PRODUCT MANAGEMENT FRAMEWORK

TOLPAGORNI
product management

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Abstract

This paper outlines the art and science of product management. It creates a framework not only for the role product manager and the function but also for the process.

Product management is a key organizational process for high tech B2B companies involving more or less all parts of the company.

The Product management arena is defined as four key areas:

- Insight creation

- Product strategy

- Product planning

- Product marketing (go-to-market)

We look into the organizational boundaries and interfaces seen from the product management perspective.

A maturity model for product management is introduced. How can we reach high performing levels?

The Product Management Arena, PMA

Definitions of product management are roughly the same around the globe and in various industries. In some cases, Product marketing is treated as a separate role – the degree of responsibility for overall profitability, deliveries and sales forecasts varies quite a lot. We define PM as four key areas:

- *Product planning: Making sure that the right product is offered*

- *Product marketing: Enabling the product to reach its potential*

- *Product strategy: The guide for product value delivery over the life cycle*

- *Creating insights: Understanding legacy, ecosystems/markets and driving forces*
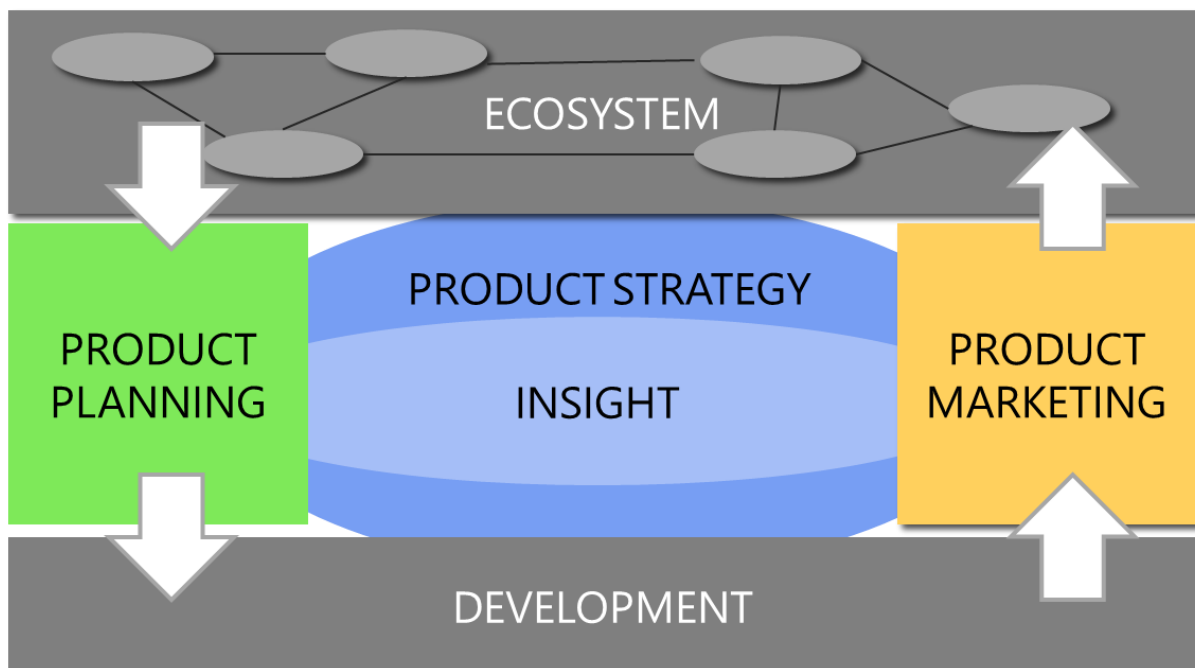
Inner Loop

Fig. 1 Product management arena, Inner Loop

In the complex environment of today, in particular for B2B technology companies, we cannot longer use a simple value chain model to describe our business. Often our competitors are marketing friends and customers at the same time. We need to introduce the concept of an ecosystem where actors interact in various ways and there are multiple interdependencies.

As product managers we want to identify and leverage market opportunities in our Ecosystem. As a rule, rather than an exception, we create solutions to solve multi-dimensional user problems. Sometime we deliver products and services on our own – but more often our products are integrated and used in combination with other components.

So, how do we move forward and plan for new products? How do we get through the Fuzzy Front End? How do we generate a fantastic launch?

We often see companies developing products they cannot sell. We often see companies selling things that aren't developed. High performing Product Management enables companies to sell what is developed and develop what we can sell.

The *Product Strategy* connects selling with development. Making sure what we develop can and will be sold – and that we market what we have in our portfolio (or Roadmap). The Product strategy shall be aligned with overall corporate directions and goals. In some cases the corporate strategy can be developed by the Product Strategy. A product manager must never wait for the corporate strategy. Without Product strategy we cannot do the job of product management. The Product strategy shall be used in product planning but also in product marketing.

In order to create a successful strategy, it is essential to have what we call *Insights.* Obviously we want to know what will happen to supporting technology, customer segments, and new disruptive innovations preparing ground for new solutions. We want to have good grip on market trends – how will our target market evolve over the coming period? Product Management needs to look into the future and act on it.

Insights is also about our own capabilities and strategies. What is (really) the intention from corporate management? Is it realistic that our R&D department can produce cutting edge designs? Do we have the right skill set in our sales force to sell not only products but complete solutions including an extensive service offering?
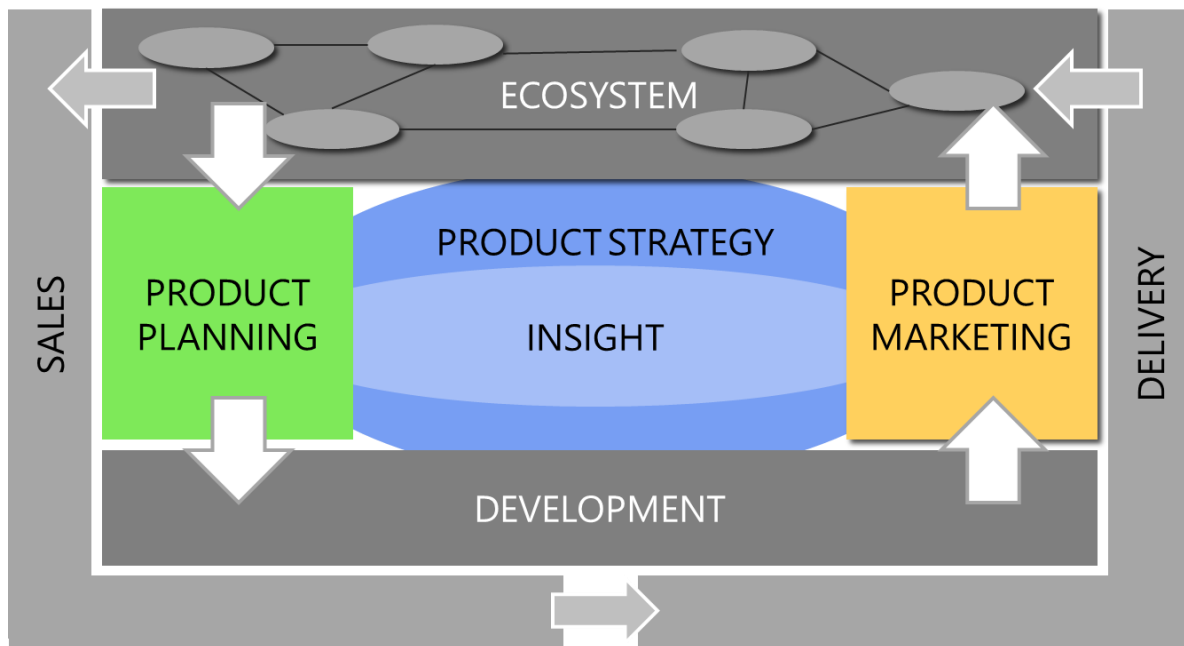
Outer Loop

Fig. 2 Product management arena, Outer loop

In some companies Product Managers are stuck with operational support to ongoing deliveries and projects. Solving technical and delivery issues which are popping up every now and then. Product Managers are also sometimes key technical sales support if the sales force is lacking product know-how on their own. This work will drastically reduce the Product Manager's ability to deliver the core of Product Management.

Another dimension is actual business forecasting. The work of product management builds the basis for scaling up the business. Delivery units, sales units, support units etc need to be activated. We often see situations were sales forecasts are going down when we start to approach the launch date. What was a realistic (?) ambition level when creating the business case is suddenly difficult when we need to commit to actual sales volumes? Reality check is a crucial part of the role as Product Manager. Product Managers must never be afraid to speak up and give factual input.

In a growing number of companies, corporate management expects product managers to *empower* sales and marketing to reach the business goals for each product. The increased focus of sales empowerment increases the role of Product Management. Staffing the role will also require additional skills.

Fig. 3 Three pillars of Product Management
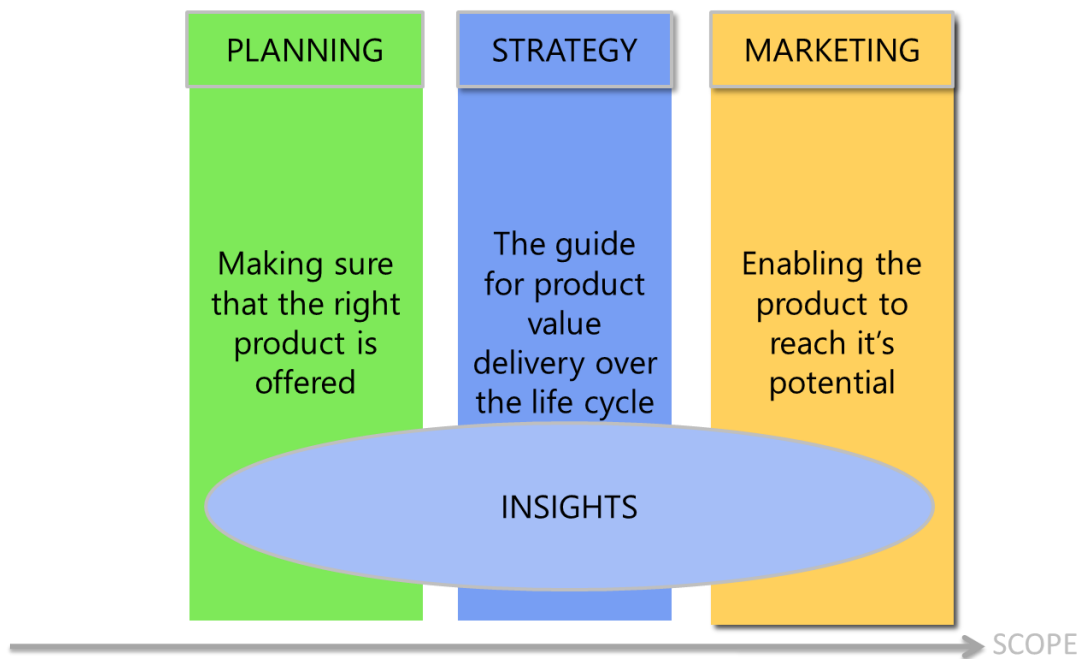
Product management role is built on three pillars:

- Product Planning
- Product Strategy
- Product Marketing

Product planning and Product marketing are clear outputs from Product Management. To be successful a Product Strategy is needed in aligning the two areas.

Insights – not only the market insights – is the foundation for generating a product strategy and to tie it all together.
A main challenge for the individual product manager is to juggle with them all in parallel!

But – where do we start? The problem is often to be found in product planning or in product marketing. But to deliver it we need the strategy and the insights.

Product Management Interfaces, PMI

When drawing a picture of any part of an organization your own part often ends up in the middle. In the case of product management this **is** certainly true – very few other functions interact with the entire company.

Key interfaces for a product manager are: corporate management, development, operations and sales & marketing.

Fig. 4 Key interfaces of Product Management

Management

PM delivers "product investment proposals" and receive "project budgets" for R&D and marketing campaigns and activities in return. We talk about the Product Governance process and involves steering groups and product councils.

There should also be a continuous process of aligning corporate strategies vs product strategies. Often new insights and opportunities, having a profound impact on the future of the company, are originating from the PM team

Development

Tolpagorni deploys regularly surveys in the PM community. Results show that overall product managers spend in average 50% of their time handling requirements and product planning. Efficient and effective collaboration with the R&D teams is critical for product success.

In a typical setup the ratio between developers and product managers are close to 20:1 . The reality is that product managers will often have to adopt to the R&D ways of working. The Agile environment sets very different requirements on a PM compared to a traditional waterfall project organization.

A key responsibility of product management is to define product requirements but also to convey an understanding of context – the domain know how.

Delivery organization

Sales forecasts are coming from different sales regions and channels. In some companies' product managers are asked to at least "check out" – sometime even approve consolidated sales and/or production forecasts. Companies might want a matrix control – per region (for all products/Sales director) but also per product (for all regions/Product director).

If sales are way above forecasts product managers might be asked to participate or even take final decisions on allocation.

In critical situations Product management needs to get involved in the delivery work. To avoid line stops in own production (one component is not available – can we replace it?) – or at a customer (can they accept a product deviation?) product managers again can be involved.

In service intensive organizations Product Management should take an active part in the process design and competence build up. These are fundamentals in scaling up the service focused business. The process and the competence build up should be treated as a part of the product.

Sales & Marketing

The Product Brief is your consolidated product presentation to marketing. Defining the key unique selling point (USPs) and the value you deliver with your product. Who are the target Personas? What are the target applications? What is your resonating focus?

In return from sales you would expect a lot of market and customer insights.

Real customers in the market

Sales departments always filter a lot of useful information. They cannot share all their insights with you. Sales has a different objective compared with Product Management. Sales will and shall always focusing in getting the next customer on board. Product management must act to create a sustainable business over time. Product management can never rely on having sales as a proxy for market information. There is no substitute from seeing actual existing (or potential new) customers. In fact – product managers are highly appreciated by customers. They see product managers as reliable and trustworthy and not as a salesperson. This gives product mangers a unique opportunity to collect true insights from direct customer contacts.

The Product Management Maturity Model, PMMM

Product management is one of few positions in a company where you can indeed pursue your career and take giant steps without actually changing formal positions.

"Going from being reactive, giving support to driving the business is a big difference"

Fig. 5 Three levels of Product Management Maturity
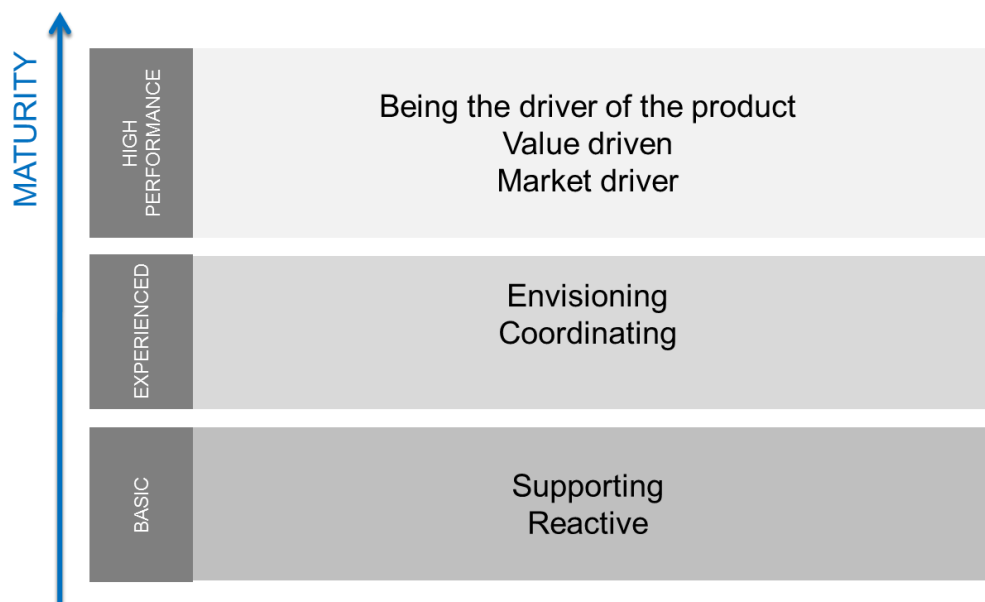
At Tolpagorni we have developed a maturity model for product management. This is not only confined to your skills and competences but also to the product management process. In order to reach higher level, you would need acceptance and support from (corporate) management, Sales and R&D.

Let us combine the Product Management working arena with the Maturity Model.

Product planning

At a basic level the product manager will just collect requirements from all stakeholders and hand over the compiled list to development. At the highest level you would inform about the context (target market and Personas), give direction and enable individual developers to take their own decisions, eg when composing every single line of code or designing the mechanics for the casing. You will also drive the requirements. Telling marketing and sales where you want to go. What kind of projects are we looking for? What kind of requirements will be approved?

Fig. 6 Acting at maturity levels

	PLANNING	STRATEGY	MARKETING
HIGH PERFORMANCE	Setting the product direction	Use	Value Communication
EXPERIENCED	Negotiate with Stakeholders	Align	Product Marketing
BASIC	Consolidate Information	Create	Supporting Sales

Product Marketing

The basic product manager produces the marketing items on the checklist. We probably provide a good and useful slide deck for the upcoming customer visit. The High Performing product manager identifies target applications, discovers pains and gains for the customer, and the journey for solving them. The High Performing Product Managers build a journey for our customers' success and a resonating focus for our product.
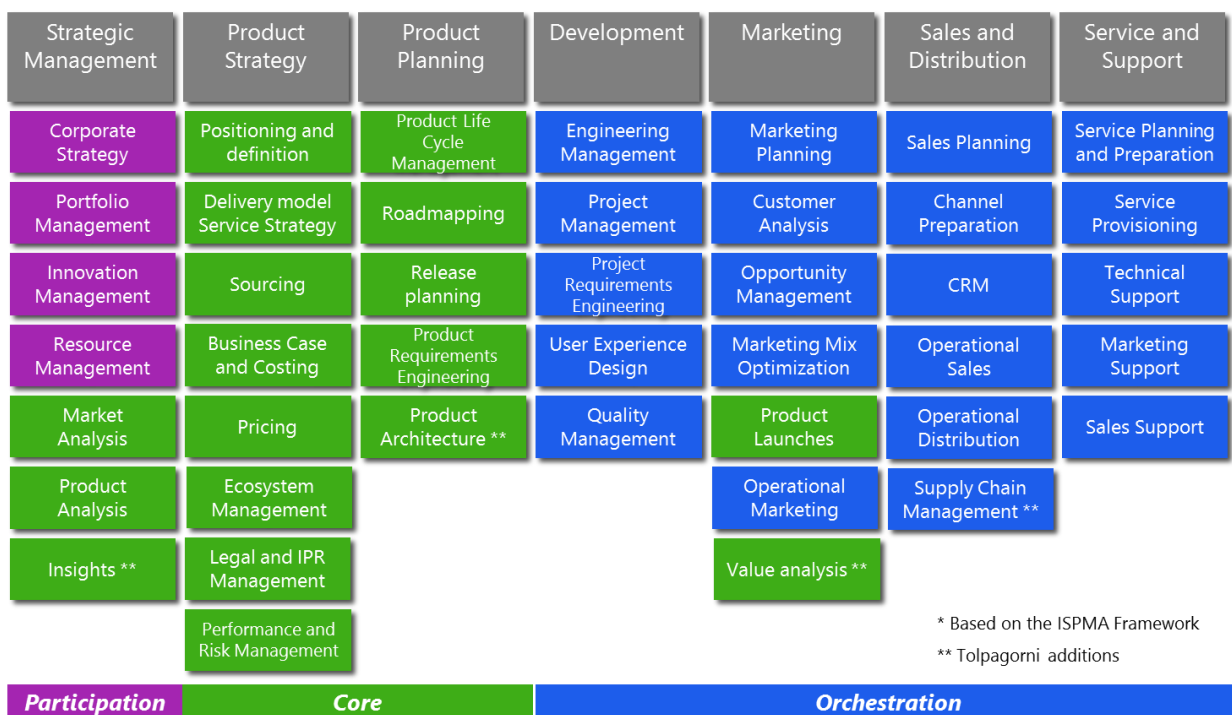
Product Strategy

There are many schools describing how strategies should be created. After all – it is not that difficult. What **is** trickier is to implement strategies in products and in our product management work. The tools we use are directly connected to the strategy. It can be how we

prioritize requirements. It can be deciding in which customer we do user studies by. It can be in what order we launch a new product line.

The Tolpagorni Product Management Framework, TPMF

The Tolpagorni Product Management Framework is based on the one from ISPMA. We have chosen to add some boxes, in particular to address not only software intensive products – but all kinds of products including HW and services.

Fig. 7 Product management framework

Strategic Management	Product Strategy	Product Planning	Development	Marketing	Sales and Distribution	Service and Support
Corporate Strategy	Positioning and definition	Product Life Cycle Management	Engineering Management	Marketing Planning	Sales Planning	Service Planning and Preparation
Portfolio Management	Delivery model Service Strategy	Roadmapping	Project Management	Customer Analysis	Channel Preparation	Service Provisioning
Innovation Management	Sourcing	Release planning	Project Requirements Engineering	Opportunity Management	CRM	Technical Support
Resource Management	Business Case and Costing	Product Requirements Engineering	User Experience Design	Marketing Mix Optimization	Operational Sales	Marketing Support
Market Analysis	Pricing	Product Architecture **	Quality Management	Product Launches	Operational Distribution	Sales Support
Product Analysis	Ecosystem Management			Operational Marketing	Supply Chain Management **	
Insights **	Legal and IPR Management			Value analysis **		
	Performance and Risk Management					

* Based on the ISPMA Framework
** Tolpagorni additions

Participation	Core	Orchestration

Main areas

Strategic management is an activity within an organization with the content to define, plan, agree, implement and evaluate the organization's strategy.

Product strategy is the guide for profitability for one particular product (family), creating strategic assets.

Product planning is the core responsibility to define the product offering over time.

Development – all technical product aspects including the implementation of changes and extensions to the product.

Marketing – marketing and deployment of products.

Sales and Distribution includes supply chain, sales and distribution to customers.

Service and Support – all services offered and provided to customers. This includes both product-related services and consulting services that are not product-related. Product-related services can include education, installation, customization, operations, and user help desk covering technical and non-technical problems.

Typical responsibility for Product Management

Participation: strategic management (responsibility within corporate management)

Core: insights, product strategies, product positioning, pricing, ecosystem management, product launches, value analysis

Orchestration: directing other parts of the company – in particular R&D and marketing

Participation of product management

Corporate Strategy consists of vision, mission, values and goals, corporate positioning, business model and financial plan, product portfolio and its evolution, resource and competency evolution, technology trends and innovation strategy, market trends and competitive strategy, policies and governance.

Portfolio management is the process where the overall offerings in the portfolio is balanced and investment decisions are taken.

Innovation management is the corporate process to organize for (disruptive) innovation in general. Including technical and business innovation.

Resource management is the organizational, strategic and budgeting process to plan and secure resources for development, sales etc.

Core responsibility of product management

Market analysis includes quantitative and qualitative reporting on segments, customer values and market trends.

Product analysis is the financial and quality reporting and analysis of the entire portfolio of products.

Insights are based not only on market and product analysis but also a deeper understanding of legacy, ecosystem, capabilities and driving forces.

Positioning and definition includes: functional and quality scope, intended use and users, UX and the complete set of components determining the offering. Value definition (from a customer perspective), focus with regard to target market and segments, company product portfolio and product life cycle phase (e.g. revitalization), channel options and required partnerships and alliances.

Delivery model & Service strategy about how to deliver the offering, standards vs customization, packaging – included services.

Sourcing includes the buy or make decision as well as strategies for suppliers

Business case and costing is about cost estimates and ROI calculations for investments.

Pricing includes building a price pyramid including values, structure, policy and price levels.

Ecosystem management includes collaboration regarding requirements, development, marketing, sales, distribution, and services

Legal and IPR management is everything from supplier/customer contracts to protecting intellectual property.

Performance and Risk management is about continuous tracking and analysis of selected relevant measures; timely action taking if needed. Risk management is continuous tracking and analysis of risks; timely action taking if needed

Product life cycle management is taking the right actions from a marketing and technical perspective in order to increase profitability over life time of the product.

Roadmapping is the strategic process where a roadmap is created. The roadmap contains both market, business and technical development over time. A roadmap is a powerful strategy communications tool.

Release planning is the process where new and/or improved functionality/values are planned in time for a particular release or product version. Market needs and own capabilities have to be considered.

Product requirements engineering is the process to gather, structure and prioritize requirements for a particular product or offering.

Product architecture is the strategic process where the overall offering is structured into modules and platforms with identified interfaces. Platforms is not only technical but also eg ways-of-working.

Product launches mean the introduction of a new product, version or release to the market.

Value analysis means defining the values offered to the customer and create a corresponding product story – e.g. using the Value Tree model.

Orchestration by product management

Engineering management includes (technical) system architecture, development processes and tools, configuration management, knowledge management, resource and skills management, Development sourcing and estimations.

Project management is about execution of development activities. Depending on methodology (agile/V-model etc) this is handled in different ways.

Project requirements engineering is the process of defining the content of a particular development effort. Sometimes one project covers several products. In agile this is about defining the Backlog.

User experience design addresses every aspect of the buyer's/users' interactions with a product or component with the purpose of shaping behaviors, attitudes, and emotions about that product or component

Quality Management in this context includes all technical quality aspects – including testing.

Marketing planning addresses the development and negotiation of plans for all marketing-related activities during a given timeframe, often a year, including respective budgets.

Customer analysis means the frequent analysis of existing or potential customers or groups of customers with regard to additional business opportunities and retention.

Opportunity management means the continuous pursuance of identified business opportunities with the objective to turn these opportunities into concrete product success.

Marketing mix optimization means the selection, implementation and management of channels appropriate for a product and the management of marketing partners within the product ecosystem.

Operational marketing means the execution of the marketing plan, tracking of the relevant measurements and taking corrective actions when measurements deviate from plan.

Sales planning addresses the development and negotiation of plans for all sales-related activities during a given timeframe, often a year, including target values and incentives.

Channel preparation means that the selected channels are enabled in time to sell a new product, version or release.

CRM or customer relations management means the systematic management of a company's interactions with customers, clients, and sales prospects.

Operational Sales includes the execution of the Sales Plan, tracking of the relevant measurements and taking corrective actions when measurements deviate from plan.

Operational Distribution means ensuring smooth order and distribution processes, stable and easy order and distribution and smooth and correct billing/payment.

Supply Chain Management means all aspects of monitoring and taking actions to improve overall supply chain performance.

Service and Support – all services offered and provided to customers. This includes both product-related services and consulting services that are not product-related. Product-related services can include education, installation, customization, operations, and user help desk covering technical and non-technical problems.

Service Planning and Preparation address the development and negotiation of plans for all product service-related activities during a given timeframe, often a year, including target values and incentives.

Service provisioning is the execution of the service plan, tracking of the relevant measurements and taking corrective actions when measurements deviate from plan.

Technical support means the fulfillment of maintenance contracts.

Marketing support means providing help to Marketing. It may include the production and distribution of marketing material, organization and execution of marketing events (conferences, user groups etc.) and documentation and tracking of marketing activities and their results

Sales support means providing help to sales representatives and channels

References

EXPERIENCE

The paper is written based on experience working with great companies like: Ericsson, ABB, Wurth, Tetra Pak, Scania, Volvo, Hexagon, IBM, Atlas Copco and others.

Scientific foundations are found in research project participation at Blekinge Institute of Technology, Swedish Institute of computer science, Uppsala University and other fine institutions.

Results have been discussed and tested in co-operation with thought leaders such as: Rich Mironov, Steve Johnson, Michael McGrath, Hans-Berndt Kittlaus, Adrienne Tan and others.

SOURCES of INSPIRATION and DISCUSSIONS

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The Art of product management, Rich Mironov   www.mironov.com

Under10 Consulting,   Steve Johnson   www.under10consulting.com

Professor Dr Tony Gorschek   www.gorschek .com

McGrath ME (2001) Product Strategy for high technology companies, second edition

The conference Product Leadership Day (2009-2016) with 50-100 Product Managers

Ten Product Management Networks, hundreds of training sessions with product managers

The Business Model Canvas. Osterwald

Inspired – Creating product your customer love, Marty Cagan

About Tolpagorni

Research and Knowledge are the key foundations of Tolpagorni. We take the lead in testing new strategies and in developing a framework of methods, tools and techniques for effective product management. We work closely with research organizations and we continuously build our skills framework through our ongoing projects. We also take an active part in building the Book of Knowledge (BoK) for the world's leading organization for Software Product Management (ISPMA).

However, the most important thing for us is to make sure we deliver results to our customers. We understand that theory on its own will not deliver usable outcomes. We strive to apply our knowledge in a practical, hands-on approach so that our customers have tools and methods to use in their everyday work practice. This approach also develops the role of the Product Manager so that they add value to their business.

All of us who work at Tolpagorni know product management from the inside, because we have done it ourselves. We believe that the combination of theoretical research and "on-the-floor" pragmatism is what makes us excel in what we do.

If you want to learn more about Tolpagorni go to www.tolpagorni.com.