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IMPLEMENTATION MODEL OF THE PROJECT EXCELENCE BASELINE FOR PROJECT DELIVERY

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The objective of the work is the application of the IPMA Project Excellence Baseline (PEB) model to real projects. The research applies the model not to finished projects, but throughout their life cycle.
The model has 20 sub-criteria, distributed in 3 areas, which allow us to evaluate and measure the degree of excellence achieved in an excellent project. Previous work has been carried out with evaluators from the international prize for excellence in projects to prioritise areas and apply them in different phases to implement the model in a staggered manner in projects underway.
A questionnaire has been designed as a working method for the application of the model. The development of the work allows knowing the approach to be deployed to generate excellence in the project.
The description and prioritization of the criteria and sub-criteria of the model will allow us to have a global vision of the project and its management, allowing us to generate a framework for its implementation.

Keywords: project excellence baseline; PEB; implementation; project success factors

MODELO DE IMPLANTACIÓN DEL PROJECT EXCELENCE BASELINE PARA EL DESPLIEGUE DE PROYECTOS

El objetivo del trabajo es la aplicación del modelo Project Excellence Baseline (PEB) del IPMA a proyectos reales. La investigación aplica el modelo para aplicarlo no en proyectos finalizados, sino a lo largo del ciclo de vida del mismo.
El modelo tiene 20 sub-criterios, repartidos en 3 áreas, que permiten evaluar y medir el grado de excelencia que se alcanzan en un proyecto excelente. Se ha realizado un trabajo previo con evaluadores del premio internacional de excelencia en proyectos para priorizar áreas y aplicarlas en distintas fases para implantar el modelo de forma escalonada en proyectos en ejecución.
Se ha diseñado un cuestionario como método de trabajo para la aplicación del modelo. El desarrollo del trabajo permite tener conocimiento sobre el enfoque a desplegar para generar la excelencia en el proyecto.
La descripción y priorización de criterios y sub-criterios del modelo permitirán tener una visión global del proyecto y de su gestión, permitiendo generar un marco de trabajo para su implementación.

Palabras clave: excelencia en proyectos; PEB; implantación; factores de éxito en proyectos

1 Introduction

Understanding the concept of project excellence is difficult because of several reasons. First of all, this concept is wide-range and subjective, depending on the observer's point of view. Another aspect to bear in mind is the existence of a multitude of aspects that can influence.

Along years, several researchers have focused on the critical factors for project success (Frinsdorf, Zuo, & Xia, 2014; Jones, 1975; Mir & Pinnington, 2014; Pinto & Slevin, 1988; Todorović, Petrović, Mihić, Obradović, & Bushuyev, 2014). This point could be considered as a starting aspect to analyse the excellence in projects. But success factors are not the unique point for a perspective of excellence. A complete viewpoint is necessary to develop better projects.

In 2002, "The Project Excellence Model®: linking success criteria" is published. In this paper, its author introduced a model developed by the International Project Management Association (IPMA), based on the European model of excellence for organisations, EFQM (Westerveld, 2003).

This model is the origin of the current Project Excellence Baseline (IPMA, 2016), also developed by IPMA. To bear in mind how a project could be excellent, this research is based on this model.

It is relevant to consider that a project excellence model is a qualitative step comparing with the other standards in project management (PMBOK, PRINCE2, ISO21500, etc.). Its application helps project teams to make projects excellent, but this excellence can't be reached without taking into account the applicable standards for the basics (Grau, 2013). The usual focus on one of these standards is limited and partial, mainly oriented to processes and tools

The use of an excellence model is oriented to examine the backward view of a situation, in this case of a project. But the helpfulness of the model is not this, its utility instead allows create a framework for excellent conditions for projects, programmes or portfolios. This research avoids an evaluation approach once the project is completed. On the contrary, the proposal is to use it from the earliest stages.

2 IPMA Project Excellence Baseline

The main objective of the Project Excellence Baseline designed by IPMA is to generate a guide to organisations or a framework of excellence in managing projects and programmes in any context and regardless of the specific industry, sector or project management approach.

Besides, this model complements two other IPMA standards:

- Individual Competence Baseline (ICB), designed to assess individual competences of project/programme/portfolio leaders (IPMA, 2015).
- Organisational Competence Baseline (OCB) – designed to assess competences of organisations that run projects (IPMA, 2013).

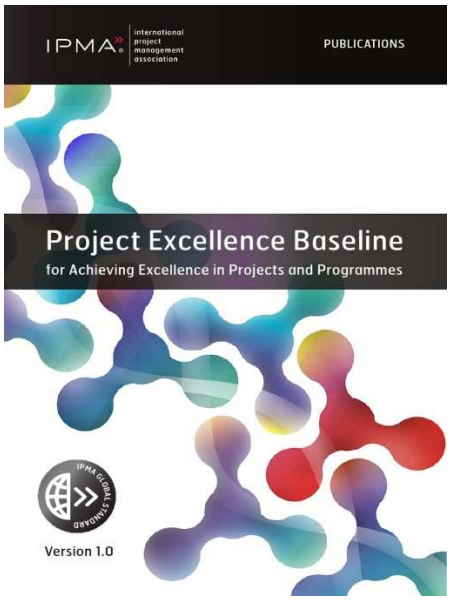
The more relevant points in the Project Excellence Baseline (IPMA, 2016) for the research are describing the following.

As Figure 1 shows, the three key areas of the model are:

- People & Purpose: The foundation of project excellence is the right people, the leadership to drive improvements and achievements, more than the established standards.
- Processes & Resources: The reinforcement of excellence through adequate processes and resources, used efficiently and sustainably.

- Project Results: The proof or excellence can only be with outstanding, sustainable results for all key stakeholders.

Figure 1: IPMA Project Excellence Baseline and its three key areas.



In addition to the areas identified above, the framework is completed with the following values:

- Performance.
- Effectiveness and efficiency.
- Reliability.
- Flexibility.
- Continuous improvement.
- Scalability.
- Sustainability.

The structure of the model introduces three different levels:

- The first level is the areas that show the main components of project excellence (People & Purpose, Processes & Resources, and Results).
- The second one is the criteria. It covers the key factors that make up the project excellence areas and enables measurement for development and benchmarking purposes.
- At last, the examples which refer to actual practices typically found in excellent projects.

The second level plays an important role in the implementation of the model. It spreads out a total of 9 criteria distributed in the three areas, as shown in Figure 2. Moreover, these, in turn, are subdivided into a total of 20 sub-criteria. Schematically, these areas, criteria, and sub-criteria are represented in Table 1.

According to the assessment schema, the three areas generate a functionality vector that represents the excellence of the project. In other terms, the baseline is constituted of the scores obtained in each of the areas.

Figure 2: The IPMA criteria.

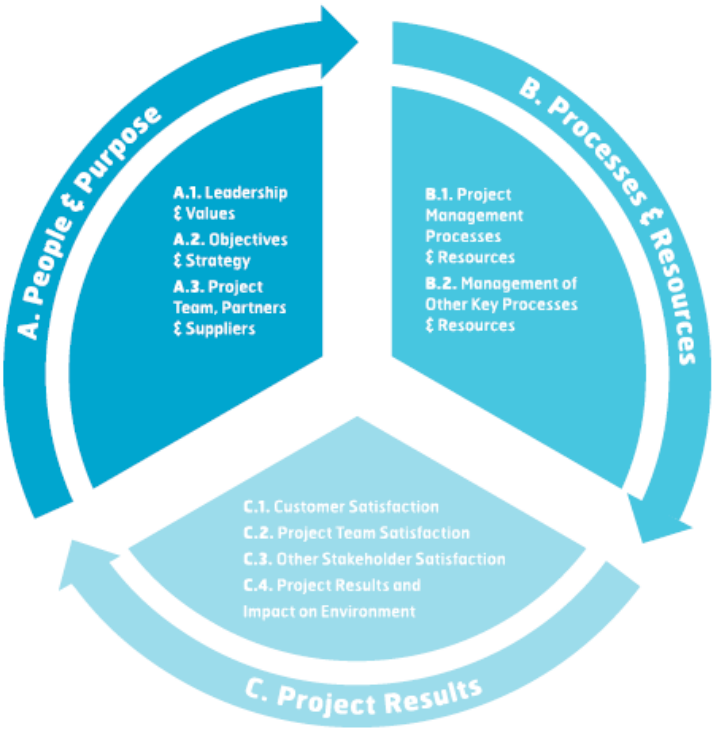


Table 1: The IPMA areas, criteria y sub-criteria.

A. People & Purpose			
A.1. Leadership & Values	A.2. Objectives & Strategy	A.3. Project Team, Partners & Supplies	
A.1a. Role models for excellence A.1b. Care for project stakeholders A.1c. Orientation towards project objectives and adaptability to change	A.2a. Managing stakeholders' needs, expectations and requirements A.2b. Development and realisation of project objectives A.2c. Development and realisation of project strategy	A.3a. Identification and development of competences A.3b. Recognition of achievements and empowerment A.3c. Collaboration and communication	
B. Processes & Resources			
B.1. Project Management Processes & Resources		B.2. Management of Other Key Processes & Resources	
C. Project Results			
C.1. Customer Satisfaction	C.2. Project Team Satisfaction	C.3. Other Stakeholder Satisfaction	C.4. Project Results & Impact on the Environment
C.1a. Customer perception C.1b. Indicators of customer satisfaction	C.2a. Project team perception C.2b. Indicators of project team satisfaction	C3a. Perception of the other stakeholders C3b. Indicators of other stakeholders' satisfaction	C4a. Realisation of results as defined in project objectives C4b. Realisation of results beyond project objectives, including impact on environment C4c. Project performance

The calculation method for this baseline is shown in the following formulas:

- People & Purpose:

$$\frac{A.1a + A.1b + A.1c}{3} + \frac{A.2a + A.2b + A.2c}{3} + \frac{A.3a + A.3b + A.3c}{3} \quad (1)$$

- Processes & Resources:

$$\frac{B.1 + B.2}{2} \quad (2)$$

- Project Results:

$$\frac{\frac{C.1 + C.2 + C.3}{3} + \frac{C.4ab + C.4c}{2}}{2} \quad (3)$$

Another aspect to contemplate is how is the scoring approach, which depends on the area of the baseline. Considering this, the model is deployed for areas A and B following the cycle of continuous improvement:

- Plan: defining a sound approach.
- Do: applying an approach systematically.
- Check: monitoring and analysing results of the chosen approach. Also, this item has two dimensions: project management and project results.
- Act: improving and integrating the approach, considering the same dimensions.

On the other hand, this scoring approach changes for the third area of results. Criteria related to satisfaction of the different stakeholders vary from the last one, Project Results and Impact on the Environment. Sub-criteria in the first ones take into account:

- Perceived satisfaction level[1], how a given type of stakeholders judge their satisfaction themselves.
- Expected satisfaction level[2] based on observing independent indicators.
- Link between the approach and satisfaction level.
- Comparison of the satisfaction level with the industry/sector benchmark.

In the case of the last criterion, project results, and impact on the environment (C.4), the implementation of the model implies:

- Realisation of project objectives.
- Link between the approach and objectives realisation.
- Trends.
- Comparison of results with the industry/sector benchmark.

3 Development of a Methodology for Performance of Better Projects

3.1 Previous Work with the Project Excellence Baselines

Considering these main topics, the investigation tries to develop a methodology to apply the model in ongoing projects, especially from their earlier onset.

[1] Applied only in case of perception sub-criteria.
[2] Applied only in case of indicators sub-criteria.

Figure 3: Comparison between questionnaire and PEB scoring schema.

As a first step, the research began with the application of a questionnaire covering all sub-criteria of the model and the comparison to an auto-evaluation following the Project Excellence Baseline scoring schema (Bellido & Montero, 2018). As a practical result, Figure 3 shows a comparison applied in an industrial company.

Figure 4: Canvas for sub-criterion "A.1a. Role models for excellence".

Project: Date:

A.1a. Role models for excellence

Leaders communicate and live up to their values (i.e. they 'walk the talk'), follow ethical standards, and act as role models. They ensure that structures and norms are in place that enable project team members to work effectively and efficiently. Leaders build and strengthen a culture of excellence and continuous improvement both within and beyond the project. They observe and carry out the project excellence concepts in a credible way and stimulate others to do the same.

	Plan	Do	Check	Act
In practice, leaders of excellent projects: Are role models for integrity, social responsibility, ethical behaviour (e.g. as defined in the UN Global Compact's Ten Principles in the areas of human rights, labour, the environment, and anti-corruption) and the project excellence philosophy, both within the project and its environment (e.g. towards the line organisation, clients, partners, suppliers, etc) and ensure the project team members adopt and live up to these values; Promote the organisation's values in the project; Understand the concept of continuous improvement and champion its application in the project and beyond; Actively seek feedback from different stakeholders to improve their leadership approach; Regularly take time to reflect on their own role, behaviour and impact; Review and improve the effectiveness of leadership behaviour including their own; Strive for personal excellence by reviewing and improving their own competences; Inspire project team members to strive for excellence in their behaviour and working methods, keeping in mind the objectives of the project; Systematically integrate project team members into the continuous improvement process; Foster innovation in the project and encourage project team members to do the same.				

In the second stage, the research developed canvas for each criteria for visual teamwork. The idea is to identify the strengths and improvement areas in the scoring approach of the baseline. Figure 4 shows, for example, the canvas for the first sub-criterion "A.1a. Role models for excellence".

The Svenskt Projektforum, Swedish member of IPMA, introduced in 2016 a simplified assessment process called Project Excellence Preparation (PEP) based on the baseline. This

method sorted the sub-criteria in three ordered levels according to a considered criticality and is conducted in three steps starting with fifteen questions on the five most critical sub-criteria, continuing with an additional fifteen questions on five second priority sub-criteria and finishing with thirty questions on remaining ten sub-criteria. The idea is to identify the strengths and improvement areas in each of them (Månsson, 2017; Månsson, Carlqvist, & Goodfellow, 2019).

Table 2: Prioritization of the Svenskt Projektforum.

Sub-criteria	Priority
A. People & Purpose	
A.1. Leadership & Values	
A.1a. Role models for excellence	1
A.1b. Care for project stakeholders	1
A.1c. Orientation towards project objectives and adaptability to change	2
A.2. Objectives & Strategy	
A.2a. Managing stakeholders' needs, expectations and requirements	1
A.2b. Development and realisation of project objectives	2
A.2c. Development and realisation of project strategy	2
A.3. Project Team, Partners & Supplies	
A.3a. Identification and development of competences	2
A.3b. Recognition of achievements and empowerment	3
A.3c. Collaboration and communication	3
B. Processes & Resources	
B.1. Project Management Processes & Resources	1
B.2. Management of Other Key Processes & Resources	3
C. Project Results	
C.1. Customer Satisfaction	
C.1a. Customer perception	1
C.1b. Indicators of customer satisfaction	3
C.2. Project Team Satisfaction	
C.2a. Project team perception	3
C.2b. Indicators of project team satisfaction	3
C.3. Other Stakeholder Satisfaction	
C3a. Perception of the other stakeholders	3
C3b. Indicators of other stakeholders' satisfaction	3
C.4. Project Results & Impact on the Environment	
C4a. Realisation of results as defined in project objectives	2
C4b. Realisation of results beyond project objectives, including impact on environment	3
C4c. Project performance	3

As a result of the Swedish experience, Table 2 presents the prioritization level, which corresponds to the step for developing project excellence preparation.

3.2 IPMA Project Excellence Awards

Since 2002, IPMA organises an annual international competition for projects and programmes presenting awards to teams that display and can prove great achievements in project and programme management. These awards were based on “The Project Excellence Model” designed by IPMA until the Project Excellence Baseline appeared in 2016.

The focus of these awards is the recognition of excellent and innovative projects that are completed. This is a relevant difference with the research that we introduce.

There are three different categories for the awards:

- Mega-Sized Projects, with a budget superior than € 200 million
- Large-Sized Projects, with a budget between € 50 million and € 200 million.
- Small-Sized Projects, with a budget inferior to € 50 million.

From the perspective of the considered criteria, the two first ones bear in mind all of the criteria, but in case of the small-sized projects, it only takes into account the following items as obligatory:

- A.2. Objectives & Strategy.
- B.1. Project Management Processes & Resources.
- C.4. Project Results & Impact on the Environment.

Applicants should also consider the other two criteria, which cannot be part of the same area.

3.3 Prioritization of Sub-Criteria

Based on the concept developed by Månsson (2017, 2019) shown previously, this research organized a panel with nine IPMA project excellence awards assessors and proposed them the prioritization of the sub-criteria of the baseline in three different groups (5+5+10). The answer from the panel is shown in Table 3.

These results differ from those obtained in the Swedish experience or project excellence preparation (PEP), as well as from the criteria chosen for Project Excellence Awards (PEA). This comparison could be seen in Table 4 and hinders the selection of sub-criteria in the implementation of the model for ongoing projects. The circumstances of the project could also influence the decision.

Table 3: Prioritization of the IPMA Project Excellence Awards assessors' panel.

Sub-criteria	Points
A. People & Purpose	
A.1. Leadership & Values	
A.1a. Role models for excellence	23
A.1b. Care for project stakeholders	25
A.1c. Orientation towards project objectives and adaptability to change	26
A.2. Objectives & Strategy	
A.2a. Managing stakeholders' needs, expectations and requirements	26
A.2b. Development and realisation of project objectives	26
A.2c. Development and realisation of project strategy	24
A.3. Project Team, Partners & Supplies	
A.3a. Identification and development of competences	21
A.3b. Recognition of achievements and empowerment	19
A.3c. Collaboration and communication	25
B. Processes & Resources	
B.1. Project Management Processes & Resources	23
B.2. Management of Other Key Processes & Resources	21
C. Project Results	
C.1. Customer Satisfaction	
C.1a. Customer perception	23
C.1b. Indicators of customer satisfaction	21
C.2. Project Team Satisfaction	
C.2a. Project team perception	21
C.2b. Indicators of project team satisfaction	20
C.3. Other Stakeholder Satisfaction	
C3a. Perception of the other stakeholders	20
C3b. Indicators of other stakeholders' satisfaction	19
C.4. Project Results & Impact on the Environment	
C4a. Realisation of results as defined in project objectives	24
C4b. Realisation of results beyond project objectives, including impact on environment	19
C4c. Project performance	21

Anyway, attending to this comparison, more specifically in the case of further correspondence some sub-criteria could be considered at a specific level. In Table 4 this level is represented by colour and tone colour (darker, more coincidence):

- Orange corresponds to priority 1.
- Yellow corresponds to priority 2.
- Green corresponds to priority 1.

Table 4: Comparative prioritisation.

Sub-criteria	PEA	PEP	Panel
A. People & Purpose			
A.1. Leadership & Values			
A.1a. Role models for excellence		❶	❷
A.1b. Care for project stakeholders		❶	❶
A.1c. Orientation towards project objectives and adaptability to change		❷	❶
A.2. Objectives & Strategy			
A.2a. Managing stakeholders' needs, expectations and requirements	❶	❶	❶
A.2b. Development and realisation of project objectives	❶	❷	❶
A.2c. Development and realisation of project strategy	❶	❷	❷
A.3. Project Team, Partners & Supplies			
A.3a. Identification and development of competences		❷	❷
A.3b. Recognition of achievements and empowerment		③	❷
A.3c. Collaboration and communication		③	❶
B. Processes & Resources			
B.1. Project Management Processes & Resources	❶	❶	❷
B.2. Management of Other Key Processes & Resources		③	③
C. Project Results			
C.1. Customer Satisfaction			
C.1a. Customer perception		❶	❷
C.1b. Indicators of customer satisfaction		③	③
C.2. Project Team Satisfaction			
C.2a. Project team perception		③	③
C.2b. Indicators of project team satisfaction		③	③
C.3. Other Stakeholder Satisfaction			
C3a. Perception of the other stakeholders		③	③
C3b. Indicators of other stakeholders' satisfaction		③	③
C.4. Project Results & Impact on the Environment			
C4a. Realisation of results as defined in project objectives	❶	❷	❷
C4b. Realisation of results beyond project objectives, …	❶	③	③
C4c. Project performance	❶	③	③

3.4 Implementation of the model in ongoing projects

It seems interesting to consider a three-step model, as presented in the Swedish experience. Table 5 indicates the sub-criteria to be implemented in each step according to the analysis done.

Table 5: Steps for implementation.

Sub-criteria	Step 1	Step 2	Step 3
A. People & Purpose			
A.1. Leadership & Values			
A.1a. Role models for excellence		●	
A.1b. Care for project stakeholders	●		
A.1c. Orientation towards project objectives and adaptability to change		●	
A.2. Objectives & Strategy			
A.2a. Managing stakeholders' needs, expectations and requirements	●		
A.2b. Development and realisation of project objectives	●		
A.2c. Development and realisation of project strategy		●	
A.3. Project Team, Partners & Supplies			
A.3a. Identification and development of competences		●	
A.3b. Recognition of achievements and empowerment			●
A.3c. Collaboration and communication			●
B. Processes & Resources			
B.1. Project Management Processes & Resources	●		
B.2. Management of Other Key Processes & Resources			●
C. Project Results			
C.1. Customer Satisfaction			
C.1a. Customer perception		●	
C.1b. Indicators of customer satisfaction			●
C.2. Project Team Satisfaction			
C.2a. Project team perception			●
C.2b. Indicators of project team satisfaction			●
C.3. Other Stakeholder Satisfaction			
C3a. Perception of the other stakeholders			●
C3b. Indicators of other stakeholders' satisfaction			●
C.4. Project Results & Impact on the Environment			
C4a. Realisation of results as defined in project objectives	●		
C4b. Realisation of results beyond project objectives, …			●
C4c. Project performance			●

4 Conclusions

We can use the Project Excellence Baseline in different ways, the most relevant ones are:

1. Assessment of completed projects, i.e. Project Management Awards.
2. Improvement of ongoing projects.

In this second case, there are many ways for setting it up. Herewith, this research shows a roadmap to put it in practice. The proposal is to do it in three steps, identifying strengths and improvement areas in each of them. The first step focuses on the identification of stakeholders and their requirements and care for the projects, as well as objectives definition and the key project management processes and resources. The second step bears in mind the rest of the roles of excellence, project strategy, competences, and customer satisfaction. In the last step, the additional sub-criteria need to be considered.

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