

# International Software Product Management Association

## Towards a Software Product Management Certification

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**Abstract**—Software Product Management (SPM) excellence is recognized as a key success factor for software organizations – both in industries delivering software as a product, software and IT as a service, or software embedded in other products. The International Software Product Management Association (ISPMA) is a group of SPM experts from academia and industry that aims at fostering software product management excellence across industries by establishing software product management as a discipline of its own in both academia and industry. This presentation will report on the progress towards establishing, disseminating and maintaining a curriculum and a certifiable body of knowledge on SPM (SPM BoK) that is recognized as the premier source on SPM by all stakeholders.

**Keywords:** *software product management; certification; education; technology product management; curriculum.*

### I. INTRODUCTION

The success of any software-intensive product depends on skilled and competent product management [1][2][3][4][5][7]. In essence, product management revolves around what functionality and quality a product or service should offer, to which customers, and when in time, while assuring a winning business case [8]. Software product management is not only relevant for software companies and companies that develop software intensive systems, but also for companies that provide services to customers using long-lived software infrastructures.

A software product manager is responsible for managing a product throughout the product life cycle with the objective to achieve sustainable success over the life cycle of the software product (or product family or platform). This generally refers to economic success, which is ultimately reflected by the profits generated. He owns the business case of a product across its different versions, variants and associated services. Acting as a “mini CEO” he represents an enterprise or business unit in strategy formulation and its operational realization. Software product management (SPM) includes work with requirements, release definitions, product release lifecycles, the creation and interpretation of product strategies, balancing long-term technology push with shorter-term market-pull, and assuring a winning business case by selecting the right requirement for realization [2][3][4][7][6] and an appropriate price [7]. Indeed software product management is complex: there are many intra- and inter-organizational stakeholders, many responsibilities and no formalized education or body of (scientific) knowledge [7].

### II. BACKGROUND ORGANIZATION

The ISPMA, first convened in 2009, has since been formalized, today existing as a non-profit organization responsible for the standardization of an SPM curriculum, body of knowledge, and certification of professional training and certified software product managers. The association is structured around an association board consisting of a manageable amount of members (eight at present) responsible and participating in the day-to-day work. The current members of the board bring both industrial and research experience in the fields of software product management, software engineering, requirements engineering and related fields. A majority of the board members are also active in industry as product development professionals, product managers and senior consultants. The association board is comprised of (in alphabetical order);

- Prof. Dr. Sjaak Brinkkemper, Utrecht University, The Netherlands, s.brinkkemper@cs.uu.nl.
- Dr. Christof Ebert, Vector Consulting Services, Germany, christof.ebert@vector.com.
- Dr. Samuel Fricker, Blekinge Institute of Technology, Sweden, Samuel.fricker@bth.se.
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- Gerald Heller, Software Process Consulting, Germany, gerald.heller@swq4all.de.
- Mahvish Khurum, Blekinge Institute of Technology, Sweden, mavish.khurum@bth.se (supporting member).
- Hans-Bernd Kittlaus, InnoTivum Consulting, Germany, hbk@innotivum.de.
- Dr. Inge van de Weerd, Utrecht University, The Netherlands, i.vandeweerd@cs.uu.nl.

In addition to the board, industrial members in the industrial reference group participate and contribute through their continuous input, review of early drafts, and active participation in meetings.

### III. SPM REFERENCE ARCHITECTURE AND CURRICULUM

The SPM BoK, and curriculum, are based upon a reference architecture (Figure 1). The architecture ranges from strategic management, through the product perspective, but also includes the coordination of the functional units of the company in relation to the particular product.

The curriculum has a foundation (basic) and advanced level. The foundation level covers all aspects in the

Strategic Management	Product Strategy	Product Planning	Development	Marketing	Sales and Distribution	Evolution and Service
Portfolio management	Positioning and Product Definition	Product Life-Cycle Management	Project management	Marketing mix optimization	Customer relationship management	Technical support
Corporate Strategy	Delivery model	Product Requirements Engineering	Engineering management	Marketing planning	Sales strategy and planning	Marketing support
Innovation Management	Sourcing	Release Planning	Project requirements engineering	Product launch	Channel preparation	Sales support
Resource Management	Business Case and Costing	Roadmapping	Quality management	Customer analysis	Sales management	Services preparation
Market Analysis	Pricing			Opportunity management	Operational distribution	Services provisioning
Product Analysis	Performance and Risk Management			Operational marketing		
	Ecosystem Management					
	Legal and IPR Management					

Figure 1. ISPMA Reference Architecture overview.

architecture, and the advanced level goes deeper into selected parts of the reference architecture. The overall intention of the foundation level is to give a well rounded knowledge in all of the fields relevant for the role of product manager. The International Software Product Management Association (ISPMA)<sup>1</sup> is working towards a formal release of the foundation level curriculum and the SPM BoK in late 2011. The curriculum (which includes modules and exams) can be used by professional training suppliers to develop and administer training in software product management, while certification is supplied through the ISPMA. The SPM BoK (and the curriculum) can be used as a means to collect knowledge and best practices in the field, and should be seen as continuously evolving through additions and refinements from research and industry experience.

#### References

[1] S. Fricker, T. Gorschek, C. Byman, and A. Schmidle, "Handshaking with Implementation Proposals: Negotiating Requirements Understanding," *IEEE Software*, vol. 27, Mar. 2010, pp. 72-80.

[2] I. Van De Weerd, S. Brinkkemper, R. Nieuwenhuis, J. Versendaal, and L. Bijlsma, "Towards a Reference Framework for

Software Product Management," 14th IEEE International Requirements Engineering Conference RE06, vol. 0, 2006, pp. 319-322.

[3] L. Gorchels, *The product manager's handbook*, McGraw-Hill Companies, 2006.

[4] C. Ebert, "The impacts of software product management," *Journal of Systems and Software*, vol. 80, 2007, pp. 850-861.

[5] T. Gorschek, P. Garre, S.B.M. Larsson, and C. Wohlin, "Industry evaluation of the Requirements Abstraction Model," *Requirements Engineering*, vol. 12, 2007, pp. 163-190.

[6] M. Svahnberg, T. Gorschek, R. Feldt, R. Torkar, S.B. Saleem, and M.U. Shafique, "A systematic review on strategic release planning models," *Information and Software Technology*, vol. 52, 2009, pp. 237-248.

[7] H.B. Kittlaus and P.N. Clough, "Software Product Management and Pricing," *Key Success Factors for Software Organizations*, 2009.

[8] T. Gorschek, A. Gomes, A. Pettersson, and R. Torkar, "Introduction of a process maturity model for market-driven product management and requirements engineering," *Journal of Software Maintenance and Evolution: Research and Practice*, Mar. 2011, p. n/a-n/a.

<sup>1</sup> See [www.ispma.org](http://www.ispma.org).