Project management maturity and excellence models: Stirring in the fruit bowl [1]

Henny Portman

Why maturity models or excellence models?

The success rate of projects is still very low. If I look at the latest figures from the Standish Group (*CHAOS 2020 – Beyond infinity*)[2] 60% or more, depending on your approach (agile or waterfall) is not successful. This is already for several decades the case!

To improve the way you are running projects, there are several paths to follow. You could look at the way your organization is doing projects. Or with other words how mature is your organization in doing projects? Some well-known maturity models are CMMI, OPM3, and P3M3. Another approach is to look at individual projects and ask how well this project was performed? Think about all those yearly contests that are running. E.g., the IPMA Global Project Excellence Awards[3], the PMO Global Awards[4], and the PMI Project Awards[5].

When you want to say something about maturity you have to look at the standards an organization has set and how they apply those standards to their projects. If one project is using the standards and another project uses a different or no standard this is a signal the organization isn't mature in project management. You could even go further and compare the results found with industry average figures by using the same maturity model to understand your strengths and weaknesses compared with competitors. I also used maturity models to compare different business units within the same organization to find spots for improvement in one business unit and used ways of working of a better performing business unit in the same area. In this case you don't need absolute figures, but relative ones will work too.

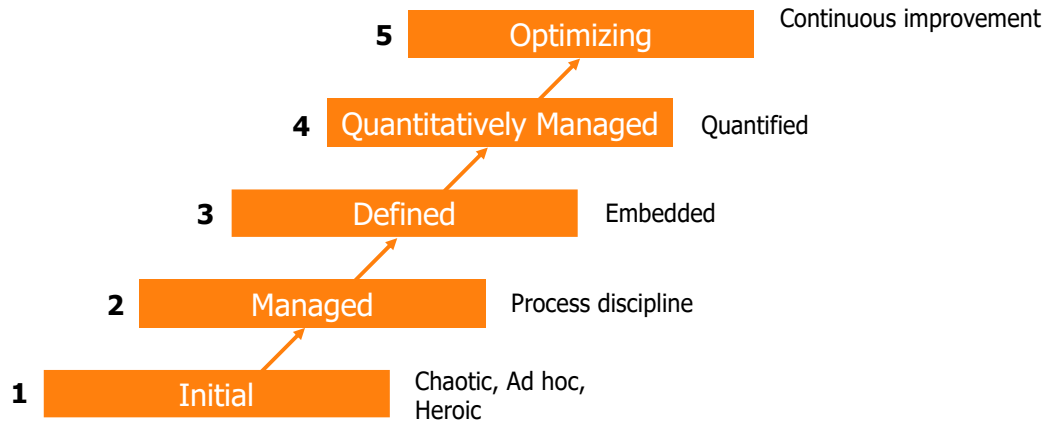
As an organization you could be less mature but still have an award-winning project. The award programmes are not maturity assessments!

Maturity levels

[1] How to cite this paper: Portman, H. (2022). Project management maturity and excellence models: Stirring in the fruit bowl; *PM World Journal*, Vol. XI, Issue II, February.
[2] https://www.standishgroup.com
[3] https://www.ipma.world/projects/project-excellence-awards/
[4] https://www.pmoga.world/awards
[5] https://www.pmi.org/about/awards/professional

Most maturity models use a scale to represent the (current or desirable) maturity level and are in line with 5 levels of Capability Maturity Model Integrated[6] (CMMI) as developed by the Carnegie Mellon University.
These maturity levels are:

- Level 1 – Initial: processes are unpredictable, poorly controlled and reactive.
- Level 2 – Managed: Processes are characterized for projects and is often reactive.
- Level 3 – Defined: Processes are characterized for the organization and is proactive. Projects tailor their processes from organization's standards.
- Level 4 – Qualitatively managed: Processes are measured and controlled.
- Level 5 – Optimizing: The focus is on process improvement.

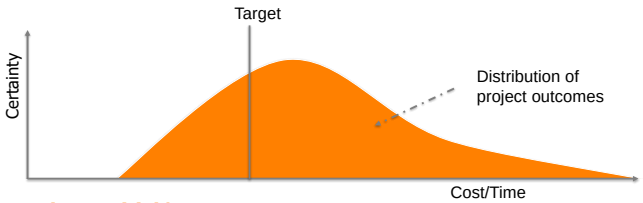


Besides these five numeric levels we see other ways to represent the different levels. E.g., AgilityHealth uses pre-crawl, crawl, walk, run and fly or SAFe uses sit, crawl, walk, run and fly to visualise the levels 1 to 5. There are also maturity models that use more than 5 levels (e.g., the UX maturity model[7]: 1) Unrecognized 2) Interested 3) Invested 4) Committed 5) Engaged 6) Embedded).

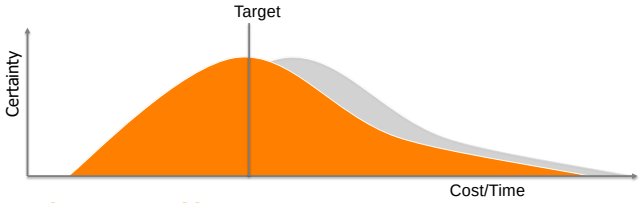
When asking people to score their own maturity level, it's important to understand the Dunning-Kruger effect[8]. The Dunning-Kruger effect means that people tend to assess their ability as greater than what it really is. This means that dimensions or perspectives that seem unnaturally high might also require additional investigations.

These maturity levels are a measure of an organization's ability to deliver repeatable results – the higher up the curve the more predictable the outcome. In figure 1 we see the distribution of the project outcome by plotting the cost/time and certainty.

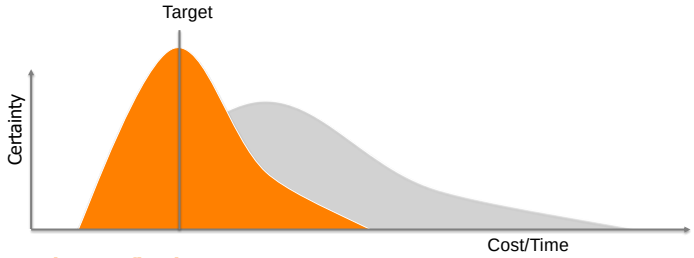
[6] https://www.sei.cmu.edu
[7] https://uxpamagazine.org/creating-and-implementing-a-scorecard-system-to-increase-organizational-user-experience-maturity/
[8] https://en.wikipedia.org/wiki/Dunning–Kruger_effect



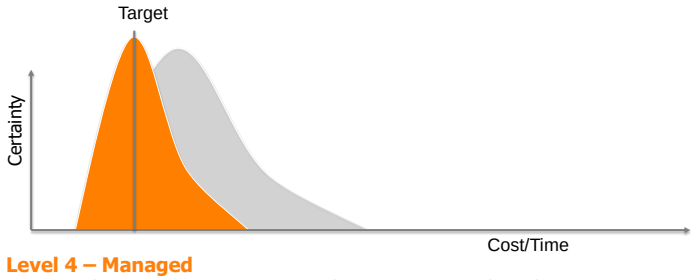
Level 1 – Initial/ Awereness
Chaotic, Ad hoc, Heroic. The starting point for use of a new process



Level 2 – Repeatable
Process discipline. The process is used repeatedly



Level 3 – Defined
Embedded. The process is defined/confirmed as a standard business process



Level 4 – Managed
Quantified. Process management and measurement takes place

Level 5 – Optimising
Continuous improvement

Figure 1 Maturity levels (Based on material Carnegie Mellon University)

Overview

The available maturity models can be divided according to the requested scope of the maturity assessment. This could be at organization, portfolio, programme, project, PMO, agile team level or even a specific perspective (e.g., risk, purchase, …) used within the same levels. There are maturity models specifically designed to be used when using a specific framework or model (e.g., PRINCE2 or SAFe).

In figure 2 – Steering in the fruit bowl of maturity and excellence models, I summarize different models. Have you ever seen a rotten peer or apple? Have you ever asked what's behind a green status indicator and compare that with a watermelon (green from the outside, red inside)? What does that mean for the maturity of the fruit, or with other words the health of the project, the maturity of the organization?

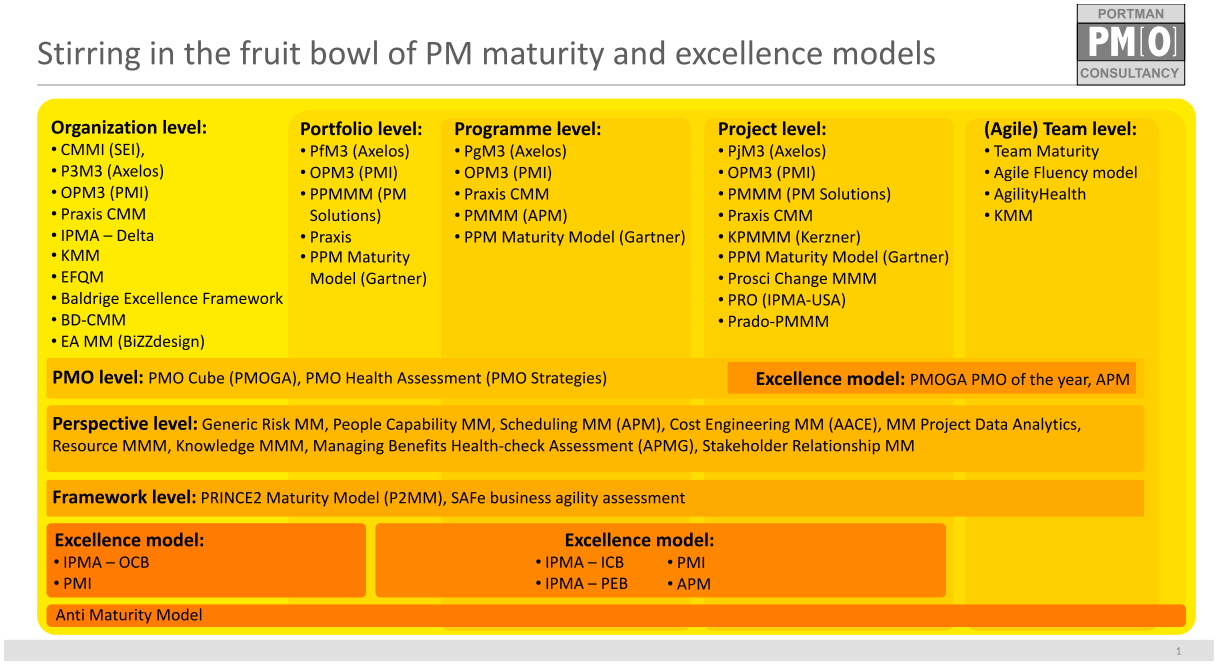


Figure 2 Stirring in the fruit bowl of project management maturity and excellence models

At this moment I am aware of the following maturity models.

- Organization level: CMMI (SEI), P3M3 (Axelos), OPM3 (PMI), Praxis maturity model, IPMA-Delta, KMM, EFQM, Baldrige Excellence model, BD-CMM, EA MM, Prado-PM maturity model
- Portfolio level: PfM3 (Axelos), OPM3 (PMI), PMMM (PM Solutions), PPM Maturity Model (Gartner)
- Programme level: PgM3 (Axelos), OPM3 (PMI), Praxis CMM, PMMM (APM), PPM Maturity Model (Gartner)
- Project level: PjM3 (Axelos), OPM3 (PMI), PMMM (PM Solutions), KPMMM (Kerzner), PPM Maturity Model (Gartner), Prosci Change MMM, PRO (IPMA-USA)

- (Agile) team level: Team Maturity, Agile Fluency model, KMM
- PMO Level: PMO Cube (PMO Value Ring from PMO Global Alliance), PMO Health check (PMO Strategies)
- Perspective level: GRMM, People Capability Maturity Model (PCMM), Scheduling Maturity Model
- Framework level: SAFe business agility assessment, P2M2 (PRINCE2 Maturity Model: terminated).

Of course, there will be more maturity models. E.g., models outside the area of portfolio, programme or project management. To mention a few but these are outside the scope of this article:

- ITIL Maturity Model[9] (Axelos)
- Software Assurance Maturity Model[10] (SAMM)
- Security & Privacy Capability Maturity Model[11] (SP-CMM)

Awards and underlaying excellence models are at an individual organization, project, project manager or PMO level:

- Organization: OCB (IPMA), PMI
- Project: PEB (IPMA), ICB (IPMA), PMI, APM
- PMO: PMO of the year (PMO Global Alliance), APM

Organization maturity models

Portfolio, Programme, Project Management Maturity Model (P3M3)[12] is a maturity model that measures an organization's capability with regards to its portfolio, programme and project management practices. This measurement is expressed as a 'maturity level' that indicates an organization's current capability in these practices.
An organization's maturity is a measure of its ability to implement continuous improvement, and a maturity model, like P3M3, is a management tool that can be used to diagnose root causes, assess current capability, and demonstrate improvement. It also acts as a roadmap to achieving performance targets. P3M3 can be used independently of your chosen project, programme or portfolio management method or framework.

P3M3 is broken down into three models, reflecting portfolio (PfM3), Programme (PgM3) and Project (PjM3) Management.

[9] https://www.axelos.com/about-axelos/news/axelos-with-new-itil-maturity-model
[10] https://owaspsamm.org/model/
[11] https://www.securecontrolsframework.com/sp-cmm
[12] https://www.axelos.com/for-organizations/p3m3

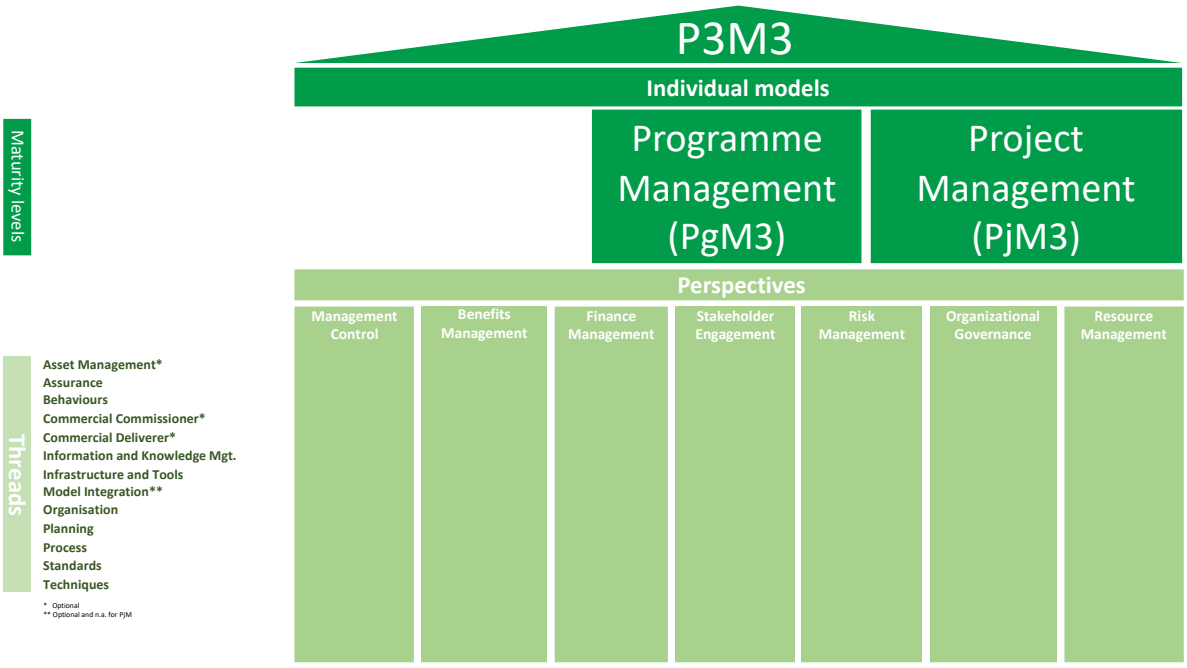


Figure 3 P3M3 model

There are seven perspectives applicable within each of the models:

- *Organizational Governance*: Why we want to do what projects / programmes / portfolios
- *Management Control*: Verifying that projects / programmes / portfolios progress as planned and within their authority
- *Benefits Management*: Ensuring / proving our projects / programmes / portfolios are/were worthwhile doing in the eyes of the stakeholders
- *Financial Management*: Getting and managing the money to do it
- *Stakeholder Management*: Involving those who care and those who need to care
- *Risk Management*: Managing uncertainty
- *Resource Management*: Making sure we have the capacity to deliver.

P4M3[13] is a proposal from myself to change the P3M3 model to incorporate the agile way of working by adding a new model (Permanent agile team), a new perspective (agility) and a new thread (product).

[13] https://hennyportman.wordpress.com/2018/08/27/the-p3m3-maturity-model-with-an-agile-extension-p4m3/

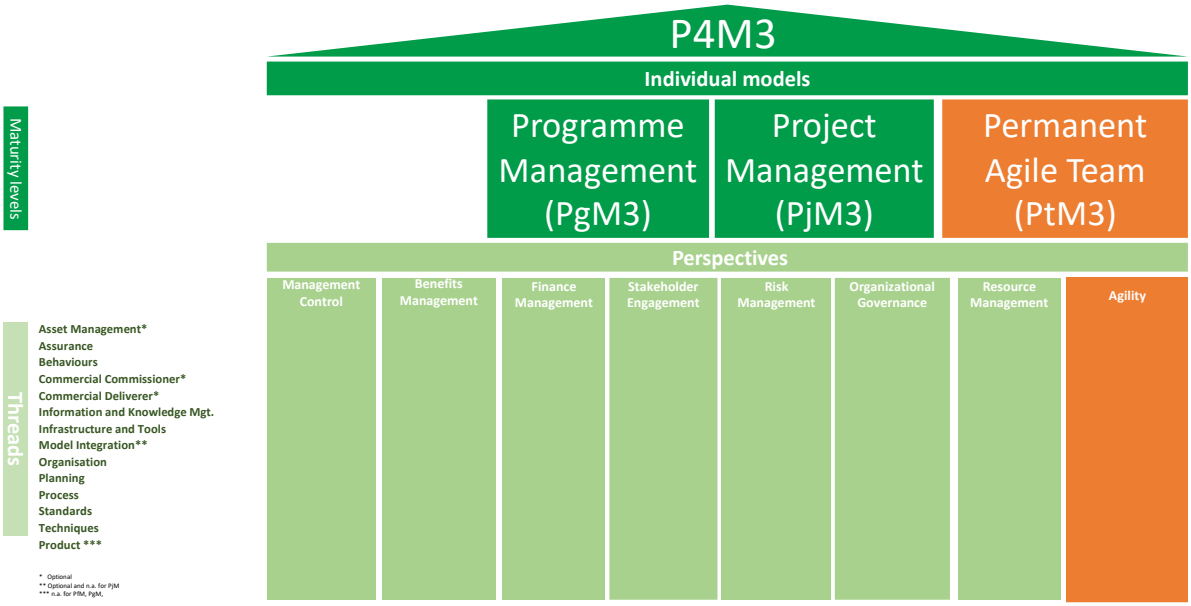


Figure 4 P4M3 model

The **Organizational Project Management Maturity Model** (OPM3) is a PMI standard for assessing and developing maturity in Organizational Project Management (OPM). F. John Schlichter III wrote in his Letter to the editor[14] of PMWJ among other things, "*The OPM3 Capability Statements, Outcome Statements, and KPI's are not currently available to new users because PMI wrote off the expense of packaging that IP in a failed PMI software product named ProductSuite, and retirement of PMI's ProductSuite confused the separate issue of OPM3's legacy. These decisions (including how to release the IP going forward) are under review by PMI's new CEO Sunil Prashara, with whom I have been discussing the matter for some time, looking forward to the PMI4.0 strategic plan.*"

This means that the future of OPM3 is still unclear. In the figure I summarized OPM3 with the domains, organizational enablers, best practices, and capabilities.

[14] https://pmworldlibrary.net/wp-content/uploads/2020/11/pmwj99-Nov2020-Schlichter-on-organizational-pm-maturity-Letter-to-Editor10.pdf

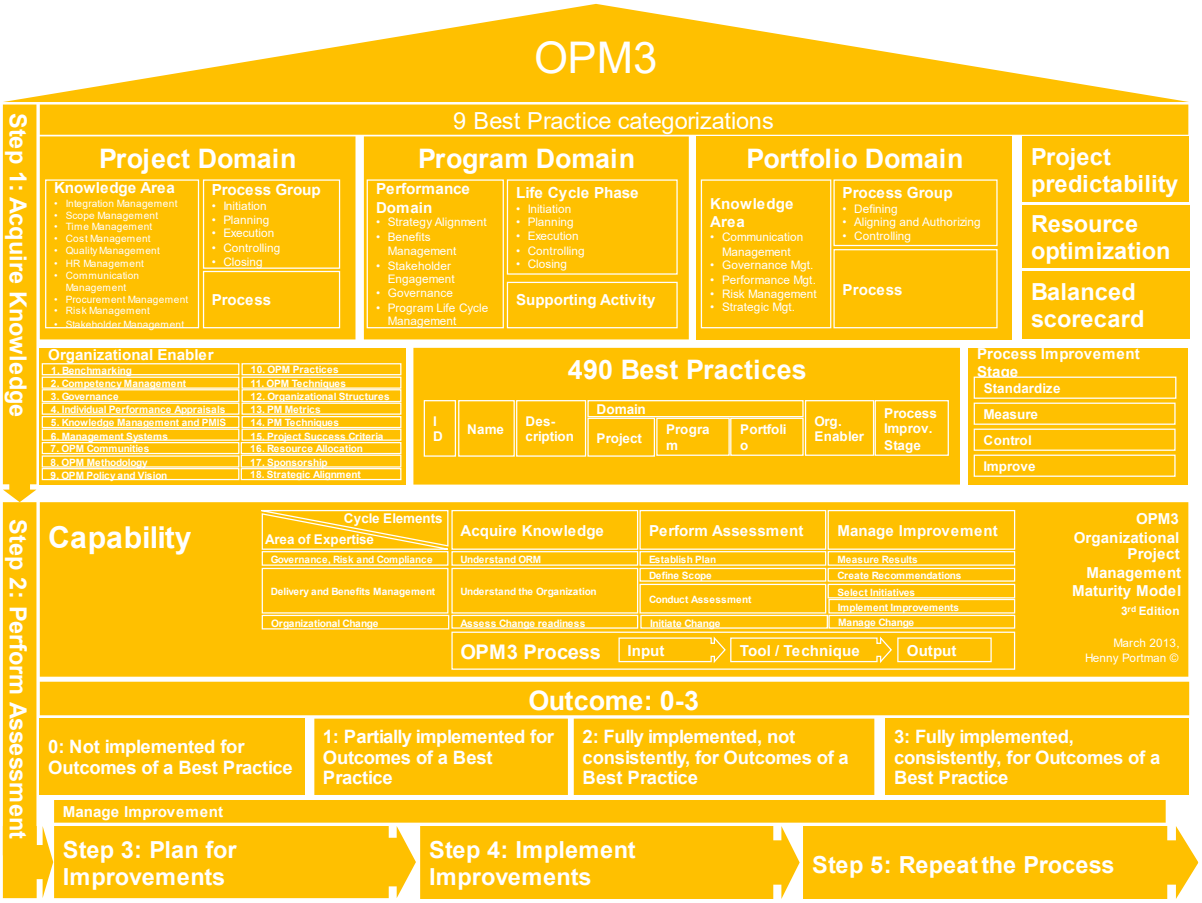


Figure 5 OPM3 overview

The **IPMA Organisational Competence Baseline**[15] (OCB) offers insights for all interested in understanding how to improve the way projects, programmes and portfolios are managed in an organization.

The IPMA OCB provides a standard for organizations to analyse their context, to identify relevant trends and to develop their strategies, processes, structures, cultures and project, programme and portfolio competences.

The IPMA OCB describes five groups of organisational competence:

- Project, programme and portfolio governance
- Project, programme and portfolio management
- Project, programme and portfolio alignment
- Project, programme and portfolio resources
- Project, programme and portfolio people's competences

Each competence is divided into three or four competence elements.

[15] https://shop.ipma.world/shop/ipma-standards/e-books-ipma-standards/organisational-competence-baseline-for-developing-competence-in-managing-by-projects-ebook/?v=796834e7a283

The IPMA OCB is one of the three standards used as reference models during the IPMA Delta maturity assessment: the IPMA Individual Competence Baseline (IPMA ICB) to assess selected individuals, the IPMA Project Excellence Baseline (IPMA PEB) to assess selected projects and/or programmes, and the IPMA Organisational Competence Baseline (IPMA OCB).

IPMA Delta uses the concept of competence classes to help assess the current project management state of an organization. IPMA Delta follows a similar approach as other assessment systems like CMMI (initial, defined, standardized, managed, optimizing).

As a result, the assessment report shows the class of competence for each IPMA OCB competence cluster. The actual class and the difference ("Delta") to the desired competence class, combined with detailed findings, can be used to derive development needs and a long-term strategy for organizational development of project, programmes and portfolios.

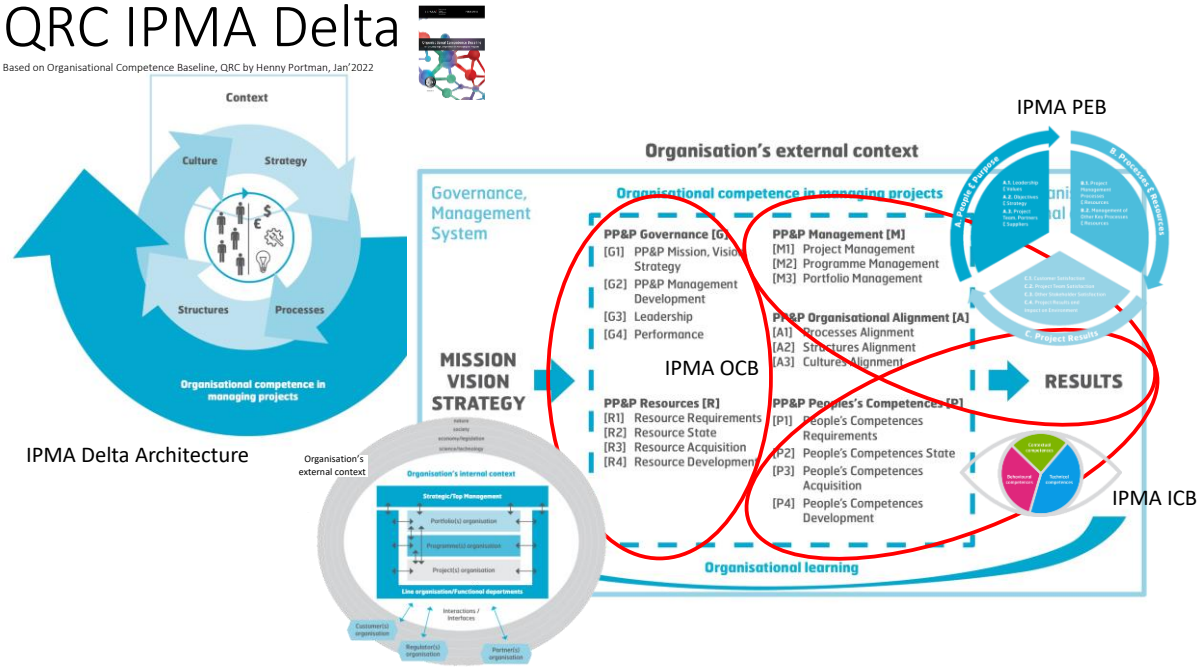


Figure 6 IPMA Delta

The EFQM Model[16], a globally recognized framework that supports organizations in managing change and improving performance, has experienced several improvement cycles over the years to make sure that it not only remains relevant but continues to set the management agenda for any organization wanting a long term, sustainable future.

[16] https://www.nen.nl/media/wysiwyg/EFQM_MODEL_English_Free.pdf

Figure 7 EFQM model

The **Baldrige Excellence Framework**[17] is all about helping you innovate and improve. The Baldrige Excellence Framework features a focus on organizational resilience, innovation, diversity, equity, and inclusion, digitization and the fourth industrial revolution.

Figure 8 Baldrige Excellence Framework

[17] https://www.nist.gov/baldrige/publications/baldrige-excellence-framework

The underpinning principle of Praxis is that portfolio, programme and project management comprise a broad set of components that are assembled and tailored to suit the context of each unique piece of work. The **Praxis Capability Maturity Model**[18] aims to be flexible enough to be adaptable to different contexts while being consistent enough to allow comparison between different organizations. The Praxis maturity model adapts the principles of the CMMI model by applying separate measures for capability Scope management, schedule management, financial management, risk management, change management, resource management) and maturity.

Figure 9 Praxis CMM

The **Capability Maturity Model for Business Development**[19] (BD-CMM) codifies established industry best practices in Business Development into a framework that supports maturity growth through well defined, proven growth paths. It is an essential part of winning business.

[18] https://www.praxisframework.org/en/maturity
[19] https://www.shipleywins.com/bwi-business-winning-institute/bwi-about-bdcmm/

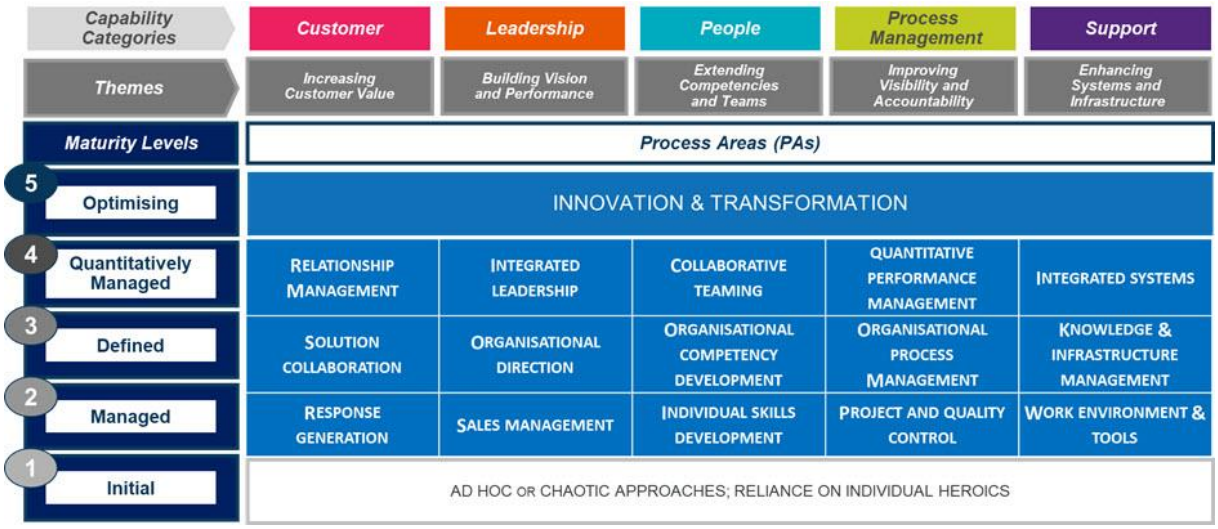


Figure 10 BD-CMM

The **Enterprise Architecture maturity model** (EA MM)[20] from BiZZdesign is a capability maturity model against which an organization's enterprise architecture practices are measured in order to determine how well-established the EA function is. The model focuses on three key connected aspects of Business and IT Transformation, each comprising several process areas: IT Governance (Plan & Organize, Acquire & Implement, Deliver & Support, Monitor & Evaluate), Portfolio Management (Management Control, Benefits Management, Financial Management, Risk Management) and Enterprise Architecture (Business Linkage, Senior Management Involvement, Investment & Procurement, Analysis & Design). The model has five levels: level 1 – initial, level 2 – project support, level 3 – decision making, level 4 – collaboration & optimization and level 5 – strategy acceleration.

[20] https://bizzdesign.com/blog/assessing-and-improving-your-change-capabilities-with-the-bizzdesign-maturity-model/

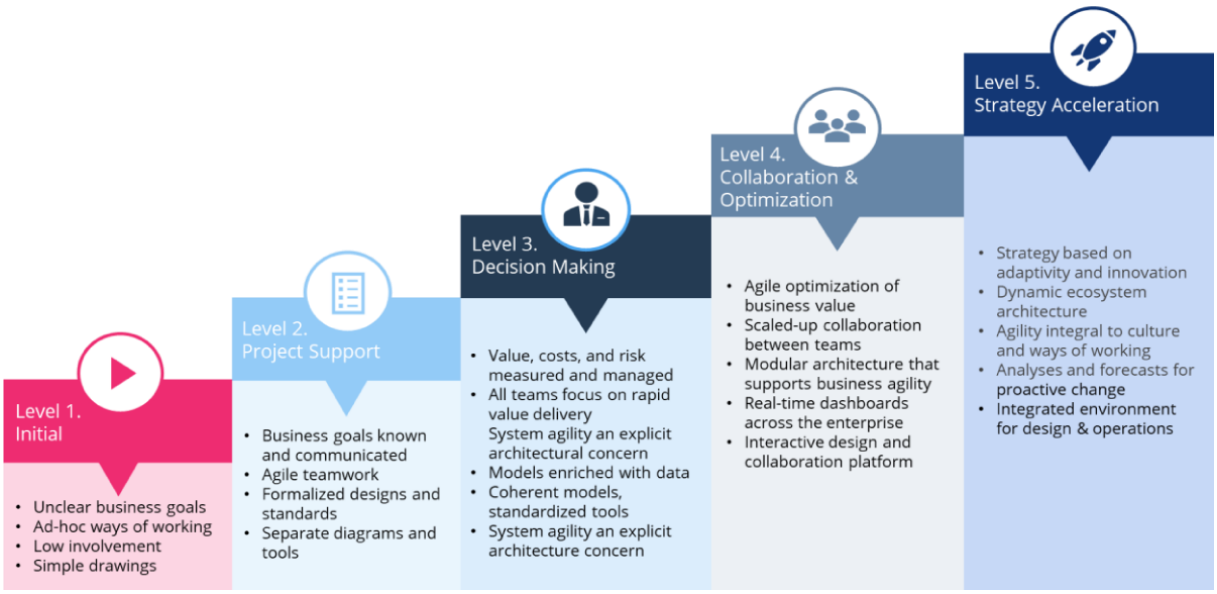


Figure 11 Enterprise Architecture Maturity Model

Project management maturity models

The Project Management Maturity Model (PMMM) was first published in book form in 2002 and released in its fourth edition in 2021, the PMMM[21] provides a logical path for progressive development and a strategic plan for advancing project management improvement within the organization. The PMMM follows the Software Engineering Institute's (SEI) Capability Maturity Model's (CMM®) five evolutionary maturity levels and examines maturity development across ten knowledge areas in the Project Management Institute's (PMI®) A Guide to the Project Management Body of Knowledge (PMBOK® Guide). The PMMM integrates both industry-leading standards for project and process management, the PMBOK® Guide and CMM, respectively, to provide a comprehensive, straightforward, and easy-to-follow plan for advancing organizational project management maturity. It includes the **Project Portfolio Management Maturity Model (PPMMM).**

The Kerzner PM Maturity Assessment (KPMMM)[22] is named after Dr. Harold Kerzner, is closely aligned with the PMBOK® Guide, ranging from level 1 (common language) to level 5 (continuous improvement). It consists of a series of carefully designed questions on subject areas including common language, common processes, singular methodology, benchmarking and continuous improvement.

PPM Maturity Model (Gartner[23], Program and Portfolio Management Maturity Model). Gartner's Program and Portfolio Management Maturity model enables PPM leaders to identify shortcomings, determine priorities and establish goals for improving their organizations. This

[21] https://www.pmsolutions.com/resources/view/what-is-the-project-management-maturity-model
[22] Harold Kerzner, *Using the Project Management Maturity Model: Strategic Planning for Project Management*
[23] https://www.gartner.com/en

maturity model is intended to support program and portfolio activities enterprise wide. The model has six levels, ranging from zero (nonexistent) to five (fully mature).

The **Prosci Change Management Maturity Model**[24] presents five levels of organizational maturity in change management:

- Level 5: Organizational Competency
- Level 4: Organizational Standards
- Level 3: Multiple Projects
- Level 2: Isolated Projects
- Level 1: Absent or Ad hoc

As an organization moves up the levels in the Prosci Maturity Model, change management occurs on more projects and initiatives and in more parts of the organization. Employees participate in change management more broadly throughout the organization, and employees begin to internalize their role in making change successful based on their relationship to change. The organization takes steps to embed and integrate change management into more functions in the organization. Ultimately, projects and initiatives are more successful, evidenced in improved realization of benefits and achievement of desired outcomes.

The IPMA-USA **Performance Rated Organization**[25] (PRO) standard provides a benchmark for addressing organizational performance in project management. The PRO standard offers a set of observable performance criteria that, taken together, provide a complete picture of organizational competence in project management.

This standard is designed for executives who want to assess their organization against an objective, independent standard. The standard applies to large and small organizations, as well as to private, public, and not-for-profit entities. It is intended to be used a guide to decide where and how to invest in better project management for better business results.

PRO is based on the idea of threshold competence. Organizations do not have to be the very best in project management to deliver useful results to their stakeholders. Instead, the standard is built around the value provided by consistent, reliable performance.

The **Prado-PM Maturity Model**[26] (Prado-PMMM) was launched in December 2002 and reflects forty years of experience on the subject by Darci Prado within IBM and two large, Brazilian international consulting firms: INDG and FALCONI. The initial goal was to create a simple and easy to use model that provides reliable results. The model is based on 7 dimensions of maturity. The Prado-PMMM model should be applied to individual departments of an organization, such as engineering, information technology, product development, etc. So, it is a departmental

[24] https://www.prosci.com/resources/articles/using-the-prosci-maturity-model
[25] https://www.ipma-usa.org/standards/introducing-pro/get-the-published-pro-standard
[26] https://maturityresearch.com/en/prado-pmmm-model/

model and not an "organizational type model" in which the focus is on the organization as a whole.

In departments that the model is applied there usually exists a portfolio of projects whose content is renewed periodically (typically annually), and where we usually have a PMO (Project Management Office). The projects in this portfolio are usually linked to the mission of the department.

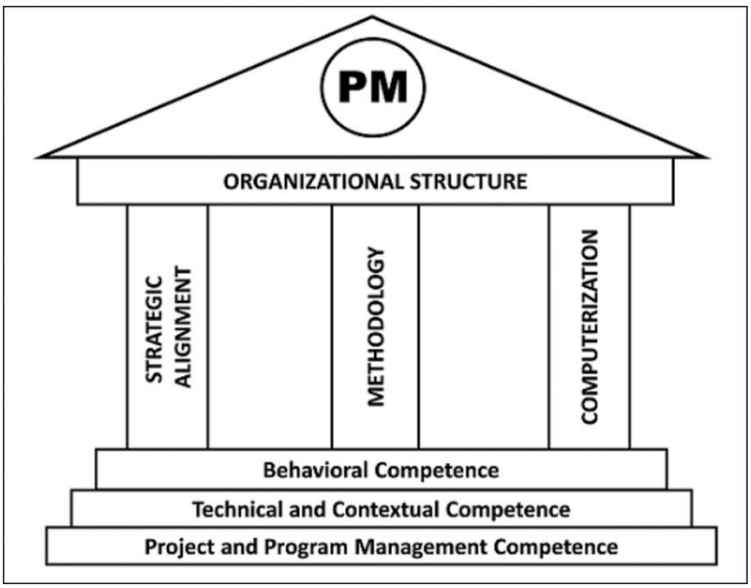


Figure 12 The Seven Dimensions of Maturity (PM Platform)

The **Programme Management Maturity model**[27] (PMMM) from APM examines programmes using ten key aspects of programme management and is linked to the programme management improvement process that provides a guide to improving maturity across these areas.

(Agile) team maturity models

Team Maturity[28], developed by David Shrimpton, describes four stages of culture and maturity, ranging from I'm alright Jack to negotiation & moderation, better off together and finally we win as a team.

[27] https://www.apm.org.uk/book-shop/models-to-improve-the-management-of-projects/
[28] https://medium.com/@davidshrimptonds/how-mature-is-your-team-version-2-0-d523ea5b78f

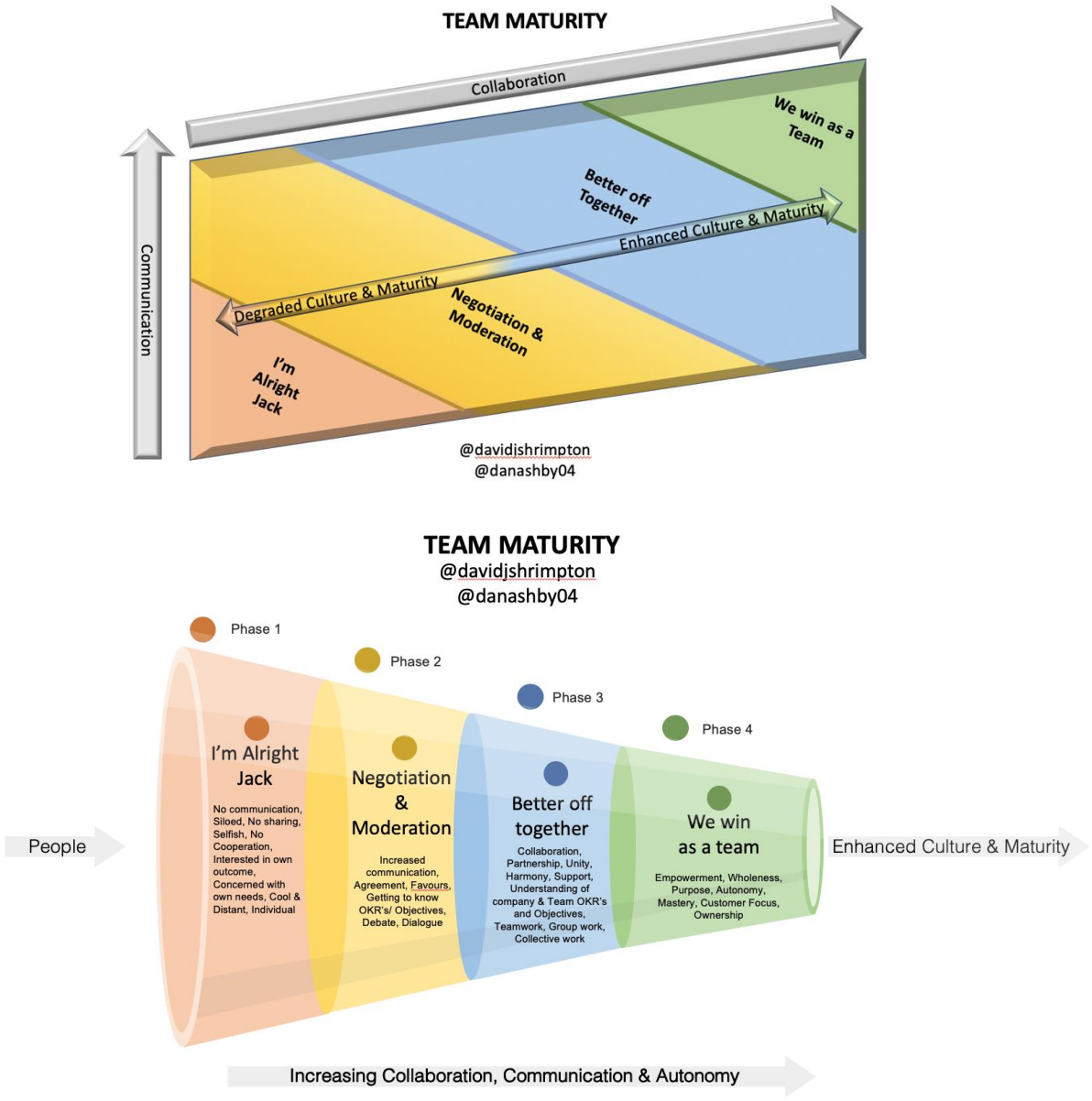


Figure 13 Team Maturity

The **Agile Fluency model**[29], developed by Diana Larsen and James Shore in 2012 and substantially updated in 2018, is a framework to help teams understand their current position and to help them develop an individual road map. Agile teams pass through four distinct zones of fluency as they learn (*fluency evolves)*. Diana Larsen defines fluency as things that you do automatically without thinking. Each zone brings specific benefits:

1. *Focusing* teams produce business value (agile fundamentals). The team thinks and plans in terms of the benefits their sponsors, customers, and users will see from their software.

[29] https://www.agilefluency.org

2. *Delivering* teams deliver on the market cadence (agile sustainability). The team can release their latest work, at minimal risk and cost, whenever the business desires.
3. *Optimizing* teams lead their market (innovative business agility, agile's promise). The team understands what their market wants, what your business needs, and how to meet those needs.
4. *Strengthening* teams make their organizations stronger (possible future of agile). The team understands its role in the larger organizational system and actively works to make that system more successful.

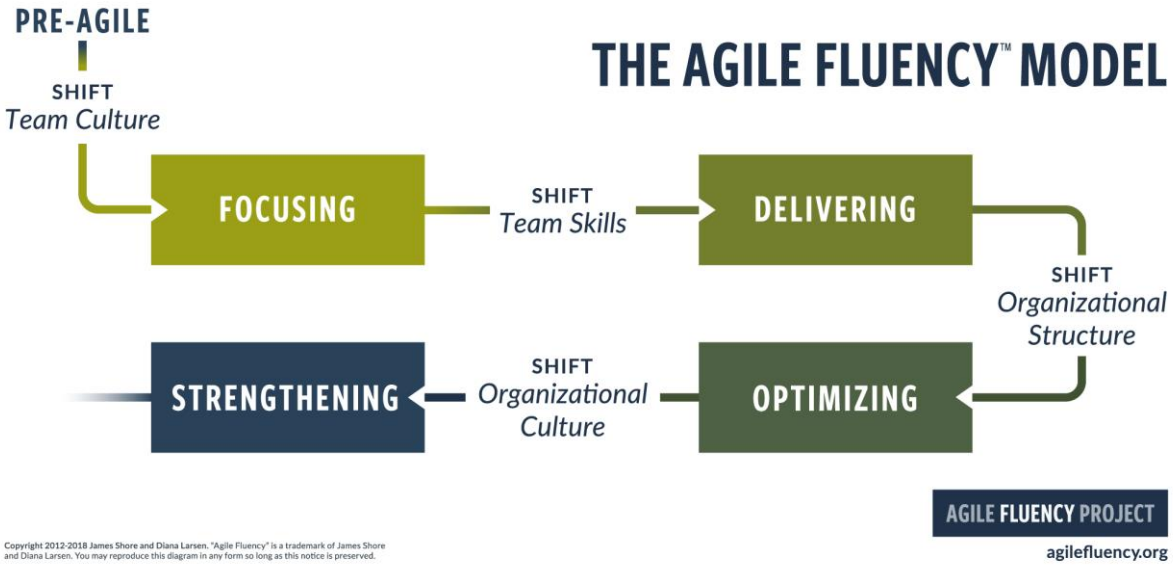


Figure 14 The Agile Fluency model

A team's fluency comes from the ability of team members to self-organize so that individual skills are applied to the right problems at the right times. A team is fluent in a zone when it's fluent in all of the zone's proficiencies, including predecessor zones.
The appropriate zone for your teams depends on your organization and can be different from team to team. It is not a ranking system but is about understanding and working towards the appropriate level of fluency for your needs at a particular point in time. *Delivering* or *Optimizing* are often the best targets but *Focusing* and *Strengthening* can also be good choices. Fluency is more a matter of habits than skills.

AgilityHealth[30] is a measurement and continuous improvement platform providing insights to the top six questions for accelerating the productivity of your teams. It offers radars for Portfolio / Enterprise, Program / Team of Teams, TeamHealth, and Role / Talent Development with scores ranging from pre-crawl, crawl, walk, run and fly.

[30] https://agilityhealthradar.com/

The **Kanban Maturity Model**[31], from David J Anderson School of Management, is a map to Organizational Agility, Resilience, and Reinvention. It uses a 6 scale: oblivious, team focused, customer-driven, fit-for-purpose, risk-hedged, market leader and built for survival. The categories are visualize, limit WIP, manage flow, make policies explicit, feedback loops and improve collaboratively, evolve experimentally. The KMM shows how to successfully deploy the Kanban Method to greatly improve the economic performance of your business. The Model provides coaches and transformation managers with a proven playbook and a roadmap to transform your entire enterprise through evolutionary change.

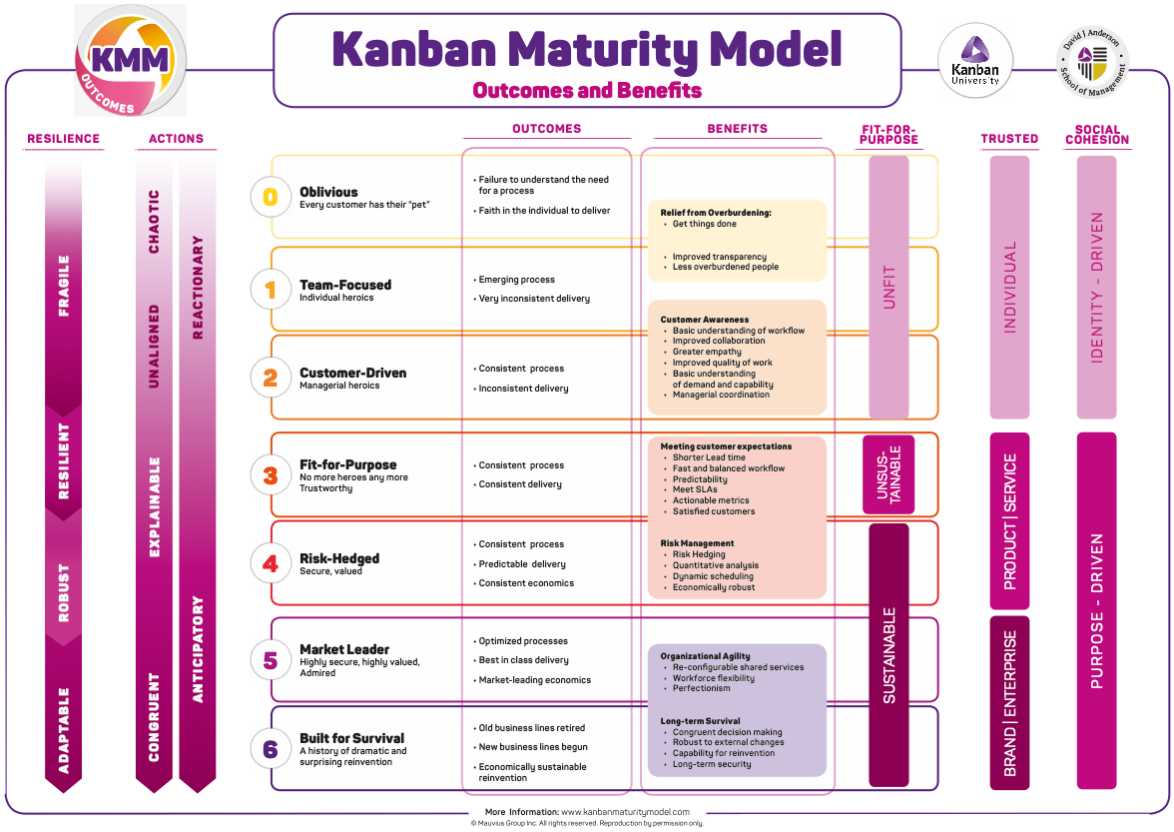


Figure 15 Kanban Maturity Model

PMO maturity models

The **PMO Maturity Cube**, a Project Management Office Maturity Model was developed by Américo Pinto, Marcelo F. De Matheus Cota, and Dr. Ginger Levin. Originally developed as a stand-alone model[32] but now integrated into the PMO Value Ring (PMO Global Alliance)[33]

Key ideas of the PMO Maturity Cube:

1. PMO maturity is a different concept of maturity
2. A PMO may be seen as a service provider and has clients with specific needs

[31] https://kmm.plus/en/
[32] PMOMaturityCubeEng
[33] https://www.pmoga.world/pmovr

3. The degree of maturity of a PMO results from the extent to which it is capable of generating value for its clients and for the organization as a whole
4. The maturity of a PMO may be summed up as being the degree of sophistication it provides to each service for which it is responsible
5. A PMO evolves its maturity in each approach independently, not from the operational to the strategic approach
6. The better the PMO delivers its services, and only the ones related to the needed functions, the more the PMO is perceived delivering value to its clients and the organization.

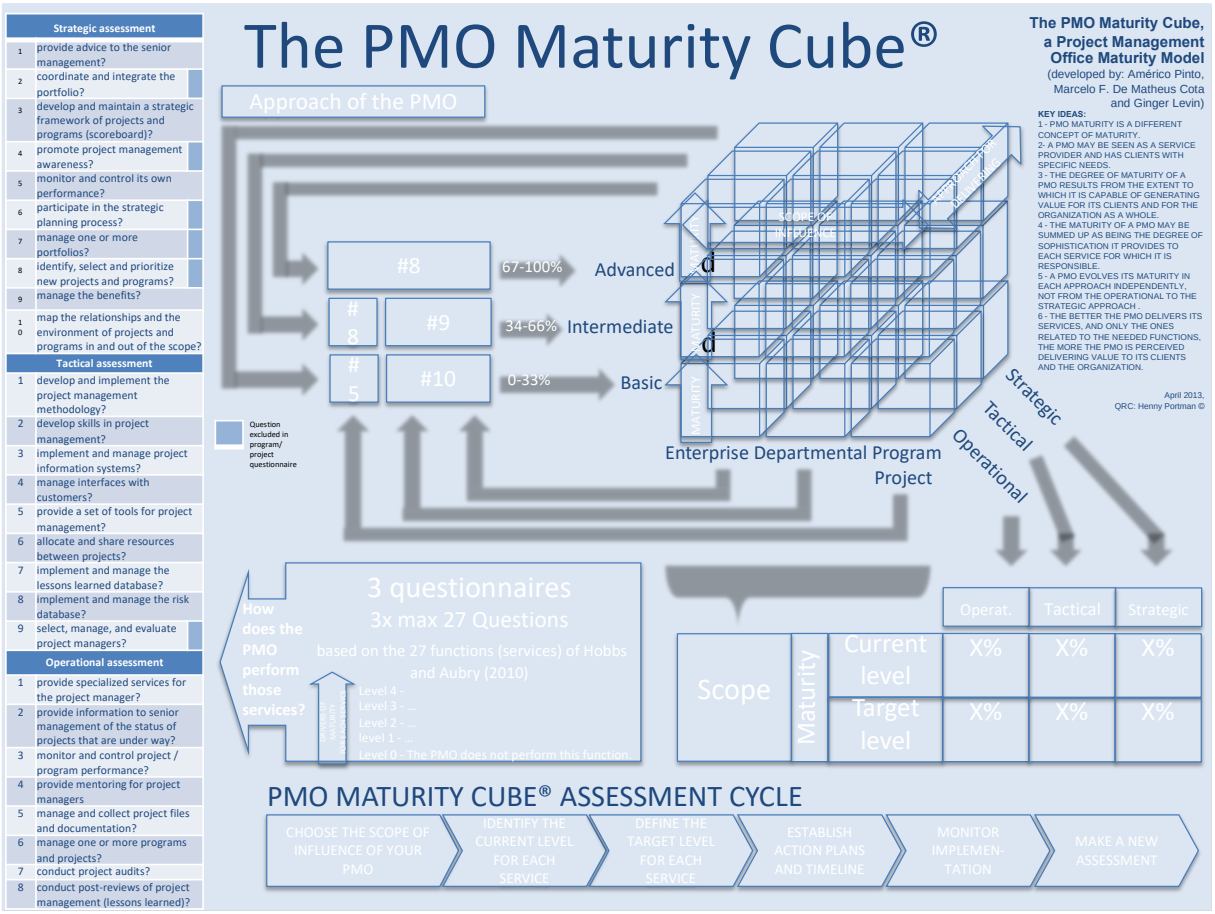


Figure 16 PMO Maturity Cube

The **PMO Health Assessment** (PMO strategies[34]) is used to evaluate 5 categories of PMO capabilities: Project Management (12 questions), Performance Management (6 questions), Career development and Training (4 questions), Portfolio governance (21 questions), and strategic Alignment (7 questions). This assessment is used to assist with identifying opportunities and evaluate existing services inside or outside the PMO that could become future PMO services. Each question must be scored on a 5-scale (1: no, 2-4: somewhat, 5: yes).

[34] https://pmostrategies.com

Perspective level maturity models

People Capability Maturity Model (PCMM)[35] is an integrated set of best practices that improves performance and key capabilities for organizations that want to improve their critical people management processes. The People Capability Maturity Model provides guidance for improving the capability of an organization's workforce. These best practices help identify skill gaps, break down workflow bottlenecks, and empower team members to develop skills that will help the organization succeed.

Generic Risk Maturity Model (GRMM)[36] is inspired by the European Foundation of Quality Management (EFQM). The Organizational category of the GRMM contains four aspects, adjusted from the EFQM model (policy and strategy, culture, personnel knowledge and top-management commitment). These four aspects cover the 19 risk management success criteria as mentioned by Yaraghi and Langhe (2011). The Application and Process category contains the steps of the risk management process. This category has three aspects (risk assessment, risk treatment, monitor and review). The feedback loops between the two categories in the GRMM reflect on the continuous improvements based on the result of the GRMM application in both categories (Organizational and Application and Process).

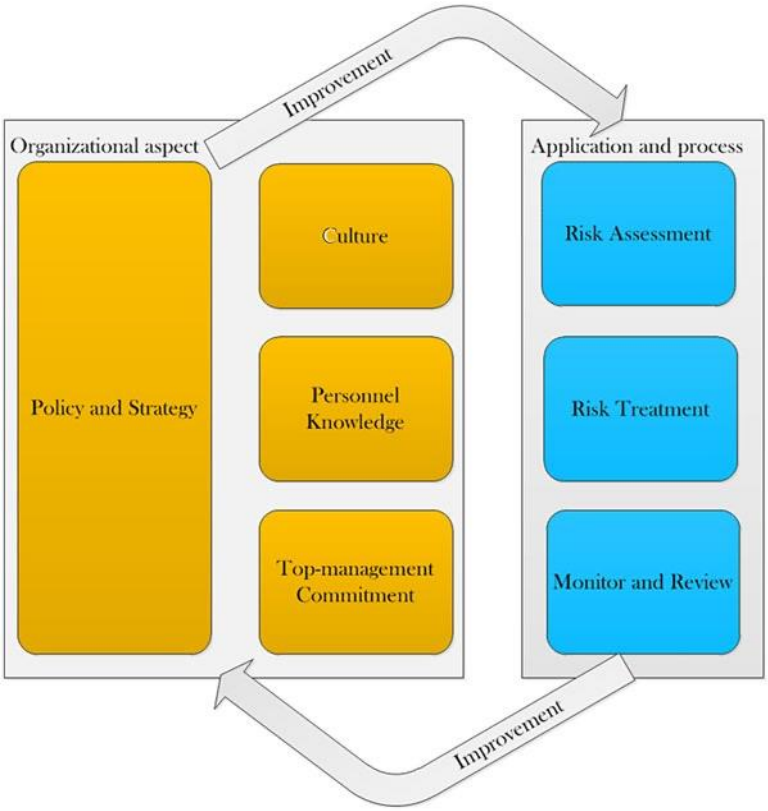


Figure 17 GRMM overview

[35] https://cmmiinstitute.com/pm
[36] https://research.tudelft.nl/en/publications/developing-a-generic-risk-maturity-model-grmm-for-evaluating-risk

The article **Developing a generic risk maturity model (GRMM)**[37] for evaluating risk management in construction projects mentions the following risk maturity models:

- List of risk maturity models. Source Risk Maturity Model (Hillson 1997)
- Project Management Maturity Model (Crawford 2006b) Risk Management Maturity Model (RMMM) (Bosler 2002)
- IACCM Business Risk Management Maturity Model (IACCM 2003)
- Risk Management Capability Maturity Model (Yeo and Ren 2009)
- PMI's Risk Management Maturity Model (Loosemore et al. 2006)
- Project Risk Maturity Model (Hopkinson 2012)
- Risk Management Capability Maturity Model (Macgillivray et al. 2007)
- Risk Management Maturity Model (Zou 2010)
- Construction Risk Management Maturity Model (Ongel 2009)
- The Alarm National Performance Model for Risk Management in the Public Services (ALARM 2009)
- Risk Maturity Model for Dutch municipalities (Cienfuegos Spikin 2013))
- RIMS Risk Maturity Model for ERM (RIMS 2015b)

The **Scheduling Maturity model**[38] (APM) is intended to provide a defined means of establishing and improving the scheduling capability as part of an organization's project, programme or portfolio control processes.

The **Cost Engineering Maturity Model**[39] (CEMM) provides the project team and organization with a complete understanding of their enterprise capabilities and processes in comparison to industry standards, best practices, and cultural norms.

The **Maturity Model for Project Data Analytics**[40] (MMPDA) covers two capability areas: applied PDA capability (stakeholders and aims, estimation, benefits planning and management, assurance, and reporting), enabling PDA capability (data governance, data model, data culture, understanding our data, creating infrastructure & processes, and people).

The **Resource Management Maturity Model**[41] (RMMM) enables organizations to define and execute effective resource management strategies. It accomplishes this by helping stakeholders better align resource-related information needs with their level of project portfolio management (PPM) process maturity and technology enablement. The RMMM identifies a logical progression of resource management process sophistication through five levels of maturity (level 1: work visibility, 2: controlled assignment, 3: governed capacity, 4: schedule-driven assignment, 5: granular management). Each level of maturity is described along seven dimensions. Organizations can use the RMMM to ensure that they can manage project resources and capacity at the "just right" level of granularity for their business.

[37] http://pure.tudelft.nl/ws/portalfiles/portal/56023816/Untitled.pdf
[38] https://www.apm.org.uk/book-shop/the-scheduling-maturity-model/
[39] https://web.aacei.org
[40] https://pdataskforce.com/resources
[41] http://www.audentia-gestion.fr/oracle/r-m-m-m-wp-rebranded-1913991.pdf

The **Knowledge Management Maturity Model**[42] enables organizations to define and execute effective knowledge management strategies. The model uses 5 levels of maturity, and the simple version uses ten dimensions (learning Before, learning during, learning after, communities of practice, knowledge ownership, business alignment, knowledge roles, behaviors and culture, technology, governance).

Knowledge Management Tutorial[43] explains the Infosys KM Maturity Model and CoP Maturity Models.

The **Managing Benefits Health-check Assessment**[44] (APMG) offers ten statements to score (always, usually, occasionally, and never) and provides suggested potential actions.

The **Stakeholder Relationship Maturity Model**[45] (SRMM) has been designed to facilitate the transition from an unorganized ad hoc approach to the management of stakeholders to a balanced proactive engagement with stakeholders overnight. Figure 17 shows the 5 maturity levels.

SRMM Stages / Levels	Standard processes	Central support	Org-wide use	Beyond projects	Typical 'stakeholder communities'	Risk handling & 'health reviews'
19. Ad hoc: some use of processes	Some	No	No	No	No	No
2. Procedural: focus on processes and tools	Yes	Some	No	Some	No	No
3. Relational: focus on the stakeholders and mutual benefits	Yes	Yes	Some.	Some	Some	No
19. Integrated: methodology repeatable, integrated	Yes	Yes	Yes	Some	Some	Some
19. Predictive: health checks and other predictive assessments	Yes	Yes	Yes	Yes	Yes	Yes

Figure 18 Summary of SRMM levels

[42] https://www.knoco.com
[43] https://www.tutorialspoint.com/knowledge_management/index.htm
[44] https://store.apmg-international.com/study-materials/managing-benefits-projects-guidebook
[45] https://pmworldlibrary.net/wp-content/uploads/2016/01/pmwj42-Jan2016-Bourne-the-SRRM-model-stakeholder-Series-Article10.pdf

Framework related maturity models

The **SAFe Business Agility Assessment**[46] is a framework specific high-level assessment that summarizes how agile the business is at any point in time. The assessment report provides a visualization that shows progress measurements along the 21 dimensions (3 for each competence). An example report is shown below.

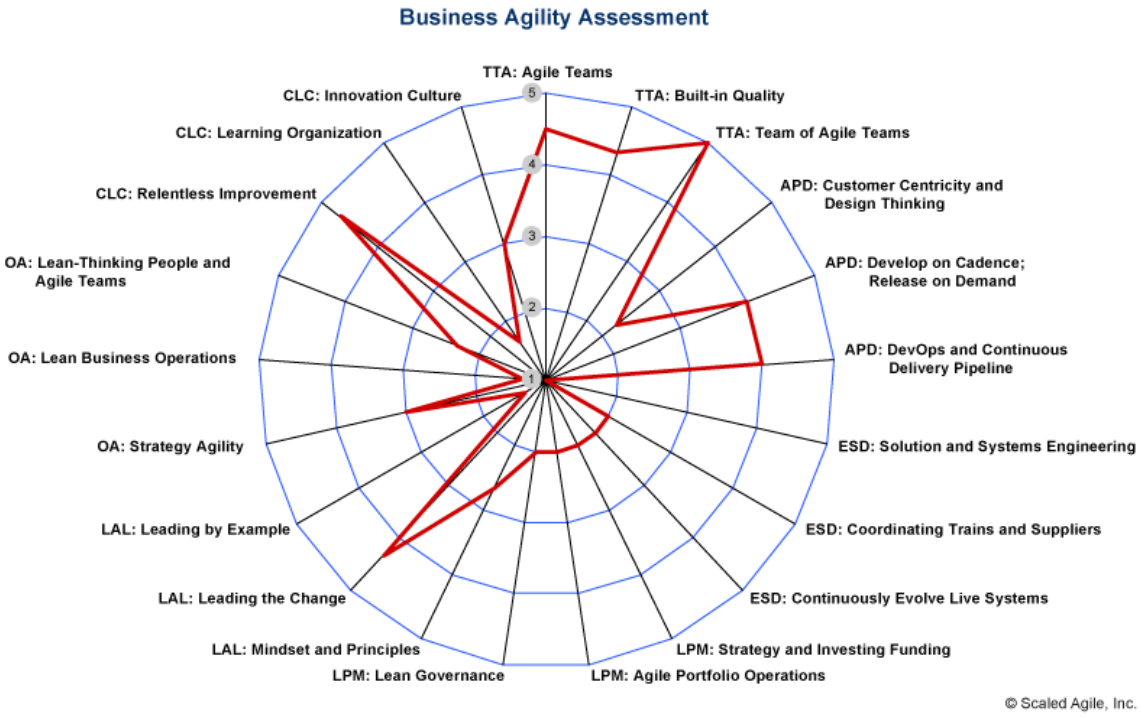


Figure 19 Example SAFe business agility assessment

In most cases, assessing progress towards business agility spurs the enterprise to greater, and deeper, efforts. That leads the business to explore and start to measure and take more specific action on some or all the seven core competencies. Structured similarly to the business agility assessment, each core competency assessment has a set of statements, organized by dimension, that are rated on the same scale as the above. The questions go one step deeper to specific aspects and areas of opportunity and concern along each of the three dimensions of that specific competency.

[46] https://www.scaledagileframework.com/measure-and-grow/

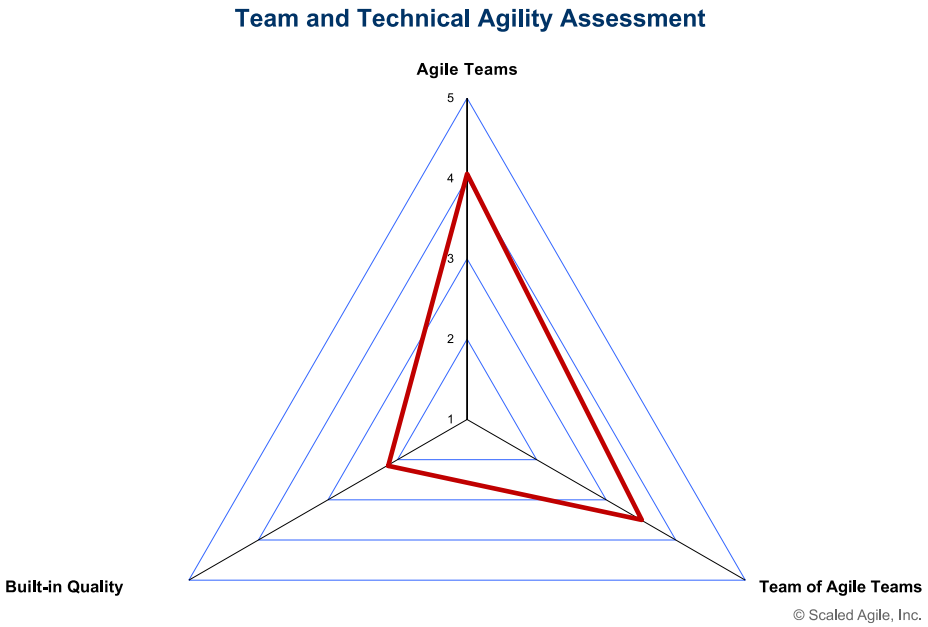


Figure 20 Example SAFe team and technical agility competency assessment

Other maturity models

In this paragraph brief introductions of or references to some other known and less known models.

The article **Business Process Maturity Models** – A systematic literature review[47] mentions the following Business Process Maturity Models (BPMM):

- Business Process Management Capability Framework (BPM-CF)
- Business Process Maturity Model (BPMM-FIS)
- Business Process Maturity Model (BPMM-HR)
- Business Process Maturity Model (BPMM-OMG)
- Business Process Orientation Maturity Framework (BPO-MF)
- Business Process Orientation Maturity Model (BPO-MM)
- Process and Enterprise Maturity Model (PEMM)
- Process Management Maturity Assessment (PMMA)
- Value-based Process Maturity Model (VPMM)
- Process Management Maturity Model
- Process Safety Degree
- Process Maturity Continuum (PMC)
- Maturity Model for Knowledge-Intensive Business Processes
- Business Process Maturity Model (BPMM)

47 https://www.researchgate.net/publication/293250305_Business_Process_Maturity_Models_A_Systematic_Literature_Review

- Maturity Estimation Model
- Model for Business Process Maturity Assessment
- Business Maturity Assessment Model
- Process Management Maturity (PMM) Model
- Process-Structure Development Model (PSDM)
- Business Process Maturity Model for Public Administration

The article **What are Maturity Models in Business**? (Capability Maturity Model, AIMM, and More)[48] discusses and compares several of the mentioned Business Process Maturity Models and the Agile ISO Maturity Model (AIMM).

The concept of **Agile ISO Maturity model**[49] (AIMM) is related to the employment of agile methodologies at procedure level while retaining an ISO -or equivalent- compliance for the breadth and documentation of your company quality management system.

Deloitte (2018) Digital Maturity Model[50]. Achieving Digital Maturity to Drive Growth.

Only names

The following models were mentioned without references:
Data Maturity Model, Analytical Capability Maturity Model, Data Analytics Maturity Model, Business Maturity Model, Continuous Delivery Maturity Model, Service Design Maturity Model, Lean Maturity Model, BPM Maturity Model, Agile Maturity Model, Agile Testing Maturity Model, Agile Maturity Assessment, Agile Development Maturity Model, SAFe Assessment Model, Scrum Master Maturity Model, Agile Marketing Maturity Model, DevOps Maturity Model, Scrum Maturity Model, et cetera.

Different perspectives on maturity models

Nicoline Mulder in C*haordisch organiseren*[51]: "*Organizational maturity is the degree to which the organization is able to function as an autonomous organization, and at the same time to integrate its autonomous position into the larger whole, by understanding that larger whole to a relative degree. We speak of maturity when the processes of robustness and response take place simultaneously."*

Laura Barnard, in Podcast 086 PMO Maturity Models[52] talks all about PMO Maturity Models. Should you focus on maturing your PMO according to a predefined maturity model or framework? Is there a maturity model framework out there that's best for you and for your

[48] https://www.process.st/maturity-model/
[49] https://blog.swa.sel.inf.uc3m.es/agile-iso-introducing-agile-iso-maturity-model/
[50] https://tinyurl.com/y9omhcyb
[51] Mulder, Nicoline, *Chaordisch organiseren* (in Dutch), Boom, Amsterdam, 9789024438921
[52] https://pmostrategies.com/086-2/

PMO? You need to ensure that you're focused exactly where you need to be to build the right services and capabilities for your PMO. She states *"looking at all those maturity models, not everyone needs to get al level 5. What matters more than maturity models is the shifts that we need to make from a business perspective above the way we see our ability to deliver impact for our organization."*

Scaling Agile appears to be a common topic these days. Of course, there are good advice and bad advice on how to do that. But how do you know which is which? If you have dealt with a few maturity models in the past, these usually run from level 1 to level 5, where level 5 means more mature. This **Anti-maturity model**[53] runs differently, with level 0 indicating that you are probably on the right track, and level MAX_INT that you are probably not doing too well. Why does this scale run differently? There is always someone out there who can come up with an even worse way of doing things than that other one that thought was worst.

Excellence models

As stated in the introduction you could also look at an individual project, programme or PMO. In that case you talk about the excellence of that specific project, programme or PMO. This is often related to a competition.

IPMA offers global project excellence awards in several categories (small and medium sized and large and mega sized projects). For all categories you have to submit the application report. For the large and mega sized projects there is a three-day site visit with interviews but in 2020 and 2021 it was/will be done online (due to COVID-19 travel restrictions). On the IPMA website there is a blog of my own online experience.[54] The award criteria are based on the IPMA Project Excellence Model. Depending on the score it is possible that there will be no golden winner for a certain category. It is a multi-step approach with assessors and judges.

The **Project Excellence Model (PEM)**[55] is described in the book *Project Excellence Baseline for Achieving Excellence in Projects and Programmes*. This Project Excellence Model is a great tool for continuous improvement of project or program management in your organization? It's not a maturity model. The main purpose of the Project Excellence Baseline (PEB) is to describe the concept of excellence in managing projects and programs. It complements the IPMA Individual Competence Baseline (IPMA ICB) and the IPMA Organizational Competence Baseline (IPMA OCB).

The book describes a project in its organization's internal and external context. The concept of project excellence is based on continuous improvement (plan-do-check-act), the role of sustainability and the role of leadership.
The PEM model structure enables easy reporting of the outcomes on all management levels via three levels:

[53] https://www.associationforsoftwaretesting.org/2013/11/16/scaling-agile-anti-maturity-model/
[54] https://awards.ipma.world/news/ipma-virtual-mega-project-award-assessment-what-a-challenge/
[55] https://www.ipma.world/projects/project-excellence-awards/

- Areas: The main components of the model: People & Purpose and Processes & Resources and Project Results
- Criteria: to enable detailed feedback about the levels of excellence on a particular project
- Examples: actual practices typically found in excellent projects.

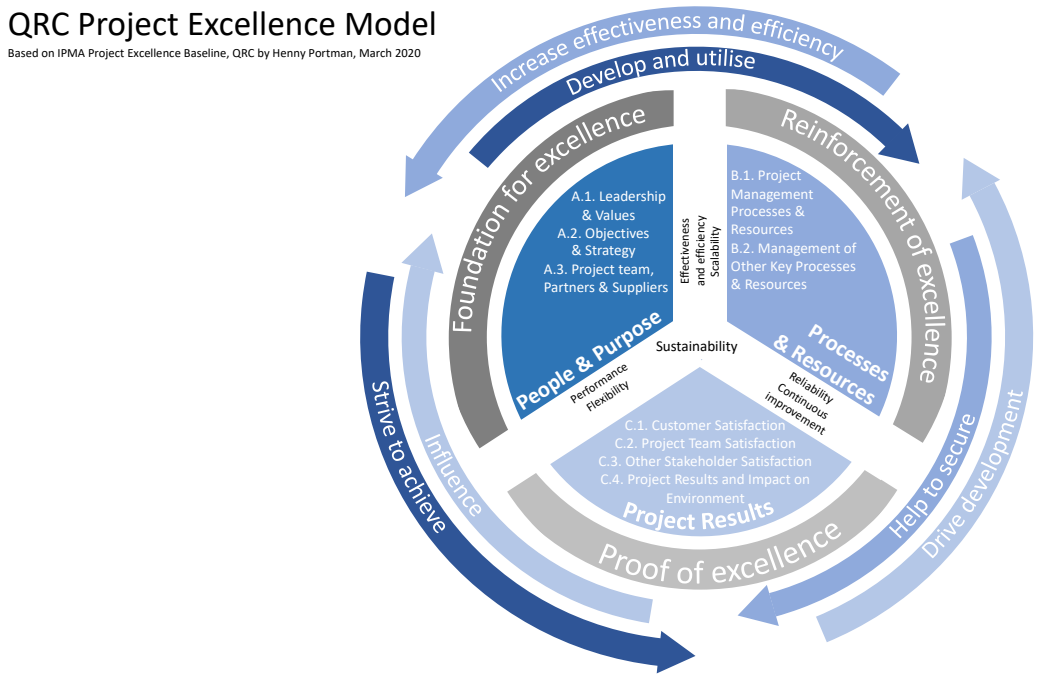


Figure 21 PEM overview

All three areas of the model strongly interact with each other. See the arrows in the figure. This means that none of the areas should be developed in isolation and each of the areas should be actively used to develop excellence in the remaining two. Due to interaction between areas the following business value can be secured: performance, effectiveness and efficiency, reliability, flexibility, continuous improvement, scalability and sustainability.

- The People & Purpose area is divided into three criteria: A.1. Leadership & Values; A.2. Objectives & Strategy; A.3. Project Team, Partners & Suppliers.

- The Processes & Resources area is divided into two criteria: B.1. Project Management Processes & Resources; B.2. Management of Other Key Processes & Resources.

- The Project Results area is divided into four criteria: C.1. Customer Satisfaction; C.2. Project Team Satisfaction; C.3. Other Stakeholder Satisfaction; C.4. Project Results and Impact on Environment.

In a separate chapter the assessment of project excellence, the assessment process itself, the role and competences of project excellence assessors, the scoring approach and the project profile are described in detail. The project profile consists of three general scores, respectively

for People & Purpose, Processes & Resources and Project Results. Examples of conclusions after assessing could be leadership driven projects with low process maturity, process driven project with low leadership and/or sense of purpose and, balanced projects combining great leadership and a strong sense of purpose with a strong process culture.

The **PMI Project Excellence Award**[56] recognizes complex projects that best deliver:

- Superior performance of project management practices.
- Superior organizational results.
- Positive impacts on society.

Criteria

- Provide a brief overview of the organization and the project. How the project contributed to the organizational strategy. Describe the benefit/value of this project on the general public.
- Show that the benefits/value of your project were realized
- Show that the leadership of the project was effective
- Show that stakeholder expectations and communications were effectively managed.
- Show that the project schedule was effectively developed and managed.
- Show that the project cost was effectively developed and managed.
- Show that the project scope was effectively developed and managed.
- Show that risks were effectively managed during the project.
- Show that proposed changes to project scope, cost, and schedule were effectively managed.
- Show that lessons learned from previous projects (if any) and from the submitted project were effectively integrated into the project and/or organization.

APM[57] offers several excellence awards. In this article I focus on the criteria for the **PMO**, the **project manager** and the **programme manager of the year awards**.

PMO of the year award criteria:

- Results and benefits (weighting: 50%): project and programme delivery, maturity and reporting, knowledge management, culture and governance and contribution to the project management community.
- Innovation and lessons learned (weighting: 30%): facilitating innovation and lessons learned between projects to create a culture of continuous improvement
- The PMO (weighting: 20%): context, capability, delivery and interfaces.

Project of the year award criteria

- Project management (weighting: 40%): context, capability, delivery and interfaces.

[56] https://www.pmi.org/about/awards/professional/project-excellence
[57] https://www.apm.org.uk/apm-awards/

- Outcomes and benefits (weighting: 40%): project team's skills and knowledge, benefits for the customer/end user and benefits for other stakeholders. Contribution to sustainability and reducing its environmental impact.
- Innovation and lessons learned (weighting: 20%): lessons learned, managing innovation and challenges overcome.

Programme of the year award criteria

- Comparable with the project of year criteria.

PMO Global Alliance offers a **PMO of the year award**[58] (worldwide, continent, country). They don't use a scoring mechanism but a single-elimination, knockout, or sudden death tournament. There are no separate assessors and judges. As a judge you assess and compare two PMO's. The loser of each match-up is immediately eliminated from the tournament. Each winner will play another in the next round, until the final four match-up, whose winner becomes the PMO of the year. If you are the final one for a continent or country you receive a continent or country PMO of the year award.

The PMO's are evaluated according to the following criteria:

- PMO's journey: strategy, consistency, adaptability, leadership, and the path that made the PMO become what it is today
- Client service: the services/functions the PMO provides to its customers and stakeholders
- Best practices: how the PMO is delivering its services/functions, methods, tools and techniques
- Innovation: usage of innovation
- Community: engagement, encouraging people to share experiences and lessons learned
- Value generation: Benefits and results delivered by the PMO to its customers, stakeholders and the organization.

[58] https://www.pmoga.world/awards

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Henny Portman, owner of Portman PM[O] Consultancy and was partner of HWP Consulting, has 40 years of experience in the project management domain. He was the project management office (PMO) thought leader within NN Group and responsible for the introduction and application of the PMO methodologies (portfolio, program, and project management) across Europe and Asia. He trains, coaches, and directs (senior) programme, project and portfolio managers and project sponsors at all levels, and has built several professional (PM(O)) communities.

Henny Portman is/was accredited in a variety of qualifications, including P3O, PRINCE2, MSP, MoP, PRINCE2 Agile, AgilePM, AgilePgM and AgileSHIFT trainer and an SPC4 SAFe consultant and trainer. He is a P3M3 trainer and assessor and PMO Value Ring Certified Consultant (PMO Global Alliance). On behalf of IPMA, he assesses mega and large projects for the IPMA Project Excellence Award. In addition to this, he is an international speaker, author of many articles and books in the PM(O) field, and an active blogger (hennyportman.wordpress.com/).

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