• Linnify

PART I

Great idea.

Do they need it?

Really?

The essential guide for rising entrepreneurs who want to future proof their ideas and investments

Why we wrote this whitepaper

You have an idea for starting a business. Great. What now?

To make sure that your future product is not bound to fail before even starting it, you need to make a plan.

With 70% of startup tech companies failing after around 20 months after their first financial raising, it felt essential to share the expertise built on the whole spectrum of product failure.

We stand by bold entrepreneurs with daring ideas. Not only in theory but in practice. We are dedicated to creating a healthy environment of growing tech companies that not only have the potential to change the way people experience life, but also make the right decisions to consistently make that happen every day.

With over 50 companies we helped build new ways that leave the old paradigm behind, with multiple startups we've both failed and succeeded with, we realized that the entrepreneurial thirst for knowledge deserves solid know-how sharing.

This is why we wrote this whitepaper.

Consider it your essential guide to making the right decisions for your next product's success.

'It is not out of place to mention that major problems and mistakes are committed by organizations during the development process resulting in product failure. It could be at any critical stage, in particular at idea generation, marketing strategy, business analysis, product development or/and at market testing stages.'

Summary

To make sure you minimize the risks of having the entrepreneurial fear of failure as much as possible, this whitepaper comes together to provide you with a set of must-knows before you launch your next product and to bring clarity to your building process for the ideas already in construction. It tackles market-responsiveness-focused product development strategy proposals to make sure your idea isn't only great - it's also in great use.

You will get a better understanding of how to determine the actual situation of your idea, its relevancy in the market, and how to smartly adapt it for success by being aware of all the matters regarding competition, biases, and obsolete product lifecycle standards.

After gaining a sharp perspective on the blindspots entrepreneurs have, you will learn how to effectively manage your investment by exploring scenarios to help you see the risks you take if you don't follow the suitable methodology for the times, we live in 2022.

After you decided what framework is the least risky for the success of your product, this whitepaper will respond to the questions regarding how to get things in motion: how to select the right product partner, what should be done next, highlighting a step-by-step proposal of the development process.



Table of Contents

Why we wrote this whitepaper	1
Summary	2
Table of Contents	3
Chapter 1. Secure your idea	5
How sharp is your idea in a sharp tools box?	7
Why would you invest all and fail when you can validate fast, adjust, and succeed?	8
What are the potential causes of product failure?	10
What's the weight of failure of great ideas?	13
Chapter 2. Validate your idea	18
Identify the obsolete product lifecycle standards-setting back your innovation	18
How can I make sure I'm on the right track?	20
Starting your prototyping without proper discovery is a lost opportunity	26
Understand the costs of skipping the discovery phase	27
Chapter 3. How to select the right product partner	29
Your idea needs definition	30
Your user's needs and behaviors must be understood	31
You must satisfy your user's expectations and needs	31
How can you find what you're looking for to create your product?	32
Chapter 4. What are the next steps?	36
Design phase - Platform technological development	36
Development phase	37
Software development process	39
Chapter 5. Conclusion	42

Chapter 6. Further readings4	<i>13</i>
Chapter 7. Authors4	14
Cătălin Briciu	44
Andreea Ghic	45
About Linnify4	46

Chapter 1. Secure your idea

Avoid business hypocrisy by determining exactly what are you working with

Ever felt that excitement that's quite difficult to differentiate from the anxiousness at the beginning of building a startup? This feeling also strikes when you're in the middle of the build-up and you feel there is a missing piece that's needed to boost your product's success and secure its deserved place on the market. Sounds familiar? We know what it's like.

Which one of these is about you? Are you daring right now to think your idea has the potential to change the way people experience life or have you already started to act on your idea? Keep this in mind as you continue reading through the whitepaper. Your answers might change as you keep on reading. And that's okay.

What resources do What is your first or What stage are you at: you need immediately: immediate need: () Idea Product strategy Validate your idea expertise () MVP Product development on your validated expertise Market launch UX/UI design expertise Scale-up Marketing expertise Reach new markets by adapting existing More invested capital product to varying

What unites both is the drive to create new products. A contagious drive that, regardless of its resourcefulness most often comes with a load of unconscious biases that can lead to product failure if not tackled appropriately in time.

Linnify came to life after multiple startup experiences that created expertise that gets even more real only when shared. The startup space became our area of proficiency for over 5 years in which we've been part of the development of over 50 software products.

Software product development is a logical process that involves multiperspective. It's not only about the essential tech side of things but rather draws on a variety of aspects: from market understanding, relevant and appropriate design with its user interaction and user experience, strategic planning, quality assurance, and suitable partnerships that can exponentially impact the evolution of your idea.

Having a dedicated team for each of these branches, Linnify decided to go beyond putting together a comprehensive team that can bring to life any idea in Health, Education, and Well-being, and create this whitepaper that acts as the bible of the product development thought process.

'Is your idea really needed' is not a whitepaper aiming to alienate you from the enthusiasm of your initiative, but to create a new type of drive, a well-documented one. It's an invitation to decide once and for all how successful and needed your product is going to be. And how to act on it to achieve it. Whether your business is at an idea phase, or you've started building on it already, take this chance to set the right mindset and work frames for it to not only touch upon its potential but to unleash it to its fullest.

How sharp is your idea in a sharp tools box?

We can see an exponential acceleration in product innovation and app development globally.

According to <u>42matters.com</u>, an average of 1009 new apps are released daily on the iOS Apple App Store. As for Android apps, <u>statista.com</u> marks November 2021 as 'the lowest number of releases between March 2019 and February 2022', when approximately 68.9 thousand mobile apps were released through the Google Play Store. That's 2297 apps per day, at its lowest.

At the same time, also at a stunning rate, many more new products rather fail to gain market acceptance than succeed. The reported data shows that between 40% to 90% of different product categories cannot succeed. The variations are given by unclear data about the criteria used to define success and the stage at which the product was included in the analysis. At the same time, according to Harvard Business School professor Clayton Christensen, 30 thousand new products are launched yearly, and 95% fail.

According to a CBInsights report, these are the top reasons startups failed after 2018:



^{* &#}x27;Since many startups offered multiple reasons for their failure, you'll see that the chart highlighting the top reasons doesn't add up to 100% (it far exceeds it).' – CBInsights

In the startup world, we see rising entrepreneurs get great product ideas and start building them as fast as possible for them to go straight to the market. The speed of their implementation without proper market validation most often synchronizes with the speed of their product failure, and with it, the burn of their entrepreneurial enthusiasm. While it is essential to keep up the momentum in such a fast-paced business reality, innovators need to make sure they validate their idea before making any consistent investments.

Why would you invest all and fail when you can validate fast, adjust, and succeed?

1. Am I sure my idea is needed?

To answer such a question, you will need to gather unbiased facts. Any intuition needs to be challenged against data, market, and end-users. The need lies with those who might be your customers.

A great idea doesn't have the potential to become a real product without validating the need for it. A potentially functional product needs to solve at least one problem for the end-user. Also, a measurement of your market size can help you forecast the potential of its sustainability.

2. Is it valuable?

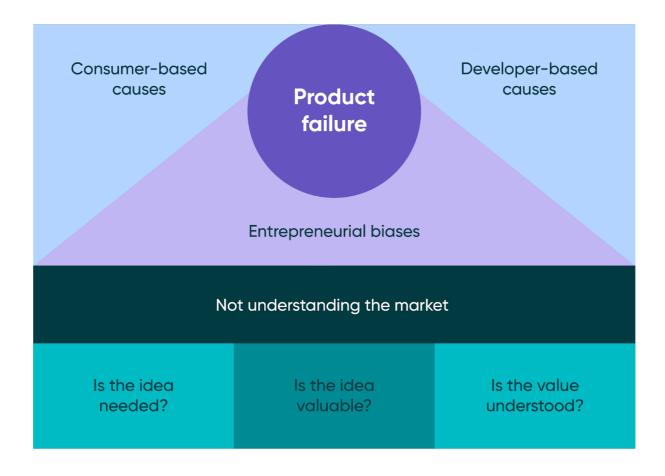
If you have validated that there is a need for your product idea, the next step is to make sure it is valuable. Its value comes from what makes it different and better from other existing alternatives to solving the problem.

Here you will need to look at your competition and learn about them as much as you can. Your product idea value is reflected by the differentiators against other similar products. This must be your fundamentals in building your product value proposition, which will answer the question of 'why would someone choose my product over the competition?'.

3. And most importantly, is the product value understood by my customers?

Many innovators and entrepreneurs manage to successfully pass the first two questions but don't even consider the third one. A product idea can be needed and can bring a lot of value, but its value cannot be understood by the end-users. Not even by the early adopters. For that, it is essential to test it out with real users and find the gap between your product value proposition and the users' conscious needs. Then, find the right nudges in product placement and communications that work.

Highly innovative products are the most challenging and the marketplace failure has been identified as two-sided and extremely polarized in this situation. The users or customers can systematically undervalue a highly innovative idea, while the entrepreneurs often overvalue their innovation. For that, answering the three questions can help innovation get closer to the end-users and be adaptable. Help your users meet you halfway.



What are the potential causes of product failure?

1. Entrepreneurial biases in business decision making

The pressure entrepreneurs feel only pushes them further in defending their products as best as they can, easily falling into biased thinking.

Building resilience in such dynamic conditions doesn't come easy. In our daily conversations with entrepreneurs and innovators, we hear many reasons for product failure, and most of these are focused on product features and technical values. However, not too many express their worries about how their products are perceived and understood by their customers. Because they feel they cannot gain control over how the customers will react. True in one way and false in another.

Market uncertainty is something that we all need to accept and, once done, things can get easier to handle. Dealing with the unexpected is the best way to train our muscles in business and, especially, in the startup world. Things can change fast and things we didn't even think of may suddenly occur. For that, we need long-term objectives and incremental planning models. This way there will always be room for maneuver, more budgets, and alternative plans.

'Product building is an intrinsically risky endeavor, with a certain rate of marketplace failure being inevitable and, in fact, necessary if one is to benefit from the marketplace successes.

The high rate of marketplace failure merely reflects the cost of doing business. Investment banks and venture capital firms work under such a model, accepting the difficulty in predicting the eventual success of seemingly viable ventures. Sadly, while a venture firm can diversify risk, the same cannot be said for the innovation developer.' (John T. Gourville)

The key point of gaining more sense of the market and what users actually need is essential to conduct in-depth research and test a prototype directly with them.

On the other hand, the standard paradigm of product development and market placement helps us understand the main factors of innovation failure. Still, it lacks a feasible methodology to tackle them within the current state of market dynamics. We will discuss this in more detail in the next section.

According to Gourville, there are five critical factors of innovation failure and new product development:

- **A. Relative advantage** the degree to which an innovation is perceived as better than the product it replaces, where better could be economic or social in nature.
- **B.** Compatibility the degree to which an innovation is seen as consistent with the existing values, experiences, and needs of potential adopters.
- **C. Complexity** the degree to which the innovation is understood by the adopter.
- **D. Observability** the degree to which the impact of innovation is visible to others.
- **E. Trialability** the degree to which an innovation may be experienced on a limited basis.

If these are covered, the users can conclude that the new product is better than the existing one/s and will be more open to adopting it.

2. Consumer-based causes of innovation failure

Inability to identify and correctly serve the need of the five types of innovation adopters or consumers:

- **A. Innovators** the first customers to try a new product. By nature, they are the ones who take risks and get excited about new ideas and new ways of doing things.
- **B. Early adopters** the second phase of product purchasers. They tend to be the most influential people on the market, as they normally have a high social status

(something that enables thought leadership), a reasonable spending amount of money, and high levels of education. They are risk-takers.

- C. Early majority these individuals are 'risk-averse' and need to be assured that their financial resources (which are more limited) are spent wisely on products. Most of the time, they are people with a higher social status who are usually in contact with thought leaders.
- **D. Late majority** are more skeptical about adopting a new product. This category has less money, has lower social status, and doesn't interact as much with innovators and thought leaders. They tend to invest their money in tried and tested products only.
- **E. Laggards** when this category arrives, it is usually a sign that a product is entering decline. They tend to value more traditional methods of doing things and are highly opposed to change and risk. Most of the time, they have a low socio-economic status and rarely seek extra opinions.

Many companies find initial success among innovators and early adopters but fail to attract the early majority in sufficient numbers to achieve long-term success.

3. Developer-based causes of innovation failures

The pitfalls include the illusion of control and wishful thinking, where developers systematically overestimate the probability and speed of adoption for their innovations.

'Fall in love with technology... and ignore the market the technology was intended to serve'. (Schnaars, p.9, 1998)

The developers-based explanations for why innovations fail are most often attributed to a form of emotional or ego involvement. It also includes what Boulding, Morgan, & Staelin (1997) call 'escalation of commitment'.

This means that individuals have the tendency to increase and prolong their efforts 'in the face of losing product introduction'. This escalation does not necessarily lead to product failure, but it certainly could lead to negative financial implications.

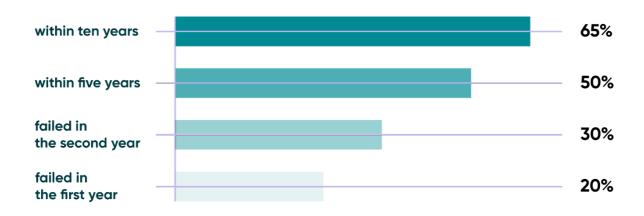
There are several reasons why new and innovative products might fail on the market. Some of them are related to the product itself, some to the consumers, and some are linked to the individuals who develop it.

What's the weight of failure of great ideas?

According to <u>Small Business Administration (SBA)</u> a small business is defined as any operation that has less than 500 employees. In the USA, for example, they make up for 47.1% (as of 2017) of the working population in the USA.

Currently, there are 31.7 million small businesses in the United States. That's 99.9% of the total US businesses according to the <u>U.S. Small Business Administration Office of Advocacy</u>. The Bureau of Labor Statics issued the <u>'Survival of Private Sector Establishments by opening year'</u>, which shows that as of 2021:

Failure rates of all new businesses



The exact numbers are beside the point. The fact is that startups are extremely risky. You can clearly see that in the growing collection of dead businesses in the <u>'Startup Cemetery'</u> issued by Failory. Or read CBC Insights' compilation of <u>startup failure postmortems</u>.

They have followed a cohort of over 1100 startups from the moment they raised their first seed investment from 2008 to 2010. The results?

70% of startup tech companies fail after around 20 months after their first financial raising. That's harsh.

This same study revealed that the top five reasons why startups fail are:

- 1. Running out of cash or failing to raise new capital 38%
- 2. An inexistent need on the market 35%
- 3. Getting outcompeted 20%
- 4. A business model that is flawed 19%
- 5. Legal challenges 18%

1. 38% of startups fail due to money running out

According to the US Bank and SCORE/Counselors to America's Small Business <u>cash</u> <u>flow issues are one of the main reasons small businesses fail overwhelmingly</u>. This has to do with *poor cash flow management* and *poor understanding of cash flow*. It also has to do with *not having a developed business plan* and *starting out with too little money*.

Another research conducted by Fundera reveals that:

- **79**% of businesses that fail start out with too little money.
- 77% of businesses do not have appropriate product and/or service prices.
- 73% of businesses have overly optimistic sales estimates.

Take, for example, <u>Wow Air</u>'s case. We're talking about a European budget airline, whose chairman, Skuli Mogensen wrote to employees:



"We have run out of time and have unfortunately not been able to secure funding for the company... I will never be able to forgive myself for not taking action sooner."

2. 35% of startups fail due to an inexistent need on the market

One of the biggest problems is by far lack of product-market fit. If you're looking to tackle problems that are interesting to solve rather than focus on those that serve a market need, you're bound to fail. You need to validate your assumptions.

You must not invest a lot of time and resources before you can be certain people want what you are offering. You also need to pay attention to the timing of your launch.

Let's take for example <u>Quibi</u>, a streaming service that shut down just six months after launching and raising \$1.8B. Its founder, Jeffrey Katzenberg said in a letter to that time's employees:



3. 20% of startups fail due to getting outcompeted

Ignore the 'don't pay attention to your competition' saying. In the real world, once an idea gets hot or receives market validation, chances are other people will try to capitalize on it. It's an opportunity not to be missed.

Don't obsess over the competition but rather pay attention to what's going on around you and understand how you can provide unique value to customers.

Let's look at Mac & Mia's case. This was a children's apparel delivery service that faced competition from far more successful companies (e.g. Stitch Fix). It shut down only one year after its launch in 2018. They've declared:

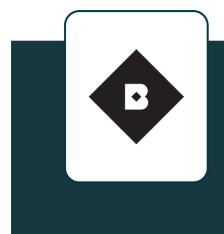


"Mac & Mia faced a host of competitors in the children's delivery box space, including the aforementioned Stitch Fix, which launched its kids' clothing service in 2018. Stitch Fix went public in 2017 and has a market cap of around \$2.7 billion. At least 20 other upstarts have launched similar delivery services for children's clothes."

4. 19% of startups fail due to having a flawed business model

It is crucial to have a carefully developed and viable business model. You need to put in place structures and systems as you grow. If not, this will lead your organization to chaos, and, ultimately, to failure. This is also backed up by <u>Gulati's research on the startup ecosystem</u>.

Let's see a positive example in this case. Thanks to a business model crafted around consumers' discoveries of new beauty products, <u>Birchbox</u> had an explosive growth within a few years of its founding:



"Each month subscribers received a box of samples customized according to their personal profiles. They could simply pay their fees and enjoy the samples; they could also go to the **Birchbox** website and buy larger quantities of the products they liked most. A dedicated team generated a steady stream of digital articles and video tutorials about beauty trends to further engage customers. This model attracted a million subscribers in the first four years, inspiring dozens of copycat start-ups to pitch their businesses as "the Birchbox for X."

5. 18% of startups fail due to regulatory or legal challenges

Sometimes your idea can be great, your startup evolves, everything goes great, and then legal complexities enter the picture, and shutters everything.

This was the case for <u>Coolest Cooler</u>. Also called 'Kickstarter's greatest failures'. They ended their operation in December 2019, after struggling for five years. They've failed to deliver their cooler to more than 20k people. The team said:



Startups are nevertheless risky, but with great risk comes great potential. We're not only talking about financial returns but progress and innovation that could simplify the way people all over the world experience life.

Chapter 2. Validate your idea

Identify the obsolete product lifecycle standardssetting back your innovation

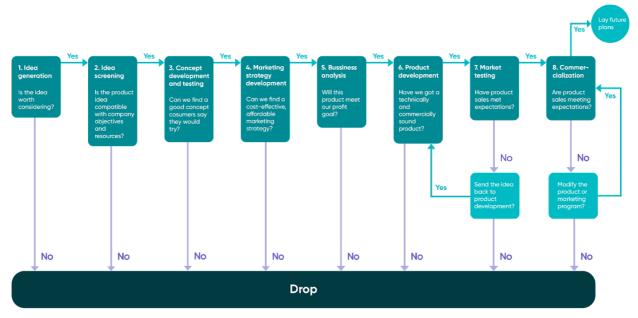
Linear thinking is one of the major setbacks in most organizations and startups. Following the 'old times' best practices or methodology is more dangerous than anything. At the same time, letting go of past ways and behaviors is scary and not just challenging, but difficult.

We hear phrases like 'accelerated change', 'fast-paced market', 'disruptive innovation', and 'ever-changing trends', which often we consider just some empty buzzwords. Well, they aren't just that.

If change used to be considered nice to have, today, if your mindset isn't centered on accepting change as a constant variable, you are at high risk in any business environment. The exponential acceleration of innovation has a direct impact on every vertical and domain.

Interconnectivity and cross-functionalities are defining our 'new world'. It's already old news that the pandemic has changed the paradigm of life and business within all industries, pushing technology adoption to a level estimated to happen within four or five years in only a few months.

So, here we are. Trying to set our idea development on a rigid framework with a linear mindset. As hard as it might seem, it's about time to reframe everything that you already knew about bringing a product idea to life.



Source: Kotler et al, 'Marketing Management', Dorling Kindersley (I) Pvt Ltd.,2013

If we take a look at the old paradigm, we can clearly see that the market testing stage was the 7th out of 8 stages. If you do that today, you get around a 90% chance to lose your entire investment and fail. What many do not understand when it comes to software products, user and market testing them at the end of product development or MVP cycle, is a poor decision.

Understanding market needs is crucial. It is the only way in which you can test the waters. You can see from the beginning if a product will perform well...or not. It is the only way to predict the market potential of your product. Once you understand what the consumers need, you can start building something valuable through a <u>validation-based</u> process.

Validation helps in building the right product for the market and in doing it as fast and costeffectively as possible. The benefits of validation can be extracted from the risks that are being tackled:

- Better solution due to market understanding
- Lower investment costs
- Faster time to product/market fit
- Happier customers
- Higher confidence in the process and a constant sense of progress

Any design, brand positioning, user experience, and interaction decision needs to be tested against user needs and expectations. And setting these actions linearly will not work. Your teams and experts need to collaborate from the very beginning and exchange ideas and discover the blind spots.

Encourage them to disagree and challenge each other until they find the best solution. Then, invite them to prototype it and set the prototype in front of real users. The customers are the most important stakeholders. So why avoid bringing them to the table?

Discover the best ways to work in fast and short iterations, test, validate, remake and only then launch. Nothing is more important than users' honest feedback.

OK, we keep talking about validation, but:

How can I make sure I'm on the right track?

We'll make it easier for you to understand.

It's pitch black. You open your eyes and find yourself in the middle of a crowded market.

You're confused, you have no idea where you are. Nothing is familiar to you.

You try to ask people for information, but they're avoiding you. Why?

Suddenly, you realize. You're naked.

That's quite unsettling.

What does that have to do with the validation?

Well, going to the market without product validation is like finding yourself in the middle of a crowded market naked.

When startups do not understand what the market needs, they run out of money and most of their products fail. Validation helps in building the right product for the market and in doing it as fast and cost-effectively as possible.

The two main reasons for product failure?

- Understanding market needs is done in order to build something of value through a validation-based process.
- It is as much about raising capital as it is about efficiently using existing resources.

Without following a validation process, you are basically going in the direction set solely by you.

You are developing your product without consulting the most important stakeholders: your customers.

What are the risks? Easy:

- There is no market need, as nobody wants the product enough.
- Although there is a need, you are not at the top of your customer's minds because of weak differentiation.
- You are not accessible enough through your distribution model.
- There is weak retention due to an unfit solution, leading to a low lifetime customer value.
- * although scalable growth might be obtained*
- You are moving too slowly and might miss a market opportunity due to waiting for 0 risk. There is always going to be a bit of risk in everything you do. Product mistime is the cause in 10% of the cases.

Validation will get you where?

- You will have a better solution due to market understanding;
- You will lower your investment costs;
- You will have a faster time to product/market fit;

• Your customers will be happier;

• You will be more confident in the process;

• You will have a constant sense of progress.

If you're still not convinced that validation is crucial for your product (we're not talking here about success, but mere existence), let's do another imagination exercise.

1st scenario (no validation)

You think about all the features that your users might need. You're also part of the target audience, you design it, build it, and you decide to launch the product on the market.

120 days

\$100.000

What's happening now?

People are not adopting your product or the entire process moves extremely slowly.

They don't use all the features that you've implemented. There are no recurrent customers. The product has yet to obtain a fit on the market.

You decide to add other features that might help the product gain traction.

60 days

\$50,000

The product starts to show signs of traction, but it's still not what users need.

You go through the last phase three more times.

180 days

\$150.000

Total time spent: **360 days**

Total investment: \$300.000

Results: launched product with a struggling growth

2nd scenario (with validation)

You are aware that you must first understand your problem, so you:

research the market;

conduct interviews

validate users' needs.

10 days

\$0

After validation, you came up with a potential solution to the problem. You sketch a product MVP version description. You then create a fictional brand and launch a landing page to validate customer interest.

In this stage, the interest may still be low due to the overcomplicated descriptions and vague solution definitions. So, you modify the solution and adapt it to your target audience.

You test the landing page again, and you have thousands of signups.

30 days

\$15,000

Now, you are well aware of what you need to build for your customers. You have both a validated potential solution and an early sign of interest.

After defining a list of MVP functionalities and their prioritization, you start building this version and launch it. Your early signups are impatiently waiting for the launch.

23

90 days

\$75.000

You launch your MVP, and you gain traction. You don't achieve market fit yet, but you survey the current user base to find out how you can improve.

You develop this new addition and gain market fit.

60 days

\$50.000

Total time spent: 190 days

Total investment: \$140.000

Results: obtained product/market fit version and is looking to scale the business

3rd scenario (5 days validation)

You don't have either time or patience to go through the usual problem/solution fit phase. You are willing to risk in order to save time and money.

So, you gather a team of specialists and schedule a full week of focusing on the matter, and you start a five-day validation sprint.

5 days

\$10.000

With the right experts by your side, you validate your idea in 5 days. You manage to:

- define the goals, main challenges, and main target;
- come up with a real solution;
- create, criticize and decide the final prototype;
- do the user testing and interviews part.

Based on your findings, you can confidently move forward with an initial set of MVP functionalities and start building the solution.

90 days

\$75.000

After that, you work on finding product-market fit. It costs more due to the shorter time spent on understanding the market needs in the beginning.

60 days

\$65.000

Total time spent: **155 days**

Total investment: \$150.000

Results: obtained problem/solution fit version in 5 days, product/market fit in 5 months, and you are looking to scale the business

Building a new product and going to market can be challenging, time-consuming, and needs investment. Through such a journey you need to prepare to make fast decisions and manage risk. Building and launching several products has taught us the relevance of validation ahead of making any major investment. Gathering feedback from the market and users can definitely save effort, resources, and money.

Starting your prototyping without proper discovery is a lost opportunity

Traditionally, the most commonly adopted framework in new product development was OEEM, 'an acronym for Organizational Excellence, Execution Skills, External Factors, and Marketing Mix Strategy'.

These are considered the main four pillars, having a number of activities as building blocks that act as enablers.

Critical factors to consider for a new product's success

Organizational Excellence

Professional Management

Strong R&D

Multiskilled employees

Risk taking

Innovative

Technology seeker

Adequate resources

Flexible and adaptable manufacturing

Strong grounding in TQM and Six Sigma

Emphasis on cost reduction

Execution Skills

Strong NPD Process

CFT's for NPD's

Collaborative departments

Strong project execution skills

First-time-right motto

Speed in development

Minimal time from conception to launch

Excellent planning skills

Fast ramp up of production

Effective supply chain management

External Factors

Constant enviromental mapping

Large market size

Growing economy

Stable market

Tab on competition

Vigil for opportunities

Responsible suppliers

Strong network of supplier

Access to raw materials

Knowledgeable customer

Condutive business atmosphere

Marketing Mix Strategy

Product uniqueness

Right price

Knowledgable channel partners

Ease of usage

Service excellence

Effective segmentation

Product differentiation

Strong base in forecasting techniques

Integrated Marketing, Great PR and Strong Brand Equity

The framework would have assisted organizations in planning new product development meticulously. Although, a few specific activities may have been added or deleted to suit the product category. It is still a good framework to have in mind.

However, today we think of these pillars, but for sure within the context of the new reality, you need to be faster and more flexible to respond to the market dynamics and demands. You need more contingency plans and ways to face the pressure of high costs.

For example, if you want to launch a new innovative product, you will definitely need a team. Hiring a full time highly skilled team might sound impossible, doesn't it? Too many risks ahead to make such a long-term commitment.

This is when you realize that a product strategy provider might be his most efficient option.

Understand the costs of skipping the discovery phase

'Effective and successful new product development has to start with the customer. Having identified the market opportunity, the next step involves studying and understanding the dynamics of the consumers in the category, using extensive market research... identifying customer needs, wants, and preferences, and defining what the customer sees as a 'better product.' – Lord (2000)

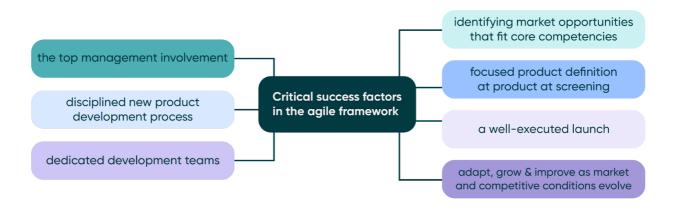
In the discovery phase, you are to first discover the market. You are to understand the needs, and the pains so that you can respond accordingly. If you skip this phase, you are delaying the much-needed clarifications on how your product should be designed.

The last acceptable moment to postpone gathering all the input that creates the vision is moment zero. Linking all the nuances of the owner's vision at the very beginning of product development is key to creating a strong foundation for building a cohesive product.

Working in short iterations is key in invalidating initial assumptions that lead to inefficient risk assessment. Gradual validation based on results brings clarity to the factors that would otherwise be easily overlooked in the incipient phases.

The OEEM pillars act as enablers. It is hoped that the framework would assist organizations in planning NPD meticulously. A few specific activities may be added or deleted to suit the product category.

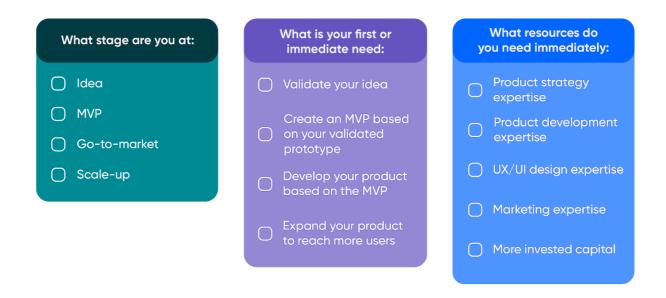
A few critical factors suggested for the success of a new product are the top management involvement, disciplined new product development process, dedicated development teams, identifying market opportunities that fit core competencies, focused product definition at product screening, a well-executed launch, and most importantly to adapt, grow, and improve as market and competitive conditions evolve.



Long story short, you will need agility at scale.

Chapter 3. How to select the right product partner

Remember when we said to keep this in mind? Let's see what it is in priority now.



The global market is dynamic and noisy. It feels like a busy highway. When looking for the right strategic product partner you might feel like trying to cross the highway at the peak hour. However, this step is critical to your success.

Finding and building trust with any external partner is something that we all strive very hard to achieve. Yet, we know how complex such a process can be. Going online and looking for the next best-matching business partner might end up massively disappointing, especially when you are not sure what to look for.

There are a few characteristics that might help you first gain some clarity on the matter.

1. What stage are you at:

- a. Idea
- b. MVP
- c. Go-to-market
- d. Scale-up

2. What is your first or immediate need:

- a. Validate your idea
- b. Create an MVP based on your validated prototype
- c. Develop your product based on the MVP
- d. Expand your product to reach more users

3. What resources do you need immediately:

- a. Product strategy expertise
- b. Product development expertise
- c. UX/UI design expertise
- d. Marketing expertise
- e. More invested capital

Depending on the priorities ahead of you, the answer to the question of how to find the right partner may vary.

Your idea needs definition

If you are looking to **define your idea**, it means you are at the **early stage of ideation** and you might need an <u>end-to-end product strategy partner</u>, able to support you in defining the right solution to the existing problem.

For sure you don't need only a product development team, design, or marketing. You need a product strategist, too.

It is vital for your product that you **understand your user's needs and behaviors.** The user should easily understand how your platform is working without putting too much effort. You need to capture their attention fast. They need to get the information quickly and without effort, otherwise, you'll lose them.

This phase consists of analyzing the market:

- o **quantitatively**, meaning that the problem's sized need to be measured in terms of:
 - audience;
 - costs;
- o **qualitatively**, meaning that your team needs to determine the audience's:
 - behaviors;
 - desires;
 - goals.

Your user's needs and behaviors must be understood

If you got your **solution well defined** and have **tested your value proposition against real users**, then you need a great <u>UX/UI design team</u> able to respond to the feedback within the user research stage and build the interface of your product through a nonfunctional prototype.

The user should easily understand how your platform is working without putting too much effort. You need to capture their attention fast. They need to get the information quickly and without effort, otherwise, you'll lose them.

You must satisfy your user's expectations and needs

If you got your **prototype's usability validated,** you will need <u>a front and back end team</u> <u>to develop</u> your <u>MVP</u> into a web and/or mobile solution able to satisfy your users' needs and expectations in order to reach product/market fit.

The requirements at this stage should be crystal clear and you must feel comfortable working with a team of experts in tech.

Be aware that, within the stage of development, you might want to start to engage with a marketing strategist to start crafting your market entry and the right marketing mix. The multi-phase research of the market now will definitely pay off: things slowly fall into one place and start to make more and more sense. Ahead of defining your marketing mix, make sure you run a feasibility study and make informed decisions. Choose data as your best ally.

How can you find what you're looking for to create your product?

Finding the right partner and talent to help you get your product from zero to hero can be more difficult than imagined. However, this is the product owner's most critical responsibility. Your product idea or your business success depends totally on this decision.

After running several conversations with product owners around the world, we realized that a common trait for the most successful products is that the user was at the center of the decision-making process from the very beginning. Then, when we asked how they choose their product partner, they explained that the level of engagement from the first conversation set the scene for the entire journey.

If they were to suggest a checklist of the characteristics to follow in the product partner selection, it will look like this:

- Focuses on the problem you want to solve
- Deep dives into the user's needs
- Highlights on what your solutions bring to the market
- Gets involved in perfecting the solution idea
- Demonstrates transparency about the process, timescales, dependencies, and resources

- Asks why, other questions, and gives you homework at an early stage
- Challenges your beliefs and point out your blind spots
- Shows genuine interest in you and your idea

Using the above checklist within your discovery call with the product partner can help you understand the differences between different organizations, work ethics, and their process. But getting there represents the last 10% of your work.

Finding those organizations can take a bit longer and might seem less of a straightforward pathway. Giving yourself the opportunity to explore and discover is the best way to achieve what you want in the long term. But finding the best product partner or provider can be closer to you than you've actually imagined.



Start asking questions within your networks and explore the 'wild wild web':

1. Explore your closest network and ask for referrals

The people we know and we have interacted with are the circle we trust the most and inspire confidence. Asking them to recommend us a product company might be the best place to start, but not the final stop. To make the right decision, make a priority out of gathering success stories.

2. Ask on social channels

Social media channels are great for fast conversations and easy to connect to people that are two or three handshakes away from us. It is amazing how easily you can find out useful information via social conversations. Look at the answers and analyze them. Filter what matters.

3. Google the list built-in and ask for reviews from their clients

Once you put together a list of recommended companies, start googling them one by one and look into the feedback and reviews they got on different platforms. Their clients won't associate their name with the product company if the work wasn't what they expected or successful.

4. Check their portfolio and web content

A website says a lot about a company: what they do, what they believe in, the stories they tell, and the people they work with. You can easily grasp the level of transparency and trust from the way they present themselves and their partners and clients. Create notes and questions for later on.

5. Schedule a discovery session

Having a scanned list is a great milestone to achieve. Now, you are ready to make contact and schedule a discovery meeting with each provider. Prepare a list of questions relevant to your needs about the product and try to understand what the provider values the most.

6. Analyze the level of implication from the beginning

The more questions the product provider asks the better. Showing interest in what you want to achieve is something that needs to be understood from the very beginning. Make sure that the provider doesn't necessarily agree with you, but makes an effort to teach you something new.

7. Make sure they are fully transparent regarding their process

In any successful collaboration, transparency is key. Setting clear expectations and points of sign-off from the start can help you understand when your input is highly

needed and where you need to be more flexible so the provider can offer the best solution within the journey agreed.

8. See if they include user validation and testing along the journey

Everything that is worked on needs to be tested and validated. Even the best product teams can make mistakes and are subject to biased thinking. For that, you need to make sure that each relevant milestone is ending with validation against users and includes time for testing.

9. Meet their team and look into their profiles

Any business is made by people, every success is the result of a team. Find out more about the experts and learn as much as possible about the people you might be working with. Look into their profiles and ask for a meeting with them and see how they connect to your idea.

10. Ask to schedule a short workshop

Before signing the long-term contract, ask for a shorter iteration to see how it really works. Creating a fast prototype within a few sessions might be the best way to really see how it goes. Instead of committing to the whole investment, allocate a smaller testing amount.

At the end of the process, you gathered so much information that you are ready to make an informed decision. With your intuition and data on the same page, you will have all the clarity you need. Make your decision and start working on your dream. Now it's getting ready to come into reality.

Chapter 4. What are the next steps?

You validated your idea through the discovery phase. What's next?

Design phase - Platform technological development

Let's say you've already gone through these two steps of analysis that we've elaborated in the discovery phase. Based on the results, you must be able to determine:

- user personas;
- user scenarios;
- user journey maps;
- unique value proposition;
- key benefits of the system.

All of these key findings need to be transposed through your system's functionalities. This is the only way users can obtain their desired benefits. Skipping certain steps to save up time will only take your product one step closer to failure.

The next step is **designing the solution** and **a non-functional prototype** by creating:

- the system's user flows;
- low-fidelity wireframes;
- user interface;
- design system;
- clickable prototype (this can be used to test the usability and potential adoption of the system in real-life conditions).

The non-functional prototype will be used to run usability and validation interviews with the target audience. This way you will be able to discover potential areas that could be improved and validate the design system.

After gathering all the feedback, and making amendments accordingly, the platform technological development phase can be considered finished.

Development phase

You now have a **validated non-functional interface**, and the functional system can be further developed with a minimized risk of usability. The second phase involves **defining system requirements and architecture** that is done in seven stages:

1. System requirements gathering:

- is supported by use-cases and flow diagrams;
- provides a high-level understanding of the system's expected behavior.

2. Choosing a technology stack:

- is based on the previous research and functional specifications;
- takes into consideration
 - o team capabilities;
 - maturity of the technology;
 - o level of shared knowledge within the community around the technology;
 - o license of use;
 - o how fast the technology is evolving.

3. Architectural diagram and deployment diagram:

- the architectural diagram describes:
 - o how the services are interacting with each other
 - o how the system will behave

In this phase, the specific technologies on frontend and backend to be used shall be selected.

- the deployment diagram describes:
 - o how each component will be deployed independently.

*In this stage your team will also need to select the suitable deployment architecture for the system (based on the non-functional requirements). Keep up with the latest trends in Cloud Computing in order to achieve scalability without overspending on infrastructure.

4. Data modeling and database design:

• Depending on the size of the product, the database design can have different buildup phases. You can create a basic Entity Relationship Diagram, on the foundation of which you can iteratively add models as the product scales up.

5. High-Level API Documentation:

- The API documentation is done using OpenAPI specification. Every feature which is implemented needs to have tests written and the OpenAPI documentation updated accordingly with examples, messages and validation.
- Once again, depending on the size of the project, the documentation is most likely to be completed iteratively as the product grows.

6. Project setup and security:

- the code is stored using Git:
- each team member has access to the code based on their role;
- sensitive information is kept in secret sources;
- Cloud Setup is being done;
- API is secured using the JSON Web Token (JWT) standard (RFC 7519);
- HTTPS is being used for communication between services;
- Google Cloud Platform and ISO compliant are used for following their established best practices when it comes to security;
- Virtual Private Cloud is used to restrict the traffic received by the Database.

7. GDPR compliance will help the system be able to:

- take measures to pseudonymize and encrypt personal data;
- ensure the ongoing confidentiality, integrity, availability, and resilience of processing systems and services;

 restore the availability and access to personal data in a timely manner in the event of a physical or technical incident.

Software development process

Following the Agile methodology, in the next stage, the **software development process** will be run into multiple two weeks sprints.

Each sprint will consist of:

1. Planning

The Product Manager, together with the team, analyzes the backlog and selects the backlog items (eg. user stories and tasks) that will be included and completed during the current sprint.

2. Implementation

The team follows a Test Driven Development process, where the developer is required to write tests first and then start implementing the solution. The code needs to follow the DRY (don't repeat yourself) principle. Once implementation is completed, a different team member will review the code to ensure it follows the project style guidelines and best practices, thus decreasing error rates by providing a second perspective filter.

3. Daily meetings (15 min)

A meeting of max. 15 minutes which contributes to team alignment and accountability over the duration of the sprint. The team discusses what was done yesterday, and what they will do in the current day, while also tackling together any other blocker there might be in the way.

4. Testing

Gradually testing the system reduces the probability of bugs occurring. The higher detailed components of the application will require unit testing and integration tests written by the developers. The internal testing components are: defining a test plan and strategy;

test tracking tool and reporting;

- quality overview status of the product;
- test methodologies adapted to product requirements;
- release readiness review process.

5. Versioning

After each sprint, a new version of the application is usually released, which can be accessed and tested by relevant stakeholders.

6. Demo and Feedback sessions

These happen at the end of the sprint. Demo meetings happen between the team members, the product manager, and stakeholders. They are meant to gather feedback and integrate it into the next sprints.

7. Retrospective

The development team and the product manager have a retrospective meeting to discuss what went well and what went wrong in the current iteration in order to improve on the next ones.

To increase the speed and flexibility of changes in the system, while also providing the ability to release new features easily. the deployment process needs to follow **continuous integration** and **continuous delivery** approach. This means that there will be at least three environments that shall be deployed independently and automatically when a piece of code is merged into a specific git branch.

The usually essential environments are:

- 1. **testing environment**: used by software developers, internal quality assurance;
- 2. **staging environment**: used by stakeholders to test unreleased features;
- 3. **production environment**: used by end-users.

The deployment to the testing environment is done once a feature is developed, reviewed, and ready for testing.

Once the platform is tested, the results will be widespread using capacity-building activities, dissemination and communication activities, and policy workshops.

Chapter 5. Conclusion

In such competitive environments of the tech world, it's essential to learn as much as possible from other companies' wisdom as well. Some things, like the market-validation first approach, feel natural now, yet, before this agile methodology started gaining more and more momentum, the old paradigm that user-tested at the end, wasn't even questioned.

It's 2022. Things need to change. Entrepreneurs can stand by each other and create a sustainable, supportive ecosystem of growing companies that not only have the power to better the world around them but actually take suitable actions for that to happen.

Linnify truly stands by bold innovators who dare to change the way people experience life. And it's through technology that we will make the most out of the potential of any idea. Thus, may this whitepaper be your guide to creating daring products in a smart way that takes into account all the aspects of solid construction that will scale and last.

Until next time, take wise risks, and grow consistently.



Chapter 6. Further readings



11 reasons why Quibi crashed and burned in less than a year

406 startup failure post-mortems

Cash Flow: The Reason 82% of Small Businesses Fail

<u>Crowdfunding disaster Coolest Cooler is shutting down and blaming tariffs for its</u> downfall

Kids' Clothing Startup Mac & Mia Shuts Down

Serverly Case Study

Startup Cemetery

Start-Ups That Last

Small Business Administration (SBA)

Store stats 2022

<u>The Birchbox Business Model – How Does Birchbox Make Money?</u>

The top 12 reasons startups fail, CBInsights

Understanding Early Adopters and Customer Adoption Patterns

What do entrepreneurs overlook about MVPs

What Percentage of Startups Fail?

Wow Air, an Icelandic Budget Airline, Suspends Service

U.S. Small Business Economic Profile

The Curse of Innovation: A Theory of Why Innovative New Products Fail in the Marketplace by John T. Gourville, Harvard Business School, 2005

Chapter 7. Authors



Cătălin Briciu is one of the Co-Founders of Linnify, and other multiple startups with the purpose of making life better and simpler. With a background in Law and Economics and an interest in Business and Technology, he is the binding element between Linnify and the market, clients, and partners. He is also the host of a brand-new podcast about innovation and technology, called 'A day in the future'.

Cătălin is constantly on a mission to help others bring value to the world in their unique manner, as he is a strong believer in people's ability to reach their full potential only provided that their authentic creativity has space to evolve and transform into something bigger and better.



Andreea Ghic is the Head of Product Management department at Linnify. She brings more than six years of experience in the startup ecosystem. Andreea has a clear, logical mind with a practical approach to problem-solving and a drive to see things through to completion. She enabled the chance to fine-tune ideas and turn them into working prototypes by managing a national pre-acceleration program.

She successfully managed the decision-making process in product building prioritization, while always maintaining a genuine customer-centric mindset. Andreea is fueled by creativity and brave ideas and always knows where the limits are - which are sometimes higher than the rest of us predict. Andreea is a true believer that innovation can make a difference in our lives.

About Linnify

Linnify helps **bold innovators** change the way people experience life. Simplifying life through innovation is our thing. And we do that by using a dynamic **validation-driven process** that is smartly adapted to the market needs.

We have been constantly expanding our perspectives and expertise to stay committed to your success every step of the journey. We are dedicated to understanding your vision, whether you're in an exploration phase or have already started building your business idea. By building a common vision we become able to offer tailored expertise for your specific business needs.

We are simplifying life through innovation.

Follow us on LinkedIn

Visit our website

Contact us: contact@linnify.com

Editors: Andra Farcău, Teodora Istrati,

Patricia Zavacky

Design: Mihai Radu, Bogdan Botaș

Copyright @ 2022, Linnify, Măcinului 34, Cluj-Napoca, Cluj, 400475, România

