

# Product Management at Crossroads

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## Abstract

The software product management discipline that just got developed over a decade ago has almost reached its peak now. There are millions of product management professionals in the industry today. While some of the professionals have formal management education, significant numbers are trained through experiences or specialized curriculums developed for corporations. When there are so many new practitioners in a field, there is a need to standardize and coordinate the process. There will be debates on what constitutes part of the activities of such practitioners and what does not. Hence, it is important to look at software product management from the perspective of a management researcher and relate the product management to the existing management literature. Secondly, when a consulting practice of product management is to be proposed for generic Software Product Management activities of an organization, there is a need to present a domain agnostic consulting practice that is understood by the management professionals. This paper attempts to answer some of these issues and also presents a framework that can help explain the activities of product management aligning to general management principles.

# Background

It will be hard to estimate exactly how many software product managers are there in the world. Some ad-hoc estimates (Aston, 2020) place it in the ballpark of a million in 2020. The same experiment carried out by the author in 2021 places the number at 5.6 million on 17th July 2021. While we may still debate on these exact numbers, it is well understood that there is a continuous entry of product managers into the industry on a fairly consistent basis. In such a condition, it will be impossible to ensure the skill levels of the product management can be kept consistent across all the organizations. While a large part of such a workforce is trained with one or more product management training programs, most are learning the craft through direct exposure at work. Most training programs are prescriptive. Some of them are Pragmatic Marketing (The Pragmatic Institute), Blackblot Marketing (Blackblot International), ISPMA Certified Product Manager (ISPMA), etc. Some specific programs like Certified Scrum Product Owner (The Scrum Alliance) are specifically oriented towards the product owner role in the agile process model rather than overall exposure to the product management process. While all these programs are developed by industry veterans with substantial product management experience in various industries, the courses are intended towards the conditioning and development of a lingua franca. In doing so, they consciously avoid reference to the core management literature so that it is acceptable to a larger audience that may not have management education. These prescriptive frameworks can be easily taught to a group of experienced product managers and hence are quite popular in the industry. Though there is an underlying foundational connection with the management principles, the trainees do not get to understand that association explicitly. Even popular product management literature like *Inspired* (Cagan, 2017) or *Empowered* (Jones & Cagan, 2020) are focused on prescriptive techniques and tools for product managers. Training with such tools leads to confusion in three categories of people. First, the experienced executives who have an extensive understanding of the management principles would like to introduce product management processes to their organizations. Second, the new business graduates look forward to an SPM career in a new organization and cannot quite find the association to the management discipline they have learned.

Third, for an independent consultant who would like to provide services to an organization not having a matured product management process. Naturally, such organizations may prefer a framework that explains the need for the processes and practices than prescriptive ideas only. On the lookout for such a framework, the author proposes his alternate framework. The framework is explanatory of the product management processes and aligns them to the traditional management literature which is proven and are in use for several decades.

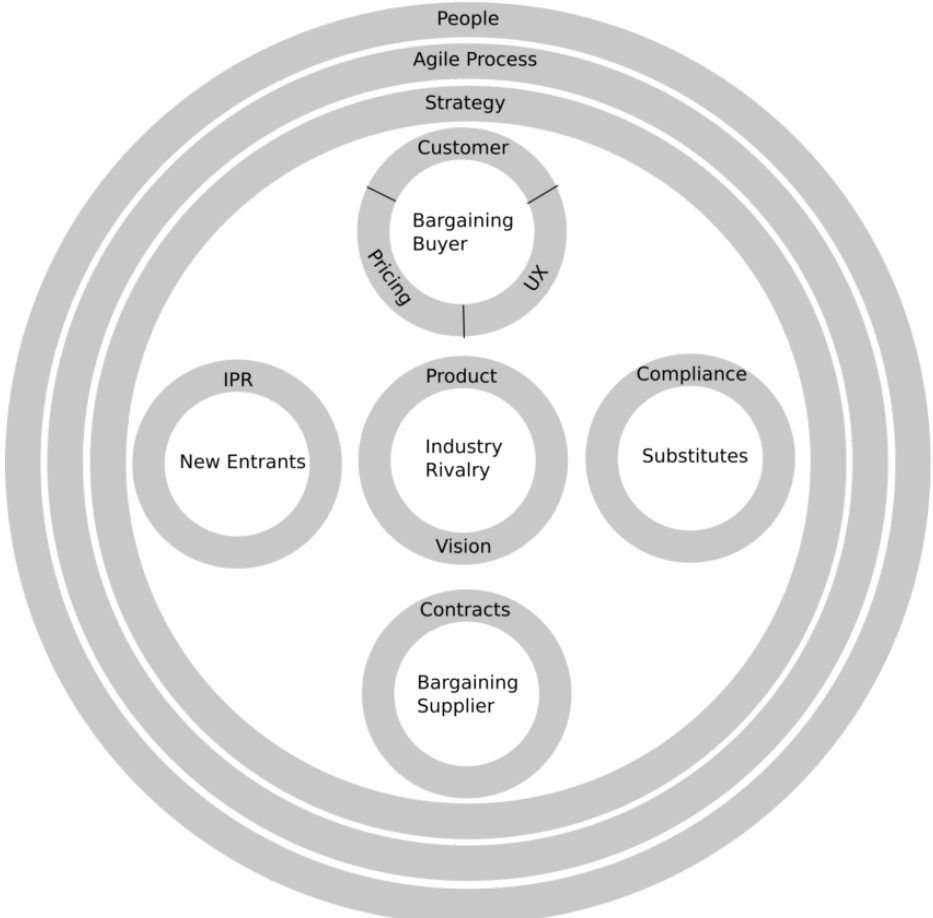
## Product and Product Managers

The classic battle in the software industry is a comparison of products vs services. From classic product classification standards, the software shall not even qualify as a product. However, the modern definitions of product consider all offerings to a customer as a product and services as a special class of product (Kotler & Keller, 2012, 327). This is particularly interesting as most software solutions are offered as subscription services while most of the software development organizations prefer to claim themselves as product companies. One aspect that is inherent to the product is the repeatability of the solution to more than one customer. This also leads to a change in thinking: from providing per customer customized solutions to a generic solution acceptable to a class of customers. This change of mindset makes the role of the product management more relevant as he is responsible for a segment of customers and not just one specific customer. You also see the additional product management roles, like the customer success manager, in-bound product manager, outbound product manager, product owners, growth product manager, even growth hackers, etc. While there are specific definitions of each role, the exact variations of the functions are significant from organization to organization. We leave the specific roles of product managers to the internal processes of the organizations. Our framework shall cover all the areas the product management as a discipline must focus on.

# The Framework

We introduce **The Practice of Product Management**. A framework based on Porter's Five Forces, that helps align various product management activities along with the market forces that affect them. Strategy, agile process, and people act as enablers for all other product management activities. While one may argue that contracts are as important to apply to a buyer as much as it is to a supplier, we believe contracts are mostly viewed as social tools to influence than judicial tools to litigate in most cases. Similarly, larger compliance requirements can also deter new entrants to enter the market, in the case of substitutes the influence is far stronger.

## The Practice of Product Management



Keeping the above in mind, we shall look at each of the practices and the role they play in the product management function of an organization.

## Strategy

The strategy becomes the core driving force of every organization. (Porter, 1996) identifies the need for the corporate strategy being different from sustained competitive advantage. While survival is a driving force for corporate strategy, business units are more concerned with establishing sustained competitive advantages. The product management function is focused on sustained competitive advantages. We also suggest at least the following tools be understood by the product managers. Our reasons for choosing the tools are based on the simplicity of the tools. They can be used effectively for qualitative inferences as much as they can be used with rigorous analysis.

1. **Porter's Five Forces:** A classic industry analysis tool that helps assess sustained competitive advantages. Any change in the forces shall mean there is a shift in the market. (Porter, 2008)
2. **BCG Growth-Share Matrix:** While it is far more common with corporate strategists than competitive advantages, one needs to understand this to assess how important the product is to the organizations and how much resources can be expended on such a product offering. (*What Is the Growth Share Matrix?* | BCG, 1968)
3. **Kenichi Ohmae's Key Success Factor (KSF):** KSFs are factors that affect a product's performance in the environment (Ohmae, 1982). They may not be product features and may be part of a larger supply chain. Non-breaking of the cold chain during the supply of vaccines can be a significant KSF. In a warm country like India, a vaccine that does not need cryogenic refrigeration during transport may have significant competitive advantage.
4. **DuPont Analysis:** While the product management function is associated with growth, it is ideal to understand the factors for growth in an organization. (Charan, 2017)

$$\text{Profit/Equity} = (\text{Profit/Sales}) \times (\text{Sales/Assets}) \times (\text{Assets/Equity})$$

While assets are a significant factor for manufacturing-based organizations, the number of employees or cost of manpower, or cost of infrastructure can be considered as possible alternatives to assets while analyzing the asset turnover ratio.

## Product Vision

The product vision is probably the only non-delegatable activity of a product manager. The product vision has the following three components:

1. What does the product do?
2. How does it do so?
3. How is it different from the competition?

While the definition of the vision is an important aspect, it is equally important to develop the product that adheres to the vision. Similarly, the vision needs to be properly communicated to all the internal and external stakeholders of the organization. While the vision is a relatively longer horizon activity, it must be kept in sync with the market forces as identified by the earlier activities. Since the vision is communicated in all messaging, the competition responds to it by introducing new products or messaging in the market.

## Processes for the Bargaining Buyer

The Economics of buying is fairly transactional. The buyer buys the product for a price as a consideration. However, the buyer is influenced by employees or customers who use the product or solution. While the price may seem like the only direct influence to the buyer, good user experience and customer relationship, and requirement analysis can be effective tools to enhance the overall product acquisition experience.

## Customer

While economics is about commodities, marketing is all about differentiating. In a perfect marketer's vision, every product is unique, almost catering to the needs of a specific customer. In short, PMs tend to provide the same product to different customers and expect them to value it differently based on what the customer will like to benefit from the product. While sales will work on establishing a walk into the door level of relationship managed with personal engagement, PMs focus on trusted partnership. PMs are focused on running a successful business which is a win-win for both the customer and the organization. However, a customer journey with an offering may not be always a feature-function-based experience. Emotions can play a significant role in customer engagement as well (Thomke, 2019, p56). A continued loss on either side will only end that association. When a PM sees such an arrangement they will have to walk out of such scenarios rather than stretching them too far. Several times PMs may be discredited for such a stance as lack of empathy towards the customer. However, on a pragmatic decision making these are practical realities PMs face.

## User Experience

User experience helps the product be useful to the end-users who can be different from buyers, yet can be influencers in the buying process. Focusing on the users helps the product move from a commodity to a differentiation strategy. However, it's often believed with the new age of AI and ML there will be a significant change in the way products are built for customers. Let's look at a travel portal which is a website with a starting location, destination, and time of travel to be filled up by the user. A travel-oriented application will make such form filling experience easier by providing widgets or dropdowns for users to fill up such information with ease. The smart applications shall focus on the context rather than mere widgets. For example, a location-aware application can easily identify you are in Bangalore and select Bangalore as the Airport as the starting destination. If it's a digital assistant and previously you have used it for reading some emails it may know you are about to attend a meeting in

New Delhi at a certain time. So it can be smart enough to take up those intent cues and fill-up the form and show you for edits and final approval. While the adoption of AI changed the experience for the user in terms of widgets or information over chatbots it did not change the fundamental context of travel. As a PM one needs to understand what contributes to the context over what is assistance to be able to design software better in the digital world. While the previous example only focused on the user interaction as the driver to influence the buyer, one can look at the complete user journey in using the product. One such approach is Design Thinking (Brown, 2008) which encompasses looking at each customer's pain point in using the product offering and eliminating them by introducing solutions in the offering.

## Price

The customer sees value and pays a price for it to acquire your product. Hence, pricing is an important tenet for a product. While pricing is a significant part of product management activities, most of the time it's worked upon by finance organizations and even worked upon at the last moment to strike a deal. Every PM must be aware of the three principles of pricing. Every pricing scheme must meet the cost of producing the product (Dholakia, 2018), they have to be competitive to a potential substitute and lastly, they should be according to the value the customer perceives (Hinterhuber, 2008, p41). Since a product's value is based on what the customer sees, you may realize a customer who uses a smaller number of features may agree to a higher price than a customer who uses a more elaborate feature set (Dholakia, 2016). Irrespective of the elaborate bundling strategy a company can come up with the basic tenets of pricing must be adhered to. While many pricing techniques exist, Good-Better-Best (GBB) is a well-known technique to design tiered pricing catering to attracting customers, retaining existing customers, and value-conscious high-usage customers (Mohammed, 2018).

## Contracts and Bargaining Suppliers

Business relationships are established with commercial contracts. Hence, it is ideal to review all the inbound and outbound contracts of the product periodically. This is particularly useful for all inbound



contracts or supplier agreements. Although there is a legal enforcement aspect to contracting, a large part of contracting is a mechanism of establishing a social relationship or documenting the social relationship (Levy, 2017, 1-15). Contracts are suggested for negotiating with bargaining suppliers as a useful tool (Paranikas et al., 2015). The same applies to all other parts of the business relationships like the customer and users as well.

## IPR

Intellectual Properties are intangible assets that provide competitive advantages, particularly from new entrants. While most software industry is accustomed to the nuances of patents and copyright laws, there is a need to be aware of other IP laws. Some of them are trademarks and geographical indications(GI). Trademark laws are used extensively to protect the domain names of organizations or their product websites. Similarly, with so many e-retailers in the space, there is a need to understand the GIs, their application, packaging and distribution requirements, etc. For example, when an agricultural product has to be packaged in the firm to support GI requirements, the supply chain must be redesigned to support these needs. Moreover, consumer preference improves even on e-commerce sales when GIs are specified on the websites (D'Souza & Joshi, 2020). As much as one's own IPRs are to be protected, the IPRs of other people need to be honored as well. This is particularly concerning open-source. Every open-source code or even stray code lying on the internet is protected under some form of copyright. One needs to understand the usability restrictions before using such a code. Similarly, due care must be taken in ensuring the IP of others whose work has been referenced is duly acknowledged and their usage is effectively compensated to avoid later legal recourse.

## Compliance

Most organizations look at compliance as an organization-level activity addressed by the board of directors and executives of the organization in collaboration with finance and legal practitioners. However, domain compliance requirements are filling almost every organization. Cloud services are

bringing in privacy and security burdens on the service providers. E-commerce and platform businesses are adding intermediary responsibility to the service providers. One of the earliest cases in this will be of Baazi.com (Delhi High Court, 2008) which led to modification in the Indian IT Act and intermediary protection was introduced. However, modifications to the IT Rules led to stricter compliance measures that acted on Twitter in the wrong way (Agarwal, 2021). Non-compliance puts someone in the realm of being guilty until proven innocent and affects the ability to conduct any business (Shinde, 2020). Similarly, changes in government policies like the e-retailers to state country of origin on the items on the sites may require immediate attention and preparedness (The Economic Times, 2020). Compliance needs will vary from industry to industry and product managers have to be aware and continuously monitor such needs.

## Agile Management

Agile management practices enable a flexible management practice for the business people, customers, and technology to come together in an open and frequent communication (The Agile Manifesto, 2001). While Scrum, Kanban, SAFe, etc. are manifestations of the manifesto, they should not be considered prescriptive. Flexibility is to be honored as long as the goals of the manifesto are kept intact. Enterprises that would like to use scrum can be benefited from the methodologies introduced (Schwaber, 2007). Larger enterprises with cross-department coordination prefer using the SAFe as a framework. Similarly, professionals who are limited by skilled domain-centric resources tend to prefer the Kanban model for their agile processes. The same organization can implement different process models depending on the varying needs of each of its departments. For example, engineering departments use the scrum framework while customer support and escalation works on a Kanban model. Moreover, tools on project management are enabling many such processes in their tools. The product managers need to be flexible to know the real needs of their organization and utilize the process models as useful for their organizations.

## People

People's interactions play an important role for a product manager. However, product managers tend to focus on working relationships rather than personal relationships. The difference is very important to be identified. Working in a matrix organization, product managers work on conflicting interests of functional organization units; often advocating the interest of people who are not in the room. Such a role is not consistent and needs to be switched in front of another set of stakeholders. A PM will defend a customer in front of the engineering management and defend his engineering team in front of the customer. Even in the worst situations, the agreement to disagree level of confidence needs to be maintained by product managers in several situations. Every product manager must be exposed to the art of principled negotiations (Fisher et al., 2012). Similarly, managing product managers comes with its own sets of challenges. Most product managers have excelled in another domain in their previous life before they choose a product management career. Hence, they tend to be explorers and love experience as their guides. Highly supervised micro-managed environments are not conducive to most product managers, even in their early stages of development. Transactional psychologists may identify a person of adult mindset over a parent or child mindset for such people (Harris, 1969, p19). However, many supervisory roles tend to establish a parent and child mindset which may not be fruitful for managing PMs.

## Organizing Internal Processes

The framework does not prescribe any specific methodology to be used for internal process management. We rather appreciate managers utilizing the methodologies they are most familiar with and utilizing them to the best of their abilities to improve upon across the organization processes following a change management methodology (Miller, 2020). However, the following table can provide a ready reckoner if all the processes of product management are getting the focus.

Scope	Practice	Tools	Remarks
Organization	Strategy	<ul style="list-style-type: none"> <li>- Porter's Five Forces</li> <li>- BCG Growth-Share Matrix</li> <li>- Key Success Factor</li> <li>- Du Pont Analysis</li> </ul>	<p>Long-term and to be reviewed once a year.</p> <p>Outcome: Know your industry.</p>
Industry Rivalry	Product Vision	<p>Compelling Vision Statement</p> <ul style="list-style-type: none"> <li>- What do you offer?</li> <li>- How do you offer?</li> <li>- Why your offer is better than the competition?</li> </ul>	<p>While a vision statement may be defined once a year, continuous development, communication, competition assessment, and customer interaction may be needed for a product. Agile Process management can be utilized to exercise this.</p>
Bargaining Buyers	Customer	<ul style="list-style-type: none"> <li>- Role Mapping</li> <li>- Roadmap Review</li> <li>- Customer Success</li> <li>- User Surveys</li> <li>- Lighthouse deployments</li> </ul>	<p>Checking customer pulse on a regular basis. Involving customers in the beta testing and early feedback phases can help improve the products.</p>
	UX	<ul style="list-style-type: none"> <li>- Design Thinking</li> </ul>	<p>Reviewing end-user experience on a periodic basis during the life cycle of the product.</p>
	Pricing	<ul style="list-style-type: none"> <li>- Cost</li> <li>- Competitor</li> <li>- Customer Value</li> </ul>	<p>For every deal, competitor and customer value assessment should be carried out. Cost estimations for business operations should be carried out once a year.</p>
Bargaining Suppliers	Contracts	<ul style="list-style-type: none"> <li>- Conditions</li> <li>- Warranties</li> <li>- Considerations</li> <li>- Subject Matter</li> </ul>	<p>Periodic review of the contracts is needed to understand their performance.</p>
New Entrants	IPR	<ul style="list-style-type: none"> <li>- Patents</li> <li>- Copyrights</li> <li>- Trademarks</li> <li>- Domain names</li> <li>- Open Source</li> </ul>	<p>Review of IPRs and open source must be carried out during the development phase of the product. Specific open source licenses that are not enterprise-friendly must be excluded.</p>
Substitutes	Compliance	<ul style="list-style-type: none"> <li>- Security</li> <li>- Quality</li> <li>- Industry-Specific</li> </ul>	<p>Security compliance needs to be validated for every release of a software product. Quality and industry-specific compliance needs must be reviewed on a periodic basis.</p>
Organization	People	<p>Interaction within an organization</p> <ul style="list-style-type: none"> <li>-Managing PMs</li> <li>-Negotiation Skills</li> </ul>	<p>HR practices in organizations are tuned for engineering structures. Conscious development for product management should be created (Gnanasambandam et</p>

		-Matrix Management,	al., 2018).
	Agile Process	- Kanban - Scrum - XP	Processes can be different for departments considering the need and complexity.
Table 1: Tools and Practices for Product Management			

# Application

As a product management consultant, the author has introduced the concept to the market recently. And evaluating its efficacy with startups or smaller organizations. There is a general acceptance of the framework due to its simplicity and associated basis with established management concepts. Most prescriptive frameworks require an all-or-nothing approach to the introduction of new concepts into the organization. That may involve training costs and process adherence and monitoring costs. Smaller organizations find any such process overhead a non-value add. The framework we propose considers the organization’s internal process in each of the identified activities and tries to enhance those to include more elaborate processes if needed. Secondly, the organization can decide the most important processes that they want to work on and cover all others as and when needed. While some qualitative views are seen with the trial organizations, a detailed long-term study and impact analysis is yet to be carried out. The framework has been particularly useful to a consultant as the framework does not assume any preconditions of the environments. Thus, if an organization is already following some prescriptive frameworks, this can be applied to the environment to study the efficacy and enhance the existing framework.

# Conclusion

The product management function has expanded significantly both in its number of practitioners and organizations. There is a need to use an explanatory framework that can help management understand why they need to use such a framework. While the explanatory aspect of the framework can help the adoption, the flexibility of the choice of exact methodologies may not be acceptable to organizations who prefer significant standardization of the processes. Significant efficacy data needs to be collected as the adoption of the framework picks up.

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