White Paper

Product Management in a world of digital transformation
Introduction

This white paper is for product managers working in organizations undergoing or considering digital transformation.

It aims to help you make sense of the deluge of online information about this topic that is pumped out online, so you can separate the reality from the hype. We also explain where product management fits and why we believe it is becoming increasingly important.

It is based on our experience of working with hundreds of companies and product leaders who are striving to understand what this means.

We hope it will arm you with an understanding and perspective that gives you credibility and influence within your organization.

3 key questions

**Q1.** What is digital transformation, and what does it take to be successful?

**Q2.** Is moving to Agile the same as digital transformation?

**Q3.** What part does product management play?
What is digital transformation?

No doubt you’ve heard the phrase “digital transformation” many times, but what does it actually mean? There are many interpretations of how digital transformation manifests in practice. Perhaps the most common definition is the adoption of digital technology, generally software, to create new products and customer experiences that enable new or changed business models.

This last part is key: simply adding or upgrading technology is not itself transformative. To justify the label, a transformation must involve the introduction of a new way of doing business or delivering value that was not previously possible. In projects that aim simply to implement additional digital technology or upgrade an existing infrastructure, the term “digitization” is more appropriate (even if it may sometimes be conveniently labeled digital transformation).
Why digital transformation?

For many companies, embarking on a program of digital transformation is forced upon them. They must respond as their market changes. For example, new digitally savvy competitors experiment with different ways of serving the customers in their market. A good example is the growth of online banks like Monzo and Revolut in the UK. They have no physical presence on the high street and focus on a seamless online experience. These fast-moving digital players are unhampered by legacy products, culture, and infrastructure and are successfully challenging the long-established big banks.

On the other side of the coin, many companies see digital transformation as a way to innovate, develop new products, and take advantage of new business opportunities. It seems that no CEO's resumé is complete without mentioning how they initiated a digital transformation program.

It’s now something of a cliché that the world is changing faster than ever before and will continue to do so. Many old certainties in business have been swept away, driven in no small part by the growing ubiquity and low cost of digital technologies. And there is no indication that this will slow down. We should assume that digital transformation is here to stay.

So, companies cannot rest on their laurels and assume that their current products are good enough or that their markets will never change. As put by eminent business theoretician Peter Drucker, “The most important skill in the 21st century will be the ability to learn new skills.”

Some examples

The Covid 19 pandemic has meant that many businesses have had to innovate to survive.

- With Covid restrictions on managing crowds in the UK, many pubs swapped to providing table service rather than customers ordering and paying at the bar. Customers now scan QR codes from their phone and order and pay from a web app by entering their table number and drinks order. Dedicated ‘servers’ focus on pouring drinks and ‘runners’ on delivering them to the tables. Pub owners reckon they can serve 30% to 40% more people at busy times and are considering whether this is a long-term model to use in the peak season.

- With the sudden onset of the pandemic and the uncertainty created about job security, many financial institutions faced a massive increase in people looking for payment reductions on their mortgages. Call centers could not cope. Many implemented AI-based web and voice prompt automation to take the load off call center staff. Automated credit profiling and risk management were used to make decisions for customers calling in. Unexpectedly, they found that many customers preferred to deal with anonymous systems rather than waiting to talk to call center staff. In the future, they see this approach as a way to reduce staffing costs and improve the customer experience.
So digital transformation is about introducing a new way of doing business or delivering value that was not previously possible without using technology. This is often focused on delivering a great customer experience and holds true in many different sectors.

- Sportswear giant Nike realized that their brand risked becoming stale and old-fashioned. They invested heavily in digital marketing programs, customer intelligence and pioneered the use of emerging tech, for example, building a mobile app that used Augmented Reality (AR) to enable customers to visualize wearing different styles of Nike trainers. At the same time, they opened ‘concept stores’, designed not as points-of-sale but to enable customers to experience the Nike brand.

- In 2011, the UK government formed the Government Digital Service (GDS) to implement the ‘digital by default’ strategy proposed by UK Digital Champion (and founder of lastminute.com) Martha Lane Fox. The GDS’s first major project, GOV.UK was a big success, bringing together over 300 government websites within 15 months to provide a much simpler platform for users. GOV.UK has been seen as an example of best practice, with GDS team members supporting other countries with their own digital government initiatives.

Given these high-profile successes, it’s not surprising that “digital transformation” has become a ‘buzz-phrase’ over the last decade.

**But it’s not easy**

![Relative global interest in the term “Digital Transformation” 2011-2021, from Google Trends](image_url)

Despite the hype surrounding the term, analysts consistently report that 70% of digital transformation programs fail to reach their goals. This surprising statistic signals the scale of the challenge facing organizations as they strive to update their thinking and capabilities.
What does it take?

A digital transformation requires five areas of competency:

Adopting new technology

A definitive feature of a digital transformation is that it involves the adoption of new software-based digital capabilities or technology infrastructure. It’s not necessary that these use emergent technologies such as Machine Learning, Augmented Reality, or Blockchain, so long as they support innovation, the creation of new value to customers, or operational efficiencies.

Using data

With digital transformation comes an explosion in the data available about your products and target markets. That means that collecting, analyzing, and using data to make good decisions is key. Being good at it can give you a competitive advantage. Being bad is just the opposite. In an increasingly data-led competitive environment, new strategies must be based on objective information where possible. As put in a 2017 article by The Economist [2], “The world’s most valuable resource is no longer oil, but data.”

Customer focus

Understanding your customers is critical for any business and even more so when trying new ways of working in new markets or business areas. These insights help you understand what can potentially increase customer satisfaction and, ultimately, sales. As a business, it means having the capability to get deep customer insights, experiment with ideas, and adapt and evolve your offering or business model in response. The mantra ‘constant change’ applies to your markets, competitors and customers, and your business. Continually learning what your customers care about (i.e., value) and where the market is heading must be embedded within your organization.

Cross-functional collaboration and processes

Today’s digital products are highly complex and involve many specialists to bring them to market, from skilled software developers and designers to User eXperience (UX) experts, DevOps, and Product Managers. No one individual has all the insights or skills necessary for success - a team of specialists working closely together is needed. In many companies, you see organizational silos, which can make cross-functional teamwork hard. Empire building and old-fashioned power hierarchies (founded on the human tendency for large egos to dominate) are often the reason. In these silos, top-down decision making, known as command-and-control, is often the result. However, this can exclude vital insights from other functions.

Building software products is a creative process, and diverse skills and viewpoints in the team drive better results. Organization structures and processes that promote cross-functional working can bring out the best from all the different specialisms and maximize the odds of success. Having everyone’s primary home as an autonomous team (or squad) focused on a specific product/element is often held up as the ideal example of how to do this. However, more often we see a product management department with Product Managers leading virtual teams who are working on their product(s).

Capacity to change and adopt a digital mindset

Digital transformation requires fundamental changes within an organization, which go to the heart of its business model, culture, and operations. Companies must be willing to take a risk by experimenting with new business models and new ways of doing things. For example, incentivizing Sales to sell software rather than hardware or changing the business case approach to see software products as an ongoing development rather than a one-off project.

A good example is the car industry in Europe. Over the last couple of years, it has been trying to adopt this digital mindset and move from the paradigm of a hardware-centric product (a one-off sale of a car) to a more software-centric approach. With continuous updates to the car’s software this opens up the potential for new additional and ongoing revenue. This is possible only if the leadership and people in a company adopt a digital mindset. It’s about thinking about digital as the default approach rather than a series of one-off transformation projects.
Q2 Is moving to Agile the same as digital transformation?

Does Digital imply Agile?

It’s commonly assumed that in order to be a modern, digital-oriented organization, you have to be, and do, “Agile”. This term was originally coined to describe a philosophy of managing uncertainty and change by being nimble and quick, but over the years, it has acquired a more precise meaning signified by its capitalization. That’s the codified processes like Scrum and the industry of consultancy, training, and resources that have developed to support them. This is understandable given that agile development methods such as Scrum and Kanban have become ubiquitous in organizations that develop software.

Product Management social media is full of opinions, stories, and case studies that would have you believe that only by following “the Agile method” can you possibly hope to survive in the 21st Century. Apparently, every company should follow the Spotify model, although some have now begun to question whether this worked as well as the publicity would have you believe.

However, for most businesses with software products, digital transformation is only possible when using agile development techniques. But… many organizations fall into the trap of believing that just by implementing Agile frameworks like SAFe (Scaled Agile Framework) they will find digital transformation magically happening. In our experience, that’s rarely the case. So, going digital usually implies Agile, but moving to Agile does not imply digital transformation.

Is Agile always the right approach anyway?

Many companies build products for which an agile approach simply isn’t suitable. While shorter delivery cycles matter for everyone, the fail fast, learn fast approach of experimentation risks a reduction in quality or reputational damage that simply doesn’t work for some businesses. Just imagine being a manufacturer of robotic aids for hospital surgeons. The more traditional waterfall approach with safety approval sign-offs and rigorous trials before live usage is key to acceptance by customers (and their patients).

Let’s use baking a cake as an analogy. You have to cook it before you can taste the results, so the feedback loop takes a relatively ‘long’ time. And, once it’s in the oven, if you want to make a change, you have to go out and buy all the ingredients again and start from scratch. However, if you’re mixing a cocktail, you have the option to check it by taking a sip as you go along. That feedback loop is quick, and it’s easy to make a change, e.g., adding some more gin, if you want to.
Agile methods are designed for quick feedback loops and assume the ability to make changes easily. They make sense if you just don’t know what will work as you have to experiment your way to success. Techniques like MVPs (Minimum Viable Products) and prototypes are also approaches that facilitate quick feedback so the product can evolve in the right direction.

Methods like waterfall and stage-gate are typically used when feedback loops are longer and making changes is harder. For example, building a complex piece of technology like the Hubble Space Telescope is a huge project, and you won’t know if it’s ultimately successful until it’s launched and orbiting the earth, so the feedback loop is long. You may be able to iterate on elements during the build, but making changes is much harder once it has left the earth’s surface.

To stretch the cake analogy a little further, you can often iterate through part of the development process. For example, if the cake mixture looks too wet as you’re mixing the ingredients, you can add some more flour. At that point, the feedback loop is quick, and making changes is easy. But once the cake is in the oven – that’s it, you must wait until it’s cooked to find out how you’ve done.

Choosing to use agile, waterfall, or some hybrid as your development approach is dependent on the type of products your company has. For software products, it’s usually easy to iterate, so an agile approach makes sense. With physical products, you can prototype the design, but it’s hard and costly to change your mind once you start the manufacturing process, so it’s probably necessary to use a waterfall approach. Many B2B propositions include physical products, software, and a service element, and typically a mixture of agile and waterfall is used.

Remember that agile and waterfall are frameworks to help you build things in the right way. But they don’t tell you what the right things to build are, i.e., the initial ideas. That’s what you need to know if you want to digitally transform your business – which is where product managers come in.

Iterate when you can, be thorough when you can’t
Q3 What part does product management play?

Digital transformation can highlight internal tensions and conflicts

Digital transformation means developing technology-based products. At all levels of any business building technology products, there are specialized roles, each with their own goals. They may sound like cliches, but there is usually some truth to them.

- **Designers** want to solve interesting problems
- **Engineers** want to build things using cool technology
- **Marketing teams** want to make the company and its products look amazing (and win awards!)
- **Sales departments** want to close deals and maximize their revenue/commission
- **Operations** wants everything to run smoothly
- **Finance** wants to spend as little as possible and predict accurately
- **Executive teams** want to maximize shareholder value and look successful
- **Shareholders** want returns on their investment

While all of these goals are valid, there’s a danger that they will conflict with each other, for example:

- **Designers** may spend too long trying to create something perfect
- **Engineers** can build stuff that nobody actually needs
- **Marketing** can overhype capabilities or focus on the wrong things
- **Salespeople** can act tactically - selling things that are not a good fit for the customer, making promises that unduly bind delivery teams, or undermining the profitability of products

These conflicts can result in customer dissatisfaction, inefficiencies within the company, damage to company morale, and lower profits.

The challenges above are not unique to companies undergoing digital transformation; however, they are even more relevant with the new complexity that digital technology and new business models bring.

**So how does strong product management help to avoid these problems?**
A balanced and holistic view is needed

Product Managers occupy a unique position in which they must balance the competing priorities of the various teams and objectives of the business. To do this, they need to have the full context for their product and its market. They need to understand all the different technical, commercial, operational, and other aspects as well as the business strategy. They can then make or recommend balanced, objective decisions in the best interests of customers and the business.

Product Managers do this by creating product strategies that focus on delivering customer value, in line with the company strategy. Simply put, when customers value a product, they will pay for it, which drives company revenue. However, Product Managers need to go a step further. They need to understand the costs and risks associated with building and running a product to ensure that this revenue is profitable.

They also need to balance the short-term and the longer-term plans for their product. Think about car cockpit systems (the dashboard) 10 years ago and what they are like today. The connectivity of today’s systems not only enables the accumulation of valuable data to build potentially chargeable services, but it can also drive additional business through downloadable apps. Given that the life cycle of a car is many years, product managers need to convince the sourcing team to think beyond shiftable “boxes” and plan for longer-term opportunities. For example, automated driving functions might not monetize at the time of a car’s sale but may give huge opportunities in years to come.

To pull this off, it’s necessary to understand and even empathize with very different mindsets and environments.

Nobody can be an expert at everything, but for a Product Manager, it’s important to have credibility with each of the teams with which they interface. It requires them to have at least some skill in disparate disciplines, particularly technical and commercial. A study by Miro [6] shows that only the CEO has a better level of engagement (collaborative connections) than product management.

So strong product management is essential if you want to drive digital transformation at the product level in a business.
Product Managers as leaders in digital transformation

It’s the function of leaders to guide others towards a vision or ‘North Star,’ an ambitious aspiration that inspires and aligns teams onto common goals. This is particularly important if the vision involves experimenting with fundamental changes to the business model as in a digital transformation - with the upheaval and risk involved.

“The CEO and other senior management are ultimately accountable for the execution of the company’s strategy to reach the company’s vision. However, in technology-based product companies, this company strategy must be translated into, and used to inform product strategy centered on customer and business value.

A useful way to visualize this is the Strategy Cascade which shows how company strategy informs everything within the company but is also receptive to feedback.

A key tenet of both Agile and digital transformation is that traditional hierarchical management structures exercising ‘command and control’ power are unlikely to be competitive in today’s business environment. Leading companies must empower their teams to make decisions at the appropriate level, whilst always moving towards the common vision and within clear constraints. It could be said that authority should no longer reside only at the head of the organization but instead form its spine, with leadership being shown at all levels of the business from top to bottom.

Product Managers are perfectly placed to provide this leadership.
A lack of trust?

One of the key impediments to the delegation of authority in this model is a lack of trust. Those who rise to senior positions in companies tend to do so because they are skillful, resourceful, and assertive people who like to take control and be proactive in uncertain situations. They often find it difficult to cede this control to others, especially if those more junior people are less experienced than themselves - they can’t bear to watch someone else do a job less well than they would.

Delegation must happen if a company is to scale and avoid a team of micro-managers presiding over demoralized teams.

To delegate effectively, teams must have clear objectives and reliable measures that indicate progress towards those objectives. They also need a strong steer on the acceptable parameters of behavior within which they can work, and the means to escalate if they cannot achieve what’s required.

In recent years there has been a growth in popularity of the goal-setting framework “Objectives and Key Results” (OKRs). OKRs focus on working towards strategic objectives, with progress being measured by numeric “key results” (e.g., 0 - 100%). Best practice is to apply the OKRs to product teams rather than individuals or departments. This promotes team cohesion and avoids the phenomenon of individuals ‘gaming’ their performance targets (doing whatever is needed to make the KPIs look right regardless of whether it’s beneficial), which does nothing to inspire executive trust! It also helps to avoid silo mentalities where departmental goals drive individuals from different departments to try to achieve competing goals.

The strategic focus of product management

We find it’s often the case that the role of Product Managers is not well defined or understood within the organization. That makes it easy for anyone to assume that any product problems are the product managers’ responsibility to sort out. This keeps them very busy with firefighting. And, if Product Managers aren’t clear about what they should be doing, it’s hard for them to push back.

Many companies use the Product Focus Product Activities Framework as a collaborative tool to identify ownership of all the activities necessary in any product business. The Product Activities Framework divides product activities into Strategic, Inbound, and Outbound Activities. Not all of these will be done by product management, but it’s important to know who owns each of these activities for a particular product. This allows product management to have enough focus on the key strategic product activities and think about how to handle other product activities effectively.

In the top half of the Product Activities Framework, the strategic work of product managers is critical in a successful digital transformation. It’s all about working out what the right product is for the business. Unfortunately, it’s all too easy for Product Managers to be stuck in the bottom half - swamped by firefighting and not spending enough time or focus on strategic activities.
A product rather than project mindset

Digital products based on software are never really finished. There is always more you could do - new customer opportunities to discover, requirements to address, and issues to fix. Agile development approaches support this with a continuous process of building, testing, measuring, and iterating to improve the product.

This concept can be a hard one to grasp for companies and management who are steeped in a project mindset. They want to know, “When is it done?” The answer is a digital product is never ‘done’ if you want to stay competitive and relevant. It’s a continual process of product evolution. It’s about product management rather than project management.

However, it’s Agile blasphemy, but also an inconvenient truth, that deadlines are inevitable in business. Whether they come from customer commitments, regulatory deadlines or resource limitations within the business - making these product trade-offs and priority calls is where product managers earn their money.

When to experiment and when to scale?

With digital transformation, there are typically major changes being made to what you offer to customers, how you sell it and how you deliver it.

There is a decision to make on when you should be experimenting to find a market fit and when you need to scale to maximize profit. So, as a business, you need to be clear on your product approach at any given time or point in your digital transformation. Product management is ideally placed to drive the chosen product strategy.

Data-led decision making

As already mentioned, a key competency in digital transformation is collecting, analyzing, and using data. This is not just needed to complete a transformation to a new business model - it’s a fundamental component of modern technology business practice.

Let’s take a simple example of coffee machines at home. Wouldn’t it be great if the product manager could know what functionality customers use frequently and which things are never used. That data can help improve the user experience, remove unused features, and reduce cost to create a more attractive product. Welcome to ‘smart coffee machines.’

Digital technology has made it possible to discover market intelligence and gain customer and operational feedback more quickly than ever before. This is especially important for Agile working, as your teams need constant feedback to make the course-corrections that are its essence. Dual-track Agile is a great example of this – see Empowered by Marty Cagan[8].
Turning data into wisdom

However, take care not to become a slave to data. Data alone doesn’t tell you anything; it’s all in the interpretation. To turn data into information, you need to add context, and to derive knowledge from information, you must ascribe meaning. These steps require skill and judgment and a greater understanding of all aspects of the product and market. With their multi-dimensional view of the product, Product Managers are ideally placed to do this.

To go back to our coffee machine. The product manager needs to interpret the usage data collected to find out, for example, why a feature is not being used. Is it because it is simply not needed? Is it because it’s too complicated to use? Or is it because the user never even found out about it in the first place?

Best practice is for Product Managers to set up a network of listening posts to give a constant stream of insights about customers, the market, and their products. Listening posts \[9\] are places and opportunities to take soundings from different data sources to provide ongoing information. This allows Product Managers to become the voice of the market for their product in their company.

Empowered product managers can deliver

Unhelpfully, the polarization of views expressed on social media or blogs by the most strident product management commentators resembles something of a ‘Product Culture War.’ It’s not an equal debate, with the apparent consensus that “waterfall is bad” or that “agile can’t be scaled” and the unrepresentative dominance of startup culture, web-based software, and B2C models.

However, the reality that we see across the many hundreds of product companies that we work with every year is complex. Product Managers deliver success in companies of all sizes worldwide \[10\], working in different organizational structures, different markets and using a wide range of tools \[11\] and approaches.

What is undeniably a trend is that product management is growing in prominence and influence each year. Our annual survey \[12\] shows a continuous increase year-on-year in the proportion of product management departments that report directly to board level.

This suggests a growing recognition that companies that empower Product Managers can more effectively deliver business value from technology. With the right level of delegation of authority, they can respond to the challenges and opportunities presented by the digital business environment much more quickly than a board of executives.

So, if senior executives have the role of deciding where the company is driving to, then it’s product management that should be at the steering wheel, ensuring that it keeps moving in the right direction.
Conclusion

Moving to Agile doesn't mean digital transformation

Implementing Scrum or SAFe are great Agile development approaches. But they are just a way of working. They depend on the quality of the input - the product ideas that can drive digital transformation, and the mindset of the people driving them.

In fact, what’s shipped and how it’s built is not really important. What counts is the outcome, i.e., that products generate value for customers and the business. It’s the job of product management to make sure that happens.

A new organizational mindset and opportunity for product managers

If your company isn’t constantly monitoring its performance, listening to the market, and looking for new trends, it will soon be outcompeted by other companies doing these things. Business models can change much more quickly than in the past, and yesterday’s disruptors are today’s mature incumbents, looking over their shoulders.

Everyone from the top-down has to buy into digital transformation. It’s not a one-off project but a new way of thinking for the business. It’s about how to use technology to innovate, disrupt and drive operational efficiencies. And, it’s often accompanied by the transition from a project to a product-centric approach. But change is hard to accomplish in any organization. Evangelizing and championing digital transformation is a great opportunity for product managers.

Product Management continues to gain influence

A consistent trend shows Product Management departments are increasingly becoming seen as strategic in a business, with a presence on the board. Many leaders of top technology businesses have come through product management roles, and many leading technology firms recognize this and have staff development programs cultivating product management skills for future leaders.

As described in McKinsey’s article “Product Managers for the digital world” [13], leading technology vendors see product management as a “training ground for CEOs.” They operate rotation programs giving rising stars in product management hands-on experience that will be useful to them in management leadership roles later in their careers.

There are many famous examples of former product managers rising to the top. For example, the CEO of YouTube, Susan Wojcicki, was a former PM at Google. Ex-Microsoft CEO Steve Ballmer started as an Assistant PM at Procter and Gamble. And, the often-quoted example of ex-Yahoo CEO Marissa Mayer, who earned her experience as a PM at Google.
Product Management is a leadership role in digital transformation

Product management should be about balanced and strategic leadership at the product level. It involves understanding customers, responding to market changes, and leading a cross-functional team of specialists.

The aim of most businesses is to make sustainable profits. Product Managers are crucial to achieving this by ensuring that a business acts strategically at a product level and creates customer value resulting in sales, loyalty, and profit.

Digital transformation means a huge change to any business and requires leadership at all levels and within every team. Leadership isn’t about issuing orders to people - it’s about taking ownership, being professional, doing your homework, and helping teams to focus on the right goals.

So, Product Managers need to show leadership, not like the old-fashioned traditional ‘hire and fire’ model of a CEO but in the style of a modern CEO. That’s about coaching, keeping people on track, leading from the front, and seeing the big picture... a mini-CEO focused on the product.

In a world of agile and digital transformation, product management has more influence and provides more value to the business if it is a strategic role, leading products in support of the company strategy.
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About Product Focus

Product Focus are global thought leaders in product management and European leaders in product management/marketing training and consultancy for technology-based products.