



**LAURA CAMACHO
FRIAS**

**GESTÃO DE PRODUTO: UMA ANÁLISE
EXPLORATÓRIA EM EQUIPAS DE TRABALHO
MULTINACIONAIS**

**PRODUCT MANAGEMENT: AN EXPLORATORY
ANALYSIS IN MULTINATIONAL TEAMS**



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Dissertação apresentada à Universidade de Aveiro para cumprimento dos requisitos necessários à obtenção do grau de Mestre em Engenharia e Gestão Industrial, realizada sob a orientação científica da Prof. Doutora Marlene Paula Castro Amorim, Professora Auxiliar do Departamento de Economia, Gestão e Engenharia Industrial da Universidade de Aveiro

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To those who supported me through the way.

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A mis hijos, que sin saberlo me obligaron a seguir en frente.

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A Pedro, que me obliga cada día a parar para respirar, me hace reír y soñar.

A mis amigos, mi segunda familia, que me dan energía.

palavras-chave

Gestão de producto, equipas virtuais, cultura

resumo

Este trabalho apresenta os resultados de um estudo exploratório conduzido com o objectivo de identificar os principais desafios na gestão de equipas de Gestão de Produto internacionais, multiculturais e geograficamente dispersas. O trabalho desenvolvido envolveu uma revisão bibliográfica preliminar sobre a posição de Gestor de Produto, equipas globais e virtuais e posteriormente a recolha de informação sobre o papel e os desafios da função de Gestão de Produto, através da condução de entrevistas e questionários. O estudo pretendeu: i) caracterizar a função da Gestão de Produto; ii) analisar a influência da cultura organizacional na percepção da função de Gestão de Produto; iii) perceber o impacto da dispersão geográfica das equipas nos profissionais de Gestão de Produto; e iv) compreender as implicações do uso de comunicação virtual nas equipas de produto.

key-words

Product management, virtual teams, culture

abstract

This dissertation presents the results of an exploratory study conducted with the aim of identifying the key challenges in managing teams of International Product Management, that are multicultural and geographically dispersed. The work involved a preliminary literature review concerning the function of Product Manager, as well as about the functioning of global and virtual teams, followed by data collection about the role and challenges of Product Management function by means of interviews and questionnaires.

The study aimed to: i) characterize Product Management function; ii) analyze the influence of organizational culture on the perception of the role of product management; iii) understand the impact of geographic dispersion of teams in professional management product; and iv) understand the implications virtual communication in product management teams.

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LIST OF ABBREVIATIONS

ICT – Information and Communications Technology

IPM – International Product Manager

Ux – User experience

1 INTRODUCTION

This study aims to explore the main challenges involved in the management of cross-cultural and geographically distributed teams of International Product Management (IPM). The work was developed building on desk and field research.

The preliminary phases of the work relied on desk research conducted with the purpose of examining existing literature concerning the topics of Product Management, virtual teams and cross-cultural management. This review addressed relevant publications in the field on Product Management, business organizations, new product development and literature on team management. Although many of the referred publications don't have a direct link to IPM it was considered important to analyse them given the existing similarities between IPM and other areas, such as research and development (R&D), innovation and manufacturing.

The literature sections regarding Product Management, virtual teams and cross-cultural teams were kept as independent conceptual blocks to reinforce the characteristics of each of the teams, and to facilitate in the exploratory phase the acknowledgement of those features.

The subsequent phases of the work were empirical and involved qualitative research with an exploratory approach. The empirical fieldwork involved the conduction of in-depth interviews with a selected sample of the target group addressed in the study: International Product Managers in multinational companies. The companies addressed for data collection managed similar product portfolios but had very different organizational and cultural backgrounds. The selection of interviewees observed multiple factors, such as their areas of responsibility as International Product Managers, the inclusion of different professional and academic backgrounds and a spectrum of several cultures and locations, in order to provide a rich setting for data collection.

The initial inspiration for this study derived from the acknowledgement of the challenges associated to the role of International Product Managers (IPMs) in multinational companies, acting in international markets. At the time of this study, the role of IPMs was characterized by an absence of an obvious degree or career path leading to work as IPMs, and a lack of consistency regarding the perception about the role and the visibility of the functions of IPMs inside the organizations (which derived from the fact that in distinct organizations it was possible to observe IPMs dealing with different market/ product scopes and responsibilities), as well as a very heterogeneous "team feeling".

These characteristics were expressed in former literature references to the role of Product Managers.

The primary aim of this study was to explore if different organizational structures lead to different ways of working but not necessarily change the main characteristics of the IPM role. To achieve this, the document was organized in three main parts: conceptual framework, context and methods of study and results.

The conceptual framework chapter presents the features and scope of Product Management, ranging from the set of skills required to the responsibilities and challenges of the role inside business organizations. The purpose of this framework was to identify the main topics to approach during the questionnaires and interviews phases, as further explained in the methodology section.

Next, in the methodology chapter the data collection and analysis tools that were used to support this study are presented. A questionnaire was created to collect data about the profiles of the participants in the study, designed according to the content from the previous chapter, i.e. addressing the professional experience and academic background, ways of working, locations and cross-cultural aspects were approached this way.

Following this, and in accordance with the insights gained from questionnaires, some questions were reinforced during the interviews, that were carried out via telephone or videoconference, and that build on the approach suggest by the Critical Incident Technique methodology. The analysis of the interviews aimed at understanding the extent of the influence exerted by organizational culture on its teams way of working (taken for granted in some cases but not really recognized), the impact of disperse teams in the professionals/ individuals (way of working, performance), the challenges of multi-cultural relationships within the team and/or the rest of the organization (impact of stereotypes, different languages, cultural differences), and the effect of use, need and dependence on virtual communication within the IPM team and in individuals. The results section therefore reports the feedback collected from the participants. The content of the questionnaires was arranged in five blocks, directly linked to the topics approached in the conceptual framework chapter. Then, the results from the interviews were summarized. To finalize, limitations and further studies were described.

Although this study has been conducted with a specific group of professionals, the results suggest an accordance with a key argument of success for the performance of the profession as IPM, found across the publications used as reference - the importance of the “team feeling” and use of organizational culture

as “glue” between individuals to overcome communication barriers between team members and increase the team performance.

The sense of belonging to the organization, the understanding of common goals, as well as trust and transparency rank among the most salient topics found mentioned by interviewees. Other key insights regard the need to understand individual needs in order to improve team performance, regardless the distances, cultures and modes of communication.

2 CONCEPTUAL FRAMEWORK

2.1 SCOPE OF THE INTERNATIONAL PRODUCT MANAGEMENT FUNCTION

A product is something that is produced (Kahn, 2007), but not only: a product is anything offered, for sale or consumption in return for retribution. It can be tangible (objects), or not (services), as well as a combination from both (Cooper and Edgett, 2009).

Management, from the Old French word *ménagement* (“the art of conducting, directing”), and from Latin *manu agere* (“to lead by the hand”), is a process, a systematic way of doing things to accomplish goals by use of people and resources. (Tripathi and Reddy, 2008).

So, what is Product Management?

Product Management is the organizational structure within business that manages according to customer needs and supports the marketing and sale of a product or set of products throughout the product life cycle. This structure takes care of the activities required to put the product out in the market and to support it thereafter (Gorchels, 2003). Different activities, from different business functions are gathered under the leadership of one person – the Product Manager (Haines, 2013). Procter & Gamble was the first Company in the 1930s to create the role of brand manager (a person responsible for the success of a brand, managing its product lines) as a way to improve the effectiveness of its consumer products business. The new approach to the business was the first step to the Product Management role (Haines, 2008), a middle management position in the business organization responsible for the success of a product, but with no direct authority over the development or sales entities (Gorchels, 2003).

Product Management is business management at the product, product line, or product portfolio level, where the products are considered as small businesses inside of a bigger business and where the Product Manager is partly or wholly responsible for all or part of a product platform, a single product, a product line (a small product portfolio), or several product lines (a larger portfolio) (Haines, 2008). The Product Manager evaluates the product ideas and decides which are worth pursuing, and which are not, advocating for the customer’s needs and desires (Windley, 2002). This assessment needs to determine what it will take to succeed (Cagan, 2008).

International growth, more complex products and more demanding customers are the reasons why companies require Product Managers in their organizations, to act as general managers of their products (Gorchels, 2011).

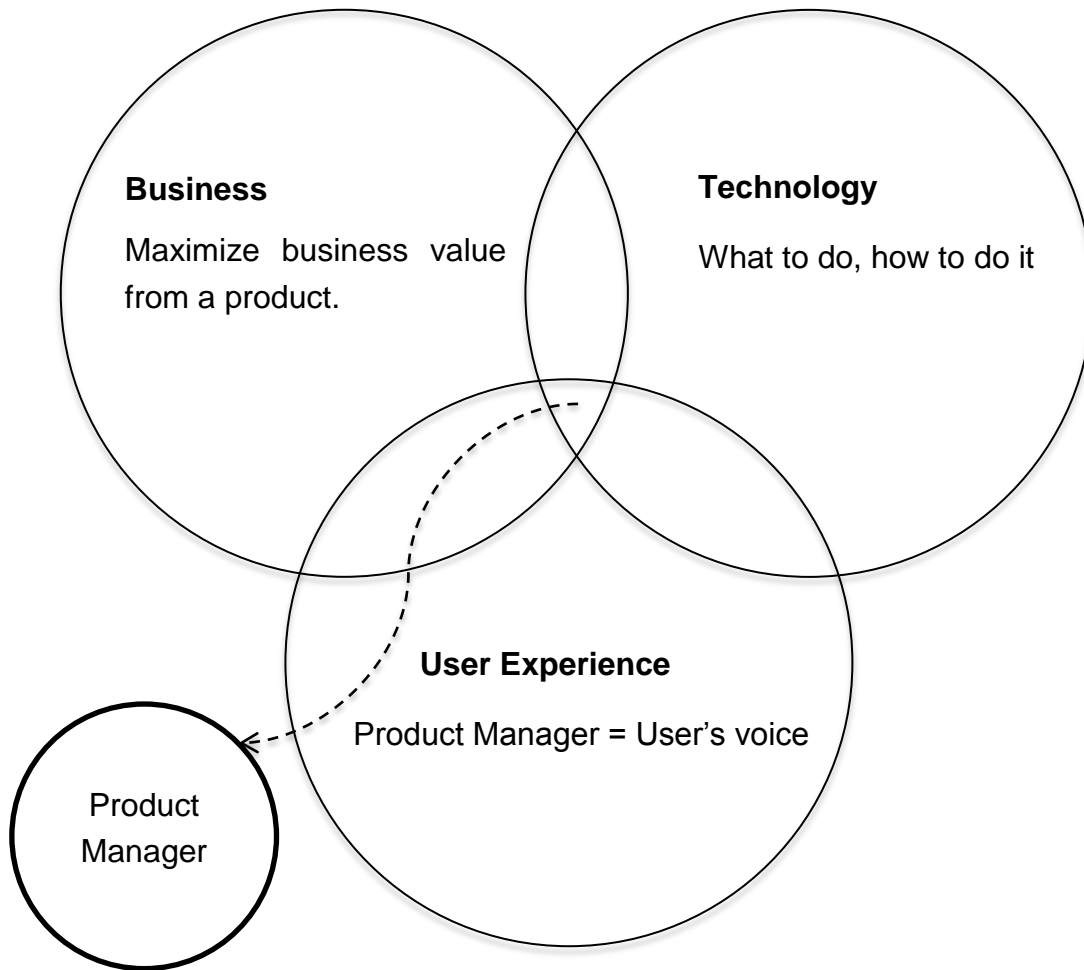
Product Managers should be focussed on optimizing a product to achieve the business goals (while maximizing return on investment), but acting as the product CEO is not a one-person job: it requires a product team, where the Product Manager is in the intersection between business, technology and user experience (Cagan, 2008).

In Figure 1 the function of Product Management is illustrated by evidencing its role as the intersection of the following areas:

User Experience: the Product Manager is the voice of the user inside the business and because of this, plays an important role on the User experience (Ux), defending the requests and preferences from the customers towards the Business and Technology units. Ux is created from the opinions and feelings from the users regarding a certain product (tangible or not), from first sight (e.g. advertisement), contact (e.g. trial or purchase moment) or use (e.g. long term use) (Kraft, 2012).

Business – Product Management is a business function, voice of the customer, but most of all, focused on maximizing business value from a product. One of the main goals is therefore, to achieve the business goals while maximizing return on investment. For this, the decision process to choose the ideas to invest in is vital (Gorchels, 2003).

Technology – To make the correct decisions for the products definition is very important to understand the levels of technology and of effort involved. It is necessary to know how to build even before defining what to do, since this will have impact on the complete project, determining time and resources required. (Cagan, 2008).



Adapted from Eriksson (2011)

Figure 1 Positioning of Product Management function.

Due to the intersection between several areas in the business organization, the role of a *Product Manager* includes several responsibilities, which may vary from company to company. An overview of the variety of such functions is presented in Table 1, linked to the three areas of action from the organizations mentioned in Figure 1 (Business, Technology and Ux).

Table 1 Overview of the Product Manager responsibilities
(Based on Cagan (2008), Gorchels (2003) and Windley (2002).

Product Manager responsibilities	Areas of action within organizations
Defining and planning product lines and product enhancements	Business, Technology
Managing product contracts and sales	Business
Setting strategic direction based on customer needs and business goals	Business, Ux
Translating strategic goals into operational tasks	Business, Technology
Making proposals to senior management regarding implications of proposed plans	Business
Serving as a representative to internal and external clients. Taking the lead in establishing tactical plans and objectives	Business, Technology, Ux
Developing and implementing administrative and operational matters ensuring achievement of objectives	Business
Evaluating risks and trade-offs	Business, Technology, Ux
Proposing contingency plans	Business, Technology, Ux
Analysing business processes and creating applications to improve or support those processes	Business
Branding	Business, Ux
Working with graphic designers to create look and feel	Ux
Defining navigational flow and user experience	Ux
Defining feature sets	Business, Technology, Ux

Therefore, in the end the question is always: what does the Product Manager manage exactly and how is it done?

The work of the Product Manager starts with the setting of a vision for the product. The vision builds on customer needs, demands and problems, assessed by means of market research. Once the information is available (e.g. by using of feedback from clients, quantitative data from web analytics, research reports, market trends and statistics) the Product Manager brings that information together to define a vision for the product (Gorchels, 2003). Eriksson (2011) outlined seven steps that are required to “arrive to the vision”:

1. Assessing the industry and competition.

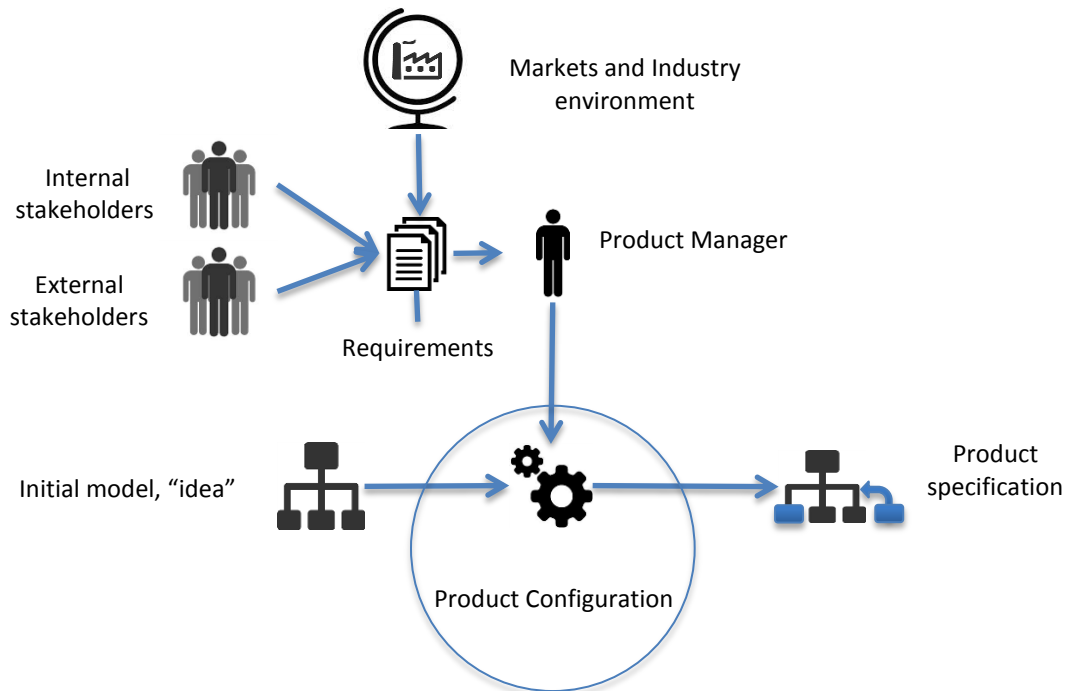
Before any allocation of resources into any project, it is necessary to check the environment within which the company operates and where it may operate in the future. In this assessment both company and products are considered and based on it, together with customer needs, it is possible to define revenue opportunities, market segmentation and customer targeting (Zahid, 2013).

2. Market research and segmentation:

To define the product customers a joint effort is necessary from a cross-functional teamwork, and, whenever possible, involving external research firms is required. The Product Manager often takes responsibility for directing this activity and keeping it on track. The key element when segmenting markets is to know what group of buyers are similar enough so the same product or service is able to appeal to all of them (Barringer and Ireland, 2010). Despite their importance in the definition of a new product, market research and segmentation are no substitute for the work of discovering customer needs. Sometimes even the customer is unaware of a basic need, or a “better” way to address it, so the Product Manager must drive this discovery process and own the results (Haines, 2008).

3. Decision making

Product Managers must make the best possible decisions in near real time during the product's life cycle. Figure 2 shows a traditional configuration process in which stakeholders (external and internal) provide requirements to the Product Manager who in turn interprets and translates them into a product specification, which will lead to a product configuration after review with all the stakeholders (Mendonca, Bartolomei and Cowan, 2008).



(Based on: Mendonca, Bartolomei and Cowan, 2008)

Figure 2 Illustration of a decision model for a Product Manager

4. Financial planning and analysis.

Companies invest money in products that are expected to generate a positive return to the business and Product Managers must plan for product profitability and assess the profitability of existing products, working with finance to achieve a balance between the cost of products and the market price desired. Customers don't care about internal cost or ways to fix prices. Their concern is just to know whether a product has sufficient value given the competitive alternatives available (Gorchels, 2000).

5. Forecasting volumes, market share, and revenue.

The Product Manager should and must own this activity from start to finish (Haines, 2013).

6. Product and marketing strategies.

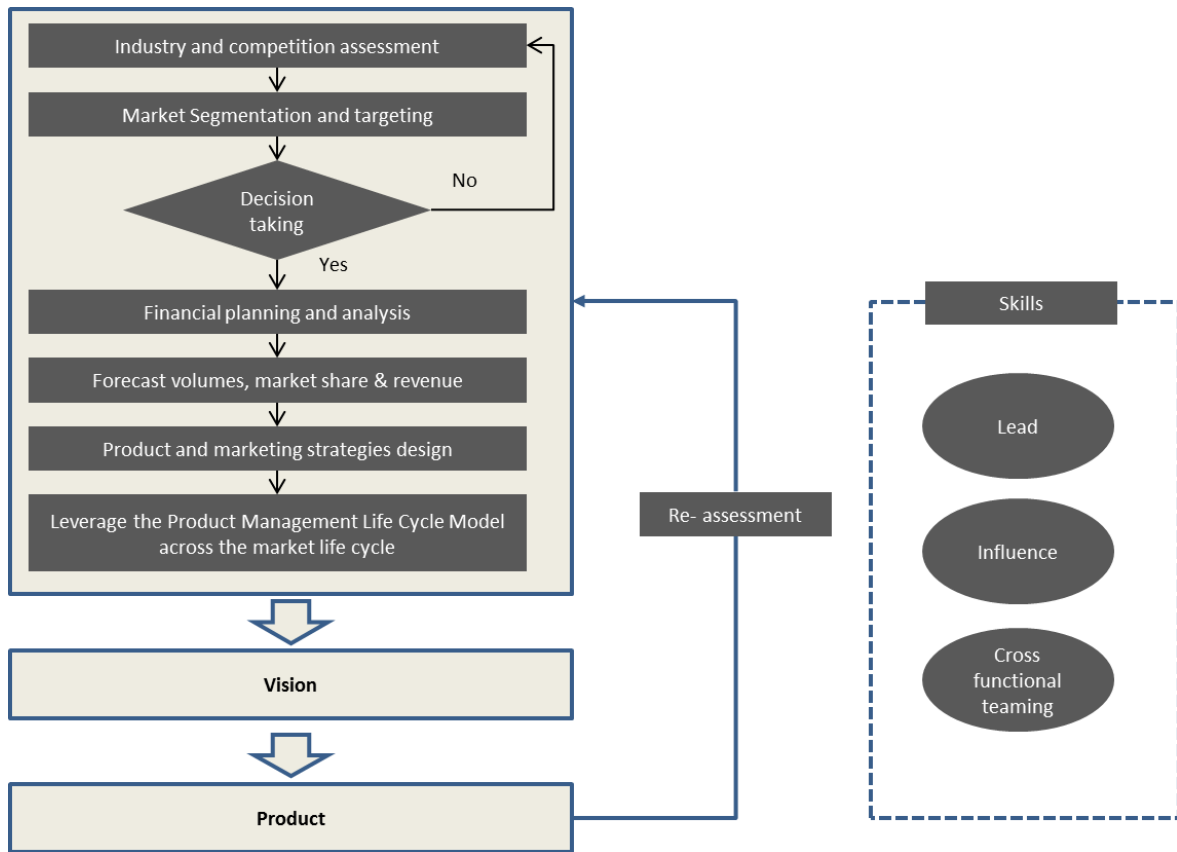
These strategies are designed according to the forecasts, with the support of a cross-functional team, leading to the vision for the product. The most important responsibility of the Product Manager is to align the strategies for the product with the strategies of the organization, and to make sure they are not only compatible but interconnected, in order to check all possible product portfolio investment possibilities (Haines, 2008).

7. Once the strategy is defined, it is necessary to leverage the Product Management Life Cycle Model across the market life cycle. A consistent set of business solutions is displayed to support collaborative creation, management, dissemination and use of product definition information across the organization from concept to end of life – integrating people, processes, business systems and information (Gecevska et al., 2010).

The Product Manager creates, maintains and assures the execution of the various plans and documents required to give life to a product and keep it healthy in the different phases of the Product Life Cycle (e.g. Product Strategy, Business Case, Launch Plan, Marketing Plan, Product Requirements, Marketing Mix, Phase-in/ Phase-out plans, etc.) (Gorchels, 2011), collecting and analysing performance data constantly (i.e. market, financial, and operational data) to identify new opportunities for the business (Haines, 2008).

Figure 3 illustrates the flow of the steps towards the Vision and Product just described: after the initial assessments and the definition of customers, it is necessary to decide if the idea is worth to be translated into a project, before further investments are applied. If the outcome is negative, a new idea is evaluated; if positive, further planning is required from business, technology and customers perspective.

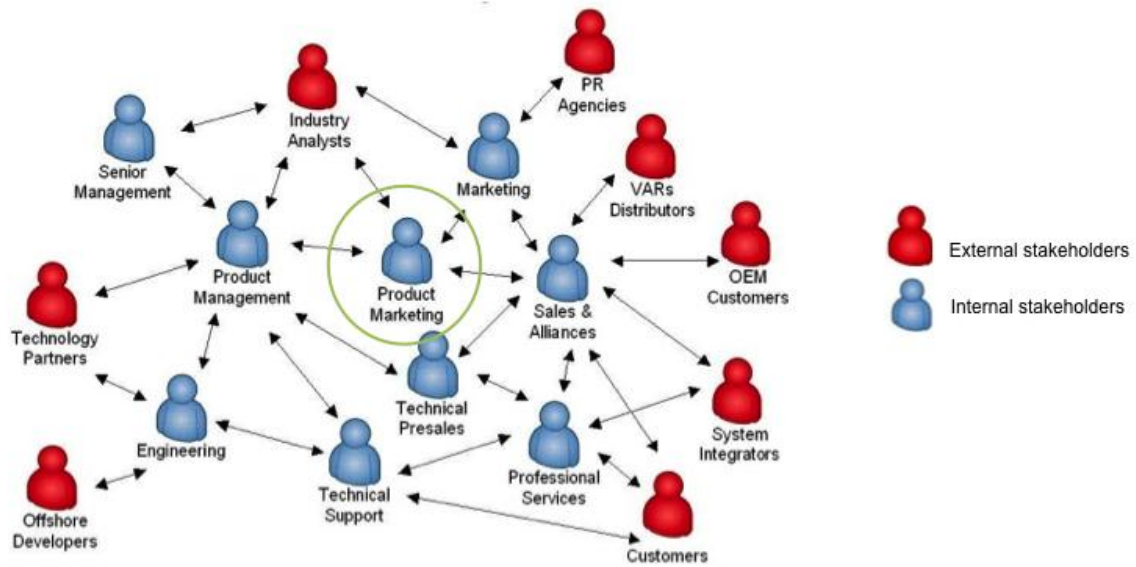
Once the Vision is reached and the Product is in the market, it is necessary to check if the Market conditions initially stated for it are still valid and evaluate the success of the introduction. This belongs to the re-assessment phase, which leads to a new cycle of decisions, planning and acting to improve, upgrade or substitute the product and renew the Vision if necessary.



(Based on Eriksson, 2011)

Figure 3 Illustration of Product Managers 'path towards Vision & Product

In figure 3 a set of skills is presented next to the steps towards Vision and Product. These skills are considered vital to succeed as Product Manager (Haines, 2013). Once there is a vision, the word needs to be spread in the business and the success of the product relies on every team member, every stakeholder, from sales to developer (see Figure 4). Cross-functional teaming is the key to the success of any product, bringing expertise, different points of view and criticism from many different areas. It allows to better control complexity, to increase efficiency and to lead to higher levels of creativity than common-function groups (Huth, 2008). To lead the team, the Product Manager must have the skills to facilitate discussions and debate, mediate conflict, and support collaboration.



(Based on: Kejriwal, 2010)

Figure 4 Product team stakeholders

Managing implies explicit authority over individuals (Tripathi, 2008), which in most of the cases does not exist for Product Managers (Gorchels, 2000). Leadership, on the other hand, means to convince/influence those individuals to follow a vision (Bush, 2003). One of the most important challenges for the Product Manager function is the development of an ability to lead, convince and manage without having authority over the rest of the team (Rekhi, 2014). To succeed in this work, the Product Manager needs to present the goals to the team in a clear way, identify the needs from stakeholders and link both to share the problems. Therefore, it is important to invest in relationships, creating a common ground for better communication (Cohen and Bradford, 2011)

It is clear at this moment that the Product Manager should have an ample range of skills to achieve success in a great number of tasks within several areas, i.e. from market research to leadership and project planning to finance (Zahid, 2013), but since there is no obvious degree or career path to arrive to the position of Product Manager and different companies manage their products in different ways it is possible to find Product Management professionals coming from very different backgrounds, including technical, economics, marketing, business management, international affairs, etc. (Haines, 2008). The role not only misses a degree of academic specialization: most of the companies do not have a formal or standardized Product Management professional development programs (Haines, 2013), therefore people in charge of products and services tend to manage them within the context of their own discipline (e.g. engineering, marketing, sales, etc.).

The structures of the organizations have as well a great importance on how the work is done. Different models of organization exist (e.g. by product, market, technology or buyer behaviour) as well as reporting lines (e.g. Product Management, Marketing, Market management, etc.) (Weitz and Wensley, 2002). However, the support of the organizations, notably from their top management to Product Management is key (Haines, 2008). Decision making processes need to be clear (e.g. by avoiding whenever possible middle layers between the Head of Product Management and Product Managers) and a certain degree of flexibility is required to keep proper collaboration with other departments (e.g. R&D, sales, purchasing, etc.) (Mukerjee, 2009),

Different ways of working and profiles and lack of support from the structure of the organization may lead to a lack of recognition inside the companies, and the emergence of ambiguity about a position that apparently does not produce, sell or promote anything. When Product Management has no well-defined framework, it may often be treated as transition discipline in many companies (Cagan, 2012).

2.2 CHARACTERIZING VIRTUAL TEAMS

When companies face the need to compete on a global scale, the process of new product development and market introductions becomes more complex. To solve this, (e.g. overcome language and cultural differences, assure presence in the markets and even support new production locations) an increasing number of organizations rely on teams dispersed throughout the world, i.e. global teams (McDonough III, Kahn and Barczak, 2001). These teams can be called global, virtual, distributed or dispersed, among other designations (Pfneisil, 2000) although slight differences will be discussed ahead regarding the meaning of “global” and “virtual”.

In global teams, technology plays an important role to facilitate the achievement of the goals. Here is where “virtual collaboration” appears in the daily work equation: members from the same organization or multiple organizations may overcome potential barriers and focus in a global and multi-organizational project or task. (Gibson and Cohen, 2003).

Three attributes can be used to define a virtual team:

1. Group of people working together, with or without interdependent tasks and/or projects. The individuals are responsible for the outcome of the group and must be seen as a team by others (individual or groups), managing the relationships across the organization where they are embedded. (Hackman, 1987).
2. The members of the team are geographically dispersed, often separated significantly by time, distance and language (Hellriegel and Slocum, 2008) although some authorities suggest that people that need to work together and are based more than 50 metres apart are a virtual team (Edwards and Wilson, 2004).
3. The team members base their work and rely on technology-mediated communications rather than face-to-face interaction to stay in touch and get their tasks done: telephone, fax, teleconferences, e-mail, videoconferences, collaborative design tools, knowledge-management systems... Whereas the teams may meet face-to-face from time to time, their work, and the coordination of their activities could not be done without technological support. The virtual characteristics of the team increase together with the reliance on electronic communication (Gibson and Cohen, 2003).

2.2.1 CHARACTERIZING THE WORK OF VIRTUAL TEAMS

Virtual teams allow organizations to increase their flexibility regarding the type of work that can be accomplished. To this end the use of these teams' knowledge is expected to develop and change faster than co-located teams over time, which may often lead to new problems, negotiation and interpretation efforts (Cohen and Gibson, 2002). Despite virtual teamwork can be considered more complex than working face-to-face (Heimer and Vince, 1998), the fact is that a virtual team that is designed, managed, and implemented effectively can use the talent from anywhere in the globe to solve business problems, service customers, and create new products (Cohen and Gibson, 2002). When the design, management or support of that team is disregarded, the team is likely to fail. Therefore, organizations must create the conditions for effective virtual teamwork to avoid failure.

The performance of disperse teams depends to a great extent on the quality of communication. Difficulties may arise from the lack of communication as well as from the lack of face-to-face interaction (Oertig and Buerger, 2006). The face-to-face interaction helps on communication and allows an easier development of trust and team spirit, which is important to increase the sense of trust between team members (Laroche, 2012), as a way to avoid conflicts and inefficiency (Arrow, 1974).

While the members of teams with a common location may feel a certain urgency regarding assistance to meetings or asking a question from a face-to-face conversation, discussing and reaching consensus may be difficult for virtual teams due to low availability of participants and different priority settings. In disperse teams the quantity of informal exchange of information is minimal (Pawar and Sharifi, 2000; Schmidt, Montoya-Weiss and Massey, 2001) since virtual teams tend to be more task oriented and exchange less socio-emotional information. There is always the possibility of contextual information being delayed or overlooked by remote team members, or lost in transmission because of technical or human errors (Cohen and Gibson, 2002). To enable communication and avoid these issues, adequate work structures are required (Ebrahim, Ahmed and Taha, 2009).

Virtual team collaboration requires both synchronous and asynchronous work (Cohen and Gibson, 2002): when team members are able to meet (locally or virtually), it is expected to be easier and faster to create output (synchronous mode), but it may turn into a challenge when the team members need to start earlier/ finish later the working day to speak to each other. When the same output

is expected by using asynchronous work, because not everyone may be available at the same time, it may likely take longer: the time required to keep up to date all participants can be perceived as additional preparation, those who did do their homework may view those members that may not have time to prepare the meetings as inefficient and the activities of preparation often have as result redundant discussions and missed dialog.

Virtual-team members often complain that too much time is spent on merely sharing information in meetings rather than doing truly collaborative tasks such as decision-making or problem solving (Cohen and Gibson, 2002). In a co-located situation, it is rather common that team members are around when changes in requirements are made and because of this, information is likely to get distributed quicker and with less effort than in virtual teams. This kind of situations may lead to wrong perceptions between non-co-located team members since members of co-located teams tend to take their own context (local situation) for granted and assume others' are similar, and thus don't know what about their context needs to be communicated to others (Steers, Nardon and Sanchez-Runde, 2010).

Table 2 shows a comparison between co-located global teams and virtual global teams to highlight the differences on communication, working patterns and challenges. Despite the global feature being present in both types, the co-location leads to differences on the behaviour of team members.

As we can see global teams are not necessarily virtual (e.g. certain departments from multinationals' have local branches with local focus). However, co-located team members, depending on their responsibilities, can present a mix of features: global-non-virtual with the colleagues in the same location and global-virtual for the tasks shared with colleagues out of that location.

Table 2 Global Team Characteristics - co-located vs virtual teams
Based on: Steers, Nardon and Sanchez- Runde (2010)

Global team characteristics	Co-located global teams	Virtual global teams
Team participation and working patterns	<p>Team members work regularly in close proximity: strong reliance in face-to-face interactions.</p> <p>When face-to-face discussions are important and possible, building trust and relationships is important, and decision time horizon can vary.</p>	<p>Team members' work separately, from various locations: strong reliance on virtual communication technologies.</p> <p>When key players are unable to co-locate, contextual information from different locations is important, tasks are well defined and can be accomplished independently, and ambiguity is low.</p>
Team composition	Heterogeneous, multicultural	Heterogeneous, multicultural
Required skills for interaction	Emphasis on intercultural skills	Emphasis on intercultural and technical skills
Main team challenges	<p>Communicating, making decisions, and taking actions in a largely face-to-face environment, where interpersonal styles can differ significantly (e.g. nonverbal communication; language subtleties, preserving or losing face)</p>	<p>Communicating, making decisions, and taking actions in a largely distributed and often computer-mediated environment, where interpersonal style, communication and body language are largely unseen.</p> <p>Developing cross-cultural understanding and sensitivity from a distance.</p> <p>Developing productive working relationships from a distance.</p>

2.2.2 TECHNOLOGIES

In the previous section two types of teamwork were highlighted: synchronous and asynchronous (Cohen and Gibson, 2002). These same categories can be applied to communication modes. Conference calls, fax machines, video conferencing and instant messaging (chat) support synchronous communication (even face-to-face if the team members are co-located). On the other hand, asynchronous interactions are possible by use of e-mail, newsgroups, and mailing lists, collaborative writing systems and group calendars, among others (Duarte and Snyder, 2006).

Despite being a key part of linking together geographically dispersed activities, the development of infrastructures and the use of technology to connect dispersed members is influenced (and complicated) by the composition of most virtual teams (Cohen and Gibson, 2002). The type of technology used should be connected to the tasks and needs from the team and develop together with the team and organization. Global teams rely on Information and Communications Technology (ICT), independently on how “virtual” they are. What changes, according to different levels of co-location or number of stakeholders, is the degree of reliance on ICT (Pauleen, 2004).

The use of asynchronous communication languages in virtual teams may present a key challenges since: the use of text-based electronic communication (e.g., e-mail) may impede the development of trust in virtual teams (Cohen and Gibson, 2002); the communication process is more laborious (so people tend not to type out details they would communicate verbally) (Graetz et al., 1998); and reaching consensus can be made more difficult (particularly in those teams working on complex, non-technical issues) (Hollingshead and McGrath, 1995). As a result, computer-mediated groups have lower communication efficiency than co-located groups (DeSanctis and Monge, 1999).

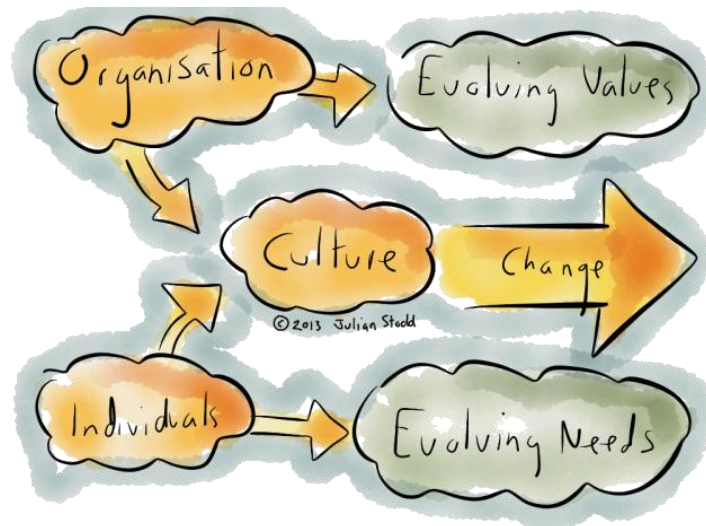
Despite this all, e-mail is probably the most common way of communication in today’s business world (Edwards and Wilson, 2004). However, sometimes e-mails are not enough and live-communication (synchronous) is required (Harvard Business School Press, 2010). To this end, the use of phone or videoconferences is a common resort to make communication easier and quicker. Even if virtual teams have the advantage of flexibility when using asynchronous communication (Cohen and Gibson, 2002), they have less modes of communication (non-verbal communication is not possible), less ability for networking and informal information transference (e.g. stopping by the coffee machine) and much more dependence on technology to get the work done (e.g. use of mobile devices to check the e-mail) (Schwalbe, 2013).

2.3 THE “MULTI-CULTURAL ENVIRONMENT EFFECT”

Whereas the previous section made clear why the management of virtual teams can be challenging, in this section the purpose is to detail another layer of team management difficulties: the fact that some virtual teams include elements from different nationalities and different places. As such, on top of the difficulties of managing the work of people who are not co-located, we add the complexity brought by the cultural and contextual differences among those team elements.

The communication problems that can be seen as a normal team issue for co-located colleagues are magnified when team members need to cope with cultural diversity, different languages and/ or accents (Ebrahim, Ahmed and Taha, 2009). When a second language is established as the official business language, this may create a psychological distance and fears of misuse, miscommunication, and misinterpretation of knowledge. As a result, there is often a higher perception of risk, which increases ambiguity and complexity of exchanged information (Steers, Nardon and Sanchez-Runde, 2010). Within co-collated team members, subgroups are often formed based on national, organizational, and functional cultures and there are from these subgroups potential perceptions of risk, distrust and suspicion towards individuals from different cultural groups, purely on the basis of group membership. Members from different nations are likely to perceive and react to organizational politics differently which could result in negative emotions and dysfunctional conflict (Cohen and Gibson, 2002).

Culture in a business environment is not only an individual or society issue. It is important to highlight the role of the organizational culture and what impact it has in the company environment. According to Hofstede (1980), the culture is learnt and not inherited, derived from the social environment. It differentiates itself from general human nature on one hand, and from the personality of the individual on the other. Organizational culture is the set of values and behaviours to have a certain way of working and environment in an organization (Schein, 1984). It is held together by the organization's values, philosophy and expectations and these are expressed in its image and interactions. The organizational culture is based on shared features (e.g. attitudes, beliefs, customs) and rules developed over time and considered valid. Organizational culture can be considered as created by the organization and inhabited by people, or co-created by the people and framed by the organization (De Witte and Van Muijen, 2000). In both cases it is considered that new needs from individuals or organization lead to evolving values. This process of creation and evolution of organizational culture is illustrated in Figure 5.



Source: Stodd (2013)

Figure 5 Evolution of organizational culture

Organizational culture has the following major features (Bush, 2003):

1. It focuses in values and beliefs of members of organizations although this does not mean that individual' values are always in harmony. Morgan (1997) suggests that there may be different and competing value systems that create a mosaic of organizational realities rather than a uniform corporate culture.
2. Organizational culture emphasizes the development of shared norms and meanings. These group norms sometimes allow the development of a monoculture with meanings shared throughout the staff (Martin, 2006).

The organizational culture affects the organization's productivity and performance and provides guidelines on topics such as customer care and service, product quality and safety, attendance and punctuality and concern for the environment. It also extends to production-methods, marketing and advertising practices, and to new product creation. Organizational culture is unique for every organization and one of the hardest things to change (Gallagher, Brown, Brown, 2008) but above all, organizational culture is a strong knowledge resource to achieve success in the organization's activities.

The culture of organization is believed to be strong when the majority of the employees embrace the same sort of beliefs and values as the organization (Deal and Kennedy, 1982), which depends on organizational factors such as size, age, employee turnover rate, and intensity of original culture. Most organizations have moderate-to-strong cultures, transmitted and learnt by employees principally through stories, rituals, material symbols, and language. According to Deal and Kennedy (1982), a weak culture of organization is directly linked to realities where rules are imposed strictly on the employees, which may create diversity between the person's personal objectives and organizational goals.

To allow a better understanding on how companies can use culture as competitive advantage, it is necessary to deconstruct culture into usable categories (Holden, 2002):

- General cultural knowledge: freely available knowledge about cultures (internet, papers, books, surveys...) and possible to be formally classified.
- Specific cultural knowledge: specific to a given source of common knowledge. It is subjective in the sense that it is selected for relevance to the companies' operations. It can be tacit and explicit according to the convention, but perhaps more crucial is the degree of relevant pre-existing knowledge on the part of those who gather and interpret it.
- Cross-cultural know-how: is the base of a company's core competence since the knowledge-sharing and organizational learning contribute to international competitive advantage. This kind of know-how is often subjective and experiential, facilitates interaction, informs participative competence and stimulates cross-cultural collaborative learning.

Cross-cultural management is often regarded as a discipline of international management and implies (a) procedures and policies relating to the management of workforces with different cultural backgrounds, and (b) moderating the impact of cultural differences on the execution of management tasks (Søderberg & Holden, 2002). Gibson and Cohen (2003) highlight the need to create "hybrid" cultures, structures, and operating policies to represent a compromise among various alternatives preferred in the team, focusing on cross-cultural skills and training, a learning orientation, lateral understanding and cross-functional capabilities.

3 CONTEXT AND METHODS OF THE STUDY

3.1 GOALS AND METHODS

Global companies face the challenges to manage global knowledge networks and multicultural project teams, as well as interacting and collaborating across boundaries using global communication technologies. The Product Management, on its International variant, gathers most of the features from virtual and cross-cultural teams (analysed in the previous chapter), although their degree (e.g. more or less virtual, higher or lower degree of cross-cultural relationships) depends on the organization structure where it is embedded.

The primary goal of this study was to explore the impact of the company's organization on its IPMs' way of work and performance, as well as to understand how the organizational culture, the virtual nature of product teams and the cross-cultural characteristic of those teams affect the Product Manager.

To point out potential improvement areas for the function of International Product Management, the study was carried out building on information provided from professionals from two companies operating in the same business area. Two of the main relevant differences (considered for this study) between companies were the staff size/ organization and the companies' culture. The study builds on the work description and the skills required to the people executing this role, to develop protocols for the interviews that were conducted. Accordingly, a first stage of the interviews was targeted to determine the profile of the participants and the organizations where they were integrated. In addition, the protocol aimed at collecting information about the degree of cross-cultural and/ or virtual teamwork in the organizations. These two degrees were expected to lead to different ways of working, as well as different degrees of satisfaction of the interviewees towards their professional status.

Data analysis was then aimed at providing answers to the following questions:

1. How is the personal perception of the IPM role in the organization vs. the perception of stakeholders from other departments?
2. What are the *pros and cons* of cross cultural teams and organizations?
3. What are the *pros and cons* of working and managing virtual teams?
4. What are potential organizational improvements for the management of IPM teams?

As a first step, a preliminary questionnaire (See appendix 1) was sent to all the potential participants from the two considered Companies to fill the pool of profiles. To select the number of participants, it was considered as reference the IPM team from Company 2, composed by 6 team members. After sending the request to fill in the questionnaires, five IPMs from Company 2 accepted to participate in this study and, to have equality in the number of responses, five participants were selected from Company 1 by order of response.

These questionnaires asked for information about the following parameters, regarding the IPM team in which the interviewees were involved:

1. Features of the IPM function;
2. Forms of communication among the IPM team;
3. Characteristics of diversity in the organizational culture of the IPM team.

With the first block of questions regarding IPM position, it was expected to verify the characteristics of the Product Management teams gathered in the literature review and compare the answers from professionals working in the same business area but in companies with different organization. The purpose was to assess if, independently of the structure in a company, most of the characteristics of the role of an IPMs were kept.

The two other blocks, concerning the “Forms of communication” and “Diversity in organizational culture” were used to explore differences on the IPM’s way of work that might derive from the differences in the companies’ structures.

This pool of answers was used to generate some basic data, presented in chapter 4, and to drive the second part of the study, the in depth interviews (See appendix 2). The data was arranged and presented by using of tables and supported in some cases by word clouds, created with the online tool Wordle (Feinberg, 2013), as a more visual and appealing way to show the most used words by the interviewees in their questionnaires, and to highlight the consensus on several issues (Ramlo, 2011) while allowing for a quick overview of the data (McNaught and Lam, 2010). Despite this system being intuitive, it was used as a complement to the tables, where further detail and context can be found (Heimerl, et al., 2014)

The analysis of the preliminary questionnaires brought forward several clear differences in the way of working of the different IPMs, which inspired the development of questions to be used in the interviews with the participants from both Companies (five from each one), to be more focused on specific challenges of the IPM function.

The approach adopted in the interviews was built on the methodology of the Critical incident technique (CIT), as a method of gathering facts (incidents) from the Product Managers to gain knowledge of how to improve their performance. This methodology aims to identify behaviours that contribute to success or failure from individuals or organizations in specific situations (Gremier, 2004). According to the early work of Flanagan (1954), the CIT enables the identification of important facts, related to the individual behaviour. Respondents are asked to focus on a particular incident or set of incidents, which caused serious loss. Critical events are recorded and analysed to identify clusters of difficulties and their relationship with a certain aspect of the system practice. Explanations for the source of the difficulty are explored afterwards.

It was intended to make clear the meaning of “critical incident” to participants. Critical incidents can be minor or major events that led to negative or positive consequences but it is important to consider that (a) since critical incidents often rely on memory, incidents may be distorted or even forgotten if the incident is collected long after an event and (b) respondents may be reluctant to reveal incidents that reflect badly on themselves and may reply with stereotypes, not actual events.

CIT has been used extensively in a diverse number of disciplines, including communications, job analysis, medicine, marketing, organizational learning, performance appraisal and psychology, among others (Butterfield et al., 2005). It is as well one of the most useful methods to gather the feedback from people regarding organizations (Zeithaml and Bitner, 2003), providing the list the factors that origin satisfaction and/ or dissatisfaction, to support organizations in the decision process to keep them or not.

The interview protocol included a set of questions addressing the following topics:

1. Type of management practiced in the organization;
2. Personal experiences in an intercultural context;
3. Personal experience in multi-sites contexts.
4. Experiences and difficulties arising from the combination of the previous points.

An additional point was added to the interview in case the interviewee was in a team/ group management position (depending on the answer from questionnaire previously sent).

5. Overview of previous points from the team/ group management point of view.

3.2 CHOICE OF INTERVIEWEES

As mentioned in the introduction section of this document, only professionals in companies with a very strong international presence were considered for the interviews. The selection of the interviewees was done from the pool of International Product Managers in 2 companies acting in a similar business and technology area, but differing widely in terms of size (the size of the IPM group was approximately ten times bigger in Company 1 than in Company 2), structure and organizational culture.

To select the participants, the IPM team from Company 2 (composed by 6 team members: 1 team manager with coordination responsibilities and 5 segment managers), was considered as reference. After sending the request to fill in the questionnaires, 5 managers from Company 2 accepted to participate in this study. To have equality in the number of responses five participants were selected from Company 1 by order of response.

The total number of participants was 10, 5 for each of the companies considered, both in the questionnaire and interview phases.

It was considered as mandatory for the selection the communication with people outside their own main location as part of the regular work, while locations and hierarchy had no pre-requisites (see Table 3).

Some extra questions were directed to the participants working as team/ group leaders.

Table 3 Basic requirements for interviewees' selection

Company	Team/ Group manager?	Dealing with foreign stakeholders?	Main location
Company 1	Yes/ No	Yes (mandatory)	(no requirements)
Company 2	Yes/ No	Yes (mandatory)	(no requirements)

The age range of the selected participants was between 30 and 62 years old.

Eight of the participants were male. The two female participants belonged to Company 1. Company 2 had no female International Product Managers.

The experience in the current role from the participants varied between 3-6 years.

In Company 1, all interviewees were Portuguese. In Company 2, the nationalities from the interviewees were Dutch (2), English (2) and French (1).

After forwarding of guidelines via e-mail, the interviews took place via telephone, videoconference or face-to-face.

The selection of participants in this study considered multiple factors, such as areas of responsibility of the IPMs, their training and the spectrum of several cultures and locations.

3.2.1 COMPANY 1

Company 1, selected for the study, was integrated in a group which at the time was the industrial leader in the production of heating and hot water products, with an estimated turnover of approximately €3.100 million and over 13,500 employees across 90 countries worldwide (Europe, Asia and America), holding different brands, each of them aimed at a specific market (according to 2013 Company results).

It was, as well, one of the sixteen divisions of a larger Group and well recognized brand acting in other sector businesses.

The International strength was based on:

1. Presence in all major markets and the power of its brands.
2. Great tradition and high level of awareness of the brand(s), positioned as premium.
3. Great investment on own development and manufacturing.

The IPM department was directly linked to the R&D locations: every competence centre had its own IPM group despite the headquarters being located in Germany. This meant that IPM departments could be found in Germany, Portugal, UK, Netherlands, Sweden, Turkey, China and US among others, linked directly to the products in focus at the research and development departments at those locations.

3.2.2 COMPANY 2

The second company selected was the 4th world manufacturer and distributor of sustainable and smart climate and sanitary hot water solutions and services. It was operating in a market worth over €16.000 million of annual sales, in more than 70 countries worldwide, employing over 6,400 people (according to 2013 results reports). The annual sales were close to €1.800 million.

It was a global group with local market-leading trade brands with top market position in key European countries and strong positions in the rapidly growing markets of Eastern Europe, Turkey, Russia, North America and China. The Group was created by the merge of two strong and recognized European companies in 2009. The headquarters of the group were based in the Netherlands. The strategy of the Group involved the use of multiple trade brands and strong national operations in the major European economies. This way of working allowed rapid reaction to changes in local demand. This was reached through own development as production as well as use of third entities to outsource the products.

The IPM department was directly linked to the headquarters location and not necessarily to any R&D or sales entity. R&D locations could be found in Spain, UK, Italy, Germany, France and Turkey. The responsible IPM correspondents could be found in Spain, Netherlands, UK and France. There was no direct/ requested location to link the IPM with the R&D Centre. Due to the dispersion of locations the link was mainly done by the IPM responsible, responsible to travel from location to location to keep the projects updated.

3.2.3 COMPARISON OF ORGANIZATIONS

Both organizations showed different flows of communication within their structures. Figure 6 shows the flow of communication between the International Product Manager towards other stakeholders inside and outside their own organizations.

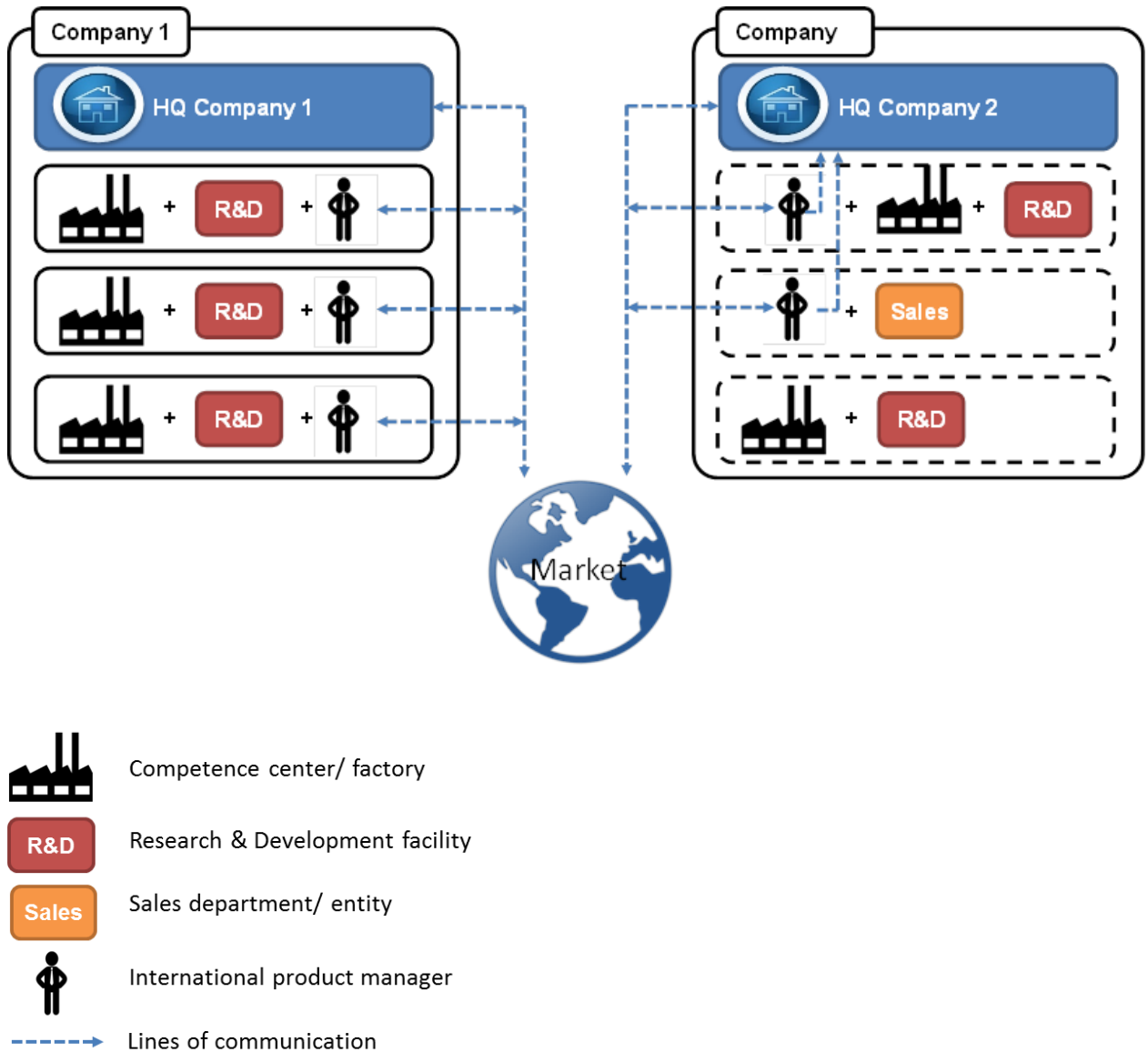


Figure 6 Lines of communication differences between companies 1 and 2

Company 1 could be considered as a controlled environment: (represented by continuous lines): each competence centre was directly linked with one production location and research and development department. Next to these two, the International Product Manager (IPM) was responsible for the products developed and manufactured at that location. The communication with external stakeholders was related to information with/ from markets (e.g. product definition) and headquarters (e.g. company's strategy towards markets) mainly.

Company 2, due to a much reduced number of IPMs on its organization (when compared to Company 1), chose a "headquarters location". The members of the team were therefore allowed to "sit" in any of the sales entities, manufacturing locations or representative offices around the world (represented by dotted-line boxes), during the labour days but requested to attend to the team meetings in the headquarters location as well as spend a certain part of their time there.

There was "no need" to locate a certain IPM in a specific manufacturing location since every IPM had products from more than one manufacturing location. This had a clear effect on the internal flows and ways of communication. The IPM in Company 2 needed to adjust to different production/ research and development locations, balancing the priorities from each project/ product.

4 RESULTS, CONCLUSIONS AND AVENUES FOR FURTHER RESEARCH

4.1 RESULTS: PRELIMINARY QUESTIONNAIRES

4.1.1 IPM BACKGROUND, RESPONSIBILITIES AND SKILLS

The results were presented in tables where C1 and C2 stand for Company 1 and Company 2. A1 to A5 represent the answers, for each company, from IPM 1 to 5. The order of the answers/ participants was kept, which makes possible to keep track on the answers from a specific participant if required. For some of the questions, word clouds were created with the online tool Wordle (Feinberg, 2013), to present the results in a more visual, direct and appealing way (Ramlo, 2011). The use of the word clouds was intended to be complementary since the analysis of full answers was supported by the tabulation of data.

As indicated by Haines (2008), the path towards Product Management was not just one: the answers (see Table 4) included backgrounds as trainees (first job after university) and experiences in other areas (technical or commercial) and/ or company.

Table 4 Path towards IPM

Question: How did you arrive to the current position?					
	A1	A2	A3	A4	A5
C1	Similar position in the past (Internal)	Candidature (Internal)	Trainee program (External)	From Sales Management (Internal)	Candidature (External)
C2	32 years in previous roles (Internal)	Candidature (External)	Candidature (External)	Candidature (Internal)	Candidature (External)

The results were quite homogeneous for both companies, showing both internal and external recruitments, as well as experience in previous roles.

When questioned about IPM role perception (“Being a PM, do you think other people in the company understand the role? Why?”), it would be expected that, a company with stronger culture, with clear shared values and beliefs and strong internal communication (Bush, 2003) as Company 1, would recognize more easily the goal of this position but, according to the participants in this study, the perception from the Product Manger role was not clear through any of the organizations (Haines, 2008), and was very dependent on how close they (people) were to the other people. Even with a strong company culture, this did not imply necessarily a strong communication of what and how is done, regarding each of the companies’ departments, and specifically, for the International Product Management function. Eight out of the ten interviewees stated that in many cases their colleagues confused their role with Sales and Marketing positions, possibly mislead by previous roles they held in the organization, but not only. There were as well different opinions on how technical or business driven the Product Managers should be. It was again verified the existence of types of Product Managers, as well as different expectations from them depending on the organizations and departments within them.

From an internal perspective, it was clear for all the participants that the main role of the Product Manager (see Table 5) was to be “the voice of the customer” (Windley, 2002) despite there were, within the same Company and even same group, different approaches to the same role (Eriksson, 2011). The word “alignment” appeared in the answers exposing that the success depends on the capacity to connect with the rest of stakeholders. Other important parts of the role were highlighted as well, such as Portfolio Management and Market Opportunities forecast (Cagan, 2008).

Table 5 IPM meaning for IPMs

Question: which is the main role of the IPM?						
		A1	A2	A3	A4	A5
C1	Customer spirit , driver of what the product needs are.	Bridge between clients and Company. Voice of the customer	Voice of the customer Customer spirit, drive of what the product needs are.	Bridge between clients and Company. Assurance of product introductions in the right place, with sales success	Identification of customer needs. Mid and long-term strategy Set apart from competition	
C2	Market direction	Aligning people and having the right products for the company	Product portfolio management, Create visualize and realize market opportunities (and hence revenue)	Complete overview of the external and internal environment. Define product strategy Vs. customer needs.	Alignment	

Table 6 presents the feedback of the IPMs when asked about the skills required for their role. The participants from Company 2 showed a more “Goal/ Profit orientation” than participants from Company 1, where “the customer” was much more mentioned. When the interviewees from Company 1 were asked if the use of the same terms could be related to the Company profile and inside communication, they confirmed to recognize to use some of the standard words used to explain their role in the Company job description. It seemed clear that since the values, mission and vision of the organization were communicated in a regular basis it was more likely that, when asked, people working there would answer with the same words (Deal and Kennedy, 1982).

Table 6 IPM skills according to IPMs

Question: Which should be the characteristics of a Product Manager?					
	A1	A2	A3	A4	A5
C1	Creative, systematic, analytical, enthusiastic.	Communicative, with negotiation, intercultural, analytic and social skills.	Influence, visionary and good analytical view.	Negotiation skills and proactivity.	Good in: observation; negotiation; proactiveness; creativity; analytical skills; market/customer oriented; communication; priority setting.
C2	Customer focus with an eye for profit opportunities.	Sociable, dynamic, demonstrative, enthusiastic and persuasive, competitive, demanding, determined, strong-willed and purposeful	Social, decision maker, good listener and to the point.	Curious in understanding the real customer needs.	Key asset is relationship building, team management (indirect) and diplomacy.

The answers from Company 2 were more related to the objective of the role than to the skills. When asked about it, the participants stated that the important part of the role was to “get the things done”, by use of different skill sets in each case. “Analytical” was the most used word from the team members from Company 1 (four out of five).

4.1.2 PERSONAL PERCEPTIONS ABOUT THE ROLE

The interviewees were questioned about the *pros and cons* of their position. By asking about the “best and worst” parts of their jobs, two topics were highlighted in the responses: the exposure to a multi-cultural environment (considered as good from both groups) and the time constraints from Company 2 (as negative).

Whereas one of the participants from Company 2 highlighted the capacity of power (influence) as positive, two others considered not having enough influence on the final decisions. Once more, it was here pointed out the different results obtained, even when the participants belonged to the same group. The way to approach the role and to use/ develop skills lead to different perceptions and experiences.

Both groups mentioned topics related to the business such as the market status or the processes complications (bureaucracy, logistics) as negative. Time constraints and travelling were only mentioned by PMs from Company 2, which made of it a differentiation item between both groups of study and one of the topics to explore during the interviews phase.

The negative points highlighted by Company 1 members were related to the whole Organization, not specifically in the IPM department. Despite this not being the case for Company 2, both groups did look for improvement in the entire organization to improve the negative points highlighted previously.

Tables 7 and 8 gather the feedback from the IPMs regarding *pros and cons* from the role and potential improvement points, respectively.

Table 7 IPM role *pros and cons* according to IPMs

		IPM role Pros	IPM role Cons
C1	A1	Product with strong sales arguments.	Product with no sales arguments.
	A2	Connection with people from different parts of the world.	Don't being really the part of the strategy. Decisions are made top/down
	A3	Creativity task, design analysis and driving innovative feature.	Control sales performance and make pressure to sell more.
	A4	International working environment.	Bureaucracy on processes.
	A5	Customer/market contact.	Formalities, processes and procedures which cause delay.
C2	A1	Achieving results.	Time constraints.
	A2	Having more power than you think.	Travelling.
	A3	Bring a (new) product to the market with all marketing aspects to it.	All the stuff next to it as SAP, logistical routes.
	A4	Meeting people from different fields.	In the middle of everything (in particular of problems).
	A5	Cultural diversity , non-traditional products and services, innovation.	Travel , lack of direct. Responsibility/Control of resources.

Table 8 Potential improvements of the IPM role/organization acc. to IPMs

Question: Which should be the characteristics of a Product Manager?					
	A1	A2	A3	A4	A5
C1	Speed in implementing the product range required.	More communication and involvement with the projects.	Common Company goals.	Faster product introduction.	Formalities, processes and procedures. Higher focus on "true" customers.
C2	Focus.	More local involvement.	Clear job definition.	More resources to be able to do more pedagogy.	More budget responsibility.

4.1.3 TEAM SPIRIT: IS IT REALLY IMPORTANT?

Most of the participants were positive about their sense of belonging to a team. The sense of contribution to important decisions from the company helped on this, though it was highlighted the negative effect by one of the participants (Company 1) of internal competition between portfolios (different solutions for the same purpose driven by different Product Managers inside the Company) and, by another (Company 2) the "island effect" derived by the focus in their own portfolio an nothing else.

The team spirit was linked to the general environment between the members of the group (good environment led to a more probable feeling of belonging). Team feeling encouragement was perceived as an occasional need to mix private and business lives. It was seen as well as something "trendy". In none of the Companies was seen as something natural or inherent to the Company culture.

Table 9 shows the feedback from IPMs regarding Team feeling as well as their reported perceptions about the encouraging of such feeling by their respective Companies.

Table 9 Team spirit according to IPMs

		Do you consider yourself part of a team? Why?	Is the 'team feeling' encouraged in the department and/ or organization?
C1	A1	Yes, decision taking and guidance.	Yes.
	A2	Yes, because my work allows my colleagues to make their work better.	It varies with the time. Currently no, but sometimes the feeling exists.
	A3	Not so much: our products can be "competitors".	More or less, but no defined activities.
	A4	Yes. Interaction.	Yes, through highly interdepartmental processes.
	A5	Yes, we contribute to common goals. Good team spirit and commitment.	Yes.
C2	A1	Yes.	Not always.
	A2	No.	Private things are not done within our company.
	A3	Yes, although every Product Manager lives on his own island (portfolio).	Yes, good atmosphere. Roles still need definition in the organization.
	A4	Yes, all product segment are linked and we have to define the strategy together.	No, I think as we are all overflowed, nobody takes the time for it.
	A5	Need more collaboration and Co-location.	No.

4.1.4 WORKING LOCATIONS

The interviewees were asked to give a percentage of their work done together with people placed in other locations. The values stated were between 40% and 95%. Although the participants from Company 1 were co-located, this was possible since IPM department from Company 1 was linked to a Competence centre in Portugal but belonged to a central IPM structure, with headquarters in Germany and they had projects in common with other entities from the Company, which required contact with stakeholders located in other countries.

To communicate with their partners, e-mail, phone, and computer-based conferences were used in both groups. Though all these methods were seen as standard, some of the participants expressed that this kind of remote interaction could be problematic sometimes (e.g. use of email to “shrink responsibilities”).

A clear difference was found across the feedbacks from both groups: while working with people from other locations was not considered as a disadvantage for Company 1, for Company 2 this was a clear disadvantage. Considering the differences of organization in both structures, there was a factor that seemed to contribute to such a difference in the feedback: the frequency.

While in Company 1 e-mail and phone were used, it was possible as well to communicate face-to-face since many of the project team members were in the same location (e.g. R&D, manufacturing, quality and logistics). In Company 2 most of the communication was done through computer assisted systems and phone. When required face-to-face communication, in most cases, the IPM was the one to travel to the correspondent R&D or sales organization.

While the participants from Company 1 did not agree as a group that sharing the working space with other project stakeholders would make the work easier, most of the interviewees from Group 2 did. In this case again, the current physical distance between the project team members seemed to be an important factor: there was no need to be closer (in the same room) if the distance to cover was “easy to walk” (Company 1).

Tables 10 and 11 reflect the feedback from IPMs regarding *pros and cons* of virtual communication.

Table 10 *Pros and cons* of virtual communication according to IPMs (C1)

		Is being apart a problem or an advantage?	Which are the advantages?	Which are the disadvantages ?	Working in the same room would easy the tasks?
C1	A1	No problem.	Better analytical quality of data.	Speed of data, close reality contact.	Probably not...
	A2	Not that much.	Easy to reach even though the distance.	Meetings might get confusing, no face-to-face contact.	Maybe.
	A3	Problem.	Less influence during creative process.	Miscommunications and distance from markets.	Yes, but not possible.
	A4	Not a problem but requires higher communication with markets.	(No response)	Indirect feedback and influence on perception.	Could improve a shorter feedback but could cause function conflicts.
	A5	Can be a problem. However, it also allows the required distance to allow looking into topics/problems from a different perspective.	Every time, everywhere.	"Noise" in the communication and lack of non-verbal communication which is actually 80% of the way we communicate.	100% agree.

The feedback from the participants indicated that preparing the information before communication, required virtual communication, avoided confrontation or disturbance from other stakeholders, allowed direct access (email) and led to a better quality of data in the end. On the other side, it was mentioned that there could be sensations of losing contact with reality (when no discussion was done to prepare the data).

There was as well a big perception about the risk of misunderstanding/ misperception, or loss of details when there was no opportunity for face-to-face communication (even with video conference this was not 100% solved). Delays on communication (e.g. e-mails with no answer) and no clear responsibilities attached to the processes were pointed out as potential risks of virtual communication.

Table 11 Pros and cons of virtual communication according to IPMs (C2)

		Is being apart a problem or an advantage?	Which are the advantages?	Which are the disadvantages ?	Working in the same room would easy the tasks?
C1	A1	Always a problem.	Cannot see an advantage.	Poor communication.	Of course.
	A2	Both.	Can keep distance from tactical issues.	Delay in communication.	No.
	A3	Problem: E-mail becomes an easy tool to shirk responsibilities.	Easy to access people.	No urge for own responsibility.	Could very well do.
	A4	Problem.	Time saving.	Less detailed discussions, more difficult to feel the subtleties.	For sure.
	A5	Need more face to-face.	The world is moving. Need to adapt.	Tools and techniques needed (improved).	Yes.

4.1.5 CULTURE & NATIONALITIES

The interviewees stated that between 40% and 95% of their working time was spent with people from other nationalities. Despite the participants from Company 1 being co-located, this was possible since:

1. They had foreign colleagues in their location.
2. IPM department from Company 1 was linked to a Competence centre in Portugal but belonged to a central IPM structure, with headquarters in Germany.
3. They had projects in common with other entities from the Company, which required contact with stakeholders located in other countries.

Everyone was positive about this situation and expressed how inspiring this was, to learn the cultural differences at work and on a social level. When asked about any disadvantage of this reality, the two details pointed out were the potential misunderstandings due to language and the need to travel (Company 2).

The analysis of the content of responses, suggested that travelling was the main issue for participants from Company 2 while for Company 1 was the potential miscommunication. Table 12 gathers the feedback from the participants regarding pros and cons of the multinational working environment.

Table 12 Pros and cons of multinational working environment acc. to IPMs

		Pros	Cons
C1	A1	Open mind to different cultures and thinking.	None.
	A2	Get to know other cultures and learn how to deal with the difference.	Sometimes communication is lost.
	A3	Multicultural interaction enables new ideas and working methods.	Miscommunications.
	A4	Intercultural experiences.	None.
	A5	Personal and professional enrichment.	Communication problems.
C2	A1	Wider experience.	Travelling.
	A2	Learning from different cultures.	Travelling.
	A3	Learning.	Sometimes the language.
	A4	Different points of view and ideas.	Difficulties to express: lose info.
	A5	Diversity.	Languages.

The word cloud in Figure 7 aims to illustrate the content from Table 12, to have a clearer picture of *pros and cons* considered by the IPMs regarding multinational working environment. Both *pros and cons* seemed clearer in Company 2 results.

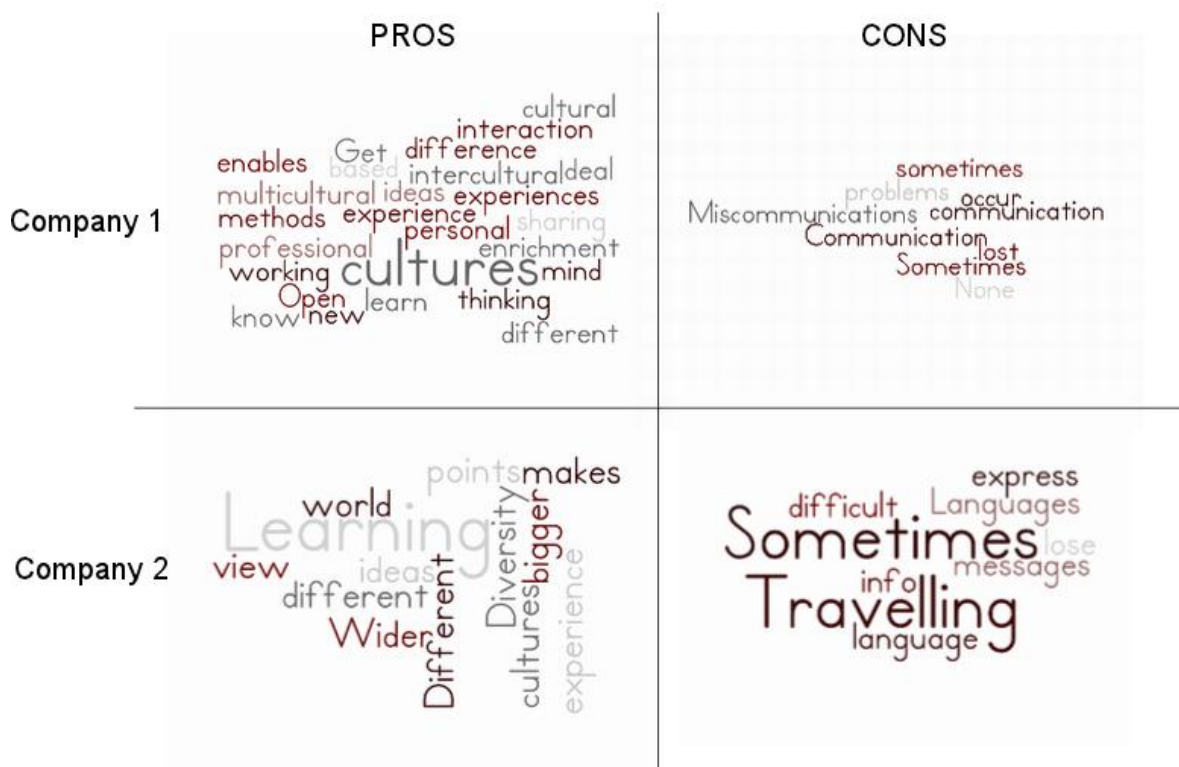


Figure 7 *Pros & cons of multicultural environment according to IPMs*

The influence of the manager nationality was not clear when both companies were compared. While in Company 1 all the interviewees had the same nationality as their manager (Portuguese) and in Company 2 not (Dutch, French and English PMs, with a Spanish group manager), this was not highlighted as something good or bad. It seemed clear for them that, despite the cultural differences between people from different countries, it was even more important the personality of the managers and the relation and behaviour towards their partners.

All the participants confirmed that cultural/ nationality stereotypes exist and were in many cases confirmed.

As part of the skills set, it was asked how many languages the participants knew and used for their jobs. The answers varied between 2 to 4 but always included English, as the main language used in the business communication. The use of a common language (when not English) was used though, in many cases, to facilitate the communication.

4.2 RESULTS: INTERVIEWS

The conduction of the interviews was supported by the interview guidelines provided in Appendix 2. The goal was, by means of using the Critical Incident Technique approach, to gather as many incidents as possible, to create a pattern for companies 1 and 2. The participants in the interviews phase were the same as in the questionnaires phase, 5 from Company 1 and 5 from Company 2.

The results were structured according to the order of questions.

P1	<p>Which is the structure of the Product Management department in the organization?</p> <p>How is the relation and distance to other departments of the organization such as R&D, marketing, sales, after sales or logistics?</p> <p>How is this group seen within the organization?</p> <p>Are the targets and functions of the Product Manager clearly recognized by the colleagues from other departments of the organization?</p>
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Participants from both companies recognized that it was not 100% clear to all their colleagues what an International Product Manager exactly did. In many cases their role was confused with other (sales and marketing in most of the cases, even customer support sometimes). While in Company 1 IPM was seen as a department/ group belonging to the structure, in Company 2 it was more related to the person.

The existence or not of a strong culture, or shared values, didn't seem to influence the perception of the organization across departments.

In Company 1 not all the departments recognized the value of the role: normally only one part of the responsibility was perceived. For the sales department and local Product Managers the IPM was "protecting development" and not fighting enough for the market needs. For the development sector, IPMs were focusing too much in the demand and not so much on what "really could be done". Clearly everyone agreed that the IPM role was a transversal one but not all agreed on the added value to the Organization.

In Company 2 the IPM seemed to be in contact with more projects' stakeholders in a regular basis: from local Product Managers to members of the Board of Management. The contact through the different levels seemed easier and faster than in Company 1, which was an advantage in some cases (more visibility and

recognition) but “dangerous” in others: there was great decision power on these IPMs, which meant no “safety nets” in case of mistakes or misunderstandings.

In Company 2, since the teams were much more dispersed, IPMs had a lot of freedom to create their own agenda for travelling and meetings (they were aimed to do so, to keep in touch “with everyone”). This did not happen in Company 1, where most of the communication was done via telephone and e-mail and travelling needed to be approved by the head of department.

There seemed to exist a slight difference between both groups on the approach to become “the voice of the customer”: while in Company 1 this was about managing a complete range of specifications to meet the expectations of the customers, in Company 2 the goal was to get the maximum profit choosing between several options, based on expectations.

Recognition and visibility were highlighted as important topic in both sides: while in Company 1 there were “many people” and it seemed difficult or unclear how to stand out, in Company 2 seemed to be really easy to recognize who was “doing the extra mile”. Not only had the size of the structures of the organizations affected this outcome: the culture / nationality of the headquarters seemed to have a great influence in the way of working. Company 2 organization was much smaller and the IPM office was placed in the central headquarters so it was possible to share meetings and corridor conversations with the members of the Board of Management, which automatically provided more visibility.

When the participants spoke about the “normal day at work” some patterns were recognized in both groups: for example, in how to “show performance”. While in Company 1 (Portugal) the time spent in the office seemed to be an important factor, the members from Group 2 expected to be assessed by the targets accomplished, not willing to spend more hours than necessary in the office. However, within Group 2 there were differences between nationalities (Dutch seemed to be more “free” than English and French colleagues). The approach to difficulties/ barriers at work seemed to be different as well, but as in the previous case more affected by nationalities/ cultures than by group structure. In this case Dutch participants seemed more direct and willing to skip barriers in the organizational structure than Portuguese, English and French.

P2

Regarding the intercultural context, were there particularly positive or negative experiences (critical incidents)?

How have these experiences had an effect on a day-to-day basis, how have they become integrated and what consequences resulted from them?

In case of exchange or reflection took place, in what form?

What preparations were done regarding intercultural applications and how was this promoted (push or pull)?

Is or was there *on the job* support through training or coaching?

None of the participants recognized to have any issue with specific cultures or nationalities. Despite stereotypes “were proven sometimes” the incidents described were linked to people and not to culture according to the participants. The incidents with people were considered as isolated and managed according to each participant perspective: generally managing relationships with more or less support from the team or escalating to managers in other cases.

English as business language was common to both groups of study but (except for the native speakers) led to miscommunications and incomplete communication, when the “right words” were not found or the message from the other person was not clear. References to other nationalities were done reinforcing how difficult might be sometimes to communicate (e.g. Chinese, Spanish, German) when there was no common language. Both groups agreed that the knowledge of a second language helped to overcome barriers of communication and improved the trust between stakeholders.

None of the companies seemed to have a special program to prepare IPMs for the role, to deal with other cultures and nationalities. Company 1 developed (centrally, not specifically for IPM) Country/ Nationality Profiles, available for all the employees that needed to communicate with different cultures (however, not available for every country the company did business with).

P3

Which are the main difficulties while working in a multi-site team context?

How is the daily basis work in this context?

Which are the recognized benefits and which are the potential improvement points?

Is the organization working to increase or decrease this kind of structures?

Is or was there *on the job* support through training or coaching?

When asked about the multi-site context, participants from Company 1 referred to the occasional need to extend the day or start earlier to match different time zones (e.g. when communicating with US or Asia).

Computer based communications were used in many cases to avoid these situations, in both Companies, increasing the non-verbal communication. This, sometimes, had a negative effect since getting the right information could take days (response to a mail during the morning to China would only arrive on the next working day), increasing the sense of urgency and “lack of patience” when things were not OK at first trial (even if the response arrived in the next day, in case it wasn’t right, it would be necessary to wait one more day due to different time zones).

Most of the participants declared to have a certain addiction to their mailbox. All the participants used laptops but this was, most of all, stated by those who did read their e-mails on their mobile devices (telephone and tablet). All the participants from Company 2 used to read their e-mails from work in their phones. Only 2 of the participants from Company 1 did so (both of them were team managers).

E-mail was considered as a tool, in many cases, “to protect the sender” (“I asked it”, “I advised this would happen”, “I told them”). To improve this, all the participants agreed on the importance of meeting face-to-face whenever possible, or at least, speaking on the phone to “know a face or a voice” behind the name appearing in the mailbox.

Videoconference systems were used in both groups. The most used system, when communication between several participants is required, was teleconference. When communication was one-to-one the phone was used for urgent matters and/ or with people that participants felt more comfortable to speak with.

In Company 2 the main remarks were times constrain and travelling required. Once again, it is important to highlight that in Company 2 travelling was seen as a very important part of the role (participants from this group used to spend between 2 to 5 days per week out of the office closer to their homes). In other cases the

IPM could choose to “sleep at home” but getting to a meeting of 2 hours might consume a whole day when travelling to another Group’s location. This travelling need had an impact on the personal life-work balance of the participants of Group 2. Some of them used words as “lonely” and “boring”, but a common expression was “too much”: “It is necessary to do too much”.

Participants from Company 1 had portfolio responsibilities: managing products in portfolio, and looking for a new idea is part of the daily job. Company 2 used a similar system but required a much more focus to find out which were the real profitable areas/ products. Since the number of International Product Managers in Company 2 was much lower than in Company (approximately 1 to 5) there was no possibility to focus in niche segments.

When asked about team spirit, sitting together or apart from the rest of the team really did make a difference. Even if within the team the portfolios could be market competitors, the fact of being located in the same office did make easier to share experiences, knowledge or asking for advice. Both groups recognized this.

In Company 2 the participants not only were responsible for their products alone (there were no teams sharing same portfolio responsibilities) as spent many time “alone”. Co-location was rare and in some cases, a once-a-month opportunity to see the colleagues.

P4

Is there (or was there) any program in place within the organization to improve the efficiency of the Product Management department?

Workshops and team buildings were organized in both Companies. There was no frequency recognized for it.

Company 1 developed specific trainings for IPM group during 2012 and 2013 to increase the competencies from the whole group in two centralized events, gathering the IPMs from all Group locations.

Company 2 carried out coaching and Team building sessions during 2013 to try to elevate the Team feeling. After the sessions the IPM manager recognized to have “not a team, but a group of people working together”. The participants from this group agreed on the difficulty to create the Team spirit when they spent so little time together.

P5

Is there (or was there) any program in place within the organization to improve the efficiency of the Product Management team manager?

Two of the participants from Company 1 were team managers. Apart from the event mentioned before (for IPMs in general, not only for managers), no other specific-IPM program was carried out in the organization. The courses and coaching provided were general for managers and not focused in the specific needs of IPM.

The manager of IPM in Company 2 did not participate in this study. In the group of participants from Company 2, there were no team managers, only the Head of Department due to the current people allocated to the IPM department (6 plus manager). Participants from Company 2 confirmed plans of coaching sessions for the following year (2014) to increase the group's performance (as in Company 1, not manager specific).

4.3 LIMITATIONS AND IMPLICATIONS FOR FUTURE STUDIES

The primary goal of this study was to explore the impact of the company's organization on its IPMs' way of work and performance as well as understand how the organizational culture, the virtual nature of product teams and the cross-cultural characteristic of those teams affect the International Product Manager. To achieve this a specific role (IPM) in a specific business segment (Heating Industry) was considered. Participants were selected according to the maximum number of participants from one of the selected Companies (the potential number of participants from Company 2 was 6 and from those 5 accepted to participate in this study) and considering this the same number of participants was used from both companies (5).

The methodology applied (use of questionnaires and interviews) allowed to gather the statements from the interviewees. The use of the Critical Incident Technique approach allowed to focus in the point highlighted in the literature review and questionnaires though the statements collected through the methodology applied are very subjective: the point of view of two interview partners of the same organization can be quite different and quite differently interrelated.

The reduced number of participants and subjectivity of the participants' responses can be seen as the main limitations of this study.

Despite the limitations exposed above the interviewees' feedback reflect some of the main characteristics and challenges related to the Product Manager role explained during the literature review. From the intersection position between business, technology and user experience (Cagan, 2008), expressed by some participants by use of terms such as "bridge" and alignment" to the lack of recognition inside their organizations (Haines, 2008), the interviewees declared that their role as "the voice of the customer" (Windley, 2002) required many different skills to perform with high quality (Cagan, 2008), despite the different approaches possible to the same role (Eriksson, 2011). During the questionnaire and interview phases the participants explained their experiences within international and cross cultural teams, declaring as the most concerning points the potential miscommunication problems due to the use of virtual communication methods (Cohen and Gibson, 2002) or even a second language (Steers, Nardon and Sanchez-Runde, 2010). Most of them expressed though, the positive influence of meeting different people and cultures, and recognized this to be as part of their regular daily work.

One of the aspects considered during the literature review though, seemed to be almost irrelevant for the participants: the organizational culture. Considering the organizational and historical differences between both companies it would be expectable some recognition but this did not happen “automatically” (e.g. the use of institutional words to describe their own role, for Company 1 participants).

After the analysis of the interviewees feedback two potential improvement points for the management of International Product Management teams were highlighted. Both topics appeared in questionnaires and interviews and led to more critical incidents, independently of the Group/Company:

Work-personal life balance (flexibility) was required but there was, depending on the available headcount, an increase on the dependency on mobile devices and travelling requirements. As a result, it could be difficult for the employee to keep up with the pressure set by the group, to be operational and responsive almost 24/7. Expectations, targets and boundaries should be clearly set to avoid disagreements on the role definition.

Visibility and recognition was very different depending not only on the structure of the Group/ Company but as well on the “main nationality in the office”: clear expectations towards the employee, from manager, should be communicated and respected by the manager. The role should be easily understood by the organization, which could be reached by the correct support from the board of management. Top down communication as well as collaboration between departments should be used to promote the role, to help to increase efficiency.

Future research could 1) expand this study to other Companies from the same Industry in order to validate the results in the same business area; 2) expand this study to other business areas; 3) include the feedback from other Company members such as top management, development engineers, sales representatives or marketing managers to check the impact of the IPM role in the organization under other stakeholders’ perspective as well as to gather information of how to improve the visibility of the role; 4) expand this study to other roles, exposed to the same conditions of international and cross cultural environments, such as business developers, technical advisors and trainers, sales representatives, etc.

Other potential studies could be related to the skills and knowledge required for the IPM position:

- Analysis of IPM recruitment process (requirements to fulfil the position, options for the Human Resources Department and final selection) in different organizations, to find similarities and different approaches to the same role;
- Evaluation of best practices in the organization (s) to increase the quality of performance of the (International) Product Managers, such as training, coaching and working environment changes among others.

The diversity of skills, knowledge and experience required by the International Product manager position and its working environment allows extrapolating some of the results to other roles within international companies. The evaluation of the attained information in this study is not claimed to be empirical evidence and cannot be used as representative statements. Rather it should be considered as a way to check current literature trends on organizational management reality.

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6 APPENDIX

6.1 APPENDIX 1 – QUESTIONNAIRE PRE-INTERVIEW

Profile	Name
	Age
	Nationality
	Current position
	Time in current position
	Location: Company/ country
	Short explanation of responsibilities
	Management position (group/ team)?
	If yes, how many people in the team/ group?
	Is there a higher hierarchy manager in the same department? (e.g. Teams inside group)
	If yes, how many people in the group?
	How much time as manager?
	Nationality of the group manager?

Product management	How did you arrive to the current position?
	Being a PM, do you think other people in the company understand the role? (Why?)
	In your opinion, what does the PM add to the Company?
	Which should be the characteristics of a Product Manager? (A good one)
	Best part of the job?
	Worst part of the job?
	What could improve the current situation?
	Is this the dream job? Why?
	Working in the Product management, do you consider yourself part of a team? Why?
	Is the 'team feeling' somehow encouraged in the department? And in the organization?
	Which are the main differences between local and International Product management?

Virtual communication	How much of the job is done with people located in other places?
	Communication methods?
	Is this a problem or an advantage? (to be apart)
	Which are the advantages?
	Which are the disadvantages?
	Working in the same room would easy the tasks?

Cross-cultural	How many languages do you speak?
	How much of the job is done with people from other nationalities?
	Do you like it?
	Is there any advantage?
	Disadvantages?
	Are there recognized stereotypes within the people from the other countries?
	Is there a "official communication language" in the Company?
	Which is the common language used in the communications?
	Advantages of the use of a second language?

6.2 APPENDIX 2 – INTERVIEW GUIDELINE

P1	<p>Which is the structure of the Product Management department in the organization?</p> <p>How is the relation and distance to other departments of the organization such as R&D, marketing, sales, after sales or logistics?</p> <p>How is this group seen within the organization?</p> <p>Are the targets and functions of the Product Manager clearly recognized by the colleagues from other departments of the organization?</p>
P2	<p>Regarding the intercultural context, were there particularly positive or negative experiences (critical incidents)?</p> <p>How have these experiences had an effect on a day-to-day basis, how have they become integrated and what consequences resulted from them?</p> <p>In case of exchange or reflection took place, in what form?</p> <p>What preparations were done regarding intercultural applications and how was this promoted (push or pull)?</p> <p>Is or was there <i>on the job</i> support through training or coaching?</p>
P3	<p>Which are the main difficulties while working in a multi-site team context?</p> <p>How is the daily basis work in this context?</p> <p>Which are the recognized benefits and which are the potential improvement points?</p> <p>Is the organization working to increase or decrease this kind of structures?</p> <p>Is or was there <i>on the job</i> support through training or coaching?</p>
P4	<p>Is there (or was there) any program in place within the organization to improve the efficiency of the Product Management department?</p>
P5	<p>Is there (or was there) any program in place within the organization to improve the efficiency of the Product Management team manager?</p>

