

### Societal Readiness Levels (SRL) defined according to Innovation Fund Denmark

Societal Readiness Level (SRL) is a way of assessing the level of societal adaptation of, for instance, a particular social project, a technology, a product, a process, an intervention, or an innovation (whether social or technical) to be integrated into society. If the societal readiness for the social or technical solution is expected to be low, suggestions for a realistic transition towards societal adaptation are required. Naturally, the lower the societal adaptation is, the better the plan for transition must be. SRL 1 is the lowest and SRL 9 is the highest level.

#### Levels

- SRL 1 identifying problem and identifying societal readiness
- SRL 2 formulation of problem, proposed solution(s) and potential impact, expected societal readiness; identifying relevant stakeholders for the project.
- SRL 3 initial testing of proposed solution(s) together with relevant stakeholders
- SRL 4 problem validated through pilot testing in relevant environment to substantiate proposed impact and societal readiness
- SRL 5 proposed solution(s) validated, now by relevant stakeholders in the area
- SRL 6 solution(s) demonstrated in relevant environment and in co-operation with relevant stakeholders to gain initial feedback on potential impact
- SRL 7 refinement of project and/or solution and, if needed, retesting in relevant environment with relevant stakeholders
- SRL 8 proposed solution(s) as well as a plan for societal adaptation complete and qualified
- SRL 9 actual project solution(s) proven in relevant environment
- Stages SRL 1-3 reflect the early work in a research project, including suggesting and testing on a preliminary basis a technical and/or social solution to a technical or a societal problem. Here reflections about the general societal readiness towards the idea and its proposed solution(s) are required, including identifying relevant stakeholders and how to include them (such as end users, the right communities, etc.).
- **Stages SRL 4-6** represent the actual solution(s), the research hypothesis, and testing it/them in the relevant context in co-operation with relevant stakeholders, while keeping a focus on impact and society's readiness for the product. In these stages expectations on the societal adaptation must be described in specific terms and, to the extent possible, be part of the test phase.
- Stages SRL 7-9 include the end stages of the research project, including refining the solution(s), implementation and dissemination of results and/or solution(s). Here the plan for addressing the societal readiness on a practical level to gain impact, creating awareness, disseminating results, etc., will be carried out.

## What is Societal readiness?

- Innovation Fund Denmark: Societal Readiness Levels (SRL)
- SRL is a way of assessing the level of societal adaptation of, for instance, a particular social project, a technology, a product, a process, an intervention, or an innovation to be integrated into society
- If the societal readiness for the social or technical solution is expected to be low, suggestions for a realistic transition towards societal adaptation are required
- SRL is still not a broadly recognised concept, and it was difficult for interviewees to assess projects according to this scale. We applied SRL assessment only on the case studies
- Technology Readiness Levels (TRL) are used to assess the maturity level of a particular technology. SRL mirrors TRL

# Technology Readiness Levels (TRL)

TRL level	Definition
TRL 1	Basic principles observed
TRL 2	Technology concept formulated
TRL 3	Experimental proof of concept
TRL 4	Technology validated in lab
TRL 5	Technology validated in relevant environment
TRL 6	Technology demonstrated in relevant environment
TRL 7	System prototype demonstration in operational environment
TRL 8	System complete and qualified
TRL 9	Actual system proven in operational environment

## Societal Readiness Levels (SRL)

SRL level	Definition
SRL 1	Identifying problem and identifying societal readiness
SRL 2	Formulation of problem, proposed solution(s) and potential impact, expected societal readiness; identifying relevant stakeholders for the project
SRL 3	Initial testing of proposed solution(s) together with relevant stakeholders
SRL 4	Problem validated through pilot testing in relevant environment to substantiate proposed impact and societal readiness
SRL 5	Proposed solution(s) validated, now by relevant stakeholders in the area
SRL 6	Solution(s) demonstrated in relevant environment and in cooperation with relevant stakeholders to gain initial feedback on potential impact
SRL 7	Refinement of project and/or solution and, if needed, retesting in relevant environment with relevant stakeholders
SRL 8	Proposed solution(s) as well as a plan for societal adaptation complete and qualified
of 13 9	Actual project solution(s) proven in relevant environment

### From TRL to SRL

TRL (Technology Readiness Level) TRL 1 (basic research) up to TRL 9 (sales and use by the customer).

There are many non-technological i.e. human factors which need to be considered before it can be said that an innovation can create impact.

**SRL (Societal Readiness Level):** level of knowledge about the stakeholders' interests and concerns as well as to what extent the product/service impacts on society (from the recognition up to the involvement of the stakeholders)

### If the SRL lags behind the TRL, the innovation will not get off the ground.

#### **Technology Readiness Levels** Societal Readiness Levels TRL 9 - successful user deployment in real life SRL 9 - successful deployment in real stakeholder context TRL9 TRL 8 - final user testing in real life (check TRL 1) TRL8 SRL 8 - final testing in real stakeholder context (check SRL 1) TRL7 TRL 7 - demonstrated in operational user environment SRL 7 – demonstrated in operational stakeholder context SRL 6 -demonstrated in simulated stakeholder context TRL6 TRL 6 - demonstrated in simulated user environment TRL5 SRL 5 - validated in simulated stakeholder context. TRL 5 - validated in simulated user environment SRL 4 - stakeholder context validated TRL4 TRL 4 - validated in lab TRL3 TRL 3 - experimental proof of concept SRL 3 - stakeholder context proof of concept SRL 2 -- proposed solution in stakeholder context TRL2 TRL 2 - technology concept SRL 1 - societal problem in stakeholder context TRL1 TRL 1 - basic principles

Social innovation. The potential for technology development, RTOs and industry.

Policy paper. Fraunhofer IAO. RTO Innovation Summit, Brussels, Belgium, November 2018