

## Insights Guide

# The 6 Key Stages for Product Development



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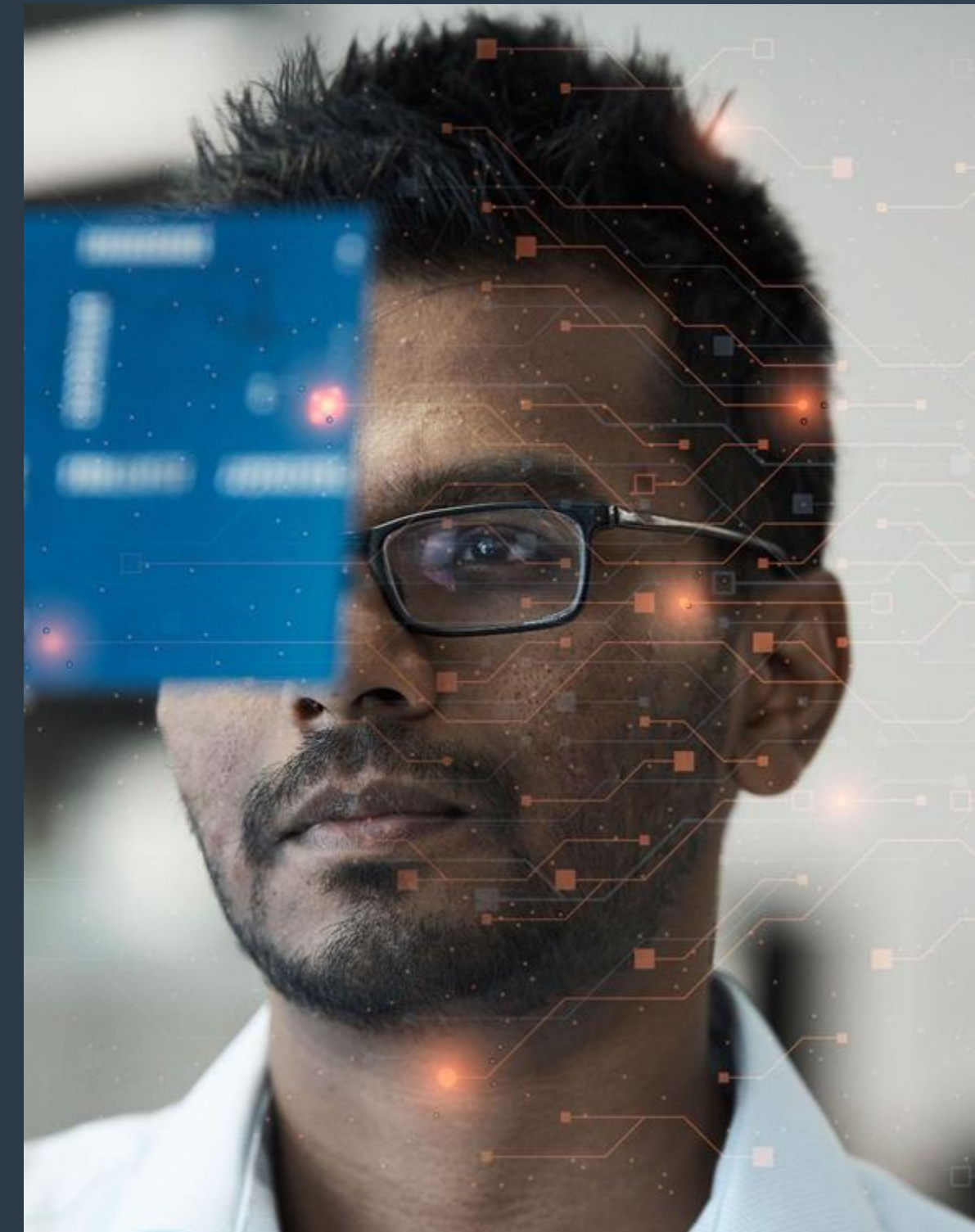
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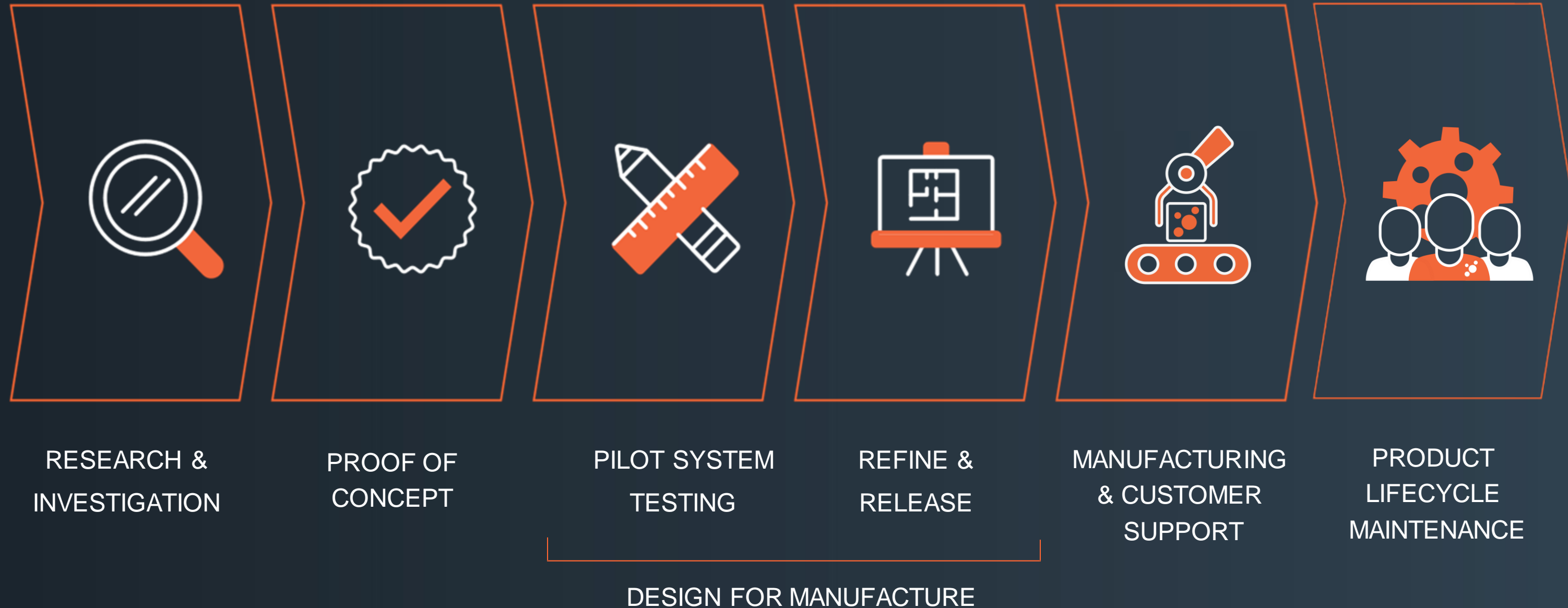
19/ Ready to Innovate?







Product development is the process of **creating an innovative product** by applying the latest cutting-edge technologies. The goal is to introduce groundbreaking products that **solve real-world problems** and enhance our quality of life. There is a **defined process** for product development that involves market analysis and technical expertise to help ensure a product meets the needs of the target market.





Developing a product using a structured approach can help you **reduce the risk of project failure**, omissions, and unexpected challenges. It also helps to **clearly define the roles and responsibilities** of your product team members and provides a **framework for tracking progress** and making necessary adjustments as the product is being developed.



Have you ever encountered a **project that ends up over budget**? Maybe your team has found completing a product within the **initial timeline impossible**. Or worse, you had to start again from scratch after plan B failed.



Time to take a step back and study this **product development process**, to ensure you can nail your product launch! To develop a successful product, you need to follow a proven product development process. That's why so many great product ideas never make it to market, because **execution is arguably more important** than the idea.



# Idea Generation: Brace for brilliance

In the **world of new product development**, producing a new idea is **essential for success** because if you're not innovating, your competition will probably take the market edge and leave you behind.

Ideation is all about surfacing those **"aha!" moments**, whether it's through internal brainstorming sessions or gathering feedback from external sources like online forums and niche communities.

The **idea generation process** should involve teamwork, research, and technical feedback — and all these elements should be considered before moving on to the next phase of product development.



Here's our expert mind map to assist with your product development idea generation.





# 1. Research & Investigation

Creating and **releasing an innovative product** doesn't happen overnight. To see the bigger picture of your product, research, and investigation is an absolute necessity. This requires creating a **business case** that outlines (1) the value of your product, (2) how it can impact its target market to effectively meet **customer or business needs**, (3) and why it's worth pursuing above all other initial ideas. The business case also includes an **executive summary**, which provides an overview of the product team, business strategy, and product strategy. Look at it as a **world-class designed blueprint** tailored for success!

The first step in this stage is often **market research**. Businesses need to identify their target audience, understand their needs, preferences, and pain points, and assess the **size of the potential market**. Surveys, focus groups, interviews, or observational studies may be used to gather this information.

Simultaneously, a **detailed competitive analysis** is conducted to understand the strengths and weaknesses of existing products in the market. This helps businesses find a **unique value proposition** for their product and identify opportunities for differentiation.



Research & Investigation stage is an absolute necessity, and requires creating a business case, identifying market value of your product, and how it meets customer or business needs.





# 1. Research & Investigation

Another critical aspect of the Research & Investigation stage is **feasibility assessment**. This involves evaluating the **technical feasibility** (can we build this product with the current technology and resources?), **financial feasibility** (will this product be profitable?), and **legal feasibility** (are there any legal considerations or restrictions?).

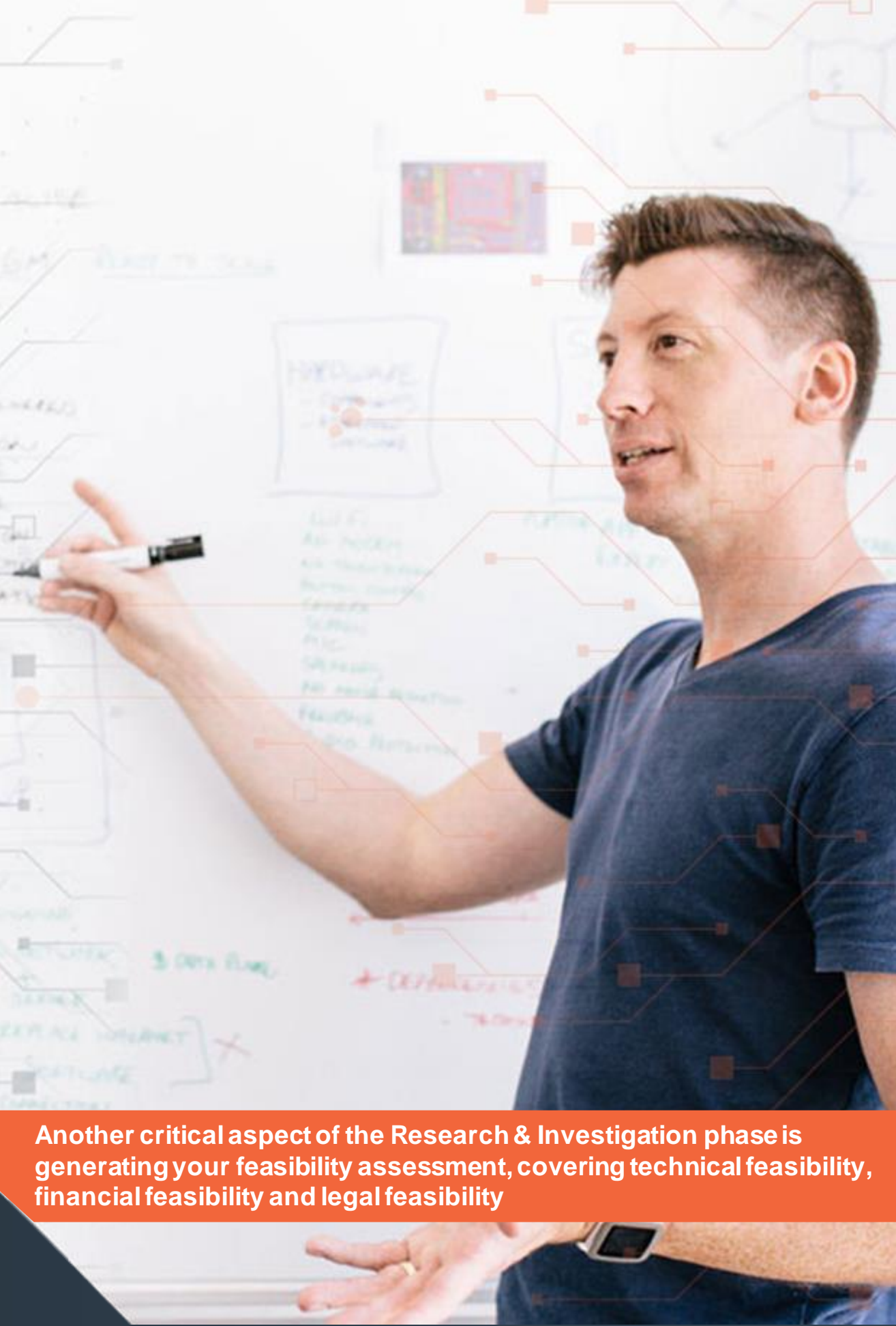
Lastly, this stage also involves developing a **preliminary business case** and strategy for the product, including pricing strategy, distribution channels, and marketing and sales strategies. This provides a **roadmap** for the subsequent stages of product development.

In essence, the Research & Investigation stage of product development is about gathering and analysing all necessary information to **ensure that the product concept is sound**, feasible, and has the potential to succeed in the market.



Pro Tip

Understanding the “**Product Life Cycle**” is a key aspect of product research that can help inform decisions about the development, marketing, and retirement of the product.



Another critical aspect of the Research & Investigation phase is generating your feasibility assessment, covering technical feasibility, financial feasibility and legal feasibility

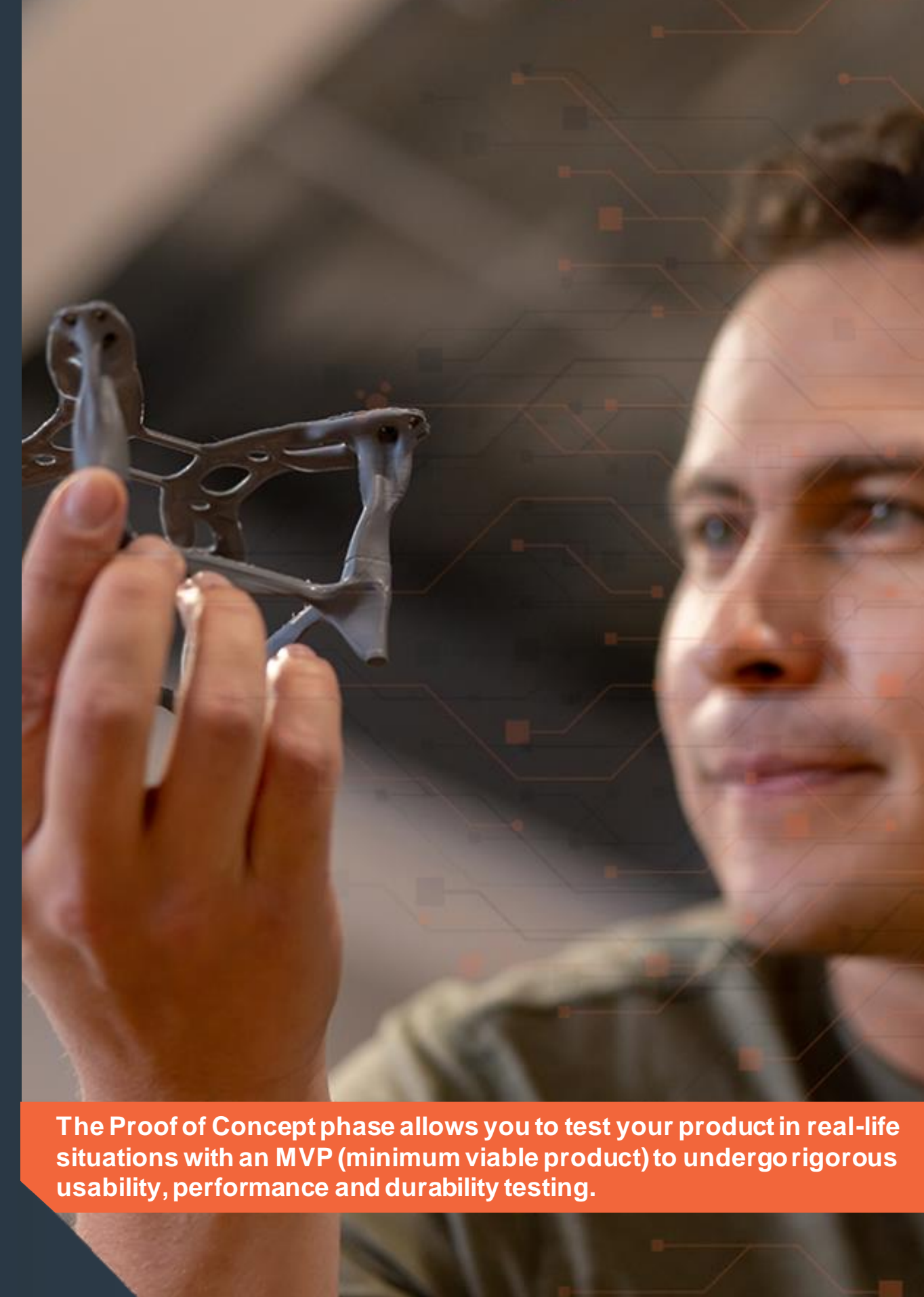


## 2. Proof of Concept

The Proof of Concept (PoC) phase is where you start developing your concept into a prototype. This is a **small-scale version of your final product** that allows you to test out how your product works in real-life situations. The **goal** here is to not only see how people will use your product, but also to test technical performance so that when the time comes for manufacturing, you'll be able to make **necessary adjustments** before moving on with production.

This stage typically starts with the development of a prototype or a **minimum viable product (MVP)** – a simplified version of the product that possesses its **core functionality**. The complexity of the prototype can vary widely depending on the product and the resources available. For some products, a **basic mock-up or a 3D model** might suffice, while others may require a **functional prototype** that closely resembles the final product.

Once the prototype is ready, it undergoes **rigorous testing**. This could involve lab tests to verify its performance, durability tests to check its lifespan, and usability tests to ensure it meets user needs and expectations. Any shortcomings or **issues identified** during these tests are then addressed through **iterative refining** of the prototype.



The Proof of Concept phase allows you to test your product in real-life situations with an MVP (minimum viable product) to undergo rigorous usability, performance and durability testing.





## 2. Proof of Concept

In addition to internal testing, **feedback from potential users** is often sought at this stage. This could involve user trials or beta testing, where a small group of target customers use the prototype and provide their feedback. Their insights can **prove invaluable** in identifying any potential issues or improvements before the product goes to market.

Finally, the results from the PoC stage are typically documented in a **Proof of Concept report**, which provides evidence that the product concept is viable and **outlines the next steps** for product development.

In summary, the Proof of Concept stage is all about turning ideas into tangible, testable products and **validating the products feasibility** through practical testing and user feedback.

Pro Tip



**Test marketing** is a marketing strategy that involves introducing a new product or service to a small, targeted group of users to gauge their response and gather feedback.



Your Proof of Concept Report provides evidence that the product concept is viable, outlines next steps for development, and turns ideas into tangible, testable products that validate feasibility.



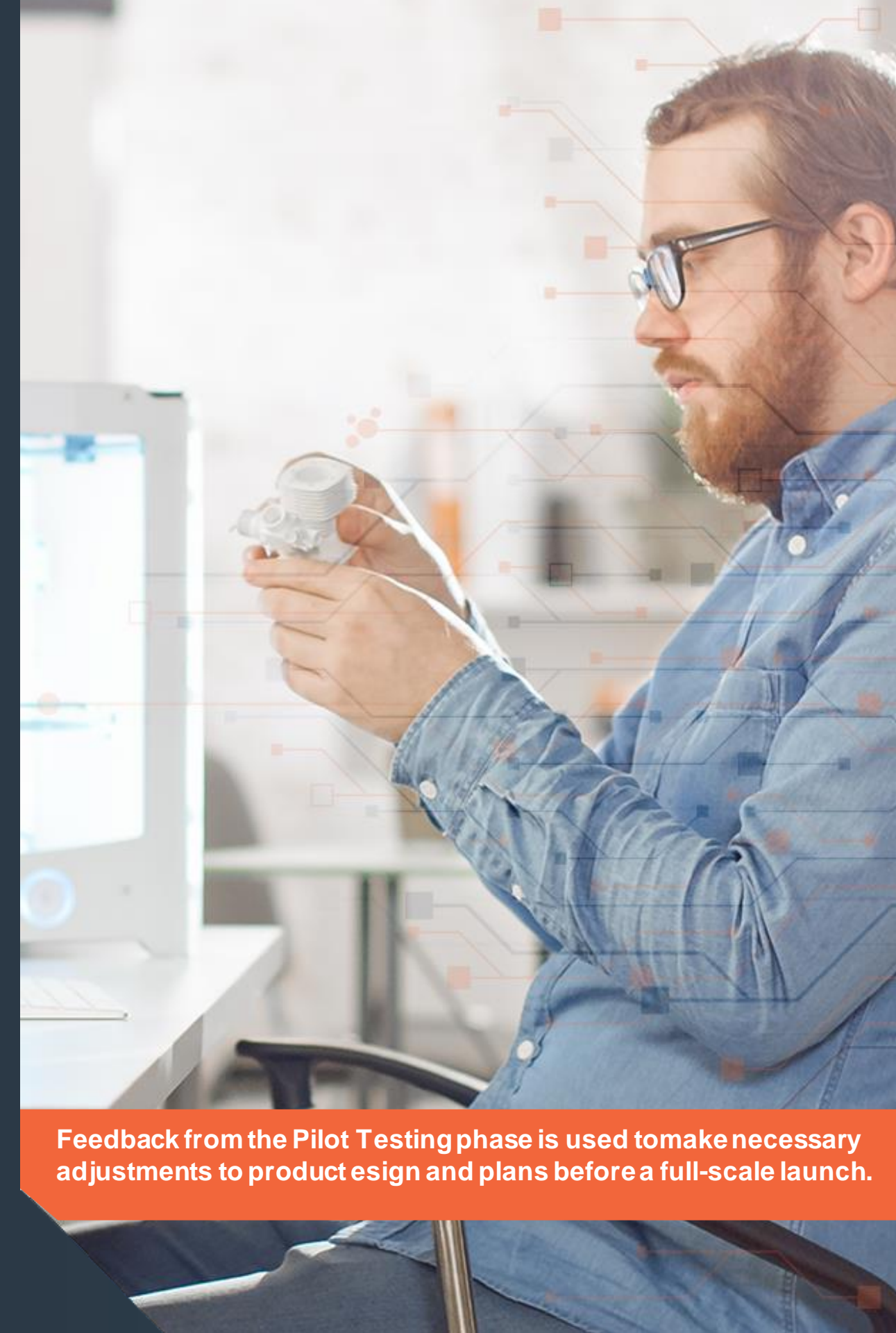
### 3. Pilot System Testing

The Pilot Testing stage is also an **opportunity to test other aspects of the product** roll-out, such as packaging, instructions for use, and even marketing messages. It's a chance to **identify any gaps** or areas of confusion that might affect the user experience.

Feedback collected during the pilot testing phase is used to make necessary adjustments to the product or its supporting elements **before a full-scale launch**. This could involve making changes to the product design, improving user instructions, adjusting pricing, or **refining marketing strategies**.

In addition to providing **valuable insights for product refinement**, pilot testing also helps mitigate risks associated with a new product launch. By testing the product on a smaller scale first, businesses can **identify and address potential issues** before they become larger problems in a full-scale launch.

In summary, the **pilot testing stage is a critical 'trial run'** in the product development process that helps ensure the product is ready for the market and has the best possible chance of success.



Feedback from the Pilot Testing phase is used to make necessary adjustments to product design and plans before a full-scale launch.





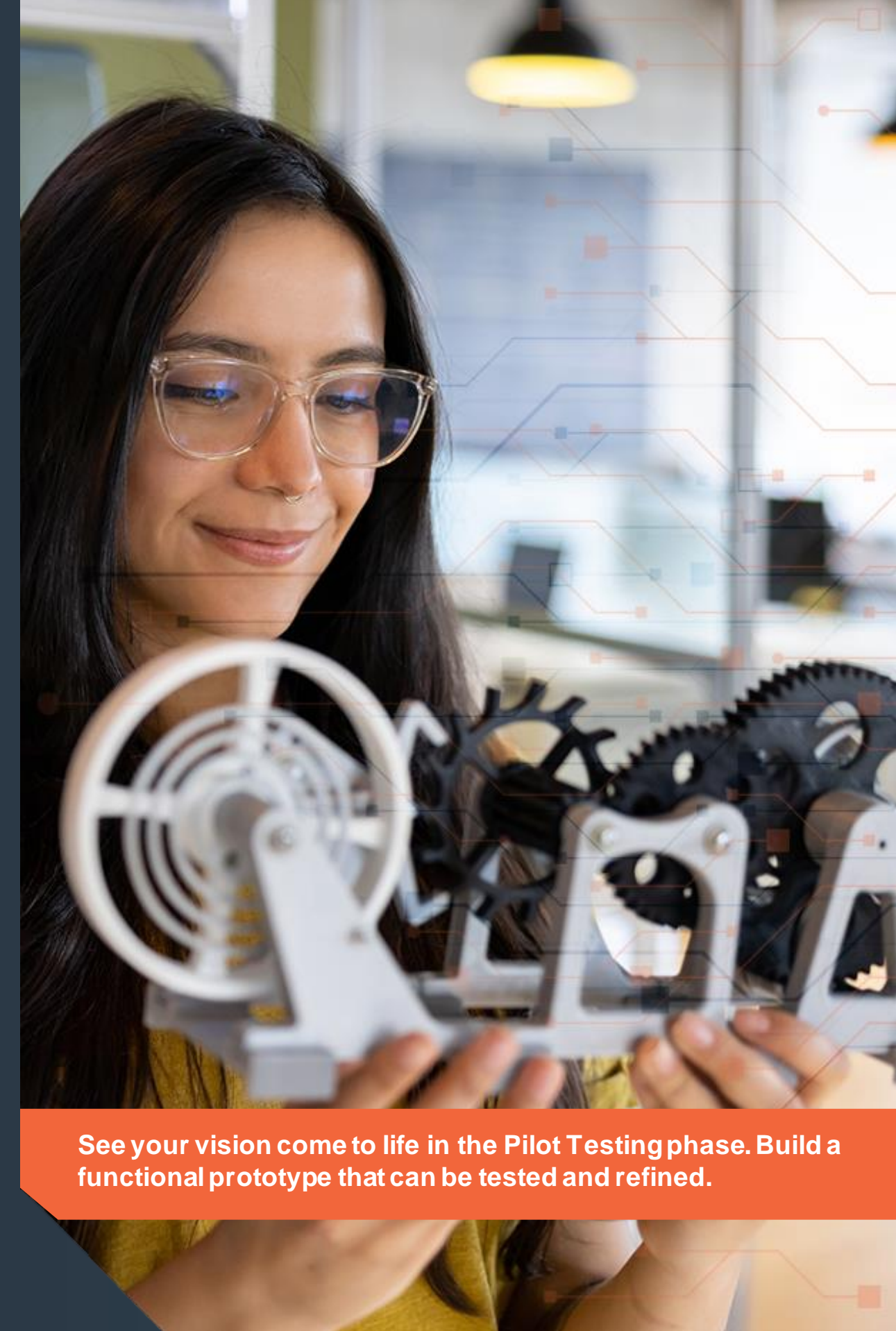
### 3. Pilot System Testing

Welcome to the pilot testing stage! You're about to **see your team's vision come to life** as your product takes shape and starts to interact with real-life users. Before you can jump into pilot testing, there are **a few key steps** you'll need to take.

Depending on your product, this could involve a **variety of tasks**, such as designing and building production-ready prototypes, developing algorithms, and writing code. This stage is all about turning your product concept into a **functional prototype** that can be tested and refined.

Pilot testing begins with the **selection of a small group of users** representative of the target market. These users are provided with the product and their usage is monitored over a specified period. This allows businesses to observe and understand how users interact with the product, **how well it meets their needs**, and any issues or challenges they face while using it.

Pilot Testing also involves a series of tests to ensure the product meets all necessary **standards and regulations**. This could include safety tests, durability tests, and performance tests, among others.



**See your vision come to life in the Pilot Testing phase. Build a functional prototype that can be tested and refined.**



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## 4. Refine & Release

You've done the hard work — you've dreamed up a **market defining product**, developed it, and even put it through the wringer with testing. Now it's time to let it shine!

During the **refine and release stage**, it's all about putting the finishing touches on your masterpiece, **setting up your pilot production run**, and getting your product out into the world.

The Refine part of this stage involves making any **final tweaks or adjustments** to the product based on feedback from the pilot testing phase. This could be anything from making minor changes to the product design, adjusting its pricing, refining marketing messages, or even improving user instructions or packaging. The goal here is to ensure that **every aspect of the product** and its supporting elements is optimised based on real-world feedback before it hits the market.

Once the refinement process is complete, the product moves into the Release phase. This involves setting up a **pilot production run**, where you manufacture an initial small quantity to **launch your product into the market**, which requires careful planning and execution.



Put the all-important finishing touches to your product in the Refine & Release phase. Critical real-world feedback from the Pilot Testing phase is implemented into the final product.





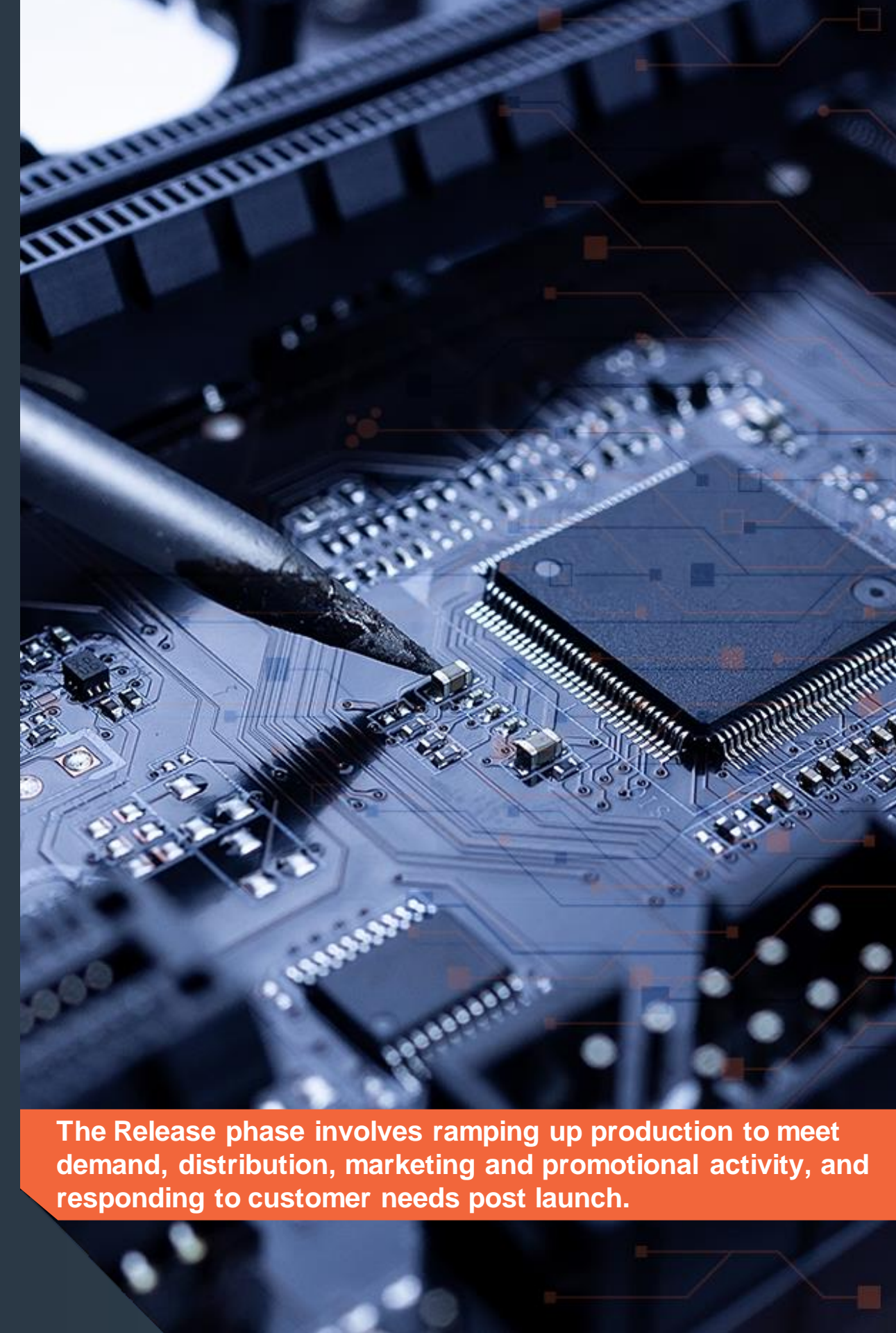
## 4. Refine & Release

The Release phase also crosses over into Manufacturing & Customer Support phase as you increase **production to meet anticipated demand**, distributing the product to retailers or direct to consumers, and executing the marketing and promotional plan. This could involve a **wide range of activities**, from PR and advertising campaigns to in-store promotions, social media marketing, and more.

Post-launch, it's crucial to **continue monitoring the product's performance** in the market, gather customer feedback, and make any necessary adjustments. This could lead to further iterations of the product in **response to customer needs** and market trends.

A successful product launch can help generate buzz, create brand awareness, and drive initial sales.

In summary, the Refine and Release stage is about perfecting the product based on **real-world feedback** and then launching it into the market in a way that maximizes its chances of success. It's not just the end of the product development process, but also the **start of the product's life in the market**.



The Release phase involves ramping up production to meet demand, distribution, marketing and promotional activity, and responding to customer needs post launch.





## 5. Manufacturing & Customer Support

The Manufacturing & Customer Support stage is a **crucial phase** that will **significantly impact the product's success** in the market.

You've made it through the product launch stage, and your **product is finally ready** for manufacturing! All those **new ideas and innovative designs** would just be intangible business plans and technical schematics without manufacturing.

For the **manufacturing process** to begin, you need to select the most suitable manufacturing solution. A Design Transfer is also required, which includes a handover of design files and manufacturing instructions, and **expert training provided** to the manufacturing team.

Some companies prefer to **manage all the manufacturing requirements** themselves, while others prefer to engage with their technology solutions partner to manage the entire process on their behalf.

Pro Tip



Choose a **scalable distribution strategy**, as this will allow you to easily expand your distribution network as your business grows.



**Congratulations, you have reached the Manufacturing phase, which involves many steps critical to your success, including meeting standards and regulations, safety and durability tests etc.**





## 5. Manufacturing & Customer Support

Turning your product vision into a physical reality also includes ensuring that **customers have the support they need** to use your product effectively.

Once the product is in the market, the focus shifts to the **Technical Support** phase. This involves setting up systems to provide customers with assistance if they encounter any issues while using the product. This could involve creating user manuals or guides, setting up a customer service team, offering online or phone support, or even **providing onsite assistance** for more complex products.

The aim of the **Customer Support** phase is not just to resolve issues, but also to gather feedback from customers. This **feedback can be invaluable** for identifying potential improvements to the product or spotting trends that might indicate larger, systemic issues.

Customer Support does not just include the support you provide your customer. Just as important is the **ongoing expert support provided to you** by your team or product development partner for the **lifecycle of your product**.



**The Technical Support phase is crucial for the lifetime success of your product. Your customers need your support, as does your company from your product development partner.**





## 6. Product Lifecycle Maintenance

You've **successfully launched your product** and it's out in the wild, being used and enjoyed by your customers, but **your journey doesn't end there**.

To ensure that your business and product enjoy **sustainable success**, you'll need to implement an **internal product lifecycle maintenance process**.

Here are the key **support types** you may need for the lifecycle of your product:

**Self-support:** One option is to provide your team with resources and tools that allow them to troubleshoot and resolve technical issues on their own. This may include a technical support team, online help centers, product manuals, and other self-service resources.

**Client Support Services:** Another option is to partner with your technology solutions provider to support you with access to a dedicated client support team who can assist with all technical issues and complex problem resolutions.

**Onsite support:** In some cases, it may be necessary to provide onsite support in order to resolve complex issues or provide training and assistance. This may involve sending expert technicians or maintenance crew to your location.



**Don't overlook the ongoing technical support and maintenance solutions you and your team will require to ensure sustainable success for the lifecycle of your product.**





## 6. Product Lifecycle Maintenance

**Remote support:** Another option is to provide remote support, which allows technicians to access and troubleshoot the product remotely using internet connected remote access tools.

**Software updates:** Having a team to create regular software updates is often an important part of the maintenance process, as they can help to fix bugs, improve performance, update compatibility requirements, and add new features.

**Hardware repairs:** If the product includes hardware components, it may be necessary to provide repair or replacement services as part of your support and maintenance plan.

**Training and documentation:** Providing training and documentation can help your team effectively use and maintain your product, and is often fundamental to the maintenance process.



The main purpose of a product lifecycle maintenance plan is to **keep a product working at optimal efficiency**. Your maintenance plan should address a variety of issues, including ongoing and future problems.



There are a range of support types that will be required for the life of your product, which can be set up and managed internally, or managed by your technology solutions partner.





## Custom Technology Solutions & Product Development



You've reached the end of this guide, but this could be **where the journey starts for you**. The product development process is a multi-faceted and complex endeavour that involves a variety of stages and activities. From identifying a new product idea and conducting market research to prototyping and testing, to refining and releasing the product, each stage of the process requires **careful planning and execution** to ensure the success of the final product.



By following a **structured and well-defined process**, you will increase your chances of creating a product or business solution that dominates, disrupts and defines your market, and ultimately drives **considerable and sustained business growth and success**.

If you would like to see what **technology solutions are available** to you, [contact us for a free consultation](#) to discover what is possible.

We are award winning **experts in Product Development**, with over 16 years of expertise delivering well over 150 products to market for our clients.



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**Adrian Crouch, *CTO***

