

Original article

MULTI-PROJECT MANAGEMENT IN THE CORONA CRISIS
(Results of a Germany-wide study on the impact of the CoViD19 pandemic
on the portfolio management in companies)

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Abstract: The CoViD19 pandemic is forcing companies to take ad hoc measures to maintain operations during the crisis. In order to be able to estimate the effects of these measures on project portfolio management, the Multi Project Management Section of the German Project Management Association (GPM) conducted a survey among German companies. The results of the survey are presented in this report. It shows significant effects of the CoViD19 pandemic on the active project landscape of companies. Already established processes of PPM prove to be predominantly resilient and adaptable to the changed basic conditions. In many cases, companies are developing new ideas for projects. The size of the company and the industry has a significant influence on the impact of the pandemic.

Keywords: Portfolio management, multi project management, CoViD19, Corona, survey, project portfolio management.

Note: The full results of this study are available in German language in form of a working paper published by the TH Mittelhessen University of Applied Science. A summary of the study is published by GPM in its magazine “Projektmanagement Aktuell” in German language.

1. INTRODUCTION

The management of project landscapes has become increasingly important in companies in recent years (Scheer, 2017; TPG, 2020). The German Project Management Association has 2015 calculated, that 35% of the economic value added in Germany is being generated through services in the form of projects (Schoper et al., 2015). Nevertheless, empirical studies show that both the degree of penetration and maturity of project portfolio management offer development potential in many companies. For example, as a methodological extension, agilisation to increase flexibility and adaptability is often still in its infancy in practice (Komus, & Kuberg, 2020).

At the beginning of 2020, the CoViD19 pandemic (or corona crisis as it is often called) created a disruptive situation that forces companies and other organizations to develop measures to maintain business continuity (DGQ, 2020). These can often be identified as ad hoc measures, for example the conversion of production to protective materials or products that are in greater demand during the crisis or the establishment of new sources of supply in the supply chain (General Anzeiger, 2020).

“Basically, the topic of corona has catapulted us into the modern era in terms of digitization and collaboration, so to speak”. This statement from the head of project portfolio management at a German private bank

underscores the relevance of the question of what impact the corona crisis has had on the project landscape and the resilience of project portfolio management in companies (Hüsselmann, & Golfels, 2020). To this end, the multi-project management section of the German Project Management Association conducted a Germany-wide survey in April and May 2020. The aim of the survey was to identify the effects of the CoViD19 pandemic on multi-project management in companies and other organizations. Where corona-induced effects are found, the survey should also consider the extent of the effects in order to enable further conclusions.

2. EXECUTION OF THE SURVEY

2.1 Multi-project management reference model

For a systematically comparison of the answers and a reduction of potential problems of understanding that could be caused by different models, a high-level process model of multi-project management was used as a framework for the questions. This model was synergistically developed by the PPM laboratory of THM from various sources (DIN, 2013; Lock, & Wagner, 2019, p. 235-350; Seidl, 2011, p. 116-149). At the top level, the processes of strategic and normative PPM are mapped (Rüegg-Stürm, 2005, p. 70-73): portfolio alignment and PPM governance. On the operative PPM level, the second level of the PPM process model, four processes are represented: multi-project evaluation, program/portfolio control, resource management and post-project monitoring. On the third level of the PPM process model, the project management processes of the individual projects are presented according to DIN 69 901 (DIN, 2009). The PPM support processes represent the lowest level of the PPM process model. This is where the project management methods and standards as well as IT services are designed and provided. Finally, knowledge and change management are assigned to all four levels.

The level of project management and PPM support processes were not the subject of the survey. Rather, the operative and strategic

PPM, supplemented by knowledge management, was considered.

2.2 Participants

In order to obtain answers from as many different perspectives as possible, the survey was distributed via various social media channels and newsletters. The organizers also contacted potentially interested representatives of relevant companies directly. In this way, the measures for distributing the questionnaire potentially reached several thousand addressees with a professional interest in the topic. Due to the target group selection, it is to be classified as non-representative, but nevertheless indicative.

82 persons took part in the survey. Not all participants have completed all questions, so the sample size of individual answers varies throughout the individual findings. The survey was conducted completely anonymously, so that participants and participating companies or organizations cannot be identified by name (so the citation in the introduction).

2.3 Characteristics of the companies

Participants from a wide range of industries took part in the survey. To facilitate the derivation of results, the industries were divided into four sectors (Gottmann, 1957). These are:

- Raw materials (primary sector)
- Manufacturing (secondary sector)
- Product-based services (tertiary sector)
- Knowledge-based services (quarterly sector)

The assignment of the industries to the sectors can be seen in Figure 1. The detailed distribution of the participants to the sectors can also be seen in this image. Since the primary sector is only weakly represented in the survey, no statements on this sector are derived. Thus, the primary sector is excluded from the sector-related findings in the following.

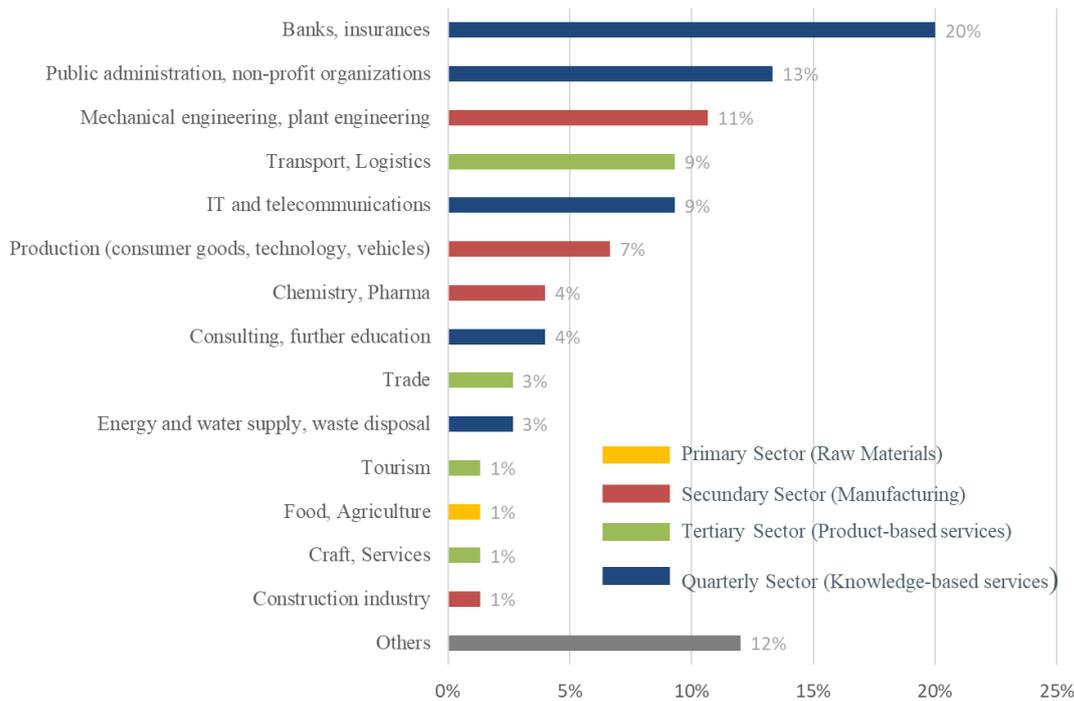


Figure 1: Participating branches and sectors

The participating companies range from under 10 employees to over 10,000 employees. With more than three-quarters of the participating companies, large companies with over 1,500 employees are more frequently represented in the survey than small and medium-sized companies. The number of projects in the portfolio was divided into gradations ranging from less than 20 to over 500. Approximately three-quarters of the participants state less than 100 projects in the portfolio, and one quarter less than 20 projects. Every eighth participating company has over 500 projects in its portfolio.

IT projects are managed by about 80% of the participating companies, followed by organizational projects, which are stated by two thirds of the participants. Other project types, such as product development or infrastructure projects, are carried out by less than half of the participants. Details can be found in Types of projects in the project landscape

Table 1: Types of projects in the project landscape

IT Projects	80%
Organizational Projects	66%
Infrastructure Projects	46%
Plant engineering projects	18%
R&D Projects	30%
Product development projects	48%
Marketing/sales projects	38%
Events	18%
Others	4%

About 80% of the participants state that project portfolio management (PPM) is organizationally established in some way in their company. However, in about a third this is only informally the case.

The self-assessment of the degree of maturity reveals a very heterogeneous picture: from no PPM (24%) in place, through a (at least) defined PPM (37%) and an established PPM (28%) to professionalized project portfolio management (12%).

3. RESULTS OF THE SURVEY

3.1 Area of portfolio control

One third of the participants stated that they had added new projects to their portfolio as a result of the Corona crisis. These are especially projects from areas of organizational structure and sales. Projects from areas like crisis management and digitization were mentioned with a lower frequency. In Table 2 are the

provided answers of which projects were added to the portfolio due to CoViD19 by the participants, translated from German to English but not further modified.

No participant stated that they had permanently terminated projects due to Corona. However, some 60% of the participants have temporarily suspended at least one project due to the pandemic. Broken down by sector, service providers from the tertiary sector are particularly willing to adjust their portfolio due to Corona. Every second participant from this economic segment has added new projects to the portfolio due to Corona and 80% have put at least one project „on hold”.

Table 2: List of individual projects stated by the participants that were started due to CoViD19

Digitalization of communication (especially document exchange) between authorities
Investment projects, infrastructure projects, sales projects “cooperation agreement” according to roadmap
Cost saving projects, digital replacement offers for unusual fairs and events
Quickly deploy “contactless” solutions for sales
“IT-Rollout Projects, Organizational Projects”
Project “Restart - how and with what focus will we start after the crisis”
Setup/expansion of online trainings
Sales projects
Temporary Hospitals
To remedy the crisis
Digitization trends
IT projects for modernization
“Financial relevant projects, Remote Work, Back-to-Office, short-time work”
Fast credit KfW
Restructuring projects
Covid19 Task Force

For the approval of new projects, new ways of approving and activating projects were established in the working reality of the participants after the pandemic reached Germany in the first months of 2020. About 75% of the participants stated that the usual processes were not applicable due to the pandemic, but that shortened processes were created and established in the organization.

The budget for the entire project portfolio has not been changed by 70% of the participants during the pandemic. At the level of individual projects, budget adjustments were stated more frequently. In comparison to the change in portfolio budgets, only 57% of the participants did not change their budgets for single projects. For these finding, no effect of the contracting authority can be seen. Whether the client is

internal or external is irrelevant for the adjustment of the budgets among the participants.

Due to the corona crisis, about two thirds of the companies have established a separate risk management system for new projects. A closer look at the tertiary sector reveals that every second representative of this sector continues to refrain from risk management. Overall, no dependency can be identified between the management of risks and the adjustment of budgets for project portfolios. The situation is different for the adjustment of budgets at the level of individual projects. Without a separate consideration of the risks, budgets are either not changed or even reduced, whereas with an active risk management, companies tend to

shift the budget between individual projects or to increase it for individual projects.

3.2 Area of project evaluation

80% of the participants did not fundamentally change the system for project evaluation, specifically the assessment of the business value. The tertiary sector did adjust the evaluation disproportionately often with around 35% of the representatives of this sector stating adaptations. It is also possible to assume a relation between the degree of maturity of project portfolio management and the change in the evaluation system: The higher the degree of maturity, the more frequently the evaluation systematics are adapted due to Corona.

3.3 Area of portfolio management governance

In more than 70% of the participating organizations the project portfolio management system proves to be crisis-proof and the processes of portfolio management are generally lived during the events of CoViD19. About 15% of the companies had not established any processes for PPM even before Corona. For the remaining companies, measures relating to the corona crisis are running outside the ordinary procedures. A dependence between the resilience of the portfolio management system and the size of the company cannot be deduced from the answers of the participants.

The evaluation and approval process as a special characteristic of PPM processes shows a clear dependence on the maturity level of portfolio management. For example, almost half of the companies with an informal PPM deviate from the usual evaluation and approval processes, while companies with a high degree of maturity retain 85% of their PPM processes even in a crisis. Just as with PPM processes in general, the retention of established evaluation and approval processes seems to be independent of the size of the company.

The business case is another special element of portfolio management. For projects related to the Corona-induced situation, almost two thirds of the participating companies dispense with an otherwise standard business case. These companies either fall back on a

shortened business case or do without one completely. Even before the pandemic, one in five of the participating companies did not demand a submitted business case for new projects.

Specifically in companies with a low level of maturity of project portfolio management or a rather informal PPM, the business case is dispensed with, whereas companies with a high level of maturity tend to demand the business case despite all the circumstances or switch to a shortened version of the business case.

Those participants in the survey who indicate a change in corporate strategy with an impact on project portfolio management more often deviate from portfolio management processes, compared with those companies that do not notice a change in corporate strategy in portfolio management or those that have not adjusted their strategy.

3.4 Area of portfolio alignment

Almost 90% of the participants cannot detect any change in the general orientation of the portfolio (balancing). However, about a third of the participants in the survey are seeing an influence on PPM through a changed corporate strategy. Even almost half of the small and medium-sized companies stated in the survey that a changed corporate strategy influences project portfolio management. In contrast, one in three representatives of large companies stated that such changes occur in their company because of the corona pandemic. The influence of the changed corporate strategy on PPM is described in the survey as follows (in descending order of frequency):

- Reprioritization
- Focus
- Slowdown
- Pause
- Higher value contribution
- Increased scrutiny
- Faster implementation
- Less new
- Control Online
- Postponement
- Less willingness to take risks

Broken down by sector, it is noticeable that around one in five companies in the quarterly

sector reports an influence of corporate strategy on project portfolio management, whereas in the secondary and tertiary sectors, 45% and 50% of the representatives respectively report such an influence in the survey.

Twothirds of an adjusted corporate strategy that influences project portfolio management involves both a shortened evaluation and approval process and a modified evaluation system.

3.5 Area of knowledge and idea management

Almost 60% of the companies have developed ideas for new projects related to the current situation due to the Corona crisis. About half of these companies handle new ideas outside the established innovation management process. This is done in roughly equal parts by bypassing the usual process or by setting up an additional domain outside the established responsibilities.

If the answers regarding idea management are compared to which companies have included new projects in their portfolio, it is noticeable that companies that rely on the established channels have not included new projects in their portfolios to 80%. In contrast, about two thirds of the companies that have adopted alternative methods of idea management in the wake of the Corona crisis have added new projects to their portfolios.

Whether companies have an idea management system and to what extent idea management in its established form is used for projects related to the Corona pandemic or alternative methods are used is not dependent on the number of employees in the survey.

Table 3: Questionnaire (translated from German)

Portfolio control:

1. Have you included new projects in your portfolio due to the corona crisis?
2. Have you stopped ongoing projects due to the corona crisis?
3. Does a changed corporate strategy due to the corona crisis have an influence on the PPM?
4. Was a separate risk assessment carried out for the projects in the course of the corona crisis?

Project evaluation:

5. Did you change your evaluation system for projects in the course of the Corona crisis?
6. If there are specific new projects related to the Corona crisis, do you have to present an otherwise usual business case for them?

Portfolio alignment:

7. Are projects related to the Corona crisis approved and capitalized without the otherwise usual evaluation and approval process?
8. Was the project portfolio budget adjusted in the course of the corona crisis?

Almost three quarters of the participants actively manage their knowledge regarding the Corona crisis in a knowledge management system. Two thirds of the participants use a system that was already established in the company before the corona crisis. This system was set up or expanded by about half of these companies during the corona crisis.

A comparison of the sectors shows that knowledge is rarely actively managed in the secondary sector. There is no significant difference between the two service sectors. Approximately 40% of manufacturing companies are working without knowledge management, whereas only 25% each in the tertiary and quaternary sectors do without active knowledge management.

Knowledge management shows a clear difference between small and large companies. Representatives of companies with 50 or fewer employees state to one third that knowledge is actively managed in their company. In contrast, three quarters of companies with more than 50 employees actively manage knowledge.

The comparison of different approaches to knowledge management with the activation of new projects shows that companies which actively managed knowledge in the company before the corona crisis activate new projects more often. However, no difference can be seen between companies that do without knowledge management and companies that have newly set up a knowledge management system due to CoViD19.

The surveys questionnaire is shown for reference in table 3.

9. Were project budgets adjusted in the course of the corona crisis?

10. Is the portfolio balanced differently in the course of the corona crisis, e.g. less risky?

Knowledge management:

11. How was the knowledge about the corona crisis handled in the course of the corona crisis?

Idea management:

12. Are there new project ideas due to the corona crisis and how are they handled?

PPM governance:

13. Will the established PPM processes be generally lived in the course of the Corona crisis?

Concluding statement:

14. What do you think were the most important effects of the Corona crisis on project management in your company?

Demographic survey:

D1. Which industry does your company belong to?

D2. How many employees does your company have?

D3. How many projects does your project landscape currently contain?

D4. What types of projects does your project landscape basically contain?

D5. Who is the client of your projects?

D6. Is PPM organisationally established in your company?

D7. With what degree of maturity would you rate your PPM?

D8. What role do you play in the project landscape of your company?

Remark: Answers for all questions have been pre-defined in categories; all questions could be answered additionally with free text (Hüsselmann, & Golfels, 2020).

4. FREE STATEMENTS OF THE PARTICIPANTS

Asked for a final statement to summarize the effects of CoViD19 onto the project management and the portfolio management respectively, many participants see the effects of the Corona crisis not only as a challenge and an obstacle, but also as an opportunity for reorientation and improvement. One participant, for example, speaks of “faster working methods in the work packages, better supply of specialist areas, higher acceptance by individuals. Nevertheless, the way of thinking is still too complicated and there are still too many ‘sceptics’”. Another voice cites “awareness of IT performance and that IT is not a cost factor”. The areas concerning the survey participants can be derived from the terms frequently used in the free-text answers. As expected, the term “projects” is the focus of a survey in the context of project portfolio management. The two terms “individual” and “additional” appear frequently in the answers. Various tools for digital communication and collaboration are also mentioned, but no specific tool is given priority here. Specific tools, some of which are highly present in the public and media conversations, were rarely or never mentioned by the participants. In general, however, digitization in general is quite often on the minds of the participants, just like the home office.

5. CONCLUSION

The Corona crisis influences the active project landscape in the participating companies of the survey. Thus, two out of three companies pause projects, and every third company adds new projects to its portfolio. Every fourth company changed the total budget for the project portfolio, whereby these are predominantly reduced. However, more than 40% of the companies adjust budgets at the level of individual projects.

Insofar as companies have established project portfolio management processes, these have proven to be largely resilient and adaptable. In the context of the Corona crisis, two out of three companies do without a business case or fall back on a shortened version. Likewise, two out of three companies continue the already established risk management during the crisis or expand the existing structures in the current context. More than 80% of the companies with an established project portfolio management system indicate that this system is generally lived in the crisis situation too. A lot of the participating companies have brought ideas to new projects. In many cases this is based on an active management of knowledge. More than half of the participating companies report that new ideas for projects have been developed within the company. Most of the new ideas flow into the company's portfolio via specially

created channels. Almost three out of four companies state that they actively manage knowledge in relation to the Corona crisis. 40% of the companies take the opportunity to improve the knowledge management system.

The impact of the corona crisis on project portfolio management depends on both the size of the company and the industry. Small and medium-sized enterprises as well as industrial companies and product-related service providers have more impact on project portfolio management through an adapted corporate strategy. The industrial sector and small companies in general make less use of knowledge management during the crisis. Traditional sectors of industry and the tertiary sector rebalance portfolios more frequently than new types of companies in the quaternary sector.

Finally, we can state that the participating companies have reacted to the disruptive impact of the Corona-crisis by re-allocating project budgets to new, crisis-related initiatives. In this sense the PPM systems within the companies have been proven reliable and adaptive to the changed environmental conditions. It can be seen, that the more mature the organisations PPM system is, the less ad hoc the measure are launched. On the other hands side, companies use the opportunity to improve their knowledge and risk management.

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