Product thinking: A customer-centric approach to driving innovation

What it is, how to apply it and what it can do for your organization, teams and customers.

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Strategy. Design. Engineering.

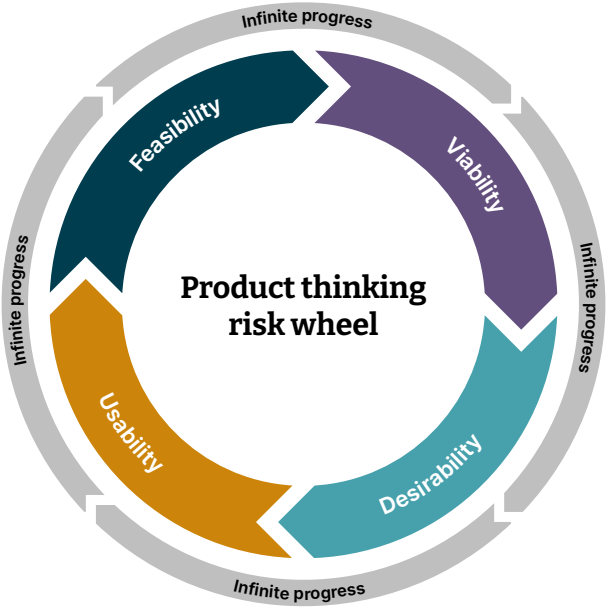
Building great products is hard

With new disruptive forces constantly emerging and challenging businesses to do more with less, today's leaders must use every available lever to maximize profitability, cut costs, and deliver sustainable growth — and outstanding customer experiences are key to achieving this.

At the heart of every great product experience is a customer value proposition that is reinforced with every interaction, digital or analog. The experience a customer has with your products and services is essentially the delivery of your brand promise.

The big question is how to unlock a customer value proposition that truly differentiates your portfolio of products from all alternatives to solve the same need. The challenge lies in effectively delivering on that promise through every touchpoint and every product. It also involves evolving your value proposition with the volatile landscape of constant innovation and changing customer expectations.

That's where product thinking comes in. Product thinking is an outcome-led approach to creating products and services that views products as living systems and helps organizations mitigate the four product risks.



Source: Thoughtworks

Feasibility

Thinking about feasibility means understanding what is technologically feasible based on the resources that a team has available and of the current and future capabilities of specific technologies.

Viability

Also known as business viability, this assessment requires an in-depth understanding of the industry including nascent, emerging, or untapped opportunities in order to deliver products that are commercially sustainable.

Desirability

Desirability validation can be summed up in one simple question: Do users want this product? It is essential to constantly assess whether the product being built addresses the needs, desires, and jobs to be done of its target users.

Usability

Testing for usability ensures that a great idea and 95% great execution aren't wasted by an end product that is difficult to use. Usability is table stakes for capturing the attention, interest, and imagination of users.

Product thinking is not just limited to teams building digital products or services. Today, everything your organization delivers — a mobile app, a website, an employee tool, a software-defined car, or even an API — is a product or service. By applying product thinking across your organization, you can:

- **Identify and prioritize the right product investments** — the ones most likely to deliver measurable value to your customer and business, based on informed decisions at every stage of the end-to-end product lifecycle.
- **Establish a shared purpose across all teams** so everyone across the organization can work together toward the same goal — delivering products that drive loyalty, revenue, and growth.
- **Build the thing right** — using product-centered engineering to craft a flexible, extensible and scalable solution.

Making sense of product thinking

Here's how Thoughtworks defines product thinking and some commonly used product-related terminology.

Product thinking

Definition: Product thinking is an approach where you aim to deliver value by continuously exploring customer problems and solving them holistically. This involves examining every angle to determine what problems users face, why they have those problems, and how well the market is responding to them.

A product thinking approach helps you build better products – products that solve problems in a differentiated way that delight your customer and drive business impact.

Differentiation: Product thinking is often confused with design thinking. They both share a focus on understanding user needs, problem-solving, and iterative learning from feedback. However, product thinking augments design thinking with a broader view of business goals and constraints, market opportunities and competition, which informs a longer-term view of the product lifecycle from idea, to launch, and evolution.

Product mode and product operating model

Definition: Product mode is a way of working that's aligned around goals and outcomes rather than projects with specific fixed scope. Instead of funding the creation of a solution, product mode sees organizations fund cross-functional teams that are empowered to deliver outcomes that will yield the best results for their customers and business. These teams then continue to evolve and support what they create over time. Organizations that are working in **product mode** have adopted a **product operating model**.

Differentiation: Product mode differs from project mode, where work is organized into temporary teams funded to achieve a specific scope or deliver a specific solution. It is also different from product-led organizations, which is more of a product organizational structure (see below).

Product-led organizations

Definition: Product-led organizations are set up to respond quickly to market change, and structured to support the continuous delivery of products that delight and engage customers. They're structured around products (rather than functions), driving product creation, innovation and evolution, instead of marketing, sales, or even tech-driven. Product-led organizations often have teams that work in product-mode, and may use product-led growth as their primary growth strategy.

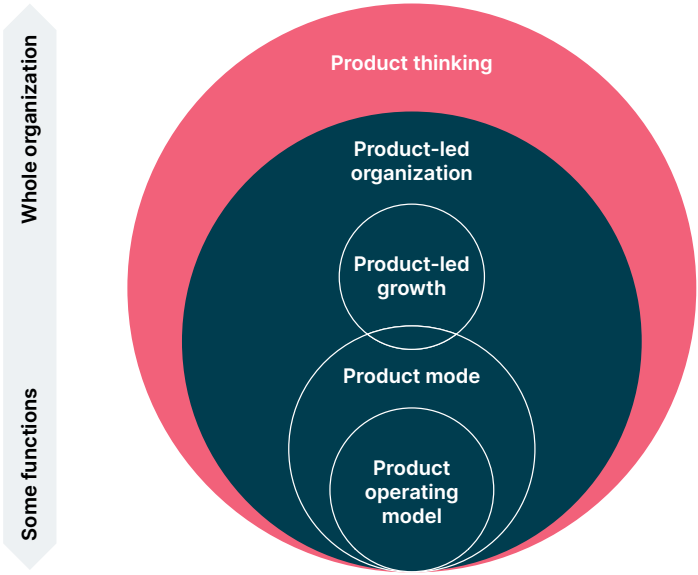
Differentiation: Product-led organizations are structured around products rather than functions such as marketing, sales and technology. It impacts the whole organization, unlike product-mode and product operating model which can be applied to teams within an organization.

Product-led growth

Definition: Product-led growth is a go-to-market strategy where products themselves are the primary driver of growth. It assumes that great products effectively sell themselves, and if you can deliver superior products to market, your business will naturally grow.

Differentiation: Product-led growth stands in contrast to the more traditional sales-led or marketing-led growth, where sales or marketing teams drive demand for their products through outbound advertising or business development. Today, product-led growth is becoming more prominent across industries, as an affordable and effective addition to established methods - particularly among steep competition.

Embedding product thinking company-wide



Source: Thoughtworks

Introducing product thinking into your organization

By leveraging product thinking, organizations can create impactful products that delight customers while catering to business drivers and the realities of bringing an idea to life.

To achieve that, organizations must adopt four key principles:

Customer centricity

Bring the organization as close to your customers as possible.

Continuous discovery

Run discovery parallel to delivery and integrate findings to keep the product aligned to customer and business needs.

Hands-on learning

Extend discovery beyond the desk to investigate problems through the eyes of the customer and validate them through building.

Cross-disciplinarity

Product managers, developers and designers work together seamlessly as part of cross-disciplinary teams.

Principle #1: Customer centricity

Product thinking helps create customer-centric cultures that bring organizations as close to their customers as possible. Cultures like these are aligned around customer-orientated goals and continuously research and talk to their customers.

A true customer-centric approach addresses unmet needs through pattern recognition of the four product risks — desirability, feasibility, usability and viability, but also must endeavor to exceed and change them through experimentation and invention, all in service of value creation.

How to incorporate it in your organization

If you want to lead in today's rapidly-evolving customer and competitive landscape, your teams must be able to make important product decisions swiftly. To enable fast, customer-centric decision-making, your teams need to be:

- Oriented around outcomes rather than outputs — in line with the product mode approach — so they can make decisions to deliver customer and business value in the right ways, even when that means halting or overhauling ongoing projects
- Able to break down the overall strategic goals of the company into tangible guidelines for their work
- Cross-functional and comprised of the diverse capabilities, skills, and perspectives required to deliver outstanding products from end-to-end
- Empowered by a culture of psychological safety and able to act on new ideas independently and continuously experiment and innovate
- Supported by an organization that constantly works to remove the barriers that stand between them and delivery of value

Principle #2: Continuous discovery

Making a commitment to continuous discovery can help organizations reduce risk and place smarter, customer-focused bets.

Discovery doesn't stop once delivery begins. It must run parallel to it — constantly integrating "emergent findings" to help ensure that execution is guided by timely insights that keep the product aligned with customer and business needs. Rather than build against a predetermined backlog, continuous discovery offers the best chance of meeting and exceeding customer demand.

How to incorporate it in your organization

To enable continuous discovery, organizations should:

- Maintain a dedicated discovery stream of work, ensuring that discovery, research, and monitoring efforts never stop — using a dual track product development approach
- Connect discovery and delivery so that discovery can continue to happen throughout the delivery process
- Make feedback easy for everyone to access and action, so that insights can be turned into value-adding product ideas
- Continuously seek out new ways of gathering customer insight and learning about the customer's underlying needs through inquiry into behaviors and motivations

Principle #3: Hands-on learning

In organizations that embrace product thinking, discovery doesn't just happen at a desk. User interviews and fieldwork help teams investigate the problem through the eyes of the customer.

Crucially, the needs identified in discovery are also validated through building. Prototypes are an essential (and affordable) means of exploring design solutions and anticipating technical challenges and possibilities.

How to incorporate it in your organization

Listening from a distance and learning from historical data can only get you so far. To deliver outstanding products and experiences that provide what your customers want without them asking for it, you need to get your people as physically close to customers as possible.

Common strategies for enabling hands-on learning include:

- Having employees of all levels spend some of their time in customer-facing roles to learn directly from customers and hear feedback firsthand
- Developing working prototypes and putting them in the hands of customers to test key hypotheses
- Building clear feedback chains so those closest to customers can use their ground-level insights to inform CX and product strategy
- Creating opportunities to capture feedback and sentiment, and establishing continuous two-way dialogue between the organization and its customers to inform the customer experience

Principle #4: Cross-disciplinarity

Creating standout products takes a whole-team effort. Product managers, developers and designers all need to be able to work together seamlessly as part of cross-disciplinary teams. Without it, you have knowledge silos, broken handoffs and delays. Where is the value in spending months defining a groundbreaking product, only to discover that it can't be built? Where is the value in spending millions of dollars engineering something that no one ever wanted in the first place?

How to incorporate it in your organization

Cross-disciplinarity requires organizations to change the way they think about product teams. Instead of having product managers devising an idea, designers building that idea out, and developers bringing the idea to life independently, teams should be aligned around products, and contain all three — among other critical roles.

Cross discipline teams should:

- Have the skills required to deliver value — optimizing flow, time to market and avoiding unnecessary handovers
- Be designed to minimize dependencies i.e. with little to no hand-offs

The power of product thinking in practice

Product thinking can be applied to everything your organization delivers — a mobile app, a website, an employee tool, a software-defined car, or even an API. Here are some stories to show what product thinking looks like when applied to different types of products.

Product thinking for digital touchpoints

When people think about the products brands deliver, digital touchpoints like ecommerce sites and customer service platforms don't typically spring to mind. But digital touchpoints are among the most important products in any brand's portfolio.

By embracing product thinking, brands can align digital touchpoints — and the experiences and journeys they facilitate — with real customer challenges and modern customer expectations. So, when customers engage with touchpoints, it's easy and intuitive for them to do whatever it is they need to do, whether that's getting some help, learning more about products, or transacting.

One example of touchpoints that fail to put the customer at the center is that many websites fall into the trap of being more like a marketing channel than a product. This approach may lead to visually appealing websites with compelling brand material, but it fails to prioritize the customer's jobs they are looking to accomplish when coming to the site. A consumer visiting the website of a beverage brand at night may be looking for where they can find it in a store near them at the late hour. A small merchant visiting a payment provider's page is looking to understand how they can run a better business.

Digital touchpoint case study: PayPal

PayPal is one of the world's leading payment service providers. The company's online payment software enables billions of transactions every year for customers in over 200 countries.

At the end of 2020, PayPal secured the license to add one of the world's fastest-growing markets to that list; mainland China. PayPal engaged the Thoughtworks China team to help navigate the new competitive landscape, regulations and new customer base, starting with a new website.

When an established company like PayPal enters a new market, it naturally wants to make the most of the infrastructure and digital assets it already has, but Chinese consumers and merchants have unique preferences and habits.

The team introduced A/B testing to help understand what consumers and merchants were responding to and to pivot accordingly. The team is now making eight new deployments per day, and has pushed six new releases to production in the first three months after launch. Today, cross-functional autonomous teams deliver high-quality software at speed, helping PayPal China stay ahead of both local and global changes in market demands and end user preferences.

Product thinking for new customer services

Customer services live and die by their ability to let customers quickly and intuitively solve their challenges. You can invest millions in new platforms and service portals, but if the services don't enable customers to solve their issues in natural, intuitive and satisfying ways, customers will bounce straight off them.

Customer service case study: e-mobility startup

For an e-mobility startup, after a series of discovery sessions, the team quickly discovered that few competitors supported the entire customer EV charging journey, from installation to payment and the actual day-to-day charging experience. Those who did clearly struggled to keep up with customer service expectations. This was a crucial concern for customers making a purchasing decision for an electric vehicle and a home charging solution.

Based on this insight, the right business model was designed to support a customer service journey, ensuring that the startup's service would deliver exactly what its prospective customers expected at the core from a charging platform - which was a reliable functional installation, transparent pricing and seamless operation services.

Based on this thin valuable slice, the team began extending and expanding the platform with features and capabilities, aligned with ongoing market and customer feedback. With a wide range of end-users and customers to consider, many features were proposed, but to keep the project on track, the team ensured that every new feature developed was tightly aligned with customer value and platform service capabilities.

This not only led to getting a version of the platform up and running quickly, but the startup could also step into a product-led phase - letting customers and partners guide how the platform evolves, and delivering a customer-centric end-to-end EV charging solution after 90 days.

Product thinking for internal employee products

When you're thinking about customer-centric design, it's important to remember that not all customers are outside of your organization. When you're designing tools, products and platforms for internal customers, it's just as important to ensure they solve real challenges, and meet the demands and expectations of your teams.

Product thinking can help organizations bring the same focus on value, outcomes, and exceptional experience delivery to internal and external products. This helps create empowered cultures where everyone can do their jobs as effectively as possible and feel supported by the systems and products provided to them — rather than frustrated by them.

Internal employee products case study: Mercedes-Benz Group AG

For example, the Mercedes-Benz Group AG (formerly Daimler AG) partnered with Thoughtworks on an organization-wide transformation to bring 12 internal functions into alignment, and equip them with the tools and data needed to delight their customers on their end-to-end journey.

Replacing the entire legacy system and changing the current dealer sales experience was a huge undertaking. The dealers were all trained in using the current system, which was well-established, and frequently used in their day-to-day activities. Changes to the system would impact every part of the dealer business and the customer's experience.

We needed to identify a starting point where we could create value for dealer staff so they would proactively adopt the new system, and select an area that would achieve the business goal of uplifting the retail experience for their customers.

Internal employee products case study: Mercedes-Benz Group AG

Continued

The team worked closely with dealers to understand the challenges they faced in their everyday activities and systems before developing a solution to address their real needs. The new application could be used across multiple mobile devices, in real-time, with the customer on the showroom floor. Taking an innovative approach to delivery, the team focused on building out “micro innovations” from customer research, implementing small changes to make the application more usable and getting fast feedback from the dealers.

For this innovation, the team received a Supplier Award in the category of innovation — the first time the award was presented for a digital experience.

Product thinking for technical products

Technical products, like APIs and infrastructure, aren't typically designed in customer-centric ways. More often than not, they're built to meet a specific technical need. Think about your developers and other teams within the company as internal customers.

By applying product thinking to developing and delivering technical products, you can ensure those products remain tightly aligned with customer and business value at every stage of their development. Have someone on the team who has the business acumen and understanding of the organization's goals and direction, and the ability to work with the platform engineering team, so they can ensure those two things are always tied together.

Technical products case study: Atlassian

Atlassian, one of Australia's most successful tech companies, partnered with Thoughtworks to migrate its core product Bitbucket to the cloud. Bitbucket is a Git-based source code hosting and collaboration tool that enables Atlassian's customers to build software at scale. On average, Bitbucket supports a billion transactions daily. Migrating Bitbucket to the cloud would provide Atlassian's customers with improved performance and user satisfaction, and greater peace of mind around security and maintenance.

The challenge was the migration needed to happen in a way that produced zero downtime and minimal disruption for their customers. That's like trying to change the engine of a moving car that's driving at 100Km per hour down a highway.

In a small autonomous team, we took a thin-slice approach and replicated data from Atlassian's data center onto the public cloud environment in real time. Eventually, data and requests from customers were being rerouted to Atlassian's cloud environment, completing the migration.

What would previously take years to achieve was completed in just three months with almost no downtime for customers. Within just two months of completing the migration, Atlassian saw a 93% reduction in the volume of support requests related to outages and a 55% improvement in Bitbucket's performance.

Product thinking for software-defined hardware

Product thinking for software-defined hardware, such as smart cars and smart bikes, is essential for creating exceptional customer experiences and maximizing the value proposition of these products. While these products involve a physical component, they rely heavily on software and digital interfaces to deliver their value. They should be treated as living systems, where the focus is not only on the technical specifications but also on the overall user experience and the continuous evolution of the value proposition, made possible by software.

Software-defined hardware case study: Ford

Ford brand is synonymous with the trades and, for more than 50 years, has manufactured both the world's best-selling pickup truck and van. Millions of people daily depend on Ford pickup trucks and vans to reliably execute their jobs and keep them safe.

In 2020, the FBI estimated that the cost of stolen work equipment in the U.S. totalled more than $7.4 billion, a figure believed to be underestimated in stolen vehicle reports (U.S. Department of Justice, Federal Bureau of Investigation, Uniform Crime Report). While the figure is startling, the report doesn't account for what we heard during our interviews with real tradespeople from the midwest. And for one user, an electrician, it isn't just equipment or tools being stolen—"it's like your whole livelihood has been taken." Across this and many other user interviews, it was clear where Ford could help their drivers next.

Ford and Thoughtworks partnered to validate and build a new product to help protect customers' valuables inside their vehicles. First, we tackled key product risks around market desirability (e.g. is there a need for this product), business viability (e.g. can we create a profitable business model for this product), product usability (e.g. can we create a product that detects threats with sufficient accuracy) and technical feasibility (e.g. how can we create a security product in a low energy environment).

Software-defined hardware case study: Ford

Continued

To answer for scalability, we built a series of high fidelity prototypes, running two end-to-end pilots with real users, one in the U.S., and the other in the U.K. Due to these pilots, Ford was able to gain greater insight into the product that further guided development, including manufacturing, installation, performance and usability.

The success of the pilots and user insights did more than satisfy the executive team at Ford, who were eager to begin production. It also caught the attention of security leader ADT, who, swayed by the compelling pilot results, decided to enter into a $100M joint venture with Ford, called Canopy, to help protect the vehicles and livelihoods of their owners.

Product thinking for generative-AI products and other AI and data products

With the excitement around generative AI, organizations will likely face a fog of uncertainty around questions such as which problems should and could be solved with generative AI at a reasonable level of risk and effort. It is tempting to fall into the trap of a tech-first approach – we have a shiny hammer; what can we hit with it? A common business mistake with AI projects is to start with available data or the AI techniques du jour. Instead, start with a specific customer problem. As Peter Drucker famously said, "There is nothing so useless as doing efficiently something that should not have been done at all."

Once we have found our customer problem, AI demands special attention to the outcomes and metrics we optimize for. AI can lead to gains that were not envisioned before (see example below). At the same time, optimizing for some metrics can adversely affect others in unexpected ways due to the complexity and limited predictability of the output. Maintaining a complete view of the customer journey is crucial in order to realize these gains while avoiding risk.

In many respects, following a sound product thinking approach can manage much of the risk of falling victim to emerging technology early in the hype cycle and improve the odds of betting on the right thing that creates customer and business outcomes.

AI and data products case study: Finavia

One of the most common mistakes businesses make with machine learning (ML) projects is using their data or their available capabilities as their starting point, rather than starting with a specific problem to solve and working back to the capabilities required. A project with Finavia — operator of Kittilä airport in Lapland — demonstrates the power and value of starting out with a clearly defined problem to solve.

Kittilä is a small airport, with just 12 plane parking spots. For most of the year, traffic through the airport is low. However, around Christmas, demand surges, with as many as 58 flights arriving and departing on the busiest days, 70-80% of which arrive within a four-hour period.

With demand and traffic so low outside of those short, huge demand spikes, simply adding resources and capacity isn't an option. So, Finavia spoke to us to help them optimize how demand spikes are handled using AI.

Together, we created an optimization model that uses current and historical flight data to build mathematically optimized parking plans that account for all relevant rules, such as not all aircraft types being suitable for every parking spot. The solution also uses machine learning to predict arrival times and passenger numbers, which are used to optimize resource allocation inside the airport, ensuring that every passenger has a great experience, and can pass through Kittilä quickly and conveniently.

The results are impressive: Finavia increased the number of flights at Kittilä Airport by 12% in the year following deployment and reduced average airport delays by two-thirds resulting in an estimated 500 000 € cost savings.

The solution brings together data sets that may not have ever been combined otherwise to solve the biggest business challenge the airport faces. If Finavia's AI journey didn't begin with a clear mission to solve that problem, it's the kind of use case that would have been very unlikely ever to materialize.

Conclusion

Great products create outstanding customer experiences, drive growth, and increase brand value. Product thinking enables organizations to continuously deliver products that engage, delight, convert, and retain customers by solving real problems, in ways that delight customers and work for the business.

To see the most success from product thinking, organizations must commit to customer-centricity, continuous discovery, hands-on learning and cross-disciplinarily.

If your organization is ready to adopt product thinking, we can help you to gain maximum value from your investment. Visit thoughtworks.com to get in touch.

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