



Project Management Office

PMO as a strategic success factor for project-based organisations

Abstract

Project-management-based organisations with either large or numerous projects can profit from a range of benefits by establishing a Project Management Office (PMO). Having a PMO in place can increase efficiency and effectiveness within projects as well as the maturity of Project Management.

PMOs can support project-oriented organisations at different levels and across project boundaries, reduce the required resources and increase the information transfer from project to project. This whitepaper will introduce three different approaches – standard, extended and state-of-the-art PMO – and list their preconditions, advantages and disadvantages.

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1. Management Summary

These days, projects tend to differ regarding their scope, budget, timeframe, etc., but if you take a closer look at how they are organised, they don't actually differ that much. Over the last few decades, the way project management has been approached has dramatically changed, but the way projects are organised has merely been adapted to potential political changes concerning surrounding organisations.

1.1. Organising Projects

While within project management optimisation has taken place on different levels (moving away from Waterfall to Agile or from basic project schedules to standards such as the PMBOK), the processes and related organisational structures pertaining to projects have never been updated to current needs in a similar way. The main reason for this may be that a project, whether IT-based or not, usually has a rather short lifetime of six months up to three years maximum. Once a project and process maturity model has been taken on board and best-practice gathering is established and institutionalised, the optimisation of project management within a company usually stops. Roles and responsibilities are defined, documents and templates established.

Maturity-based models promising to increase the efficiency and effectiveness of projects are currently in vogue. Depending on the size of the organisation, a large number of employees must be trained to raise its maturity, new roles have to be initiated and authority to be adopted. Each role must be trained, new templates and guidelines have to be introduced and enforced (depending on the specific maturity model and its integration), and finally the processes to be institutionalised need to be introduced, trained and assessed.

The usual approach is to train all the employees, introduce all the templates, documents and guidelines, and all the processes for all the roles. Depending on the size of the company or organisational unit, this approach consumes a considerable amount of resources (i.e. time, staff, procedures, and consultants). The business case generally requires a long-term perspective and regular upgrades as well as training of all employees due to changes in templates, processes and so on.

1.2. PMO and Efficiency / Effectiveness

Irrespective of methodology, the set-up for projects will be the same from one project to the next, and it depends on the management's requirements.

The greatest influence on effectiveness and efficiency, however, is to be found at the level of the Project Management Office (PMO). Only small organisational units or portfolios are aware of dependencies between projects, or of the parallel development of the same product multiple times (same thing, different names).

Having a PMO in place not only reduces the required resources (e.g. one PMO / QAP / CM / RM / TM / Tester dealing with several projects rather than just one), it also increases the information transfer from project to project and from portfolio to portfolio, thus preventing parallel development and redundancies.

1.3. PMO and Maturity

The crucial question for the management is the following: Is there no easy way to increase maturity within the Project Management of a company or an organisational unit? Is it always necessary to train and involve everyone in order to raise the maturity level? And if not, how can the experience of more mature organisational units be leveraged for the entire company?

The PMO approach might be the answer to these questions. Establishing a 'State-of-the-Art PMO' will allow a company to train only the PMO staff (for instance, three persons like a Quality Manager, a Requirements Manager, and a Test Manager) rather than the entire project staff within the required timeframe in order to enhance or establish maturity according to e.g. CMMI V1.2 ML2.

The result will be the same (maturity level reached), but the costs will differ considerably (up to 70% less).

2. Defining PMO

The definition of the term PMO is as follows:

The **PMO (Project Management Office)** is an organisational unit to centralise and coordinate Project Management activities. The PMO ensures project management excellence within an organisation.

Delimitation: A Project Manager can hand over all tasks to the PMO, but not the responsibility.

Definition 1: PMO

3. Market – Current Status and Outlook

Cost savings and a reduction of overhead costs are part of the daily business for project-oriented organisations. Overhead costs can easily be cut by 20% with an in-depth review and a suitable approach (Plowman, 2012). Best practices show that a holistic review taking the organisational approach into account will yield the best results, not only with regard to the persistence of the savings but also concerning the acceptance of the related organisational units and roles.

An empirical study carried out at a large enterprise in the financial industry indicated that the roles of

- Project Manager
- Quality Manager
- Test Manager
- Tester
- Requirements Manager
- Solution Engineer / Architect
- Business Project Manager and
- PMO

were responsible for 25.2% of the project costs. After optimising the programme's organisational structure, these costs were reduced to 11.8% – in other words, cut down by more than 50% per project.

All in all, the introduction of a state-of-the-art PMO allows for cutting project costs by around 10% while at the same time achieving better delivery quality and fewer errors in production, a leaner people management for the entire company, leaner organisation, faster time-to-market, higher maturity, and invaluable profits such as improved knowledge management, better collaboration, and employees with higher productivity.

The ten largest financial companies (SQS, 2011) generate an overall IT budget of more than € 15 billion, the IT project part being about 50% or approximately € 8 billion. With regard to the estimation on this company acting as a single global player in the financial industry, the result is as follows (see Figures 1 and 2):

- Size of the global project portfolio (IT only):
approx. € 8 billion / year
- Estimated savings through introducing state-of-the-art PMOs:
approx. € 1.1 billion / year

The long-term leverage of a state-of-the-art PMO is impressive, and the side effects are an additional argument to institutionalise such PMOs for every company having a project portfolio.

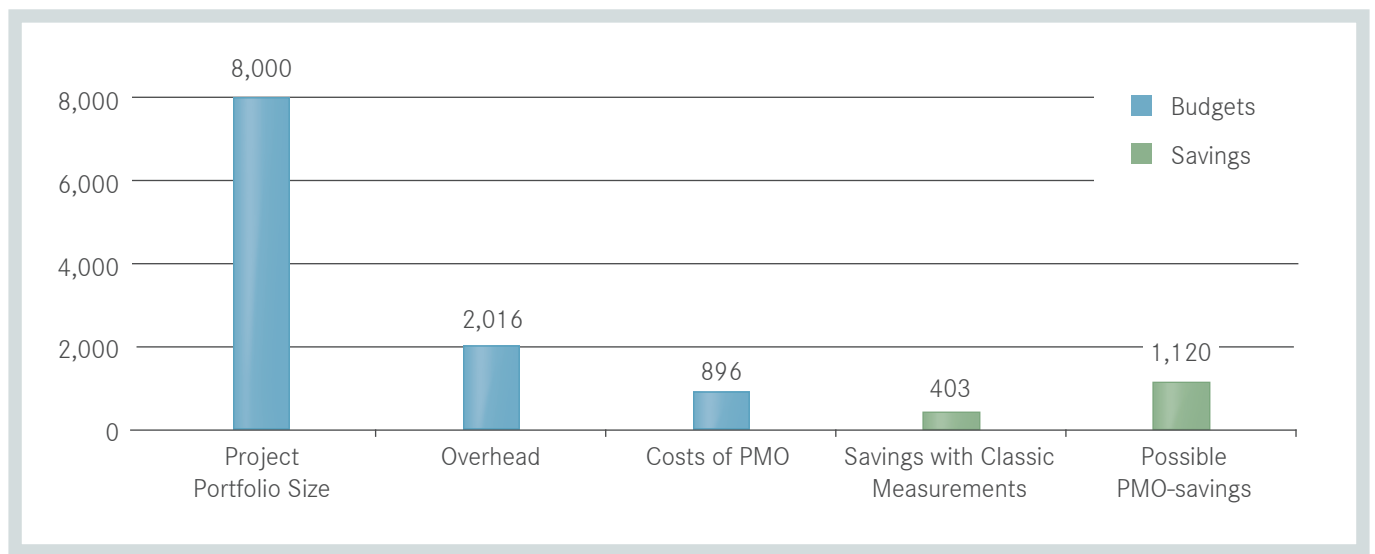


Figure 1: Savings of a state-of-the-art PMO (€)

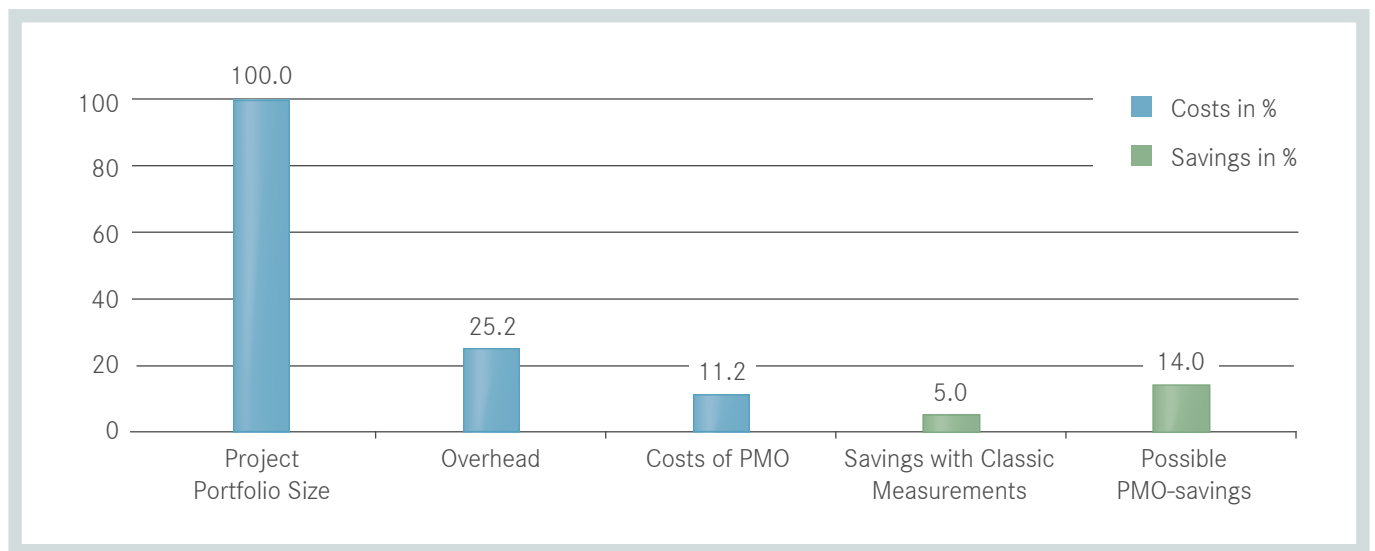


Figure 2: Savings of a state-of-the-art PMO (%)

The overall IT project budget for all industries amounts to more than € 1,000 billion. In other words: savings of over € 250 billion are possible if state-of-the-art PMOs are established.

Currently, the service industry is not responding to this demand and no company is offering a PMO service. There are several reasons for this:

- Missing awareness of the possibilities
- No know-how available on the market
- Projects are being used to have a PMO, instead of the other way round
- Missing awareness of alternative approaches

The outlook will be extremely positive if the opportunity is taken.

4. Projects: The Current Situation

Projects are generally set up in the same way (see Figure 3). The Project Manager leads a designing group consisting of Architects and Requirements Managers, a developing group including some configuration experts, and a quality assurance group, usually staffed with Testers as well. Often, the projects report directly to the Portfolio Management.

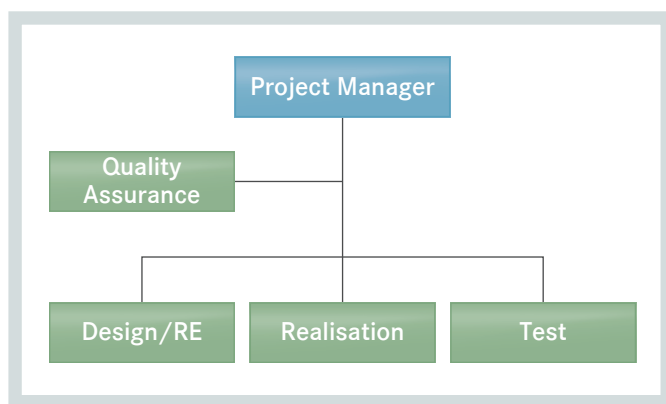


Figure 3: Basic set-up for a project

If project management is not the daily business of a company, this approach makes sense and should not be changed. But for companies where project management forms a large part of their business, or even companies using project management as their main approach, this set-up allocates too many similar resources to identical tasks that are executed over and over again. Since these resources conduct their tasks simultaneously, the allocation of a large number of resources is required and a large Knowledge Management system must be maintained. As those projects are mostly decentralised, their controlling (i.a. financials, goals, reporting, and decision-taking) poses quite a challenge and coordination of the collaboration between projects is difficult as well.

In the light of these challenges, the international project management community in the late 1990s and early 2000s initiated the PMO model: a management layer introduced between the Project and the Portfolio Management. The scope of the PMO layer is to provide training and support, control projects and streamline project reporting. While this PMO function was introduced in the Anglo-American region as designed, in most European countries the PMO approach was only adopted for administrative usage. In Europe, the PMO function resembles a personal assistance function focused on organising meetings, rooms, etc. Therefore, the PMO has been positioned as reporting to the Project Manager (see Figure 4).

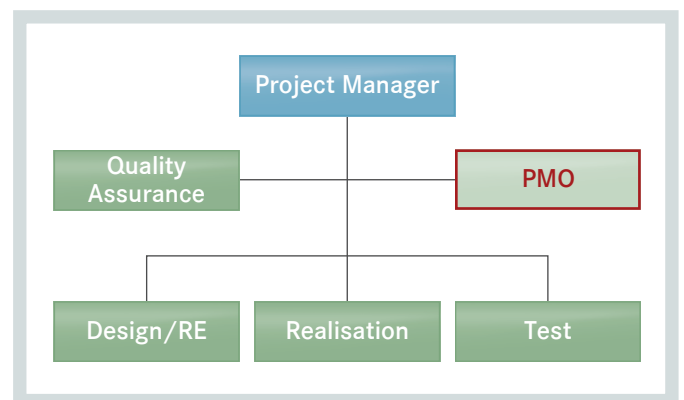


Figure 4: Basic set-up for a project with a PMO

Even in this 'European' set-up, benefits can be realised:

- PMO established as an organisational unit
- Raised awareness
- Some of the internal processes / reporting may be established

However, the disadvantages of this approach limit the PMO to the extent that it is unable to provide any further added value (i.a. costs, efficiency, and effectiveness).

5. Standard PMO as of Today

The full scope of a PMO as specified in the definition comprises:

- Support planning
- Support of project controlling
- Support of project reporting
- Ensuring reporting to the relevant stakeholders
- Escalation to and coordination with the upper management level
- Review and controlling of the Stakeholder Management
- Portfolio management of related projects
- Support of Resource Management
- Support of project management
- Support of issue and action item management
- Support of process maturity

The reporting line runs from the projects to the PMO (see Figure 5).

The above-mentioned tasks and this type of organisational structure do support projects within a portfolio and / or a programme as well as a standing organisation. The set-up allows leveraging of standard processes in Project Management, such as stakeholder management, reporting, controlling, planning, and resource management.

This standard PMO approach ensures an effective way to run a PMO. Moreover, it supports the minimum level of maturity for basic project management functions like i.a. reporting and planning.

The advantages of this approach are the following:

- Enhanced quality of project management deliverables
- Reduced project risks due to standardised reporting (KPIs)
- Increased efficiency
- Increased effectiveness
- Reduction of redundancies (1 PMO for several projects)
- Common services provided to different projects
- Standardised project management deliverables
- Standardised internal processes and procedures

The preconditions for this set-up clearly are:

- Authority for PMO required
- PMO process framework to be established
- Roles and responsibilities for PMO required

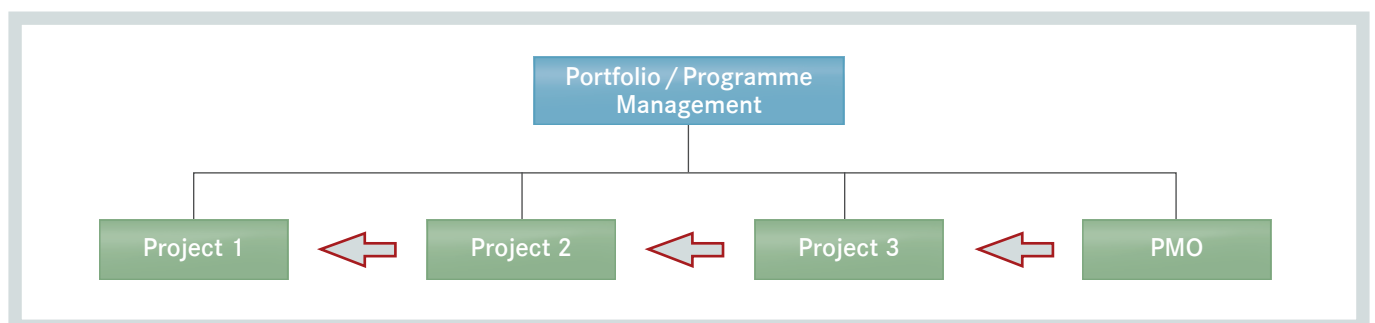


Figure 5: Organisational set-up supported by a PMO

6. Extended PMO

Once a standard PMO for projects has been established, the latter can be standardised more and more. Maturity models like CMMI based on PMBOK or PRINCE2 require the projects' compliance in all aspects. This is just one of the tasks normally assigned to Project Managers.

In order to support the Project Managers, the PMO is assigned the ensurance of compliance. Therefore, the PMO's responsibilities have to be extended (see Figure 6).

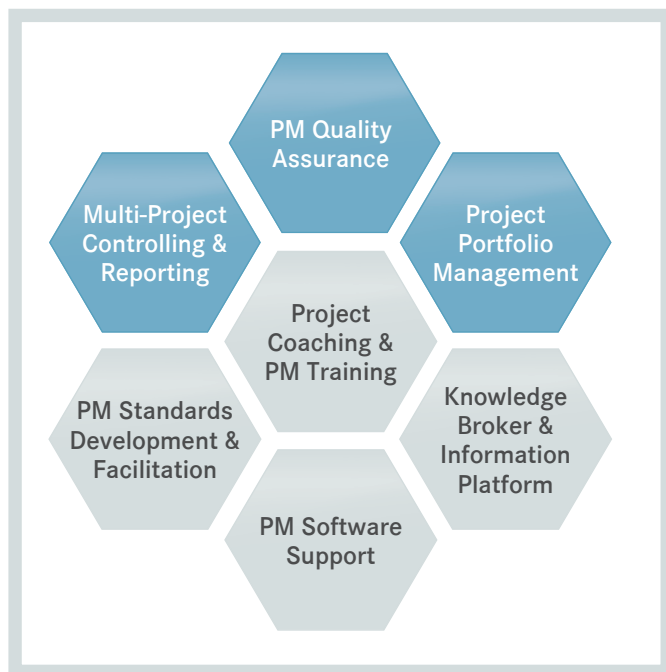


Figure 6: Extended responsibilities of a PMO

The following core activities have to be ensured by the PMO:

- Multi-Project Controlling & Reporting according to defined internal standards (incl. CAPEX and bookkeeping)
- PM Quality Assurance, i.e. planning for quality assurance and testing
- Project Portfolio Management

The supporting activities are as follows:

- PM Standards Development & Facilitation: PMO provides input to develop internal PM standards and provides all PM tools required
- Project Coaching & PM Training: PMO trains Project Managers and project members with regard to PM standards
- Project Portfolio Management: PMO ensures organisation- / portfolio-wide Knowledge Management and interdisciplinary exchange of lessons learned, news, etc.
- PM Software Support: PMO supports tools provided to the entire team

To establish this 'Extended PMO' approach, the following organisational structure is recommended (see Figure 7).

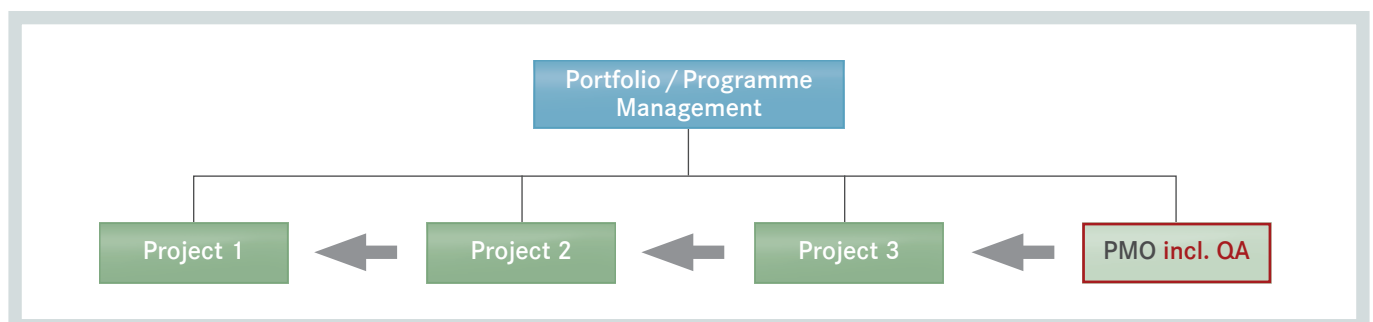


Figure 7: Organisational structure using an extended PMO

This approach enables the leverage of common resources like Quality Assurance and the PMO, ensures backup for Project Managers (they can be replaced by the PMO for a certain time), and establishes a common Project Management environment. In addition, Portfolio Management may also be included.

This extended PMO approach is perfectly suited to establish the institutionalisation of project maturity through PMOs. The advantages of this approach are as follows:

- Significant increase in quality of all project deliverables due to overall Project and Quality Management planning
- Reduced redundant functions (1 PMO / 1 Quality Manager for all projects)
- Knowledge Management enabled
- Interfaces within the organisation documented and communicated

- Reduced project risks due to standardised QA and PM reporting (KPIs)
- Standardised Stakeholder Management
- Increased efficiency
- Increased effectiveness
- Common services and resources provided to different projects
- Extended standardised project management deliverables
- Extended standardised internal processes / procedures
- Introduction and institutionalisation of capability maturity level models supported

A disadvantage of this approach is the following:

- Introduction of standard PMO required

7. State-of-the-Art PMO

The tendency to leverage a PMO to the greatest possible extent is constantly rising. In order to understand this approach, it

may help to take a look at project life cycles, in this case based on the example of a waterfall model (see Figure 8).

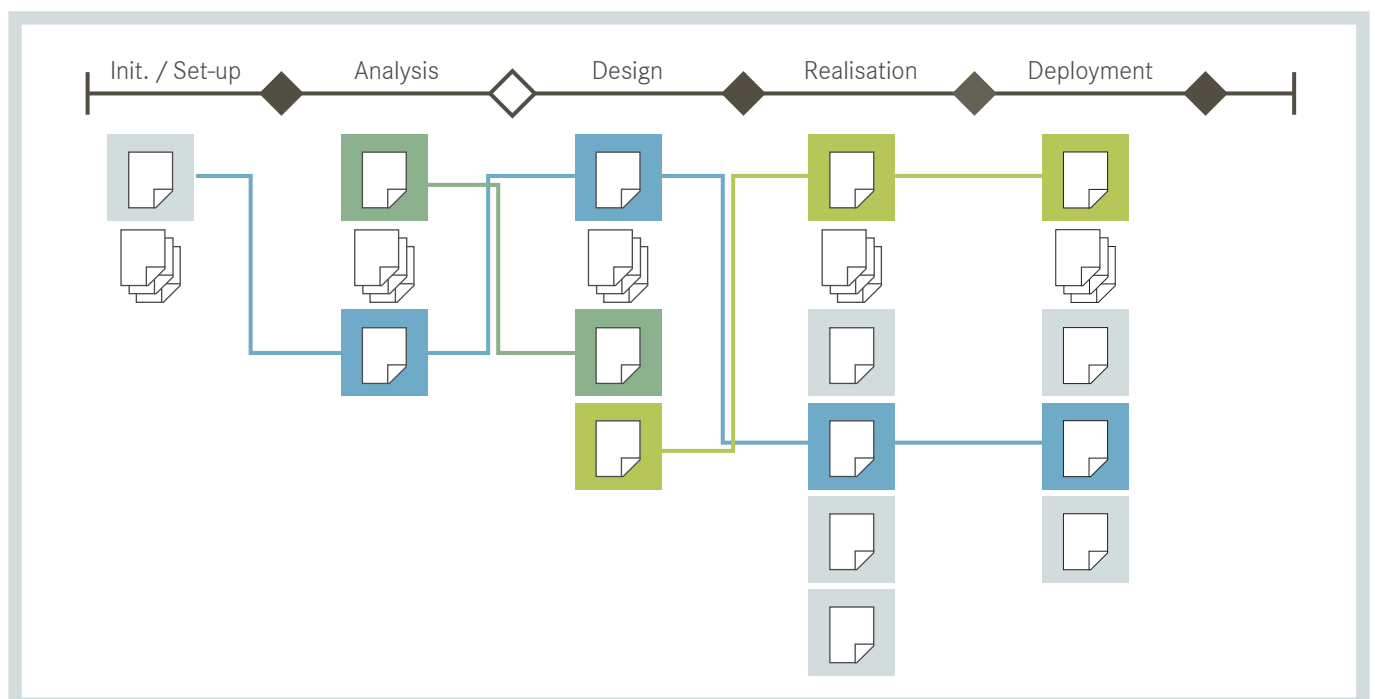


Figure 8: Deliverables in a project

During a project life cycle (irrespective of which project approach is being followed), project deliverables are established by different roles for different project sequences (see Figure 9).

These (intermediate) project deliverables are not within the scope of the PMO.

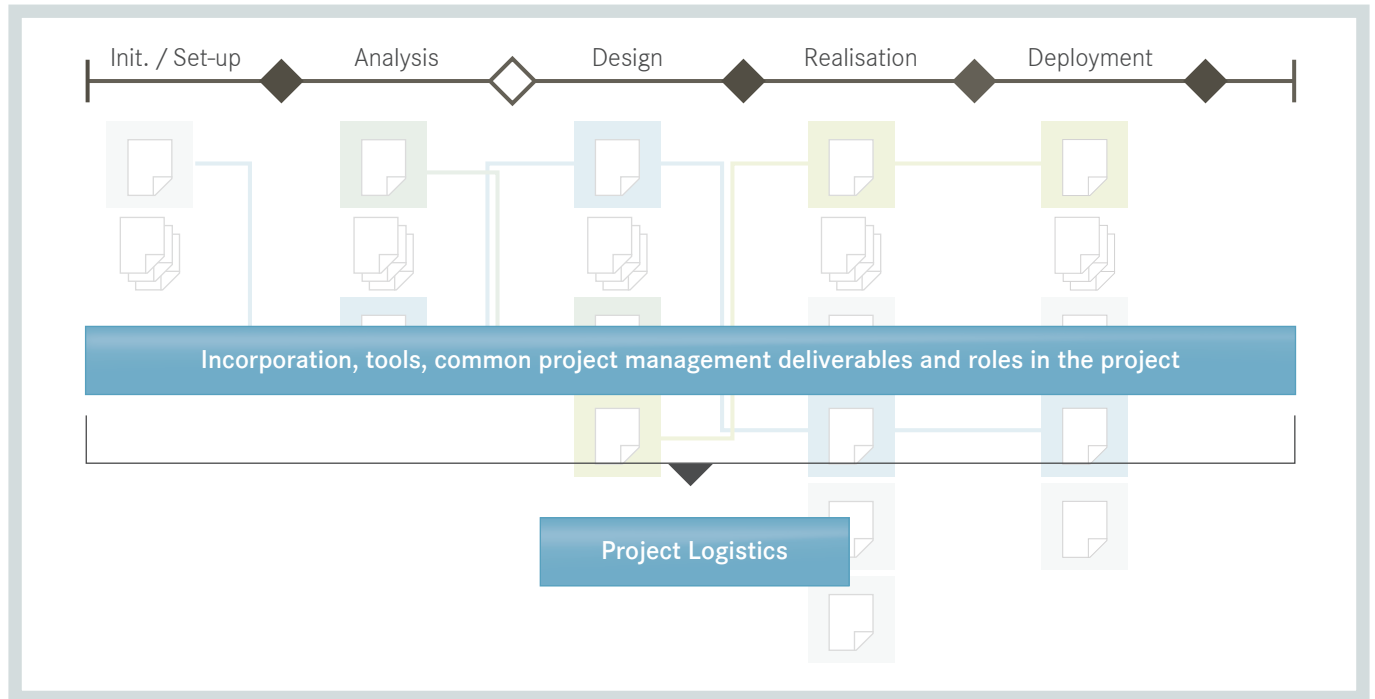


Figure 9: PMO as logistic layer for the projects

Some of the project management deliverables and some of the project roles persist over the entire project life cycle. Therefore, it is strongly recommended to evaluate these persistent roles and project management deliverables, and to hand them over to the PMO.

Within a project portfolio, the different projects usually are at different stages in their life cycles. For this reason, resources like the PMO, Quality Assurance, and also Requirements and Test Management, are used at different levels and to varying degrees. Instead of allocating those resources independently to each project (and having them 'sitting on the bench' for some time during a project phase), centralisation of those resources ensures maximum of productivity for each project and for the entire portfolio with regard to those resources. This kind of pooling for common resources within the portfolio (see Figure 10) has a number of role candidates:

- PMO
- Quality Manager
- Requirements Manager
- Test Manager
- Tester

Depending on the project scope (e.g. one holistic scope for an entire portfolio), the following roles may also be formally attached to the PMO:

- Architecture (i.a. system, data, and network)
- Business Project Manager
- Any other common role

Including Requirements and Test Management in the scope has additional advantages. Well-defined requirements result directly in improved test cases; consequently, sharing one resource for

both process areas is not only possible but – depending on the maturity of the individuals and / or internal processes – also feasible.

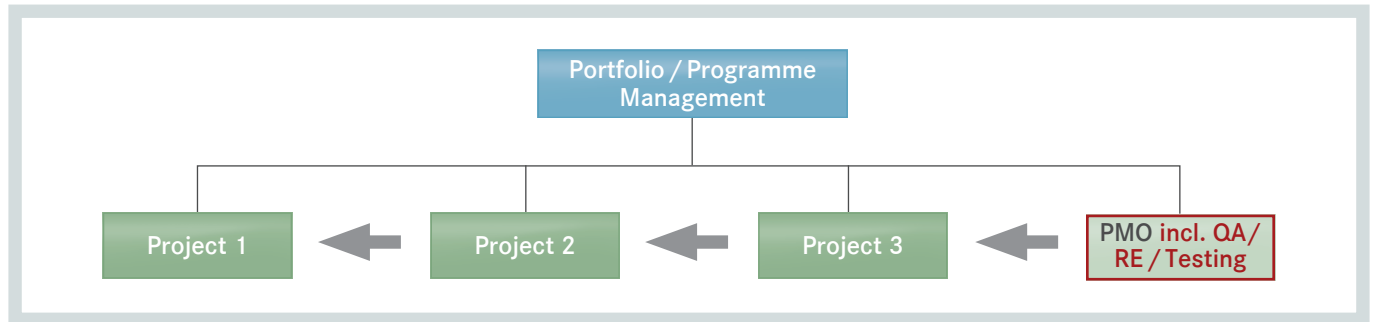


Figure 10: Organisational structure of projects using a state-of-the-art PMO approach

This approach also requires an advanced technical maturity, for instance involving the use of common planning and reporting platforms (e.g. MS Project Server or equivalent, repositories), since the assignment and confirmation of resources for the projects must be transparent. The basis for this approach is provided by the extended PMO services.

The preconditions for this approach are as follows:

- Support of top management required (maturity level of Project Management needs to be raised to widen scope)
- Introduction of standard PMO required
- Technical skills of PMO staff to be trained

The state-of-the-art PMO has the following advantages:

- Significant increase in overall quality and overall scope, resource, project and quality management planning, including testing and deployment (depending on scope)
- Significant reduction of redundancies (Requirements Management and Test Management may be merged)
- Knowledge Management fostered due to regular exchanges with Project Managers and different roles within the PMO
- Reduced project risks due to standardised KPIs from Requirements to Testing
- Defined, established and communicated escalation paths
- Portfolio Management included 'for free'
- Project Manager is no success factor any more (eliminated 'hero' effect)

8. Conclusion and Outlook

Having well-trained, certified Project Managers as well as a high-maturity-level Project Management at its disposal will help any enterprise succeed. But the greatest benefit an organisation may profit from is a state-of-the-art PMO.

The introduction of a PMO has a significant impact on a project-management-based organisation or organisational units with either large or numerous projects, i.a. with regard to the following:

- Increase in maturity of Project Management
- Increase in efficiency and effectiveness within projects
- Reduction of redundant tasks and roles
- Reduction of training effort
- Pooling of resources enabled
- Reduction of risks due to the larger interaction between projects
- Reduction of defects in production due to larger portfolios and EED due to larger testing scope (within a portfolio rather than project by project)
- Increase in transparency due to standardised KPIs
- Increase in tools integrated into project organisation
- Reduction of time-to-market
- Interdisciplinary Knowledge Management (knowledge brokerage)

The reduction of the Project Management overhead (Vaughan, 2009) from the international benchmark of around 16% of the project budget down to 8% within large projects is another reason to establish state-of-the-art PMOs within the organisation. A PMO cannot replace a Project Manager, but PMOs can support project-oriented organisations at different levels and across project boundaries.

Introducing a state-of-the-art PMO requires specific know-how, and this missing know-how is the main reason why PMOs have not yet been implemented on a large scale. As there is no common approach to learning or any training for such a high-level PMO, allocating the required resources is a critical issue. But once this know-how is available it is an excellent business opportunity with a considerable leverage factor.

Under the holistic approach of Quality Assurance, SQS provides PMO services. On the basis of an innovation group, the definition, the training, and the rollout of this service is ensured. The prime client for such a PMO has been SQS itself: the first of these PMOs was successfully established within the software department of SQS AG. With the experience gained, the defined services, and the training of the specific resources, SQS is in a position to provide a consistent QA from the health check of an organisation over the start of a project (portfolio) and collaboration in projects right up to the testing of the final products – irrespective of the approach the customer has chosen (whether it be Waterfall, Agile, or another).

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