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BRIDGING THE GAP FOR INNOVATIONS
IN DISASTER RESILIENCE

TEST AND IMPLEMENTATION FRAMEWORK

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OVERVIEW

“A comprehensive, standardised methodology for testing and implementing climate adaptation measures, in particular to assess their potential to reduce risks from floods, droughts and extreme weather. **The methodology enables innovators to assess the socio-technical effectiveness of their innovations on various geographical scales and in various sectors**. The ambition is that the framework becomes the European quality label for climate adaptation measures”

METHOD

- Societal, technical and impact assessment
- Detailed background on theory and method

TOOLKIT

- Simplified questions to evaluate performance
- Measured performance overall and by issue

GUIDANCE

- Guide to interpret the assessment results
- Advice on testing and attending to concerns

STAGE-GATES

The toolkit is designed to help innovators identify possible societal, technical, environmental and sectoral concerns that their innovations may raise early on – and iteratively throughout the development – so that they may modify their designs and not become locked into those that are less likely to appeal to end users. **It should be applied at three 'soft' stage-gates – critical points in development at which innovators should pause to identify and address concerns**.

GATE 1

Apply the toolkit prior to validation in a laboratory setting

GATE 2

Apply the toolkit prior to testing in an operational setting

GATE 3

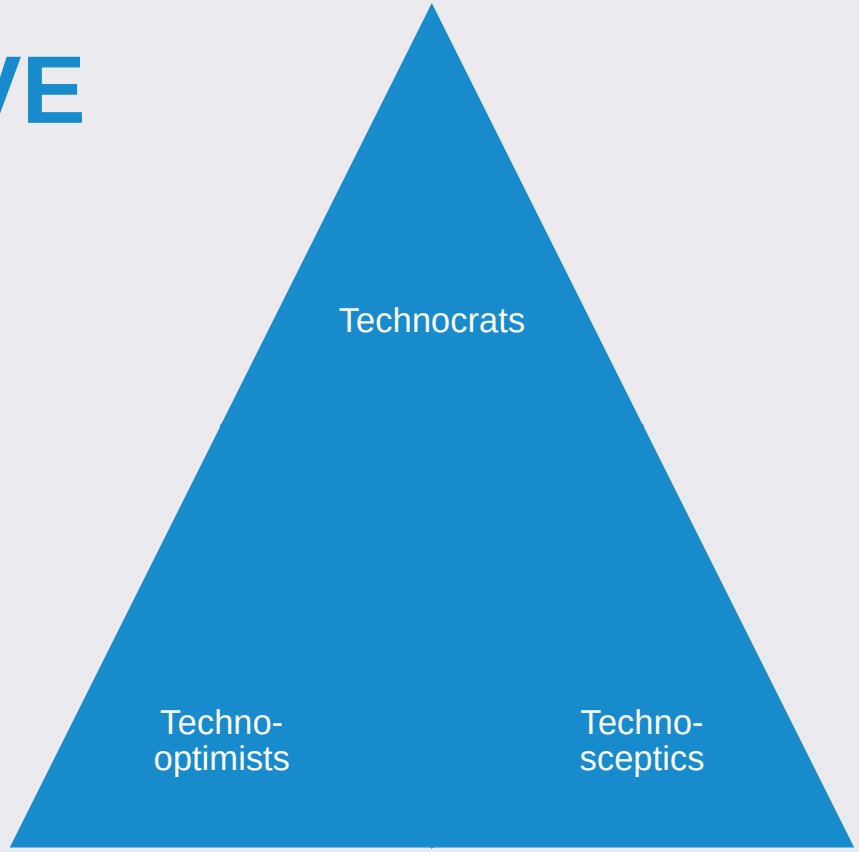
Apply the toolkit prior to deployment in the real world

SOCIETAL ASSESSMENT

- Questions to reveal likely areas of societal acceptance and rejection
- **Psychological concerns**: to evaluate dread, uncertainty and social stigma
- **Inflexibility concerns**: to evaluate technical and organisational flexibility
- **Usability concerns**: to evaluate perceived usefulness and ease of use
- **Responsibility concerns**: to evaluate how ‘responsible’ research and development is

WE ARE TECHNO-SELECTIVE

- **Cultural concerns**: to evaluate acceptability with different institutional cultures
- The technophilic-technophobic dichotomy is too simplistic. People are techno-selective.
- Innovators must match technology characteristics with implementation contexts



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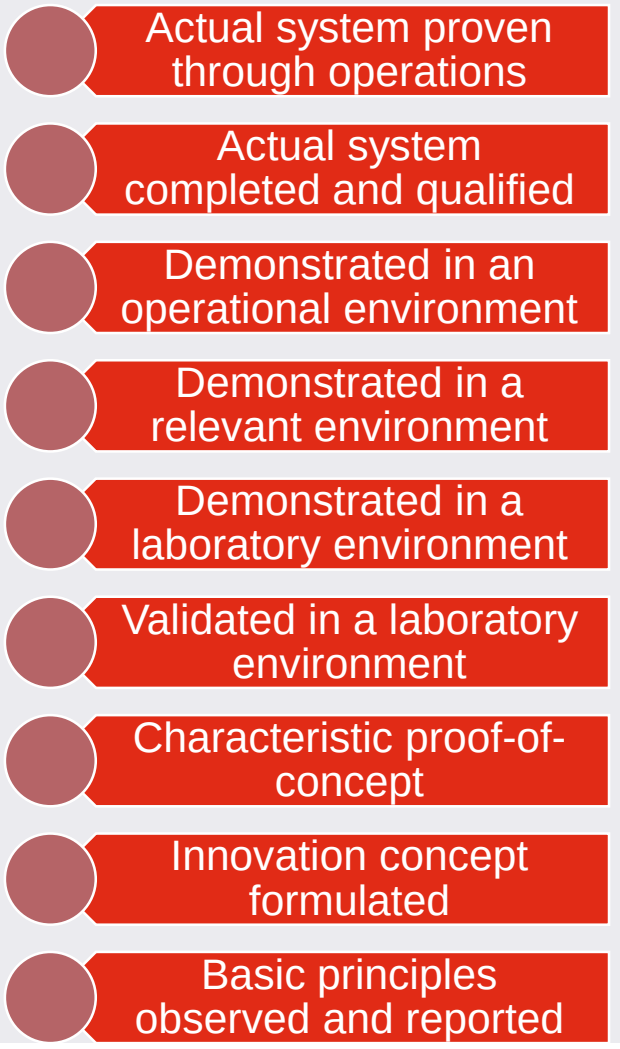
TECHNICAL ASSESSMENT

- Questions to reveal likely areas of technical success and failure
- **Effectiveness**: to evaluate the intended technical functionality of the innovation
- **Durability**: to evaluate the permanency of the operation of the innovation
- **Reliability**: to evaluate the fulfilment of functionality over intended lifespan
- **Exploitability**: to evaluate the capacity to be sold and deployed in other locations

TECHNICAL READINESS

- Technical Readiness Level scale and ‘checklist’ to guide innovators through research and development
- Stage 1: **Laboratory testing** (TRL4-5)
- Stage 2: **Operational testing** (TRL6-8)



IMPACT ASSESSMENT

- Questions to reveal likely areas of environmental harms and benefits
- **Innovation footprint**: to evaluate areal, carbon, resource and service impacts
- **Environmental impacts**: to evaluate impacts on quality of water, soil and air
- **Ecological impacts**: to evaluate conservation of biodiversity and restoration of nature

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SECTORAL IMPACTS

- Questions to reveal likely areas of sectoral harms and benefits
- **Agricultural impacts**, e.g. soil quality
- **Energy impacts**, e.g. energy generation
- **Forestry impacts**, e.g. wood production
- **Health impacts**, e.g. use of chemicals
- **Infrastructure impacts**, e.g. urban areas
- **Tourism impacts**, e.g. attractiveness

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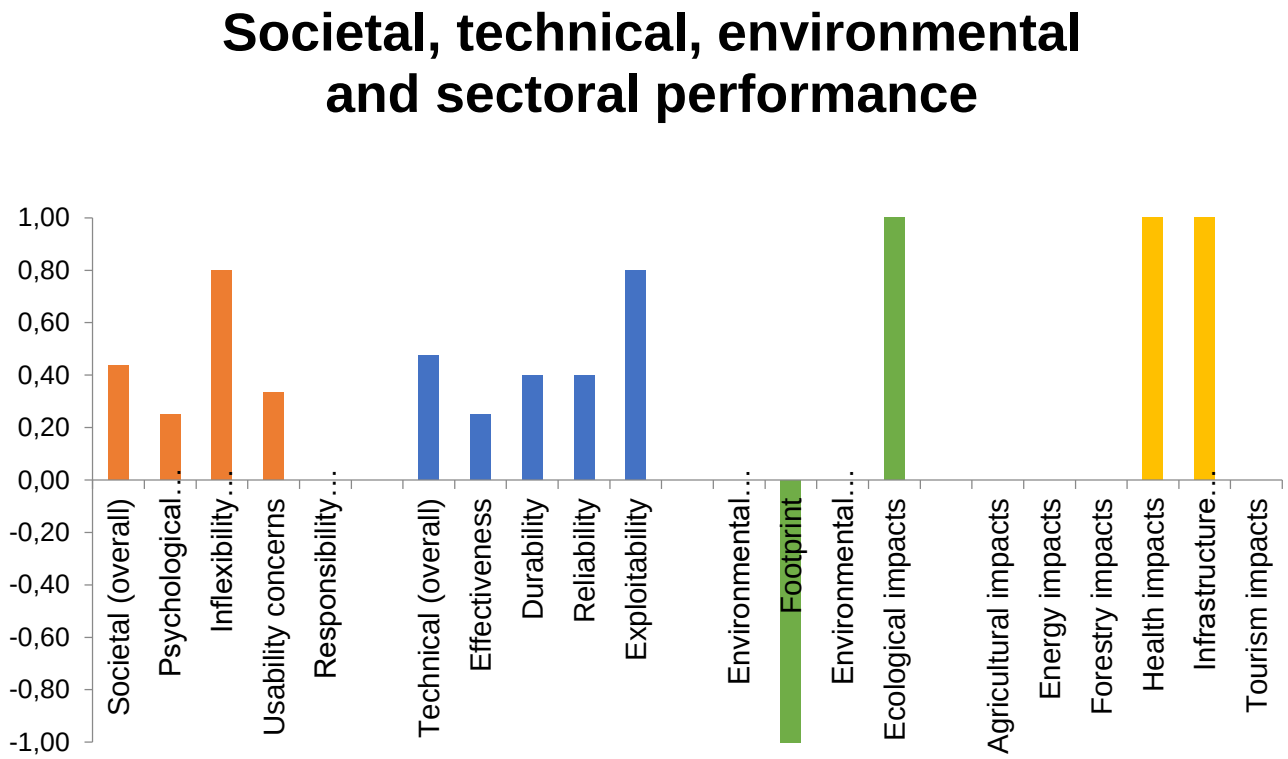
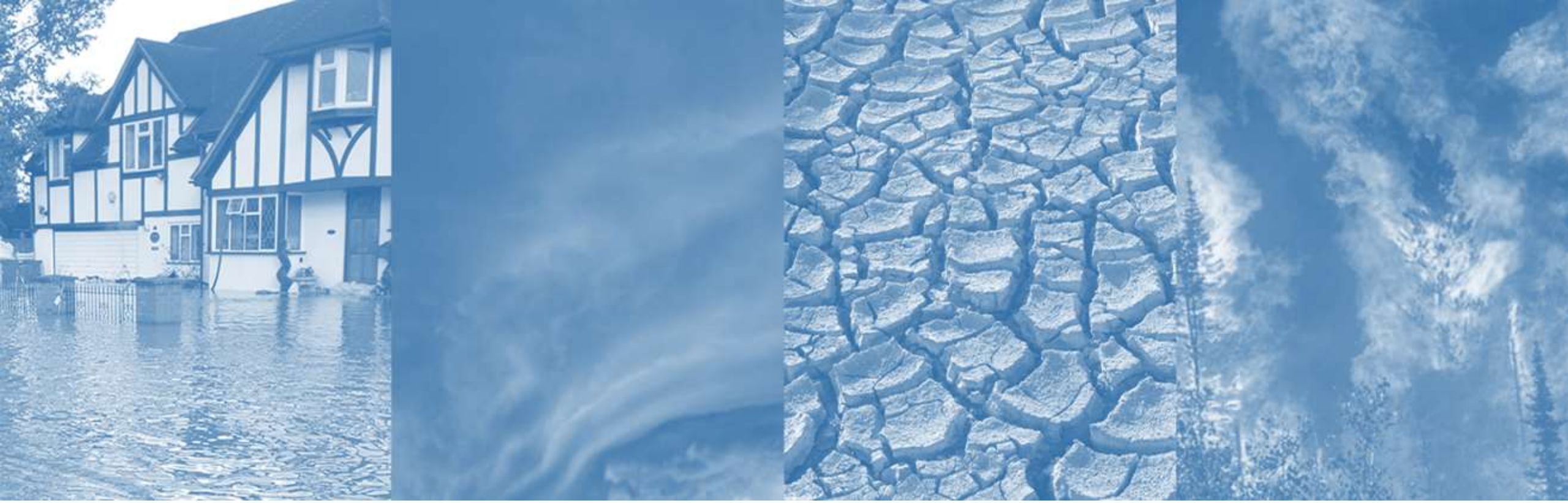
OVERALL ASSESSMENT AND GUIDANCE

- The toolkit automatically quantifies performance overall and by issue to provide an at-a-glance picture of where the strengths and weaknesses of an innovation may lie
- Guidance document provides information on how to interpret the results and advice on further testing and attending to any concerns raised





Next steps.

The full version of the TIF delivered in month 18 is the first step towards delivering the final version in month 48. Updates are scheduled for months 33 and 48. These will be informed by feedback from innovators and decision makers, spanning diverse adaptation innovations, climate risks, working sectors, national perspectives and geopolitical scales.

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