Rathenau Instituut

Living labs as instrument for societal change

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Outline

- The promise of living labs
  - New mode of R&I
- In practice: myriad uses of the term
- Typology
  - Four types
  - Each has their own logic
- Living labs as instrument for transformative change?

Living labs are increasingly prominent

'Living laboratories': the Dutch cities amassing data on oblivious residents

How IKEA's future-living lab created an augmented reality hit (Wired UK)

MITbigdata LIVINGLAB

Living labs in theory

“physical arena as well as a collaborative approach in which different stakeholders have space to experiment, co-create and test innovation in real-life environments defined by their institutional and geographical boundaries”

(Schliwa & McCormick 2016, p. 174)

- Real-life experimentation
- Cocreation

Real-life experimentation

- Combine different aspects to innovation
- Enabled by sensors

e.g. business model

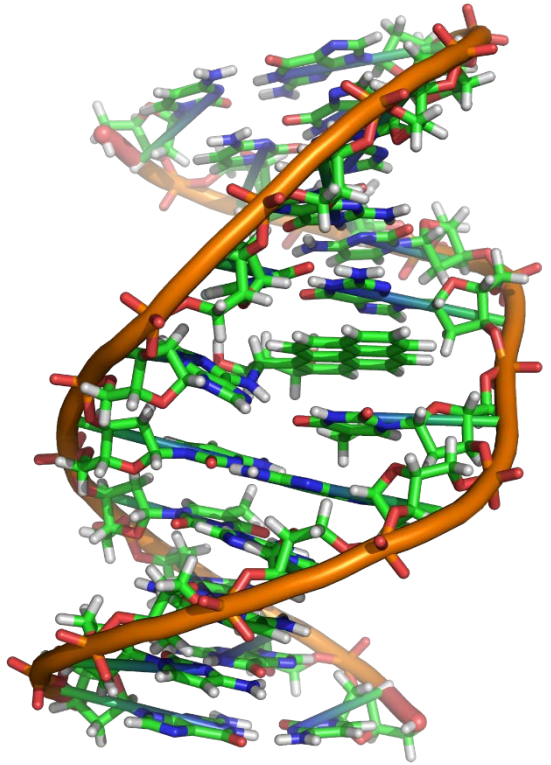
public acceptance

regulations

Co-creation

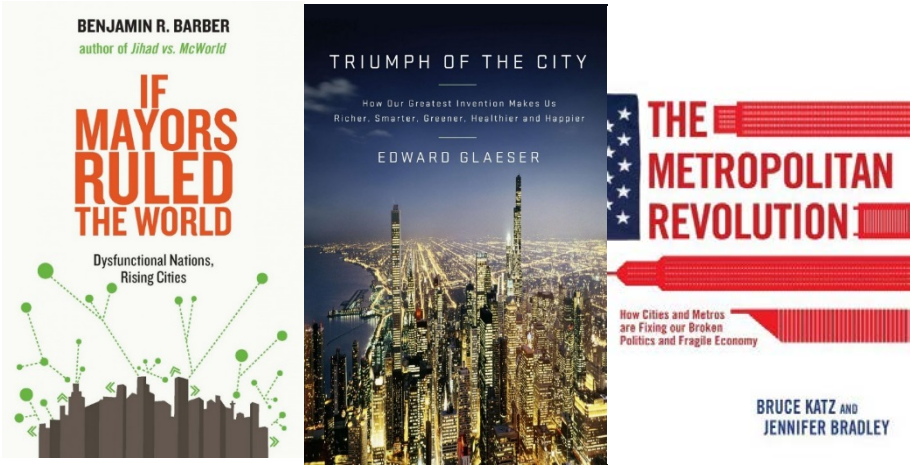
- ‘Quadruple-helix’
- But, citizens involved as
  - Consumer (passive)
  - Citizen (active)

(cf. Schliwa & McCormick 2016)

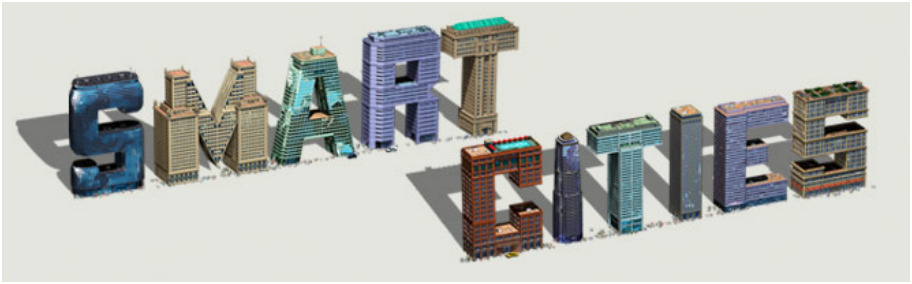


And, role of local government

- Growing attention to role of cities

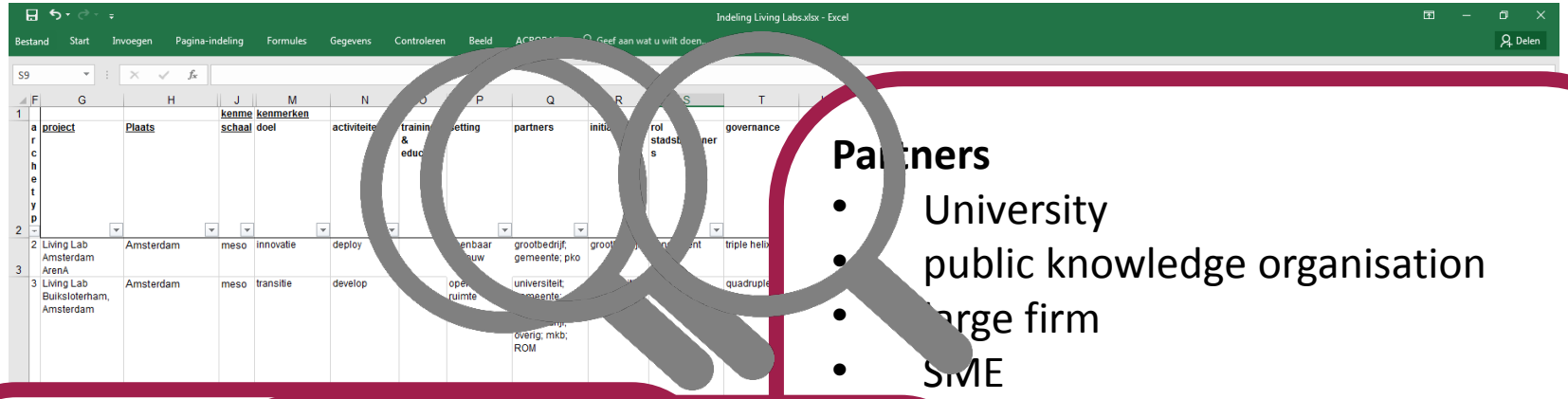


- Especially in context of ‘smart city’ movement



Living labs in practice

Quick scan of living lab initiatives



Setting

- univers
- private
- public
- public
- private
- private

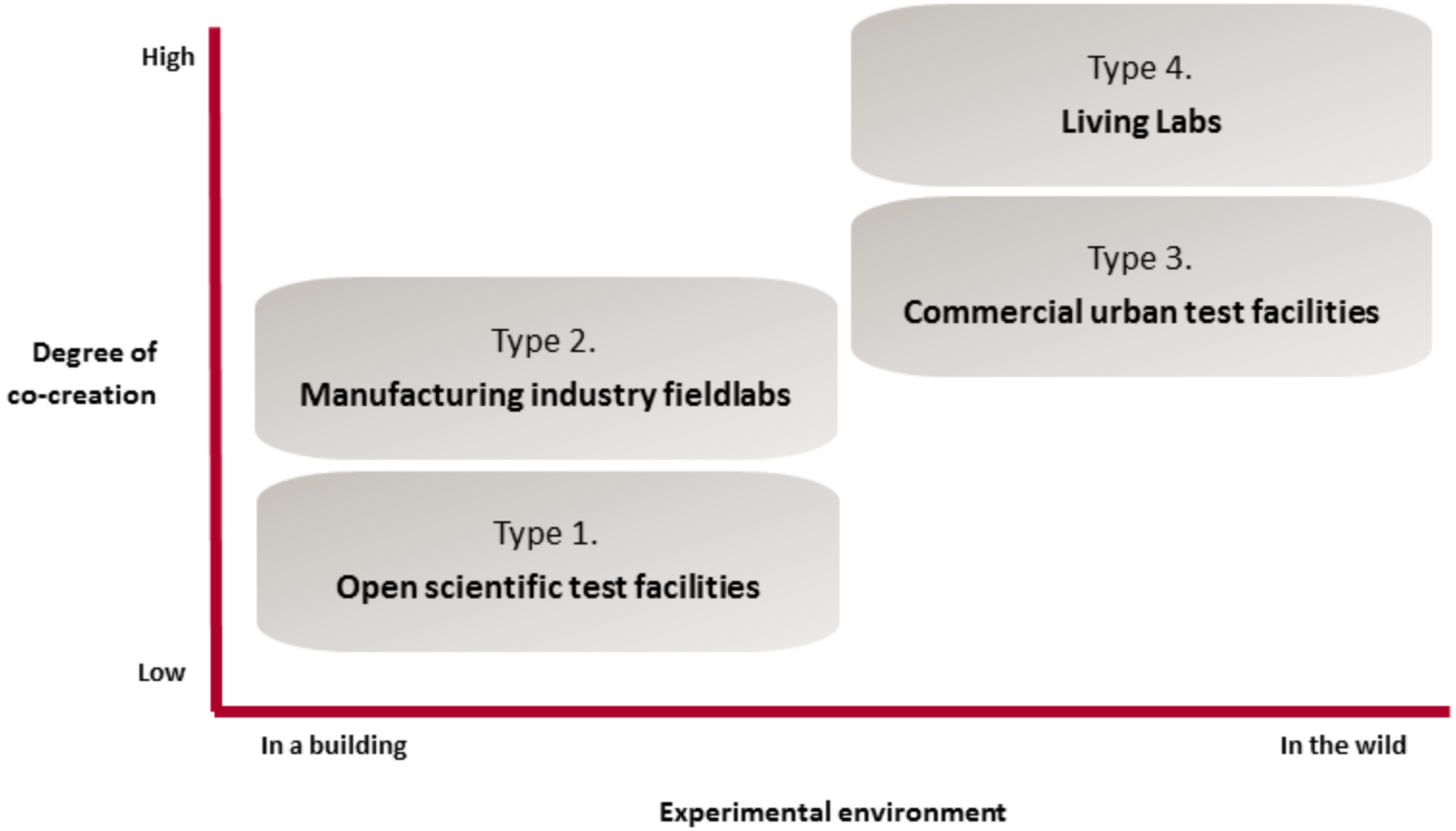
Governance

- Public
- Private
- PPP
- Triple Helix
- Quadruple helix

Pa tners

- University
- public knowledge organisation
- arge firm
- SME
- GO
- tional government
- ovince
- unicipality
- A/Economic Board
- zen initiative

Four types


High
Degree of co-creation
Low
Type 4.
Living Labs
Type 3.
Commercial urban test facilities
Type 2.
Manufacturing industry fieldlabs
Type 1.
Open scientific test facilities
In a building
In the wild
Experimental environment

Type 1: Open scientific test facilities

- Space: a building (a research lab)
- Collaboration between: universities & companies
- Focus: collaborative R&D
- Location: university campus

E.g. PhenoLab

Sensor-based recording of location, activity and proximity in laying hens

Type 2: Manufacturing industry fieldlabs

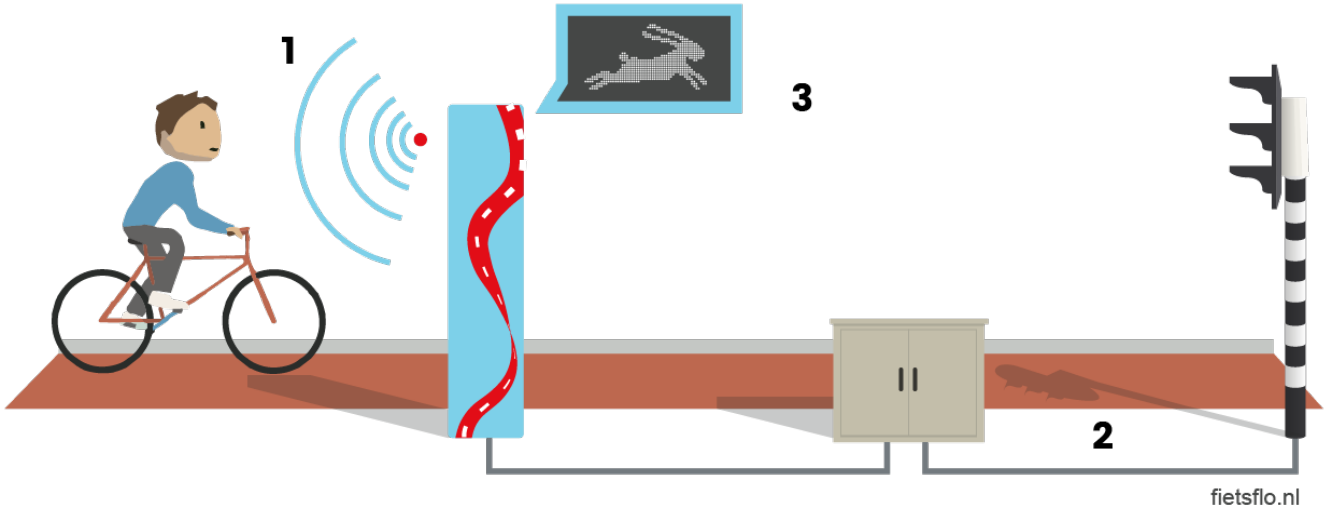
- Space: a building (real-life production site)
- Collaboration between: knowledge institutes, SMEs, government
- Focus: innovation in manufacturing & *human capital*
- Location: near companies, e.g. technology campus

E.g. AQUA DOCK

Type 3: Commercial urban test facilities

- Space: neighbourhood
- Collaboration between: companies, knowledge institute, (local) government
- Focus: test in real-life setting with end-user
- Location: where end-users are ‘found in the wild’

E.g. Flo



Type 4: Living labs

- Space: ‘in the wild’
- Collaboration between: knowledge institutes, companies, (local) government, citizens
- Focus: co-creation for societal challenges
- Location: where the challenge lies

E.g. AUAS Field Labs

“*Metropolitan answers for metropolitan questions*”

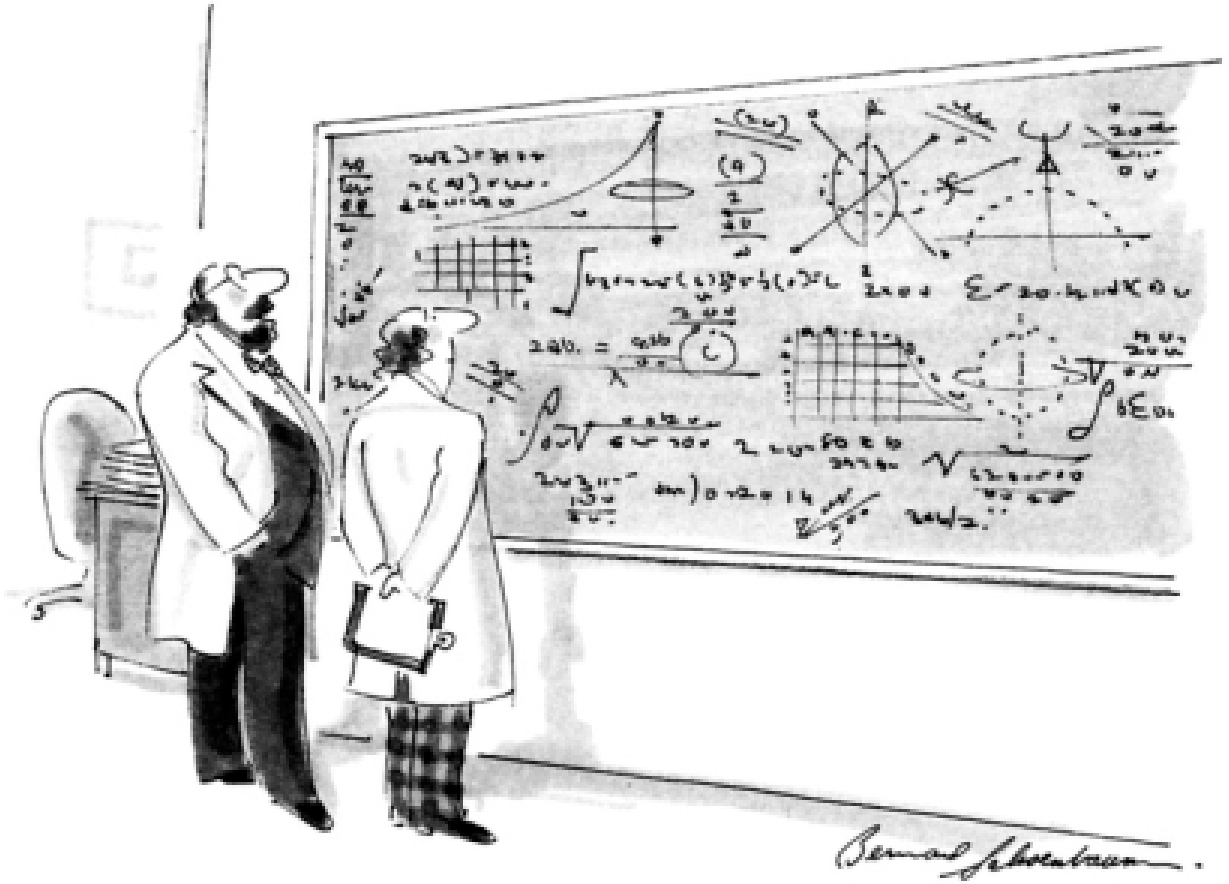
Policy instruments for different goals

Open scientific test facilities	→	Societal impact of research ***Valorisation***
Manufacturing industry fieldlabs	→	Competitiveness industry ***Industrial policy***
Commercial urban test facilities	→	Cities as test market / innovation platform ***Smart city policy***
Living labs	→	Societal challenges ***Transformative Innovation Policy***

Good lab practices

- Responsible Research & Innovation
- Responsible and representatitive involvement of citizens? E.g. privacy, informed consent, data ownership?
- Whose interests dominate? Degree of inclusiveness?

Living labs for societal challenges



"Oh, if only it were so simple."

Living labs for societal challenges

Requires

- Long-term effort of multiple actors
- Some form of “coordination”
- Structure to learn between and across initiatives

e.g. Medical Delta Living Labs

Embedding / ‘scaling up’

- ‘Pilot paradox’ (van Buuren et al. 2018)
  - Conditions for successful experiment & successful scaling might differ
- Role of intermediary activities (Geels & Deuten, 2006; Kivimaa et al., 2017)

Further (current) research

How can intermediary activities contribute to upscaling different types of experiments, combining replication and institutionalisation? What governance arrangements can stimulate this upscaling?

Results expected end of 2018

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Report (in Dutch): https://www.rathenau.nl/nl/kennisecosysteem/living-labs-nederland

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