



TRANSITIONS LAB • READINESS FRAMEWORKS

Societal Readiness Levels

The social counterpart to TRL: how ready society is to adopt an innovation, and why it decides success as often as the technology.

[START HERE](#)

How to use this resource

This resource explains Societal Readiness Levels (SRL), the counterpart to the better-known Technology Readiness Levels. Where TRL measures whether a technology works, SRL measures whether society is ready to adopt, trust, and benefit from it, the axis that most often decides real-world success. It is the framework closest to the heart of the Lab's work.

What this is

A working reference, not a marketing brochure. Read it in order, or jump to the section you need using the contents opposite.

Who it is for

Innovators and funders who use TRL and sense it misses something, programme designers who need to assess social readiness, and anyone building a technology whose success depends on adoption rather than performance alone.

How to get value from it

- 01** See why TRL is not enough
Sections 1 and 3 show the gap TRL leaves, and why a technically finished product can still fail on contact with society.
- 02** Learn the SRL scale
Section 2 gives the nine levels of societal readiness, from identifying the problem to proven adoption in context.
- 03** Learn the dimensions
Section 5 breaks societal readiness into six dimensions you can assess separately, which is where the framework becomes usable.
- 04** Study the worked cases
Section 6 applies SRL to two real scenarios, so the dimensions become concrete.

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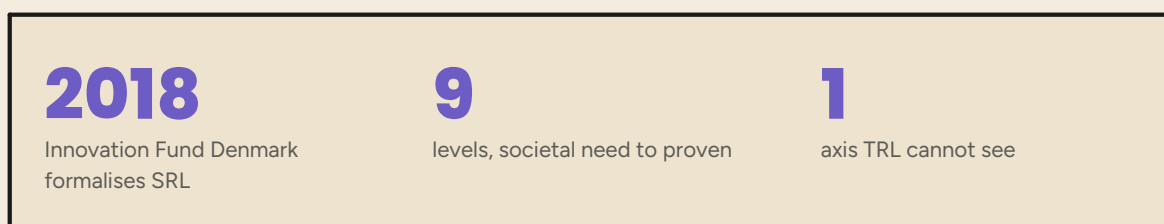
The axis the Lab measures, and references.

READINESS FRAMEWORKS

The readiness that technology alone cannot reach

A technology can be flawless and still fail: rejected by users, blocked by regulators, mistrusted by the community it was built for. Societal Readiness Levels measure the dimension that decides this, how ready society actually is to adopt and benefit from an innovation.

Technology Readiness Levels transformed how we track technical maturity, but they were never designed to answer the question that most often determines real-world success: is society ready for this? SRL answers exactly that. Where TRL asks whether a technology works, SRL asks whether it is wanted, trusted, governable, and beneficial in the social context it enters.



ORIGINS

From a Danish funding scale to a research field

The Societal Readiness Level concept emerged from debates about how to steer transitions, notably toward low-carbon futures, and from Innovation Fund Denmark's search for a way to assess how ready society is to adopt an innovation. The Fund formalised a nine-level SRL scale in 2018 and began asking applicants to assess it alongside TRL (Innovation Fund Denmark, 2018).

From that practical origin, SRL grew into a research field. Bruno and colleagues (2020) proposed extending the TRL logic into parallel scales for legal, organisational, and societal readiness. Bernstein and colleagues (2022) developed the Societal Readiness Thinking Tool, embedding SRL within Responsible Research and Innovation and identifying ethics as a core dimension. More recent work proposes sociotechnical readiness frameworks that treat social and technical readiness as fundamentally inseparable and centre equity and justice at every level (Verma & Allen, 2024).

KEY POINT

A different starting point

TRL starts inside the technology and asks how mature it is. SRL starts outside, with a societal need, and asks whether an innovation genuinely meets it. Unlike TRL, the initial idea does not spring from within, but is identified as something that matters to external stakeholders. This inversion is the whole point.

THE NINE LEVELS

The SRL scale, level by level

Mirroring TRL's nine points, the SRL scale runs from first identification of a societal need to an innovation proven in society. The wording follows the Innovation Fund Denmark scale. Levels 1 to 3 identify the need and stakeholders; 4 to 6 test the solution in real context with those stakeholders; 7 to 9 refine, deploy, and prove societal adoption.

SRL	What it means
1	Identifying a societal problem or a societal readiness challenge to be addressed.
2	Formulating the problem and identifying relevant stakeholders for the proposed solution.
3	Initial testing of the proposed solution together with relevant stakeholders.
4	Problem validated through pilot testing in the relevant context to substantiate proposed impact.
5	Proposed solution validated in the relevant context and in co-operation with stakeholders.
6	Solution demonstrated in the relevant context, with stakeholders, keeping focus on impact.
7	Refinement of project and/or solution, and, if needed, retesting in the relevant environment.
8	Proposed solution complete and qualified; societal adaptation demonstrated.
9	Actual project or solution proven; societal readiness achieved in the relevant environment.

The lower a solution's societal readiness, the more deliberate the plan for transition must be. That principle, from the original scale, captures the framework's purpose: to make the social work of a transition explicit and plannable, rather than left to chance.

TRL AND SRL TOGETHER

Two axes, read as one

SRL is not a replacement for TRL. It is the second axis of a complete readiness picture. Reading them together is what prevents the classic failure: a technically finished product that society will not accept.

	TRL	SRL
Question	Does the technology work?	Is society ready to adopt and benefit?
Starts from	The technology, from within	A societal need, from outside
Measures	Technical maturity	Social, ethical, legal, institutional readiness
Evidence	Lab and field testing	Stakeholder engagement, context testing
Blind spot	Trust, equity, acceptance	Technical feasibility
Origin	NASA, 1974 / 1995	Innovation Fund Denmark, 2018

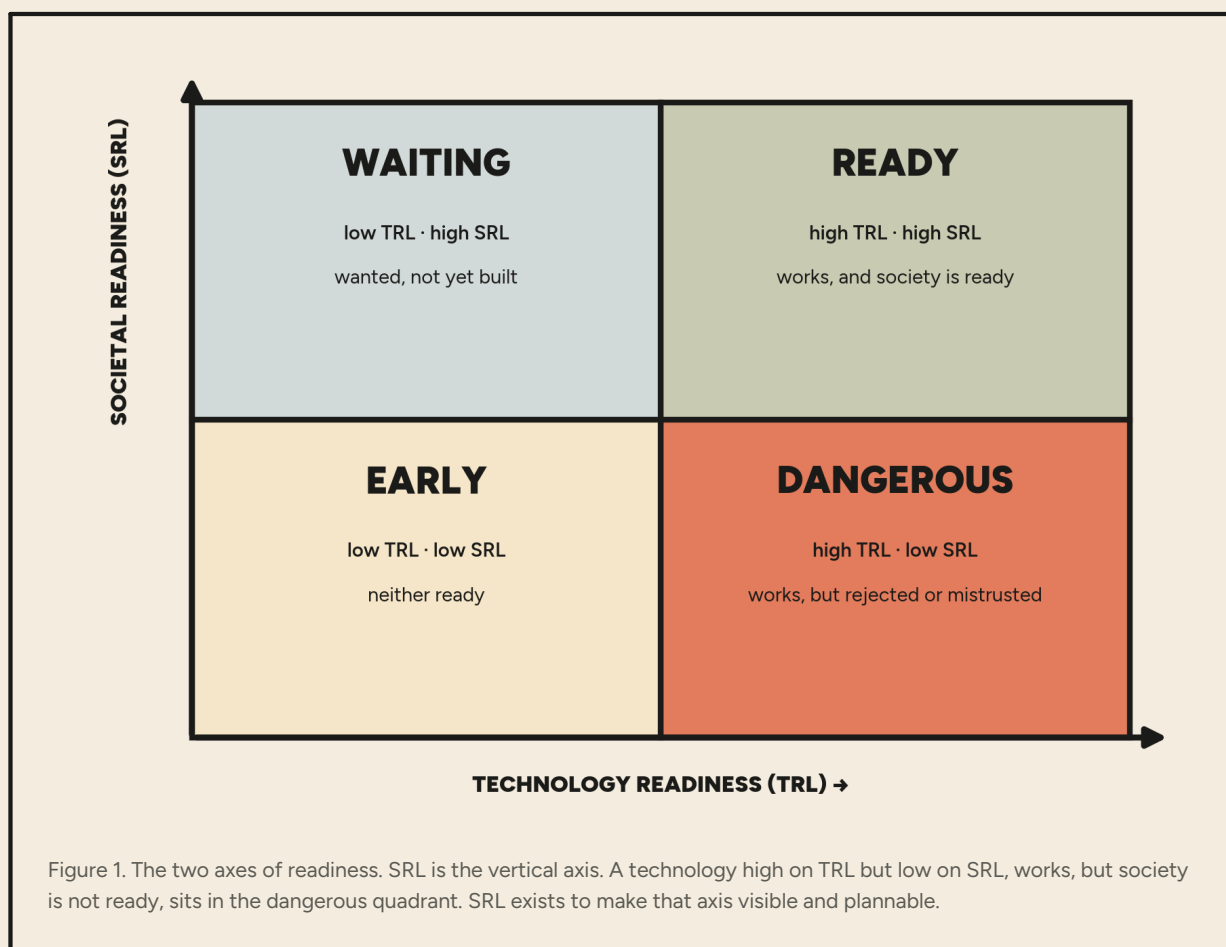
The dangerous quadrant

High TRL, low SRL: a technology proven to work that society is not ready to accept.

This is where expensive failures cluster, contested infrastructure, mistrusted digital systems, and where TRL alone gives false confidence.

The wasteful quadrant

Low TRL, high SRL: strong societal appetite with no working technology yet. Less dangerous, but a signal to invest in the technical axis before the window of social readiness closes.



WHAT SRL ACTUALLY MEASURES

The dimensions of societal readiness

A single SRL number is a summary of several distinct judgements. Societal readiness is not one thing, it is a bundle of dimensions, and a serious assessment scores each one rather than collapsing them into a vague impression. The Lab reads societal readiness across six dimensions.

Dimension	The question it asks
Problem fit	Does the innovation address a real, felt need, as the affected people themselves define it?
Ethical acceptability	Is it consistent with the values, norms, and rights of the community it enters?
Trust and legitimacy	Do people trust the technology, and the actors behind it, enough to rely on it?
Institutional and regulatory fit	Do laws, regulators, markets, and institutions permit and support it?
Adoption and usability	Can people actually access, afford, and use it in their real conditions?
Equity and distribution	Who benefits, and who is excluded or harmed? Does it widen or narrow existing gaps?

The lowest dimension tends to set the ceiling. An innovation can be technically proven, ethically sound, and legally permitted, and still fail because one dimension, trust, or affordability, is far behind the others. Scoring them separately is what reveals the binding constraint.

TWO WORKED CASES

Societal readiness in practice

The dimensions are easiest to understand through real patterns. Two contrasting cases show how a high-TRL technology can sit at very different points on the societal axis.

WORKED
EXAMPLE

Electric two-wheelers in an East African city

The situation. The vehicle is technically mature (high TRL). Commercially, the question is whether riders adopt it.

Problem fit, high. Fuel and maintenance are a rider's largest costs; an electric option speaks to a real, felt need.

Trust, initially low. Riders doubt battery life and resale value, and the charging network is unproven. This dimension, not the technology, governs early adoption.

Institutional fit, mixed. Financing and import rules can help or block, independent of how good the vehicle is.

The reading. High TRL, moderate SRL held back by trust and institutional dimensions. The Lab's fieldwork locates the binding constraint, and shows that demonstration and financing, not a better vehicle, move the SRL score.

WORKED
EXAMPLE

A digital welfare or health system in a low-trust setting

The situation. The software works reliably (high TRL). Whether it is societally ready is a separate question entirely.

Ethical acceptability, contested. Data collection touches privacy and surveillance concerns that the technology cannot resolve on its own.

Trust and legitimacy, low. If people do not trust the institution deploying it, they withhold data or avoid the system, and it fails in use.

Equity, at risk. Those without smartphones or literacy can be excluded by the very system meant to serve them.

The reading. A dangerous-quadrant case: high TRL, low SRL. Deploying on technical readiness alone risks an expensive, legitimacy-damaging failure. The societal axis is where the real work is.

WHY SRL IS CENTRAL TO THE LAB

The Lab measures the axis TRL cannot see

Societal readiness is, in effect, a formal name for what the Lab has always studied: whether a technology is trusted, adopted, governable, and beneficial in the real lives of the people it reaches. SRL gives that work a shared vocabulary and a scale.

But SRL is only as good as the evidence behind each level, and that evidence is precisely what a scale cannot supply on its own. Deciding whether a solution has genuinely reached, say, SRL 5, validated in the relevant context in co-operation with stakeholders, is a fieldwork judgement. It requires reaching the stakeholders, hearing what they actually experience, and reading who is included and who is left out. That is the Lab's core competence.

KEY POINT**How the Lab uses SRL**

We use SRL as the social axis alongside TRL's technical one, and we generate the evidence that lets a readiness claim be made honestly. Our field research, read across reach, depth, and experience, is what turns an SRL level from an assertion into a substantiated judgement. In short: SRL names the axis; the Lab measures it.

Most assessment starts from the technology and treats society as an afterthought. We start from the societal axis, because a socio-technical question is a human question first.

SOCIAL READINESS LEVELS

WORKING WITH TRANSITIONS LAB

From scale to substantiated judgement

This guide explains what societal readiness means and how the scale works. Deciding, with evidence, where a real innovation sits on it is what an engagement adds.

IN THIS FREE RESOURCE	IN AN ENGAGEMENT, WE GO FURTHER
The nine SRL levels and their origins, explained.	› A substantiated SRL judgement for your innovation, grounded in stakeholder fieldwork.
The TRL and SRL comparison.	› Both axes assessed together, so a high-TRL, low-SRL risk is caught early.
The dangerous and wasteful quadrants, described.	› Where your innovation actually sits, and what would move it toward readiness.
The reference list, for further reading.	› The primary evidence, reaching who is included and who is left out, that a scale alone cannot supply.

The scale names the axis; an engagement is where the Lab measures it, turning an SRL level from an assertion into a substantiated judgement.

If a decision in your work turns on evidence of what a technology or programme actually does to real people, we are glad to talk it through, with no obligation. transitionslab.org

REFERENCES

Sources

Societal Readiness Levels are a younger and more contested idea than their technical counterpart, developed largely in European research-policy circles over the past decade. The sources below trace the concept from its origin at Innovation Fund Denmark to its later elaboration into practical assessment tools.

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KEY POINT

Read alongside

SRL is the social counterpart to the better-known Technology Readiness Levels. The two are best read together, and the Lab's companion TRL guide sets out the technical axis in full. A technology's real readiness is a position on both, not a single number on either.

Published openly by Transitions Lab; may be used and cited with attribution. See the companion guide, *Technology Readiness Levels*. transitionslab.org