intensity of usage of agile aspects (e.g. user feedback, iterative approach, prototypes/ MVPs, ...)

## Management of digital projects

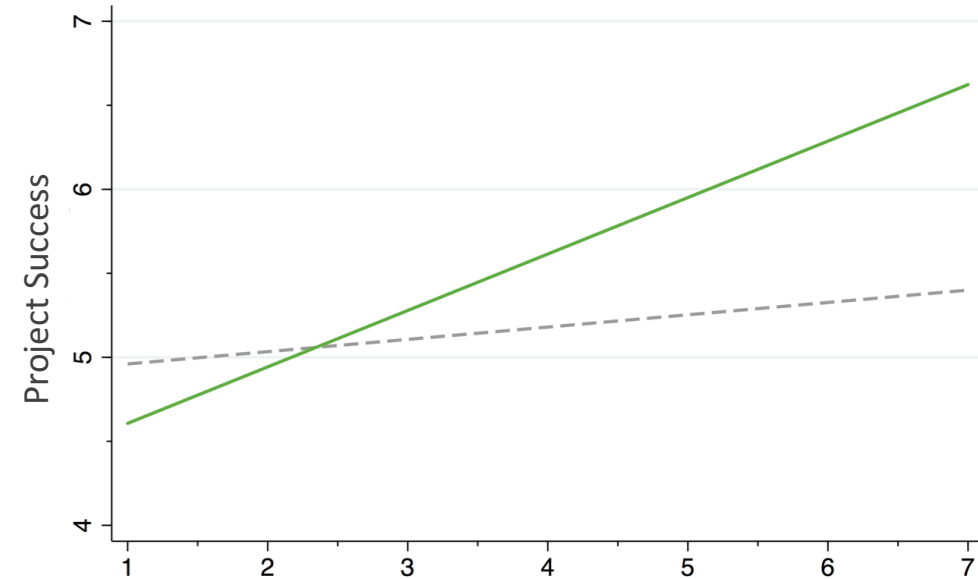
Digital projects profit more strongly from agile methods and autonomy of the project team.

### Agile PM methodology



Intensity of usage of agile aspects (e.g. user feedback, iterative approach, prototypes/ MVPs)

### Autonomy



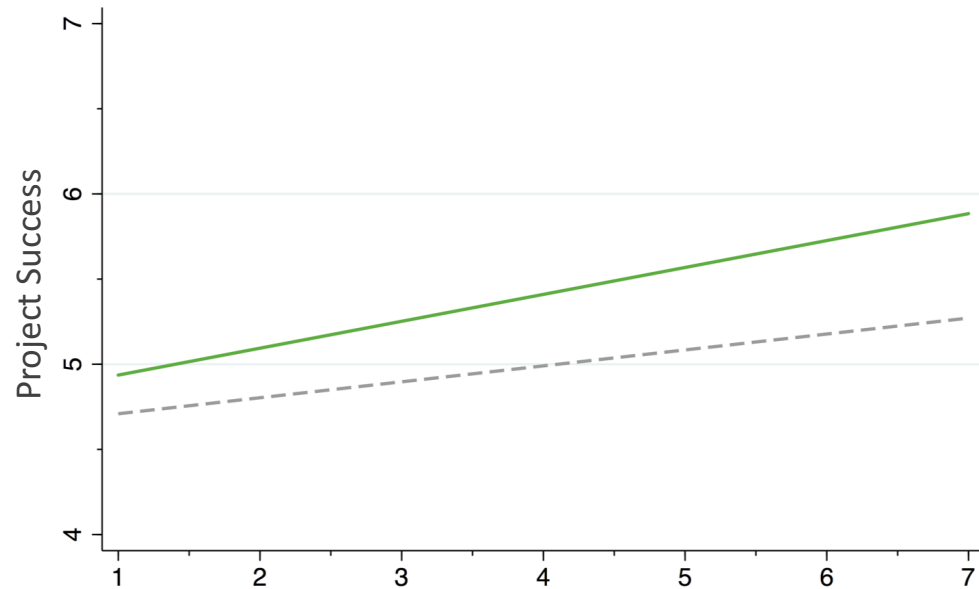
Degree of autonomy of projects team concerning project decisions and staffing.

— Digital project    - - - Non-digital project

## Management of digital projects

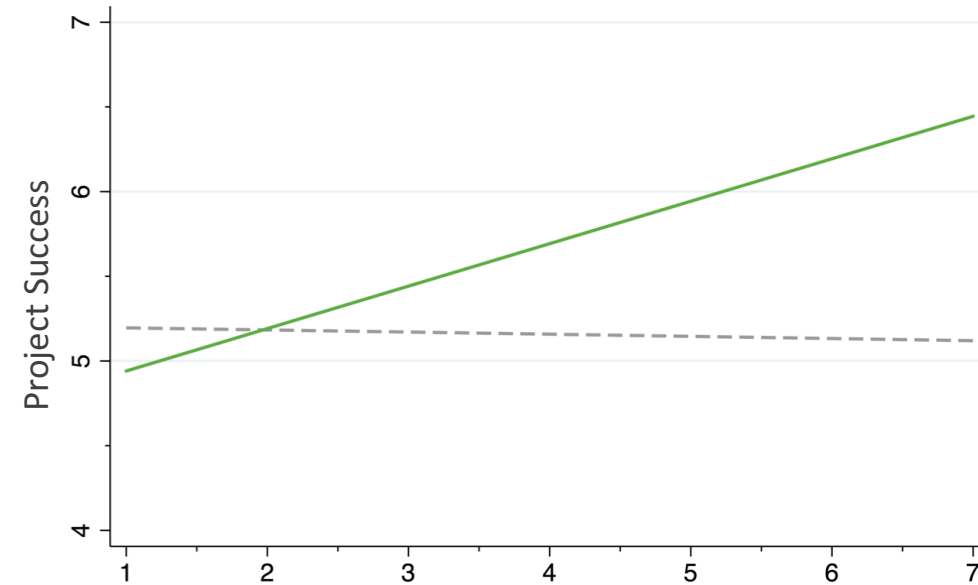
Diversity of the project team is important for all projects (digital or non-digital) - digital projects additionally profit from heuristic decision behaviour.

### Diversity



Degree of diversity and interdisciplinarity of the project team

### Decision heuristics



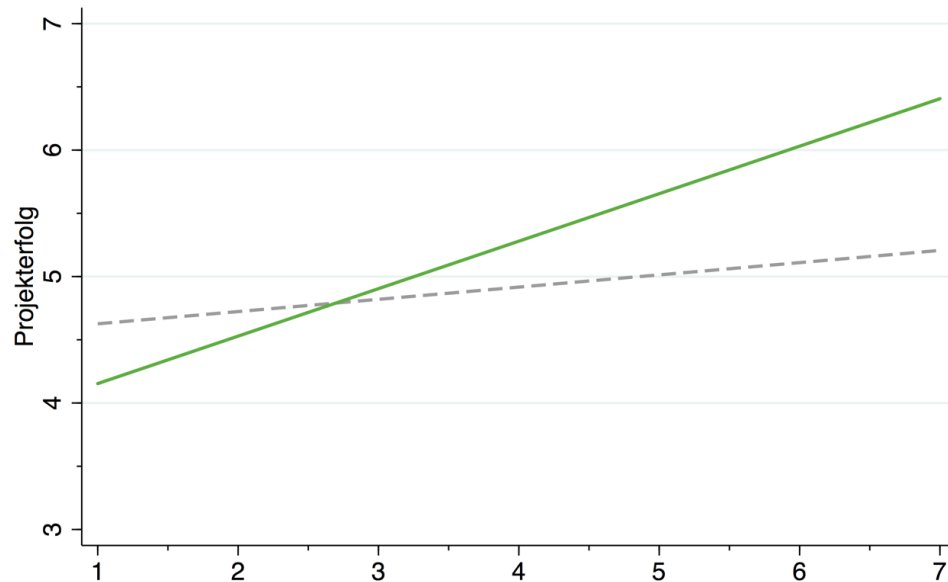
Application of heuristics, simplifications, and rules of thumb for project decision-making

— Digital project    - - - Non-digital project

## Management agile projects

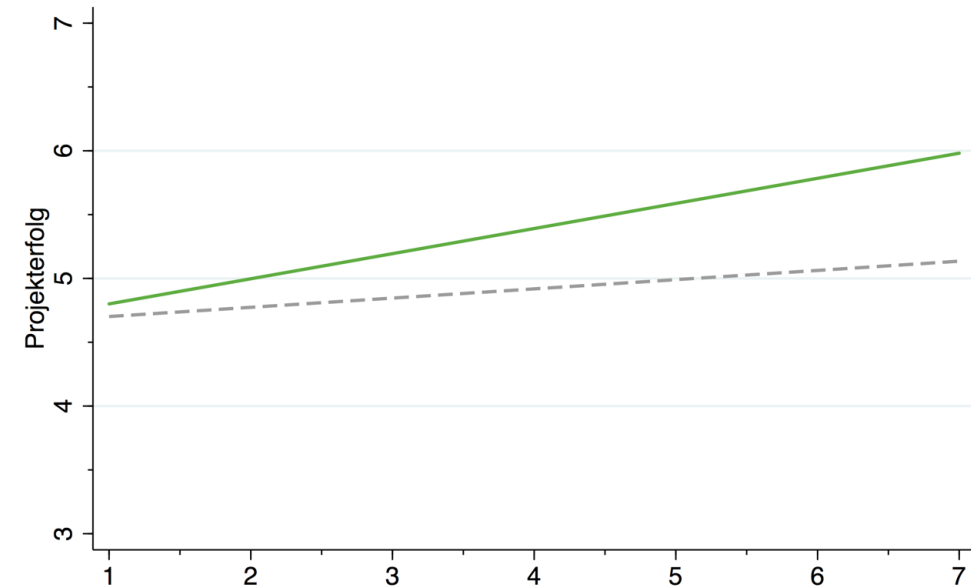
Agile project management needs an innovation-supporting culture and a strong voice behaviour of project managers and project team members.

### Voice Behavior



Intensity of project members raising their voices and call attention to opportunities and risks.

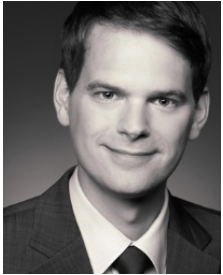
### Innovation culture



Degree of support and promotion of creativity and open communication culture.

— Agile project      - - - Non-agile project

**Thank you for your attention!**



**Prof. Dr. Alexander Kock**  
Fachgebiet Technologie- und  
Innovationsmanagement, TU Darmstadt



**Prof. Dr. Dr. Hans Georg Gemünden**  
BI - Norwegian Business School



**Jasmin Bumanowski**  
Fachgebiet Technologie- und  
Innovationsmanagement, TU Darmstadt



**Babette Schulz**  
Fachgebiet Technologie- und  
Innovationsmanagement, TU Berlin

Register at [multiprojectmanagement.org](http://multiprojectmanagement.org) to still participate in the 8<sup>th</sup> MPM Benchmarking Study!

**Contact:**

[info@multiprojectmanagement.org](mailto:info@multiprojectmanagement.org)

+49 (0)651/16 - 24354

In cooperation with:



TECHNISCHE  
UNIVERSITÄT  
DARMSTADT

