From Idea -> Validation in 8 Steps

A Scientific Founder's Guide to Startup Ideation

UNDERSTAND

Intro & Motivation Check

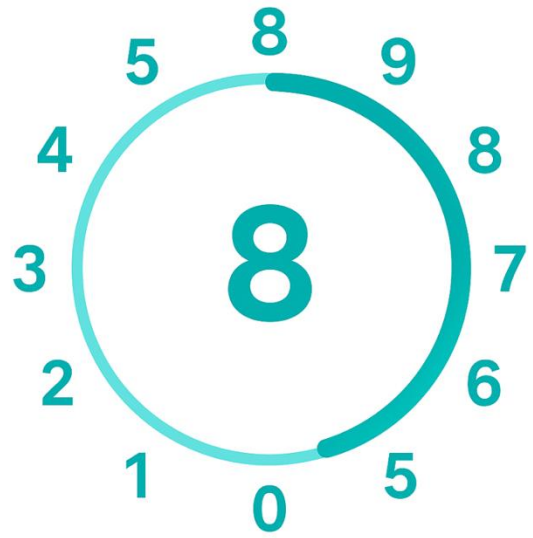
Clarify your personal motivation and ensure you're ready to embark on the startup journe

Why Motivation Matters

Starting a venture is exciting but challenging – knowing why you want to do it will fuel you through ups and downs. Take a moment to reflect on your motivation:
Are you driven by solving a particular problem, by making an impact in your field, by personal passion or curiosity?

Reflect On:

- [ ] Your personal motivations (2-3)
- [ ] Your commitment level (1-10)
- [ ] Your "North Star" mission statement



Rate your commitment level (1-10)

Field Insight

"The idea came out of my PhD research... There was not really an industry yet, but the idea was there, and it was a very logical step to think about it."

– Auxivo founder

Pro Tip

Find your "North Star". Write a one-sentence mission statement for yourself: "I am starting this venture because _____." Keep it somewhere visible.

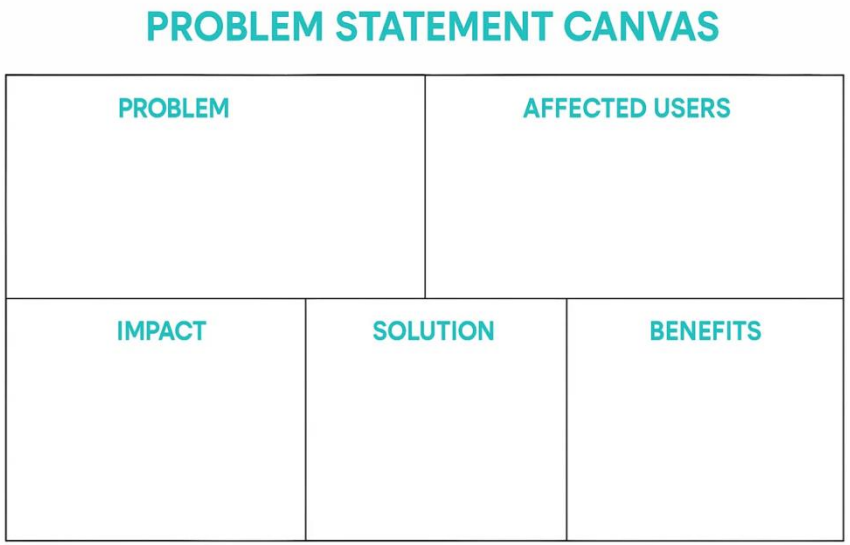
Problem Understanding

Clearly define the problem you want to tackle – who has it, what exactly it is, and why it truly matters.

Problem Statement Canvas

Great startups solve real, significant problems. Before jumping to solutions, let's deeply understand the problem space:

- **Who** experiences the problem?
- **What** is the problem or need?
- **Why** is it important?
- **Existing Solutions** : How do people address this today?
- **Opportunity** : What benefit would solving this create?



Explain the problem as if talking to a friend outside your field

Field Insight

"Try to understand what the problem is and don't do this on paper. Go down and talk to them. Ask what the pain points are..." – Auxivo founder

Pro Tip

Frame the problem from the user's perspective: "[Target user] needs a way to [solve X] because [insight about why it's hard/important]."

IDEATE

Explore trends and generate innovative solutions

Trend & Inspiration Scan

Expand your horizon – research trends, technologies, and inspirations in your domain to spark innovative ideas.

Inspiration Scanning

Now that you have a problem area in mind, let's get inspired by the world around you! Great ideas often emerge from connecting dots between emerging trends and unmet needs. In this section, you will do a quick "inspiration scan":

1. **Research trends:** What's changing in your field or in society that relates to your problem? Consider technology trends, social trends, or economic/policy changes.
2. **Inspiration from research:** Look at recent papers, articles, or patents. Has someone tried to tackle a similar issue?
3. **Analogous solutions:** Think of other fields – has a different industry solved a similar problem in a clever way?
4. **Problem scan:** Expand beyond your initial problem. Are there related problems or offshoots that came up in your user conversations?

Field Insight

"The idea came when I was doing literature research. I stumbled across a paper about a new kind of flow battery without a membrane, and I felt like this is probably hard to scale up. There is an intrinsic challenge there which I can solve." – Unbound

Potential founder

Pro Tip

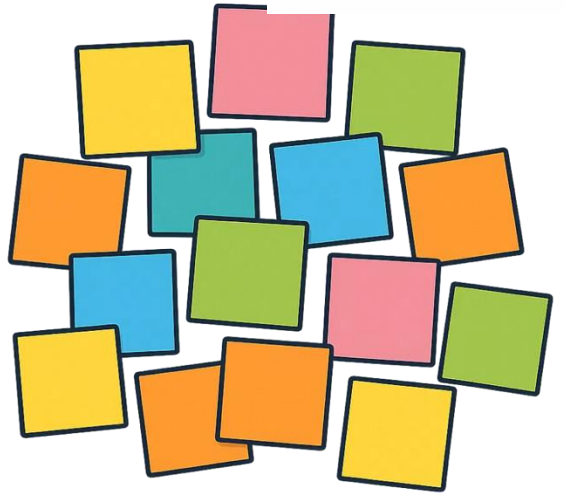
Don't just passively read – actively record your thoughts. For each interesting trend or fact you find, jot a quick note: "This could help with X" or "What if we applied this to Y?". Try a 30-minute inspiration sprint to scour for anything related to your problem.

Idea Generation

Brainstorm as many solution ideas as possible – quantity over quality. Use creative techniques to stretch your thinking.

Brain Dump

Time to unleash your creativity! Generate a wide range of ideas addressing your problem. Don't censor yourself – even wild ideas can lead to genius insights. Aim for at least 10-15 ideas.



SCAMPER Method

Use these prompts to modify or expand ideas:

S **Substitute** What can you swap out?

C **Combine** – Merge ideas or steps?

A **Adapt** – Borrow from elsewhere?

M **Modify** – Change scale or size?

P **Put to another use** – New uses?

E **Eliminate** – What can you remove?

R **Reverse** – Flip roles or sequence?

Field Insight

"At some point you want to go very wide. Exploit different opportunities. Make sure that you do not leave any big opportunity on the table."

– Irmos founder

Pro Tip

Have fun with this! Use sticky notes or a whiteboard. Sometimes a change of medium triggers new ideas.

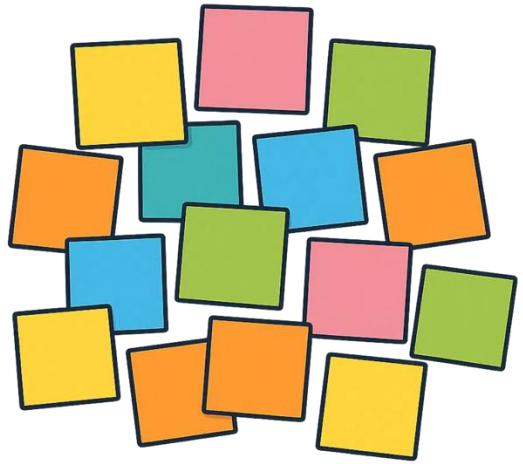
Idea Clustering

Organize your plethora of ideas into meaningful groups and start zeroing in on the most promising directions.

Affinity Mapping Process

After idea generation, bring order to the chaos using Affinity Mapping. This helps you see patterns and identify themes among your ideas.

1. **Lay out all your ideas** - Spread them out on a table or digital board.
2. **Group similar ideas** - Move ideas that feel like they "go together".
3. **Name the clusters** - Give each group a label that captures the theme.
4. **Discuss/Reflect** - Which groups of ideas are you most excited about?
5. **Prioritize** - Circle or star 1–3 most promising clusters or ideas.



Clustering helps reduce idea overload by focusing on themes

Field Insight

"There are phases where you really need to narrow down and focus on what has the biggest potential... Switching from wide to narrow is not so straightforward." – Irmos founder

Pro Tip

As you cluster, you might feel attached to some ideas that aren't making the "top 3". That's okay – park them in an "Idea Parking Lot."

VALIDATE

Test your ideas and refine your concept

Quick Validation

Filter your top ideas through a quick viability test using the NAP-Check framework.

NAP-Check Framework

Before investing serious time into an idea, do a reality check on its fundamentals:

N **Need**
Is there a genuine need? How painful or widespread is it? Would someone be excited by this solution?

A **Approach**
Do you have a feasible and unique approach? What's special about your solution?

P **Potential**
What is the potential impact or market? Would they pay for it or would someone fund it?

Quick Validation Techniques

- **Search:** Do a fast Google search - is someone already doing it?
- **Talk:** Discuss with 2-3 people in your target audience.
- **Test:** Design a tiny experiment to gauge interest.

NAP Scorecard Example

Idea	Need	Approach	Potential
AI Lab Assistant	5	4	4

Field Insight

"We would do focus groups with patients and let them try our prototype... All of this feedback was fed into product development."
– MYNERVA founder

Pro Tip

Use a simple NAP scorecard. Don't be afraid to kill an idea that doesn't pass the test – it's better to find out now than later.

Mini-Concept Refinement

Articulate your chosen idea as a concise concept. Craft a one-line pitch, highlight the key benefits, and identify your unique selling proposition (USP).

Distill Your Idea

Congrats – you've likely identified a front-runner idea! Now let's clearly define it so that others (and you) can easily understand it.

One-Liner Pitch

"We help [target user] [solve X problem] by [your solution] so that [key benefit]."

Key Benefits (2-3)

Specific improvements or outcomes users will get: time saved, money saved, improved accuracy, reduced risk, etc.

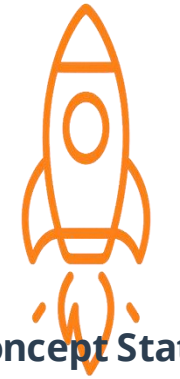
Unique Selling Proposition (USP)

What makes your solution unique or better than anything else out there? Your differentiator or "secret sauce."

Field Insight

"Explain to them how this technology could help them save time, reduce costs, reduce risks... We engage clients from the very beginning to make sure the idea and the communication goes in the right direction."

– Irmos founder



Your Concept Statement

A mini concept statement that anyone can understand immediately

Pro Tip

Once you have a draft one-liner, test it out. Tell it to a classmate or someone unfamiliar with your project. If you see a confused face, refine it. A good one-liner is conversational – avoid heavy technical terms.

COMMIT

Plan your next steps and take action

Next Steps & Commitment

Solidify an action plan for moving forward with your concept and commit to your next steps.

Action Plan

You've come a long way – from exploring your motivation to developing a validated concept. Now it's time to commit to concrete next steps that will move your idea forward.

1. **Prototype:** Create a simple prototype or mockup of your solution (paper, digital, or physical).
2. **Validate:** Talk to 5+ potential users/customers about your concept and gather feedback.
3. **Research:** Identify key technical or market questions you need to answer.
4. **Connect:** Find at least one mentor or advisor with relevant experience.
5. **Timeline:** Set specific dates for completing each of these actions.

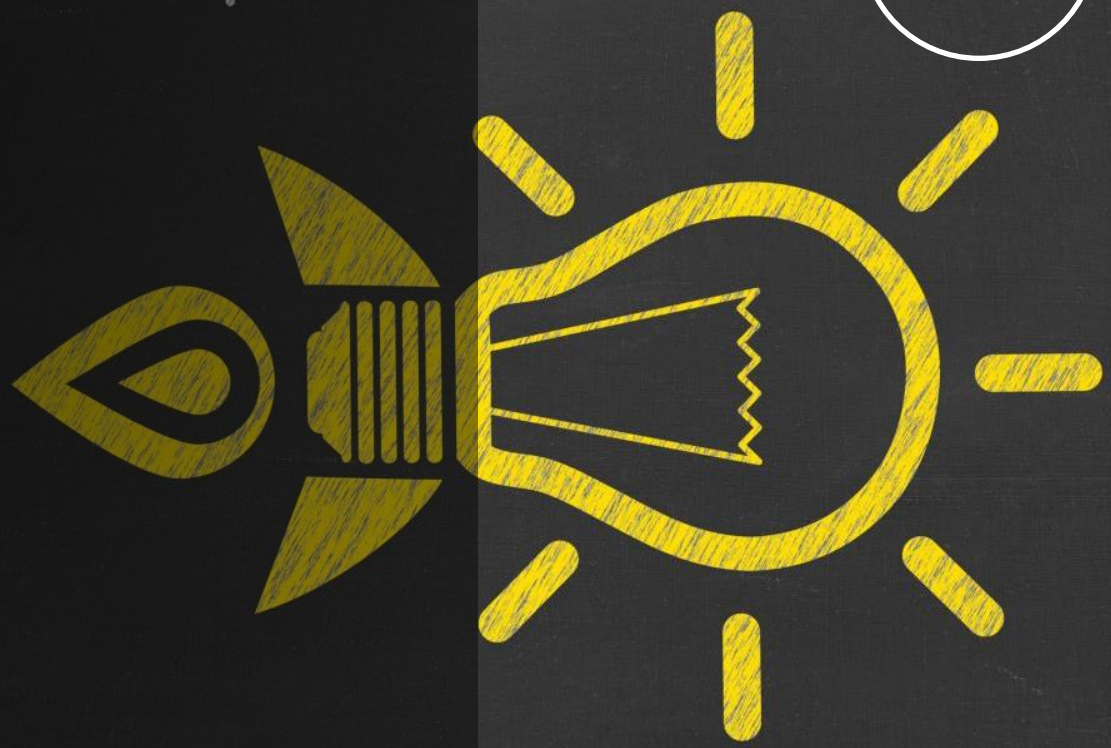
Field Insight

"We had a very clear timeline. We knew we had to deliver a prototype by this date, and we had to have a product by this date. We had a very clear roadmap."
– MYNERVA founder

Pro Tip

Share your commitment with someone else – a friend, classmate, or mentor. Public commitments are more likely to be fulfilled, and external accountability helps maintain momentum.

Let's Bring Your Idea to Life



Your journey from scientific discovery to startup success starts now