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Evaluating design enabled innovations. Lessons from Designscapes for a common impact evaluation methodology

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Designscapes

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Designscapes

- Funded by the European Union's research excellence programme Horizon 2020 (2017-2021)
- 12 organisations, in 10 European countries – academia, consulting, public sector
- To encourage the uptake and scaling of Design enabled Innovations by enterprises, start-up companies, public authorities, and other urban stakeholders

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Designscapes activities

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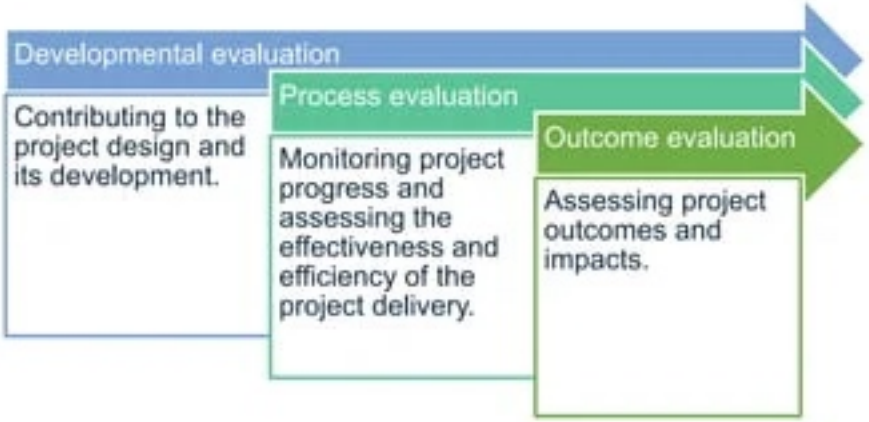
Designscapes evaluation



- To support the Designscapes' overall vision, mission, objectives and outcomes
- To develop a scalable impact evaluation methodology

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1. Does Designscapes support inclusiveness, and reduce inequalities in citizens' access to innovation?
2. Does Designscapes support co-creation, and does co-creation in turn lead to successful innovation?
3. Does design-led innovation improve performance and efficiency in the commercial and public sector - by addressing the challenges cities face now and in the future - and hence improve competitiveness?
4. What additional contribution does the urban context make?

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Designscapes evaluation

- Theory based evaluation design (theory of change and contribution analysis)
- Mixed method design, e.g.:
  - KPI design and monitoring
  - Partner interviews, online surveys and workshops
  - Case studies (multiple case study design)
  - Longitudinal stakeholder survey
  - Cost consequence analysis
  - Regression modelling
  - Systems mapping

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Emerging findings:

Does design-led innovation improve performance and efficiency in the commercial and public sector - by addressing the challenges cities face now and in the future - and hence improve competitiveness?

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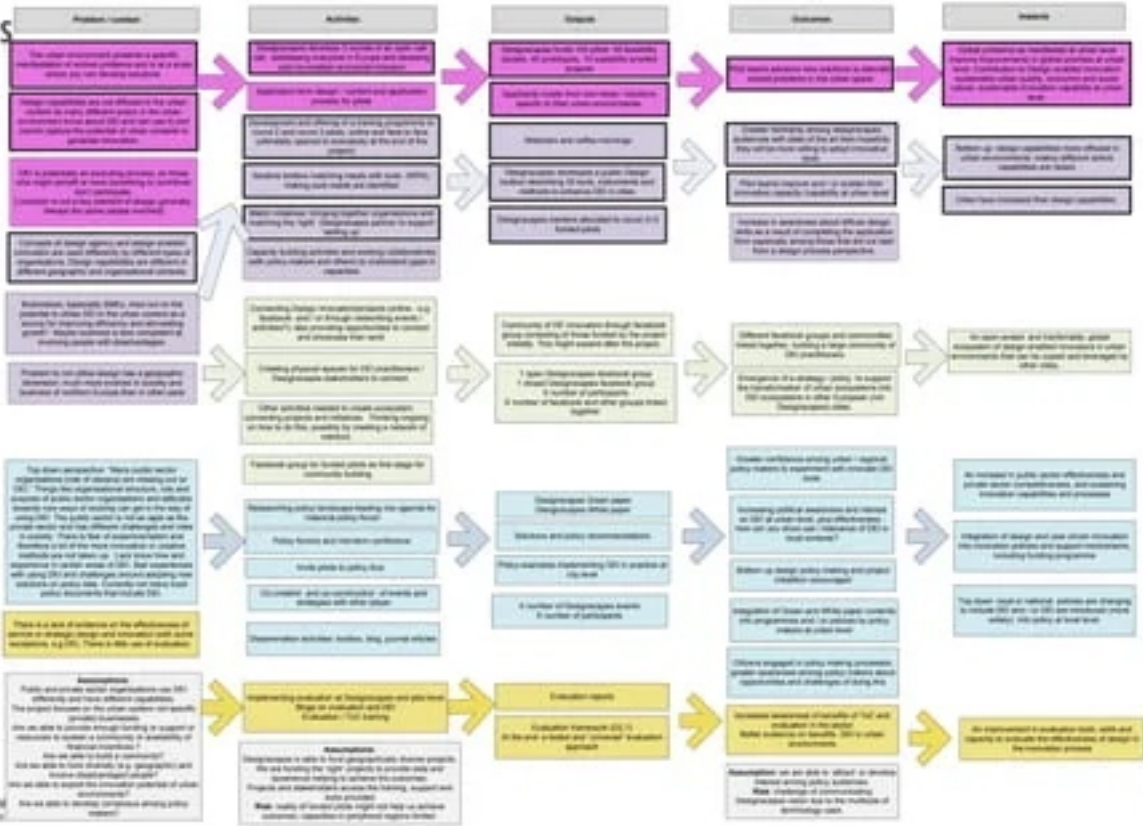

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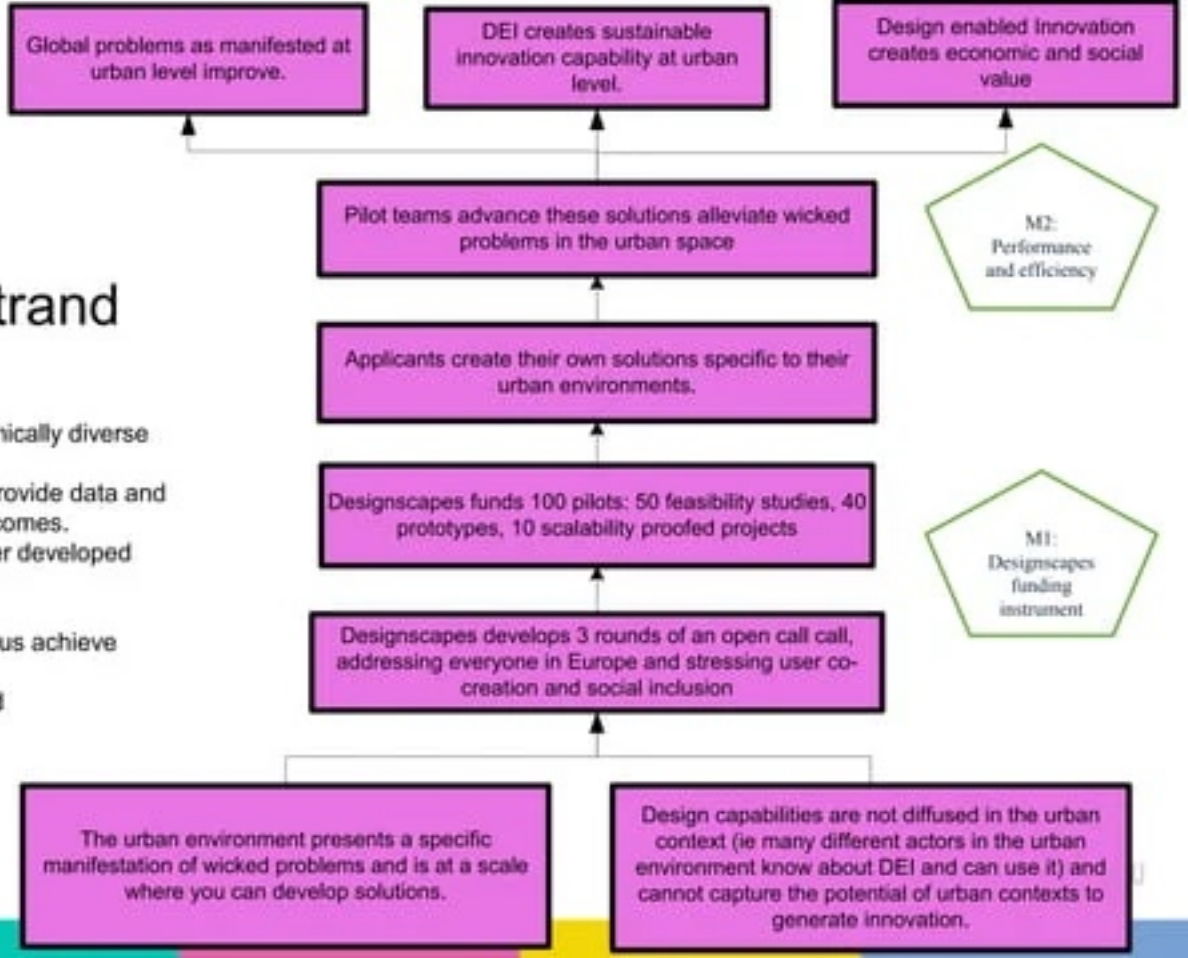
Effectiveness and efficiency causal strand

Assumptions:

- Designscapes is able to fund geographically diverse projects.
- We are funding the 'right' projects to provide data and experience helping to achieve the outcomes.
- Projects have the potential to be further developed

Risks:

- Reality of funded pilots might not help us achieve Outcomes;
- Capacities in peripheral regions limited



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Global problems as manifested at urban level improve.

DEI creates sustainable innovation capability at urban level.

Design enabled Innovation creates economic and social value

Pilot teams advance these solutions alleviate wicked problems in the urban space

Applicants create their own solutions specific to their urban environments.

Designscapes funds 100 pilots: 50 feasibility studies, 40 prototypes, 10 scalability proofed projects

Designscapes develops 3 rounds of an open call call, addressing everyone in Europe and stressing user co-creation and social inclusion

The urban environment presents a specific manifestation of wicked problems and is at a scale where you can develop solutions.

Design capabilities are not diffused in the urban context (ie many different actors in the urban environment know about DEI and can use it) and cannot capture the potential of urban contexts to generate innovation.

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"When it comes to Swedish funding, **any calls so clearly focused on using design for urban sustainability is unique**. **That is what we're trying to do, design something that fits into what society today**. (...)." [project interview, round 3]

- Applicants to focus on:
  - Urban dimension conducive to use of design
  - Using design to find more effective responses to big challenges
  - DEI projects that can be transferred to other contexts (including to less innovative contexts)

3 rounds of an open call

- Feasibility studies, prototypes, scalability pilots
- Relatively modest funding:
  - between EUR 5,000 (feasibility studies) and
  - EUR 25,000 (prototypes and scalability pilots)

"We **liked the approach in terms of design and innovation and urban**, and we think it was also **made for creative people** (not super scientific and bureaucratic as some other calls), we liked the process approach where the outcome was not the main focus – that fitted well in a prototype call; **the division of the call was intriguing** – to have the option to proceed further, feels understood for a creative process" [project interview, round 2].

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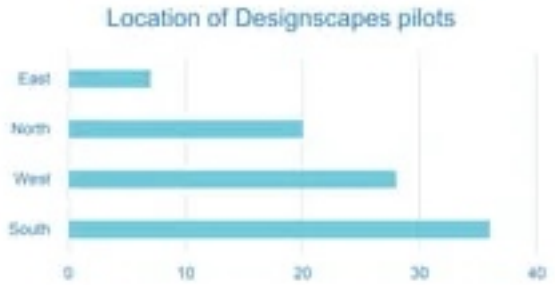
99 pilots funded



- **50 %** of successful pilots **would not have gone ahead** without Designscapes funding at **feasibility stage**
- **3%** of successful applicants **would not have gone ahead** without Designscapes funding **at prototype stage**

11 projects received funding in two rounds

3 projects received funding in all three rounds

Majority of survey respondents not applying to round 3 had continued to develop their project in some form (as designed, small changes, large changes)

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Solutions to urban problems

36 % of successful applicants at feasibility stage were looking for funding for a new idea

Self-reported perceptions that funded design enabled innovations unique in their country or in their focus (e.g. social dimension)

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Mechanism M1: **Designscapes funding instrument**. Designscapes provides a **flexible funding instrument** to which applicants respond by applying design thinking and tools **to generating and developing new and innovative ideas** to tackle problems linked to their urban environment.

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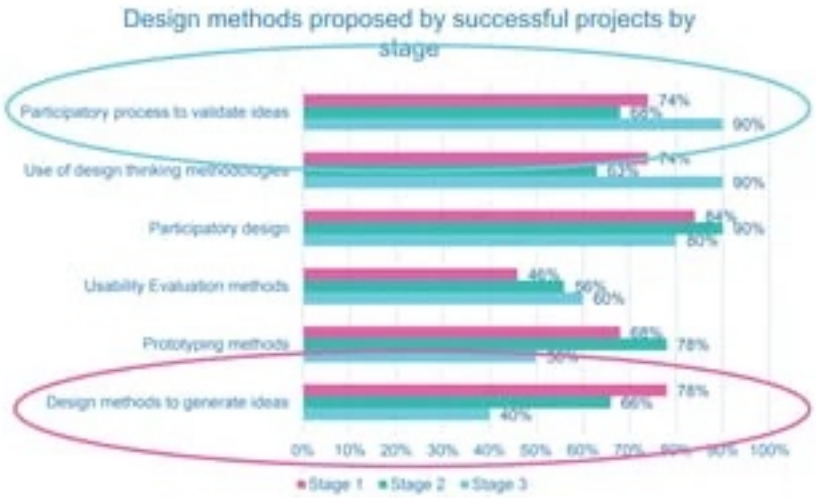
Using design methods



2578 citizens

54 public administrations

103 not for profits

47 for profit enterprises

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Benefits of co-creation using design thinking

Bringing different people and perspectives together enriches final output and outcomes

Refining the innovation and creating ownership by users

Working through a problem with stakeholders so the solution works in a given context

Understanding user needs and market interest in the innovation

"It wasn't, 'Take this project and see what you think of it and how you would improve it'; it was, 'Here you have the square – what would you do to it, what would you remove, what would you keep, and what would you add?' In this sense, it was more enriching." [citizen interview, scalability pilot]

- 81% 'quite likely' they will take prototype to market (round 2)
- 30% greater readiness to introduce innovation to new markets (round 3)

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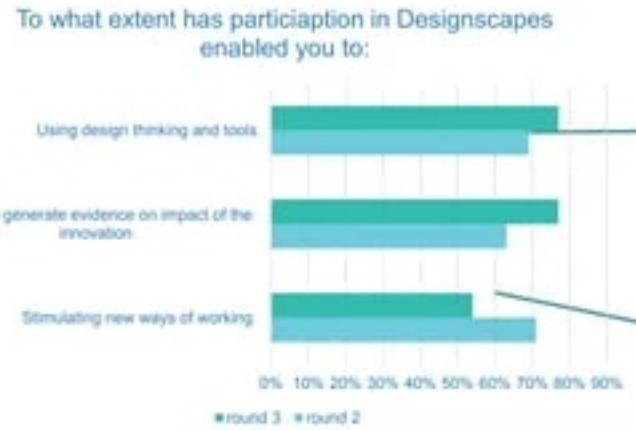
Value of Designscapes grant



We used design tools that allowed us to better understand the calibration of the project according to the different types of people/companies that might be interested in using our technology and led us to diversify the technology we developed according to the needs of those who might use it. [survey, round 3]

"It has lowered our thresholds to incorporating design methodology in our work significantly, so we will now use it much more frequent and in a more self-confident and relaxed manner"
[Case study interview, round 2]

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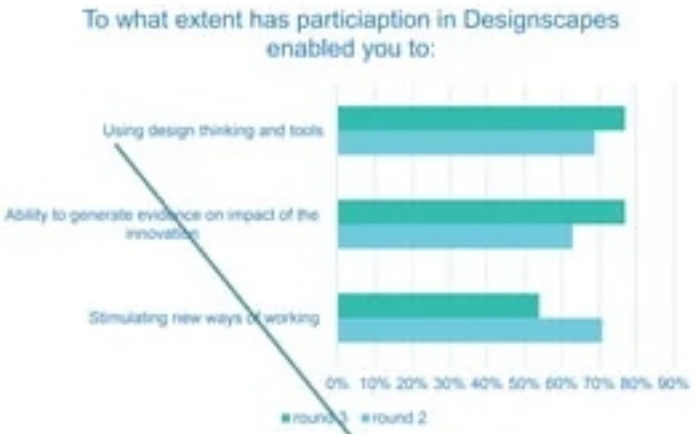
Sustainable innovation capacity — behavioural additionality effects

Professional network gains

Round 1: 80%*
Round 2: 55%
Round 3:77%



"It has lowered our thresholds to incorporating design methodology in our work significantly, so we will now use it much more frequent and in a more self-confident and relaxed manner"
[Case study interview, round 2]

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* Statistically significant difference between funded and non-fu

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Economic value – business impact

Additional funding generated by successful pilots

- 21 % of round 2 pilots:
  - EUR 74,428 (average)
  - higher than unsuccessful applicants
- 23% of round 2 pilots
  - EUR 16,170 (average)
  - lower than unsuccessful round 3 pilots (though fewer of these were able to secure this additional funding in the first place)

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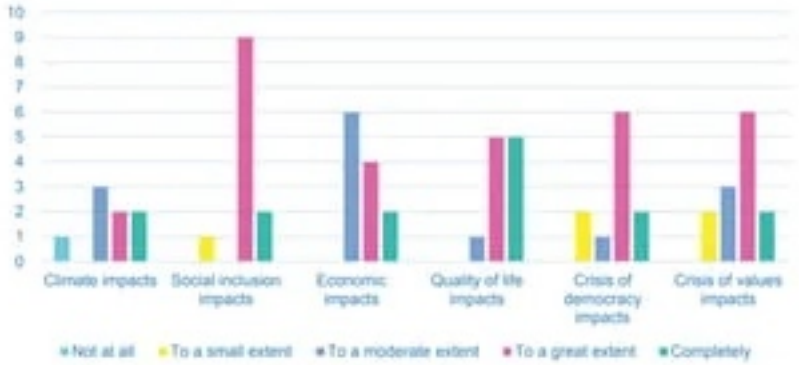
Social impact



- Projects more confident in achieving social inclusion and quality of life impacts.
- Less confident in economic and climate change impacts.

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Mechanism M2: Performance and efficiency.

By locating their pilots in the urban context and using design thinking and tools, end-users creativity is mobilised and combined with pilot teams' technical and professional expertise. This leads to new solutions or the adaptation of existing ones which meet user needs better and hence get adopted. This generates business and social value.

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Towards a common impact methodology

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The Co-Creation Call Theory of Change

User involvement central to innovation process

Design thinking and co-creation encourages user involvement

Leads to service & business model innovation, then increased performance & efficiency

Leads to increased competitiveness of public, private and third sectors

Presenting problem: Europe needs to become more competitive – by identifying and capitalising on untapped sources of growth and employment

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Application areas and evaluation questions addressed by CIM

Application area	Evaluation question	Examples from the Designscapes evaluation
1. User benefits and business impacts	What user benefits and business impacts are associated with design-related policies and programmes?	Calculating the economic and social benefits of the funding provided to projects by Designscapes using Cost Consequence Analysis (CCA)
2.Relationship between design and innovation	What contribution does design thinking make to innovation?	Using Regression Analysis to predict the likely effects of the application of design thinking methods and tools to increase innovation
3.Value-creating networks and efficiency and competition	How does DEI support value-creating networks and in what ways do they increase efficiency and competitiveness?	The contribution of the Designscapes financial instrument to creating value-driven networks and their impact on the efficiency and competitiveness of funded projects

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CIM Framework: Theory of Change

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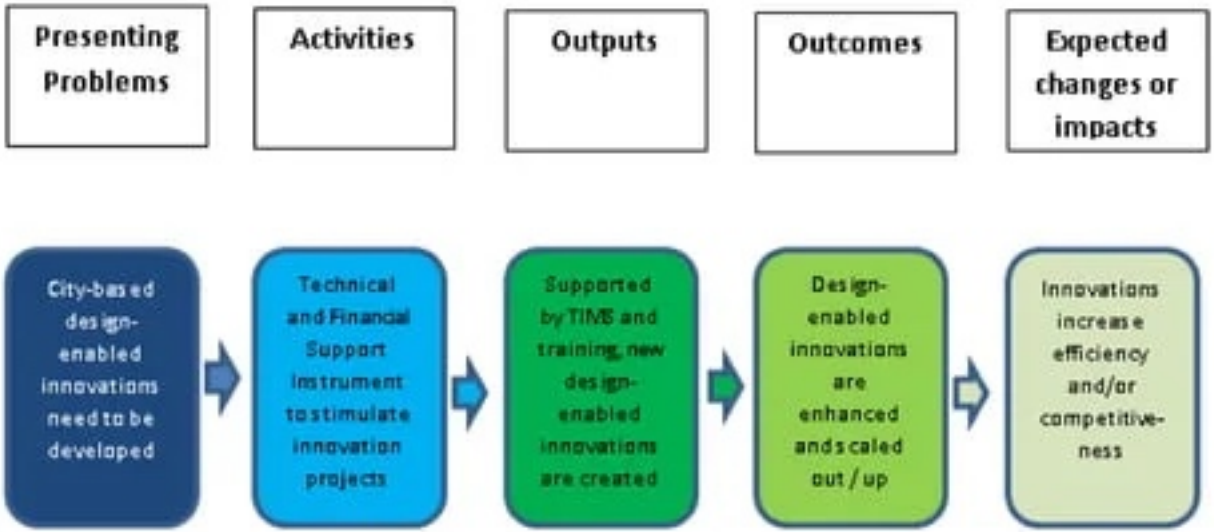

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Why use Theory of Change in DEI Evaluation?

Not only does Theory of Change provide a holistic view of the vision of the intervention and the interconnections that make up this vision, it situates that vision within the wider social context.

This helps to better articulate the contribution of the intervention to the broader societal impacts of DEI.

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Applicable at different scales

Scale	Presenting Problem	Activities	Outputs	Outcomes	Impacts
Organisational (single actor)	Small atelier making customised designer-wear is experiencing mounting production costs and decreasing profit margins	Owners join EU-wide textile and clothing innovation network	Installation of laser cutting and 3D printing equipment	Production time per output unit decreased by 15%	Profit increased by 12% after 1 year
Project (partnership)	Across Europe, cities and towns are losing their cultural heritage artefacts.	10 partners in 6 EU countries involved in using design thinking to explore factors affecting cultural heritage loss	Cultural Academy set up And delivers 10 international workshops and 10 online webinars, attended by 650 people in total	Over 75% of educational programme participants report increased awareness of cultural heritage	Over 60% of city administrations report increased attendance at heritage events in their cities
Community/regional	Urban spaces in the region have untapped potential to develop innovative and sustainable farming methods	Research on feasibility of urban 'vertical farms', including use of AI and Industry 4.0 tools	Vertical Farm Prototype in 8 cities across the region	5,000 customers purchase produce from vertical farms in 6 month trial period	5% of derelict urban properties rehabilitated to farming use in region
National	Rates of unemployment of low skilled young people are increasing across the country in all cities.	Develop a national jobs database co-ordinated nationwide	6,000 employment service staff participate in Training programme for employment service staff	55% of users placed in jobs after 1 year of programme operation	Reduction in youth unemployed rate of 15% nationally
Trans-national	The EU needs to become more competitive by capitalising untapped sources of growth through co-creation	EC launches 5 year programme to support design-enabled innovation through funding pilot projects	Design-enabled Innovation funding instrument (DEIFI) launched through ESF	Participating organisations introduce innovations into their practice	Behavioural additionality analysis shows net increase in efficiency of 12% across EU

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And for different actors

Actor	Presenting Problem	Activities	Outputs	Outcomes	Impacts
SME	A small specialist furniture maker is experiencing falling demand due to high costs and changing consumer attitudes	Apply design thinking to 'outside the box' business re-structuring strategies	Prototype Circular Economy furniture service for landlords and tenants	Reduction in volume of furniture thrown away	Contribution to reduction in use of landfill sites
Public Administration	Public administrations have a duty to support lonely but they lack resources	Design platform and App to help neighbours connect with each other	Anti-isolation network set up involving 80 public administrations	Over 2,000 people use the platform and App in 6 month period	Self-reported loneliness and isolation levels have reduced by 23%

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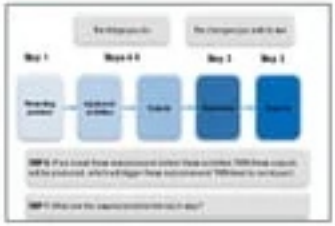
ToC
- Design Theory of Change
- Fit to scale and audience

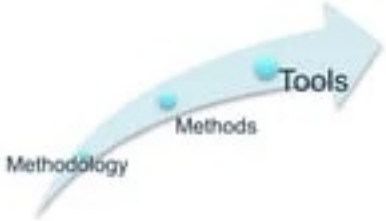
Plan
- Implementation Plan
- Purposes, resources, actions

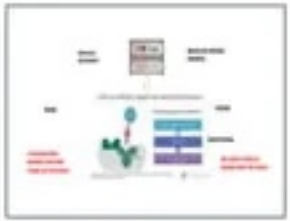
Measure
- Design indicators
- Select and apply MoV

Interpret
- Analyse and integrate results
- Triangulation, Mechanisms, Contribution analysis



SMART **SPICED**





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Application area 1: User benefits and business impacts

SROI = (social impact value – initial investment amount) ÷ initial investment amount x 100%

Stage	What this involves
1. Mapping	Produce an Impacts Map showing the expected impacts of the changes realised by the intervention
2. Measurable financial consequences	Select and quantify the impacts and outcomes that have measurable financial consequences attached
3. Non-financial consequences	Select and evaluate the impacts and outcomes that have measurable non-financial consequences attached
4. Non-recurrent costs	Identify and quantify non-recurrent costs
5. Analysis	Compare cost consequences of alternatives and review results

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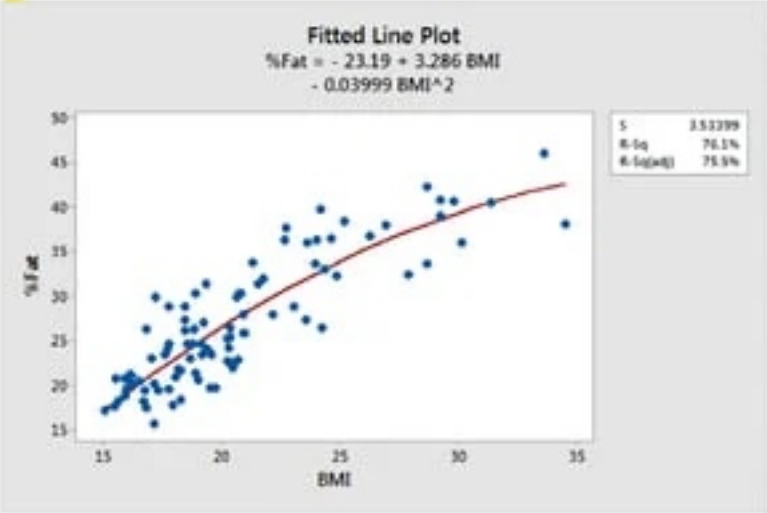
Application area 2: Relationship between design and innovation



- Providing an explanation of the causal relationships between variables and how they lead to observed outcomes
- Providing a measure of the relative strength of the contribution each variable of interest makes to the observed outcomes
- Making predictions about the likely effects on outcomes of interest if the values of the contributing variables are changed
- Producing simulation models based on 'what-if' scenarios – for example if you increase the level of investment design-enabled innovation, what is the likely effect on public sector competitiveness?

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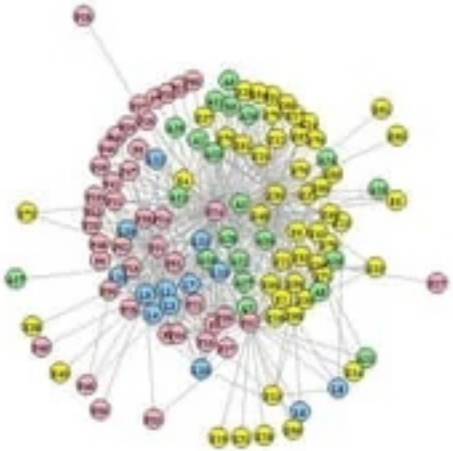
Application Area 3: Value-creating networks and their contribution to efficiency and competition



- **Social Network Analysis** (SNA) maps and evaluates the effects of interconnections between actors in a network, including more complex networks that make up eco-systems
- Main focus is on the relationships between network members – but also maps the characteristics of the members
- Captures longitudinal evolution of network/ecosystem over time

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Questions and discussion

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