CONSIDERATION OF SUSTAINABILITY IN PROJECT MANAGERS INDIVIDUAL COMPETENCE BASELINE

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Last autumn IPMA published the fourth edition of their Individual Competence Baseline (ICB4), an endeavour that has taken significant amount of person-power and three years. Meanwhile, society in general and the Project Management community also have reviewed their orientation towards sustainability (people, planet, profit). Existing approaches include the adaptation of existing methodologies, the definition of sustainable models or the development of ambitious commitment instruments. This paper describes the evolution of the ICB as regards the consideration it takes to sustainability and social responsiveness. The paper proposes several areas where further effort is still needed to produce tools and techniques for practitioners.

Keywords: Sustainability; ICB4; Competences

LA SOSTENIBILIDAD EN LAS BASES PARA LAS COMPETENCIAS INDIVIDUALES EN LA DIRECCIÓN DE PROYECTOS

En otoño de 2015 la Asociación Internacional de Dirección de Proyectos (IPMA) publicó la cuarta versión de sus Bases para las Competencias Individuales, después de un largo esfuerzo. Mientras tanto, la sociedad en general, incluyendo a la comunidad de Dirección de Proyectos, han revisado su orientación hacia la sostenibilidad (Personas, Planeta, Beneficios). Los enfoques existentes en este proceso de revisión incluyen la adaptación de metodologías previas, la definición de modelos sostenibles o el desarrollo de ambiciosos instrumentos de compromiso voluntario. Este artículo describe la evolución de las Bases para las Competencias Individuales en lo que respecta a la sostenibilidad. El artículo propone algunas áreas donde se necesitan esfuerzos adicionales para elaborar herramientas y técnicas para los profesionales de la Dirección de Proyectos.

Palabras clave: Sustainability; ICB4; Competences

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1. Introduction

Sustainability is one of the most important challenges of our time. How can we develop prosperity, without compromising the life of future generations? We are looking for a balance between economical, environmental, and social and human issues – a long term balance. The integration of sustainability in project management is very important because projects initiate changes – and changes must be shaped by sustainability criteria (Reusch, Reusch, & Otegi-Olaso, 2016).

However, Sustainability and Project Management (PM) have grown apart from each other (Brones, Carvalho, & Fancul, 2014) until recently. In the past ten years, the PM community has become more and more motivated to integrate environmental, social, and people issues into their practice. This has a reflect in scientific articles (Silvius, Turner, Gareis, Huemann,…), article reviews (Marcelino-Sádaba, González-Jaen, & Pérez-Ezcurdia, 2015; Aguilar-Fernández et al, 2015), guidelines (by Project Management Institute (PMI), Association of Project Managers (APM), International Project Management Association (IPMA),…); conferences (PMI, IPMA,..),... And it will continue in the next future: the 2016 IPMA Research Conference will have as theme Sustainability and PM.

Nevertheless, and after an analysis of the application of sustainability to PM standards, Silvius et al concluded that:

> The role of the project manager in the realization of sustainability requires adequate competencies. The concept of competencies is not new to the project management profession, as well-developed standards for project management competencies are available from two of the world's leading professional organizations: PMI and IPMA. However, as earlier studies concluded, the standards for project management fail to address the enabling role of projects in sustainability... (International Project Management Association, 2015)

With the publication of the fourth version of the Individual Competence Baseline (ICB4) for Project, Programme and Portfolio management in 2015 there has been a significant improvement of contributions on sustainability in the project management standards – compared to ICB3 published in 2006, and compared to other standards. This paper analyses these contributions against the framework of key competences of sustainability proposed by Wiek, Withycombe, & Redman (2011) as employed by Silvius & Schipper (2014) to exam ICB3.

The paper will present the conclusions from Silvius & Schipper (2014) paper about the consideration of Sustainability in ICB3. Then it will describe the major differences encountered between ICB3 and ICB4 to finally apply Wick's model to the last version of the Individual Competence Guidelines.

As a conclusion, the paper proposes several areas where further effort is still needed to produce tools and techniques for practitioners.

2. Methodology

This paper has been built following an exploratory approach of recent communications regarding the implementation of Sustainability Thinking into Project Management Standards and Practice, having as centre focus the new version of ICB.

First, opinions about the status of standards previous to ICB4 was collected. The results are presented here in form of a shallow review.

Then ICB4 – specially the Project Management domain - was analysed in detail, and compared with ICB3. Afterwards, direct sustainability aspects of the new guideline were identified. Finally, it was contrasted with Silvius' five key competences for sustainability.

3. Sustainability in Project Management. Case Study: ICB4

3.1 Conclusions from past review reports

In their contribution to the XIX International Conference on Project Engineering and Management conference of 2015, Otegi (2015) described the joint results of two review papers (Marcelino-Sádaba, González-Jaen, & Pérez-Ezcurdia, 2015; Aguilar-Fernández et al, 2015) related to Sustainability and Project Management, which could be summarized in the following sentences:

- To evolve from a Traditional Project Management practice to a Sustainable one Strategy is the main driver (and lack of it the main obstacle)
- Stakeholder management could be the connector between a Standard practice and a Sustainable one
- It is not posible to make a profit from sustainability if it is not innovation driven
- Intensive use of Metrics is needed

3.2 ICB3 and sustainability

A first systematic review performed by Reusch, Reusch, & Otegi-Olaso (2016) found that ICB3 only marginally addresses sustainability. In its chapter 3 on the introduction of certification there is just a hint, related to the contextual competence 3.09 on 'Health, security, safety & environment'.

And the next and final hint on sustainability is found in the description of the competence 2.04 on ´Assertiveness´. In a list of possible process steps sustainability is included: "8. Cultivate sustainable relationships with interested parties".

When Silvius & Schipper (2014) analyzed ICB3.0 "*…drawing on the literature from the "Education for Sustainable Development" field, … derived five key-competences for sustainability: systems thinking competences, anticipatory competences, normative competences, strategic competences and interpersonal competences".* Table 1 presents their meaning:

Table 1: Definition of Key Competences for Sustainability (Wiek, 2011)

Type of sustainability competence	Meaning
systems thinking	Ability understand the causes of complex problems
anticipatory	Capacity to think systematically about the future
normative	Understanding of concepts of justice, equity, social-ecological integrity, and ethics
strategic	Ability to collaboratively design and implement interventions and governance strategies
interpersonal	Capacity to motivate and facilitate sustainability research and problem-solving

They analyzed ICB3 for its coverage of the sustainability competences and concluded the following:

- The systems thinking competences are partly covered by the ICB3 contextual competencies.
- The anticipatory competences are not covered by the ICB3 competencies.
- The normative competences are only limitedly covered in the ICB3 behavioural competencies.
- The strategic competences are well covered in the ICB3 technical competencies.
- The interpersonal competences are well covered in the ICB3 behavioural competencies.

3.3 The evolution from ICB3 to ICB4

ICB3 described 46 competence elements covering techniques of project management (20 **technical** competences), the professional behaviour of project management personnel (15 **behavioural** competences) and the relations with the project's context (11 **contextual** competences).

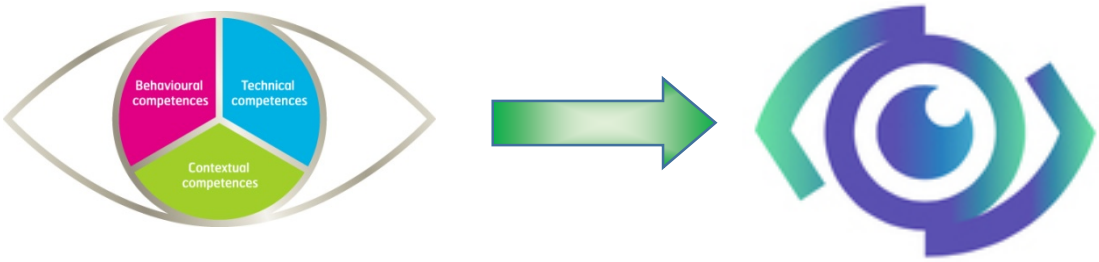
After six years and many hours of debate and work, IPMA ICB4 was developed. It is intended as "*an inventory of competences the individual needs to have or to develop to successfully realise projects, programmes or portfolios*".

It shows significant changes from the previous version:

- Domain. ICB discuss competences in terms of the individual as related to the domain (Project, Programme, or Portfolio Management) (not in terms of the role of that individual).
- Shifted emphasis. Contextual and Personal and Social aspects of the individual have gained importance relative to the Technical aspects (Jacques, 2016).
- Structured. Each competence element (CE), after its **Description**, lists pieces of **Knowledge** and **Skills** required to master de CE. For each CE several **Key Competence Indicators** (KCI's) are defined. Every KCI contains, apart from a description, a number of **Measures** that indicate necessary or possible actions for this KCI. As it occurred with ICB3, for each CE there is a list of the rest of CEs this one is **Related** to.

- Alignment with IPMA Assessment and Certification. The ICB product development team has worked closely with the International Certification Regulations team to ensure close alignment between these two products (Jacques, 2016).

Figure 1: The graphic symbols also evolve



As a result, **29 Competence Elements** required by individuals in the fields of Project, Programme and Portfolio management were described and grouped in the following competence areas

- Perspective (5) – contextual competences that must be navigated within and across the broader environment
- Practice (10) – technical aspects of managing Projects, Programmes and Portfolios
- People (14) – personal and interpersonal competences required to succeed in Projects, Programmes and Portfolios

3.4 ICB4 and sustainability. Direct references

As reported by Reusch, Reusch, & Otegi-Olaso (2016) in ICB4 a strong new focus on sustainability in project management is found. After the reorganization of the competences and competence clusters “sustainability thinking” appears even in the first competence 4.3.1 on Strategy – and the strategy is just the right place to start with sustainability.

In 8 of the new 29 competences in ICB4 there are significant contributions on sustainability – hints on sustainability are even in more competences. The following review on significant contributions is based on the part of ICB4 dealing with projects – the additional parts on programs and portfolios is not discussed here.

ICB4 competence 4.3.1 on Strategy describes how to develop and implement strategies in projects aligned with the mission and strategy of the involved organizations – esp. aligned with the sustainability strategies of the organizations. Special tools and techniques are recommended for the development, communication and control of strategies like environmental analysis, balanced scorecards, critical success factors, and key performance indicators, to “assure the sustainability of an organization”.

In ICB3 strategies were underdeveloped. In ICB4 we have a cluster of competences dealing with strategies – competences 4.3.1 up to 4.3.5 with a focus on strategy, governance, compliance, power, culture and values. And ICB4 also deals with the problem that we often have a strategy when we start a project but forget many aspects of our strategy when the project runs. Ongoing reviews of strategies and ongoing reflections of organizational goals are recommended in ICB4 – a strong contribution on sustainability project management.

In ICB4 competence 4.3.3 on compliance, standards and regulations knowledge on sustainability principles is highly recommended – including all relevant standards and regulations on health, safety, security and environment.

Individuals in projects should be able to balance economic, social and environmental aspects of the project – clear perspectives are given:

> The individual is able to assess the impact of the project on the environment and society. Realising his or her responsibility, the individual researches, recommends and applies measures to limit or compensate negative consequences. The individual follows (or even exceeds) guidelines and rules on sustainable development coming from within the organisation and from the wider society, and is able to realize a workable balance between the demands of society, impacts to the eco-environment and the economy. The individual understands that sustainability aspects, measures and attitudes often vary in different countries and cultures (International Project Management Association, 2015).

In ICB4 competence 4.3.5 on Cultures and values, the perspectives of sustainability project management are extended for international projects. A core concept introduced here is corporate social responsibility:

> The individual needs to be sure that the project supports the sustainable development of the organization, which includes corporate social responsibility (CSR). CSR is a lever of control in complying with legal and non-governmental regulations, professional standards and other ethical and international norms. By CSR, if practised in the right way, an organization encourages a positive impact through its activities on the environment, consumers, employees, communities, stakeholders and all other members of the society (International Project Management Association, 2015).

In the list of knowledge aspects in this ICB4 competence we also find “green project management”. That´s a nice recommendation – and there are important contributions available since several years like those from the Green Project Management organisation– but the job to implement green project management into ICB4 and all training and certification units is still open.

Table 2 shows the direct references to Sustainability found in the Perspective domain. No direct references have been found in Competence Elements “Governance, structures and processes”, and “Power and interest”.

Table 2: Sustainability in the Perspective domain. . Source: The authors

Competence Element	Definition	Knowledge	Skills
Strategy	Correlation with the sustainability of the organisation.		Sustainable thinking
Compliance, standards and regulations	The individual follows (or even exceeds) guidelines and rules on sustainable development	Sustainability principles	
Culture and values	The individual needs to be sure that the project supports the sustainable development of the organization, which includes corporate social responsibility	Corporate Social Responsibility. Green Project Management	

In ICB4 competence 4.4.2 on Personal integrity and reliability individuals in projects are requested to promote the sustainability of project outcomes:

> Promoting sustainability means focusing on the endurance of solutions even when engaged in time-limited tasks. Sustainability is not only about social equity, environment protection or economic results. It is the consideration of the long-term outcomes and effects of behaviour. The individual has the ability to keep the bigger picture in mind and act accordingly (International Project Management Association, 2015).

In ICB4 competence 4.4.9 on Negotiation individuals in projects are requested to negotiate to achieve a sustainable agreement.

Table 3 shows the direct references to Sustainability found in the Practice domain. No direct references have been found in the rest of Competence Elements of this domain.

Table 3: Sustainability in the Practice domain. . Source: The authors

Competence Element	Definition	Knowledge	Skills
Personal integrity and reliability	Promoting sustainability means focusing on the endurance of solutions even when engaged in time-limited tasks. Sustainability is not only about social equity, environment protection or economic results. It is the consideration of the long-term outcomes and effects of behavior.	Sustainability	Personal integrity and reliability
Negotiation	Individuals in projects are requested to negotiate to achieve a sustainable agreement.		Negotiation
Result orientation		Integration of social, technical and environmental aspects	Result orientation

ICB4 competence 4.5.3 deals with the Scope - with the boundaries of a project and structural issues (work breakdown structure, …). Sustainability issues here are a bit fuzzy – the project and its outcomes are important but also an appropriate scope management avoiding scope creeps.

ICB4 competence 4.5.9 deals with Procurement. Sustainability has to be taken into account in procurement, for example when selecting commodities or suppliers – as discussed in Reusch & Ojeda (2013)

ICB4 competence 4.5.13 deals with change and transformation. Change management should be developed in such a way that change and transformation sustain – and ´falling back´ can be avoided.

Table 4 shows the direct references to Sustainability found in the People domain. No direct references have been found in the rest of Competence Elements of this domain.

Table 4: Sustainability in the People domain. . Source: The authors

Competence Element	Definition	Knowledge	Skills
Scope	The project and its outcomes are important but also an appropriate scope management avoiding scope creeps		
Change and transformation	Change management should be developed in such a way that change and transformation sustain		

3.5 ICB4 and sustainability. Contrast with the five key sustainable competences framework

Silvius & Schipper (2014) applied Wiek's key competence sustainable competences framework to ICB3. Table 5 shows the summary of the analysis. Table 6 shows the results of a similar application to ICB4.

Table 5: Summary of the coverage of sustainability competences by ICB3. Source: Silvius & Schipper (2014)

	ICB Version 3.0		
	Technical	Behavioural	Contextual
Systems Thinking			Partial coverage (specifically 3.05 Permanent organization, 3.06 Business, 3.07 Systems, products & technology)
Anticipatory			
Normative		Limited coverage (specifically 2.15 Ethics, 2.14 Values appreciation)	
Strategic	"Full" coverage		Partial coverage (specifically 3.09 Health, security, safety & environment)
Interpersonal		"Full" coverage	

Table 6: Summary of the coverage of sustainability competences by ICB4. Source: The authors

	ICB Version 3.0		
	Practice	People	Perspective
Systems Thinking	Missing. There should be mention in several (Design, Requirements, objectives and benefits, Resources, Procurement and partnership)	Missing (Leadership)	"Full" coverage
Anticipatory	Missing. There should be mention in several (Design, Risk and opportinities, Stakeholders, Procurement and partnership)	Missing	"Full" coverage
Normative	Missing at Stakeholders.	Partially, through Personal integrity and reliability.	"Full" coverage
Strategic	Missing at Stakeholders.	Partially, through Resource orientation	"Full" coverage
Interpersonal	Missing	Missing	Partial coverage through Culture and values

4 Conclusions

With ICB4 there has been a significant improvement in proposals for sustainability project management standards. ICB4 is available since September 2015 – so far only in English. In several countries translators are active to prepare other language versions. The full implementation of ICB4 will take years. The main guidelines for implementing ICB are all based on ICB3 today (Heremarij, 2013; Gessler, 2012)

The implementation of ICB4 gives the opportunity to strengthen many aspects of this new standard. Some gaps need yet to be fulfilled (more depth into Stakeholders involvement, KPIs, innovation,..).

The development of training units for the implementation of ICB4 can be used to shape the sustainability focus of ICB4.

The new ICB4 will have an impact on other standards – even IPMA standards.

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