Technology Readiness Canvas

What is a technology readiness canvas?

A Technology Readiness Canvas is a tool for founders. It provides them a comprehensive, structured overview to review and reflect on the status of their specific technology. It is by used by founders in deeptech startups, R&D-heavy ventures, and corporate innovation to:

- Document the current state of a given technology
- Demonstrate its readiness level (e.g., using TRL – Technology Readiness Levels)
- Reveal potential blind spots in the development or strategic positioning of the technology
- Identify opportunities for third-party validation, helping to strengthen credibility and guide next steps
- In support investment, partnership, or regulatory decisions

Why is it important?

The Technology Readiness Canvas helps startups and scale-ups to assess the maturity, uniqueness, and scalability of their innovation. By structuring your technological position, it highlights both technical depth and strategic potential. This clarity builds confidence internally and externally. As a result it enables founders to communicate more effectively with partners, advisors and investors.

How to use the technology readiness canvas?

This canvas is a practical tool for mapping your innovation's technical maturity, uniqueness, and scalability. Start by reviewing it with your founding and technology team. Involve commercials teams or other disciplines if needed, and repeat (on a bi-annual basis for example) as you prepare for the next phase of your startup or scale-up. It is designed to sharpen your own understanding as a founder and identify white spots. Once completely reviewed, consider how the insights gained can strengthen your pitch deck or investor materials. For example:

- Integrate key points into your pitch to convince potential investors or financial partners.
- Prepare supporting technical documentation for your data room.

Use the color-coded stages to guide your review. Focus on the sections that are most relevant to you in the phase you are in.

Technology Validation

Market Fit & Initial Scaling

Scalability & Ecosystem

After completing the canvas

After having completed the your teams reflection on the topics in the Technology Readiness Canvas, you should have gained a better shared insight on your technology's current state, have identified gaps, and aligned on your next steps. Use insights to integrate parts of the canvas in your pitch deck or other formal communication to add clarity and build confidence during fundraising/partnership discussions.

Disclaimer: intended use and limitations

The Technology Readiness Canvas is a strategic support tool for founders. It is not a substitute for technical due diligence, legal advice, or investment documentation. Its purpose is to facilitate structured reflection and support communication between founders, advisors and investors and last, to provide a consistent framework for review your technological maturity.

Every venture is unique. Some topics may need attention earlier than others; adapt the canvas to fit your situation. It does not guarantee funding outcomes, nor prescribe a one-size-fits-all path. Use it as a guide towards working where you want to go, not a rulebook.

In search of third party validation?

TNO Fast Track is the independent technology partner for startups, scale-ups and innovative SMEs. Scan the QR code to start the conversation.

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Technology Validation

Technology

Core description
Unique Mechanism
Problem Solved
TRL
Team

Unicity & IP-position

IP & Know-how
Protection Strength

Feasibility & Roadmap

Next Steps On Your Roadmap
Risks & Bottlenecks
Demonstrator & Results

Milestones | Prototype, first pilot, basic patents, market readiness level 1-3

Problem/Solution Fit and Initial Scaling

Market Context & Fit

Validation Evidence
Market & Application Fit
Promising Categories
Research & Insights

Differentiation & Competitive Edge

Competitors
Differentiations
Business Model
MRL

Feasibility & Roadmap

Critical Resources
Availability at Start
Funding & Investment

Milestones | Proven problem/solution fit, launching clients identified, market readiness level 4-5

Scalability & Ecosystem

Ecosystem & Partnerships

Collaborations
Network(s)

Security Claims & Standards

Certifications
Validations

Feasibility & Roadmap

Availability at Scale
Funding & Investment

Milestones | International certification, > 50 clients, market readiness level 6-7

Technology Readiness Canvas

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Technology Validation

Technology

Core description
Describe the core functionality and principle of the technology. Use visuals to explain.
Unique Mechanism
What is the unique, innovative mechanism the technology is based on (compared to conventional technologies)? Use technical documentation if needed.
Problem Solved
What problem does your technology solve, how is addressed and how is is validated it?
TRL
How would describe your current Technology Readiness Level (TRL) and why?
Competences & Experience
Explain why your team has the required technological competences and experience with comparable technologies to deliver? Does the team fit the current phase of the company, and how is your hiring plan structured?

Unicity & IP-position

IP & Know-how
Do you hold any IP (such as patents or propriety know-how) and are you aware of any competing patents?
Protection Strength
How strong is your protection? (In terms of patent families, priority date, geographic coverage)
Infringements
What is the risk of potential infringement?

Feasibility & Roadmap

Next Steps On Your Roadmap
Where do you stand now and what are the next steps on your roadmap? Does your technology align with future rules & regulation? How does your technology fit in the bigger picture of the technology landscape?
Risks & Bottlenecks
How do you navigate between technological risks and engineering risks? Which still need to be addressed and how do you intend to approach that? What development bottlenecks do you foresee?
Demonstrator & Results
Describe to what extent your solution has been demonstrated? Under what conditions and at what scale? Do you have reproducible technical results?

Milestones | Prototype, first pilot, basic patents, market readiness level 1-3

Problem/Solution Fit and Initial Scaling

Market Context & Fit

Validation Evidence
What evidence can you share that signals pilot-intention, co-development or other reference conversations from potential end-users of your technology?
Market & Application Fit
Which markets or applications are most relevant for this technology, where do you see your product market fit and/or 'willingness to pay'?
High Potential Technology Domains
What areas of technological innovation are likely to deliver transformative outcomes in your industry?
Research & Insights
What relevant research or market insights exist, and what are your key conclusions so far?

Differentiation & Competitive Edge

Competitors
Who are the main competitors, and how does your maturity level compare?
Differentiations
What are your key advantages in cost, scalability, integration complexity or other factors?
Business Model
What licensing, pricing, or go-to-market approach are you pursuing?
Market Readiness Level
What is your current Market Readiness Level (MRL)?
Manufacturing Readiness Level
Describe the steps you have taken to prepare for manufacturing.

Feasibility & Roadmap

Critical Resources
Which materials, components, infrastructure or external processes are critical?
Availability at Start
To what extent are these critical resources readily available at start? What makes it possible to move from lab/pilot phase to industrial scale?
Funding & Investment
What is your current funding status and burn rate? And what budget is allocated and needed to advance your R&D roadmap?

Milestones | Proven problem/solution fit, launching clients identified, Market Readiness Level 4-5

Scaleability & Ecosystem

Ecosystem & Partnerships

Collaborations
Which technology partners, operational partners, industry clients and ecosystem players do you collaborate with?
Network(s)
How does your network strengthen tech development and future market access?

Security Claims & Standards

Certifications
What are typical security claims or certifications that are required to operate?
Validations
What public certifications or third party validations should be applied to your solutions?

Feasibility & Roadmap

Availability at Scale
To what extent are these critical resources readily available when scaling?
Funding & Investment
What is your current funding status? And what budget is allocated and needed to advance your R&D roadmap?

Milestones | International certification, > 50 clients, Market Readiness Level 6-7