

# How the Future Will Shape Product Management

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## **Abstract**

*Product management is subject to many external forces, and certain global trends will impact its future: technology, Artificial Intelligence (AI), remote work, genetic sequencing, supply chain management, societal fragmentation, and population longevity. Today's product managers will see a future filled with rapid changes in remote work, human-machine collaboration, and growth facilitation Artificial Intelligence (AI). To stay competitive in the future, product managers must be educated on technological advances and organizational changes. One of the trends expected in the future is product managers need to increase involvement in product design and nurture closer relationships with their design teams.*

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Date of Submission: 20-05-2022

Date of Acceptance: 03-06-2022

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## **I. Introduction**

Product management is subject to many external forces, and certain global trends will impact its future: technology, Artificial Intelligence (AI), remote work, genetic sequencing, supply chain management, societal fragmentation, and population longevity <sup>(1)</sup>.

### **Global Trends in the Coming Decade**

#### **Technology**

Jobs will be eliminated by technology. A Price-Waterhouse Coopers study (2019) discovered that 27% of consumers were unsure if their customer-service experience was with a chatbot or a human <sup>(1)</sup>. Labor and knowledge-based work jobs will be replaced by digital tools such as AI, eliminating 73 million jobs through automation by the end of the next decade <sup>(1)</sup>.

#### **Genetic Sequencing**

It is predicted that genetic sequencing and consumer goods will be marketed to bio-target consumer segments, such as products tailored to consumer preferences via DNA. Genetic targeting can improve the configurability of products that can be tailored to DNA-based consumer segments called "genetic personas" <sup>(2)</sup>.

#### **Artificial Intelligence (AI)**

Artificial Intelligence will be the biggest disruptor in the next decade <sup>(2)</sup>. It has been a disruptor for many industries and is still rapidly evolving. The expectation is that it will continue to disrupt and innovate across many types of businesses, especially health tech and elder care, as well as the environment, automation, machine learning, IoT, and blockchain <sup>(1)</sup>. Understanding opportunities to innovate and disrupt with AI will require that product managers leave a non-tech comfort zone and gain skills in new tech areas <sup>(1)</sup>.

AI will be an in-demand skill, so it will be beneficial for product managers to collaborate with engineers and data scientists. Product managers with a technical background will be advantageous when communicating with engineers <sup>(3)</sup>. In a recent survey, 95.5% of product managers agreed that the future of human-machine collaboration would be positive <sup>(3)</sup>. A program might be the most intelligent but still requires humans <sup>(4)</sup>.

Artificial intelligence will impact everything. Sensors can provide data needed to model anything, leading to partially to fully automated products with little or no human interaction for operation. Product packaging containing IoT tech will allow rapid feedback loops and packaging changes without maintenance trips. Modification of hundreds of consumer electronic products providing new capabilities will be handled using field-programmable gate arrays (FPGAs). (Interaction).

#### **Societal Fragmentation**

It was predicted that the internet would unite humanity. However, humanity has retreated into tribes with strong identities reinforced by filters over the past decade. The concept of cultural fragmentation implies the disintegration of "singular" cultures and the formation of numerous diverse cultures <sup>(4)</sup>.

### **Aging Population**

Three key trends of the aging population, declining fertility, and aging cohorts will increase the proportion of older adults, so by 2050, there will be fewer adolescents and young adults than people over 65. Economic pressures will force older adults to delay retirement, as technology and work-hour flexibility allow longer careers <sup>(1)</sup>.

### **Accelerated Remote Work**

A product manager is a people-oriented role requiring making connections with teams to improve communications. This isn't easy to do remotely <sup>(1)</sup>. The trend seems to favor of remote work, yet product management appears to be more suited to face-to-face contact. Remote work was already a strong trend, and COVID-19 accelerated it due to its ease of technology and desirability for meetings <sup>(2)</sup>. Advantages of working remotely include lower costs, health safety, efficiency, and work/life balance, allowing people to be employed without having to relocate <sup>(2)</sup>. One significant benefit of remote working for smaller businesses or start-ups is spending less on office space due to fewer in-house employees <sup>(2)</sup>.

However, a recent survey suggests that 70.2% of product managers prefer working in an office due to role-related reasons <sup>(2)</sup>. A product manager's job is based primarily on collaboration, and although many tasks can be accomplished remotely, specific tasks are better suited to in-person contact for leading with authority <sup>(2)</sup>. Meetings are easier to hold in-person for managing stakeholders, customer interviews, or face-to-face interactions <sup>(1)</sup>.

### **Acceleration of Change.**

Instead of taking decades for significant technological changes, such as telehealth and streaming services, now changes occur in years or months <sup>(3)</sup>. Future product managers need to be prepared for and continue to learn for faster, accelerating changes. Conversely, product managers will be responsible for recognizing and interpreting future trends in consumer behavior. They will need to extrapolate those trends throughout the whole product development process. Because some products could take years to finalize, the trends may repeatedly shift from ideation to the end-user. Thus, product managers cannot forget the end-user every step of the way <sup>(8)</sup>.

### **Growth**

Businesses will benefit from a more educated, informed, and experienced workforce and enjoy higher employee retention rates <sup>(3)</sup>. Thus, companies will need to create a culture of growth, a long-term investment that leads to long-term gains. Product managers who value increased overcompensation and flexible hours will desire a path forward in personal and professional development within their company. Without this option, talent may leave for better opportunities. Mentorship systems, certifications, and cross-departmental training allow product managers to enhance their skills <sup>(3)(4)</sup>. Product managers will have to seek knowledge and reach for the next innovation to succeed.

In the next few years, new solutions may evolve to adapt to sudden changes in supply chains <sup>(4)</sup>. Product managers must plan accordingly to compensate for backups by keeping product timelines on schedule and adding more time to source materials.

### **Risks**

The goal of manufacturing companies is to develop and produce products that meet customer needs when they are needed with little or no risk of overstocks. However, due to rapidly changing customer preferences, micro-segmentation of many product categories occur. Thus, manufacturers of consumer goods companies must accommodate smaller markets to provide a growth path and avoid price competition <sup>(5)</sup>. Forecasting exact specifications and potential sales volumes of new products are difficult. Recent studies have confirmed the problems of new product commercialization with newly launched products having high failure rates up to 50% or more <sup>(5)</sup>. This is primarily due to not understanding customer needs and providing products that have no market <sup>(5)</sup>. One solution is to involve customers in the innovation process, i.e., soliciting new product ideas and acting on the best ones.

### **Predictions for Product Management**

Based on these global trends, here's what product management may look like by the end of the decade: <sup>(1)(6)(7)</sup>

1. The cross-functional challenges of companies making products will become equal parts cultural, technical, experiential, and commercial. Chief product officers will head leadership teams, from startups to multinationals <sup>(6)</sup>.
2. Product portfolio management will be added to product manager responsibilities for leading multiple teams and products <sup>(7)(8)</sup>.

3. User experience (UX) design and product management will merge. Design talent will report to product organizations, and the path to leadership for designers will pass through the product <sup>(8)(9)(10)</sup>.

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