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Creating Tech Products That Really Matter

A guide to user-centric product design

How to Create Tech Products

... and innovations that really matter. A guide to user-centric product design

The tech world is changing faster than ever before. Companies around the world are facing the same challenges over and over again. Consistent, effective and rapid innovation is essential for your company's success, so:

How can you stay on top of emerging technologies and trends to create tech products and innovations that really matter?

At Motius, we're specialized in new tech. We've gone all the way from idea to rollout countless times. Ranging from mobility concepts for the future to factory indoor localization systems, our projects have shaped the industry. If you want to know more, check out our references.

For this guide, we gathered our expertise from over 300 projects with companies such as Microsoft, Siemens, BMW and others to share our process, tools, methods and learnings. Here's what you need to know about creating products that really matter.

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01.

Ideation

Step 1: Ideation

Start your project with a user-centric focus

When you start a new tech innovation project, it's tempting to ideate on products right away. But before we dive right into that, here's a quick reminder for the whole tech product development process:

The key to cutting-edge technology innovation is user-centricity. Nobody wants to build a product that does not actually get accepted by users.

The best way to ensure user-centricity is through **Design Thinking**. It's a proven and iterative problem-solving process that anyone can use to develop cutting-edge technological innovations. Design Thinking helps you to understand your user's pain points, generate a wide range of solutions, and develop products that really **solve your user's pains**. This is crucial for any good guideline for tech innovation.

As you set out to start your project, you first need to identify your actual starting point. Based on our experience, there are **three common starting points for tech innovation projects**. You either want to improve an existing product, notice pain points and needs of users that you need to solve, or have a first (rough) idea that you want to explore.

User-Centric Ideation

3 phases to ensure user-centricity

1

Start By Empathizing With Your User

The first step is the empathizing phase, in which you observe users interacting with their environment and engage with them in interviews. Your goal is to understand the user group and their pain points. The deeper the insights, the higher the chances of having a real impact. Useful methods can be the **Empathy Map**, the **5-Why-Method** and **Insight Cards**.

2

Define The Goals Of Your Users

In the following definition phase, your goal is to define the user's view of the problem. The previous observations and insights are summarized, and your focus should be on the most promising user group. **Personas**, **Customer Journeys** and again, **Empathy Maps** are some of the methods that are most valuable in this phase.

User-Centric Ideation

3 phases to ensure user-centricity

3

Start Generating Ideas

The goal of the ideation phase is to come up with solutions for the previously defined point of view statement. The larger the solution space, the better. Start by thinking big, creating ideas and developing first concepts. The **6-3-5 Method**, the **Crazy 8** and the **Idea Tower** will help you to develop the best ideas easier. Select the ideas that fit the needs of your user persona best.

Remember to never skip the essentials: Engage in the empathizing and definition phases until you have truly identified the user's pains and defined their view of the problem. Once you have mastered those phases, it is time for you to get creative and systematically generate good ideas. This is what you do in the ideation phase.

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02.

Proof of Concept

Step 2: Proof Of Concept

Validate that your idea is technologically feasible

You don't want to invest into product development without knowing if an idea is actually technically feasible. Therefore, you need to answer a simple question in the next phase:

Is it technically possible to build a product with this concept?

As the name indicates, the proof of concept (PoC) is a technical validation of the feasibility of an idea. It is not about the final product features or design. During this phase, cut out all the noise and focus on the **rudimentary technological concept** you need for your product. All the fanciness and cool features can be added later (prototyping, MVP, product launch).

Get Decision-Makers On Board

Consider technical and business feasibility

During PoC development, you need to prove that your idea is actually needed, come up with a technical concept to solve the user's pain, and develop a very first technical solution. Take your company's constraints into account, such as your budget, timeline, capacities and resources. However, **do not try to set up a perfect solution**. Instead, try to cut out all the noise.

All of these insights will help decision-makers within your company to explore the full potential of your idea and see the bigger picture, including the **company's strategic goals and vision**. Depending on the stakeholder environment of your company, a PoC might include a brief presentation with all the insights you gained. After all, there is a range of things that you will find out about during the PoC phase, including:

- **Market needs**
- **Technical and logistical problems**
- **Risks, obstacles and further costs**
- **Scalability**

Knowing this, significantly increases your chance to take the concept to the next phase and develop a real product. The decision-makers of your company can now better evaluate how feasible your idea is and weigh the risk of the investment.

This Is Not (Yet) A Prototype

The difference between PoC and prototype

There is a crucial difference between a PoC and a prototype. Whereas a PoC focuses on the technical feasibility of your idea, a prototype is the first attempt to build your final product. The following table makes these differences clear. With this knowledge in mind, you can now take your PoC and start building your prototype.

Proof of Concept	Prototyping
Is your idea technologically feasible or not?	What could your product look like?
Test whether you can take your idea to life.	Bring your concept to life with a model.
Describe your idea, including functionality and feasibility.	Design your model incorporating the features specified in the POC.
A theoretical demonstration of your idea.	A physical demonstration of your product.

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Rapid Prototyping

Step 3: Rapid Prototyping

Iterate fast or go home

Congratulations! You now know that your product is technically feasible and commercially viable. It is time to start thinking about how you could build the actual product. This is what you do in the prototyping phase.

As the table before indicates, a prototype is a physical demonstration of your product idea. It is an early sample of your product that you use to test, evaluate and gather feedback from users about the **practicality, design and functionality of your product**.

Consider these 4 questions in the prototyping phase:

Who do you build the product for?

What are the features you want to test?

Where will the product be used?

How do users interact with the product?

Step 3: Rapid Prototyping

Iterate fast or go home

Answering these questions will give you a good idea about what a useful prototype should look like. Similar to the PoC phase, a prototype is not the perfect product from the beginning. Rather, you first build a low fidelity prototype and **increase the fidelity level through frequent iterations with your users**.

Our recommendation:

Start with the lowest possible fidelity. This can be a paper sketch of the screens or a form factor that you created with paper. Test it, iterate fast, and adjust the fidelity level with every iteration. You will end up with a high-fidelity prototype that is closer to your final product, mimics real interaction and focuses more on details.

Comman Pitfalls ...

... of Rapid Prototyping

Rapid Prototyping lets you stay user-centric, cut down costs and reduce the overall time of the project. Despite the huge potential of the approach, there are common traps that you need to be aware of:

Investment Bias

Falling in love with a prototype too early will lead to the so-called "investment bias", where you do not want to give up on your idea because you have already put time, money and effort into it

Your First Fail

Being discouraged when a prototype "fails" will stop you from making progress. Prototyping exists to let you fail as often as possible until you have the right product

Over-Achieving

Being a perfectionist stops you from making progress and getting impactful results

Skipping the Step

Thinking that prototypes are a waste of time stops you from being user-centric and is the reason why so many products fail when they are released

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04.

The MVP

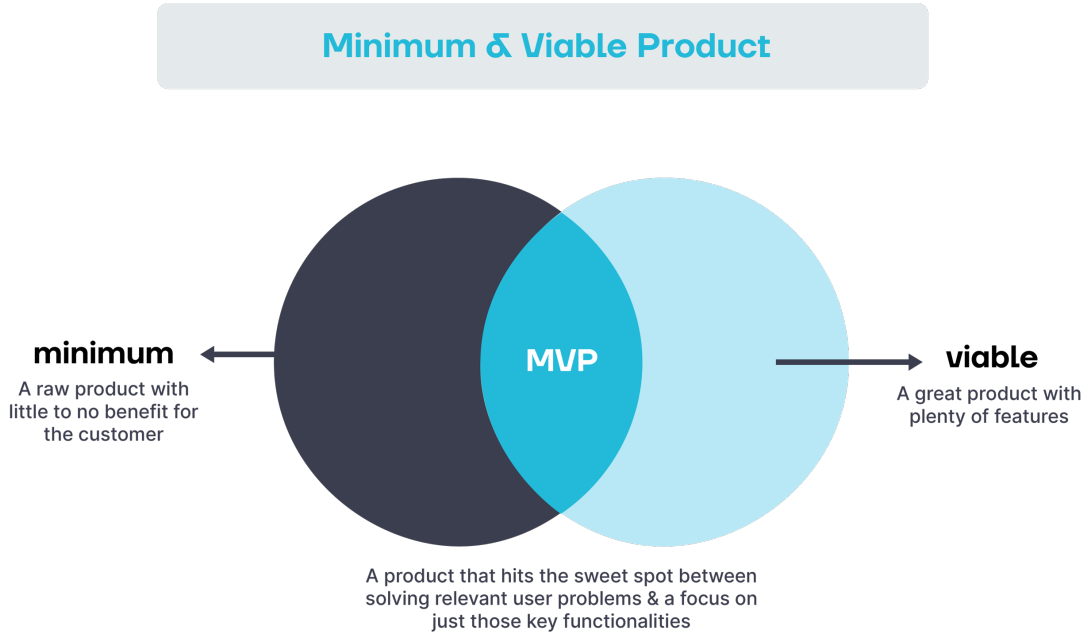
The MVP

Focus on the key parts of your innovation

Based on your high-fidelity prototype, you can start developing your MVP – your minimum viable product. An MVP is a light version of your final product. It lets you collect the maximum amount of insightful feedback about certain functionalities of your product. In this phase, you aim to develop your product towards a version that **solves your customer's pain points in the best way possible**.

Build, Measure, Learn, Repeat:

Follow the Build-Measure-Learn-Cycle. In this cycle, you start by defining which feature you want to test (What is the insight you want to get?). Build your MVP in a way that lets you test what you actually want to find out. Next, your customers (or just a selected group of customers) engage with your MVP and gather their feedback. Doing this provides valuable insights for your product development. Based on the feedback, you define what you want to learn next and start the cycle again. Throughout this process, make sure to follow the KISS principle – keep it short and simple.



The MVP

How to test your MVP

When you test your MVP, it is ok to start small. Test your iterations with a rather small (but meaningful) number of people that provide valuable feedback. For instance, you can start testing in a certain market segment or with customers that are eager to test your newest ideas (so-called early adopters). Within this test market, you keep developing until your **product has perfectly solved your customer's pains and needs**.

Sidenote: Some people will try to convince you that you should aim for "minimum lovable product". The difference would be, that people would actually love your product, instead of the product just being viable. Sure, the idea sounds lovely (no pun intended), but this is the type of process that harms a fast innovation process. Trying to create a product that people fall in love with will lead to biases and perfectionism. User-centric tech innovation does not work like that.

05.

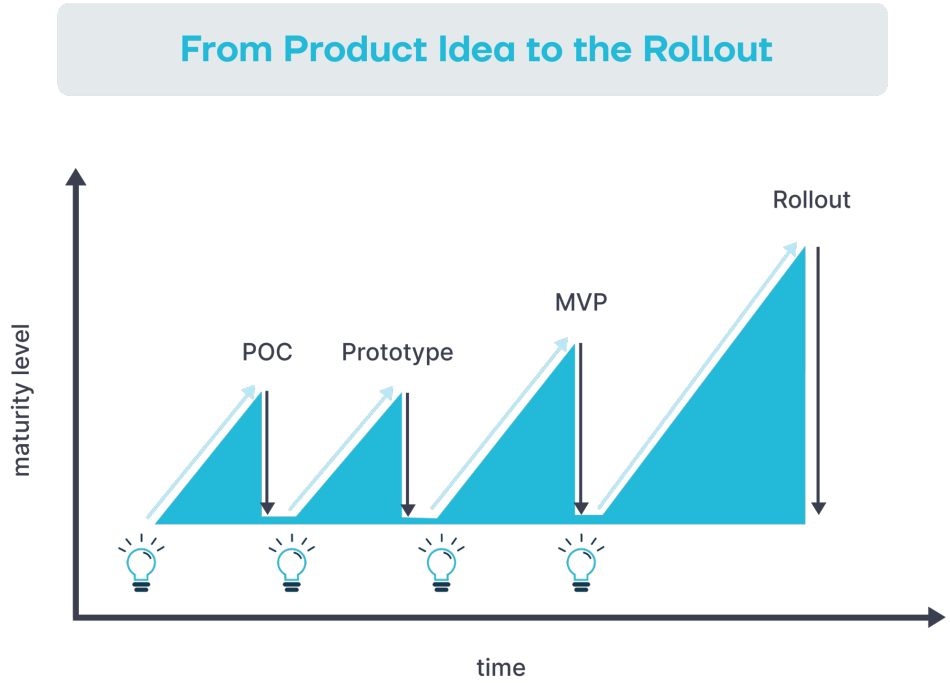
Product Rollout

Product Rollout

Going all in

Last but not least, it is time to take the last steps towards your final product. If you have been waiting for the moment to let your perfectionism play out, this phase is the right time. Depending on the type of product that you have developed, this **phase can vary in size, costs and effort**.

In general, this phase is usually the most expensive and longest of the whole innovation process. This is why it is important that you **have done the necessary groundwork beforehand**. Otherwise, you will spend a lot of money on a product that nobody needs.



Product Rollout

The final steps

If you have followed the whole process, you have:

- Identified the need for your product (Ideation phase)
- Validated that your product is technically feasible (PoC phase)
- Created a prototype that brings your ideas to life (Prototype phase)
- Developed your product towards the desired state with real customer feedback (MVP phase)

Based on this, you can take the final steps. You aim to:

- Determine the final quality and features of your product
- Integrate it with existing products or systems
- Finalize the marketing materials and brief the sales team
- Finalize the product pricing structure

Product Rollout

The final steps

The product rollout phase is the first time that you really need to be perfectionistic, as these final steps significantly influence wether your product will be accepted in the market. If you followed the five steps, there is a high chance you have developed **a tech innovation that solves real pains in the best way possible**. You can now roll it out at scale. Step by step, you have created a tech innovation that really matters.

Let's Talk about Your Tech Product Development

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Get in touch

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