

Connected Fieldlabs South Holland

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Part I:

- Zuid-Holland presents itself as a real life testing ground for mayor European challenges and is thereby a natural partner for the European Commission and European Union.
- Why are field labs a crucial part of our innovation eco system?
- What challenges do we face?



Background economic situation

- Economic potential is underused
- Strengthen regional cooperation necessary (OECD)
- Future-proof unified economic strategy
- Social consequences made clear
- Operational action perspective



It's the economy, stupid !

- Transition to “Next Economy”
- Transition path ways
 - **Digitalisation**; robotics, sensing, 3 D-printing
 - **Energy transition**; smart grids, wind, solar
 - **Circularity**; green, sustainable and re-use
 - **Entrepreneurial region**: start-ups, scale-ups, fieldlabs
 - **Inclusive society**: education, labor market, skills
- Regional Investment Program



Regional Investment Program

- New connectivity
 - (public transportation, light rail, UAV)
- New Economy
 - innovation, fieldlabs, and campus development
- New Energy
 - sustainable sources, smart grids
- Urban development
 - next generation residential area's



Fieldlab offers

- **Shared facility** for product & production development
 - Reduce cost of innovation
 - Quick access to preproduction and first series
- **Quick and easy** access to
 - Partners in the innovation-ecosystem
 - Specific technological expertise
- **Focus on non technological aspects**
 - Business intelligence, marketing, organisation
 - Financing of innovation

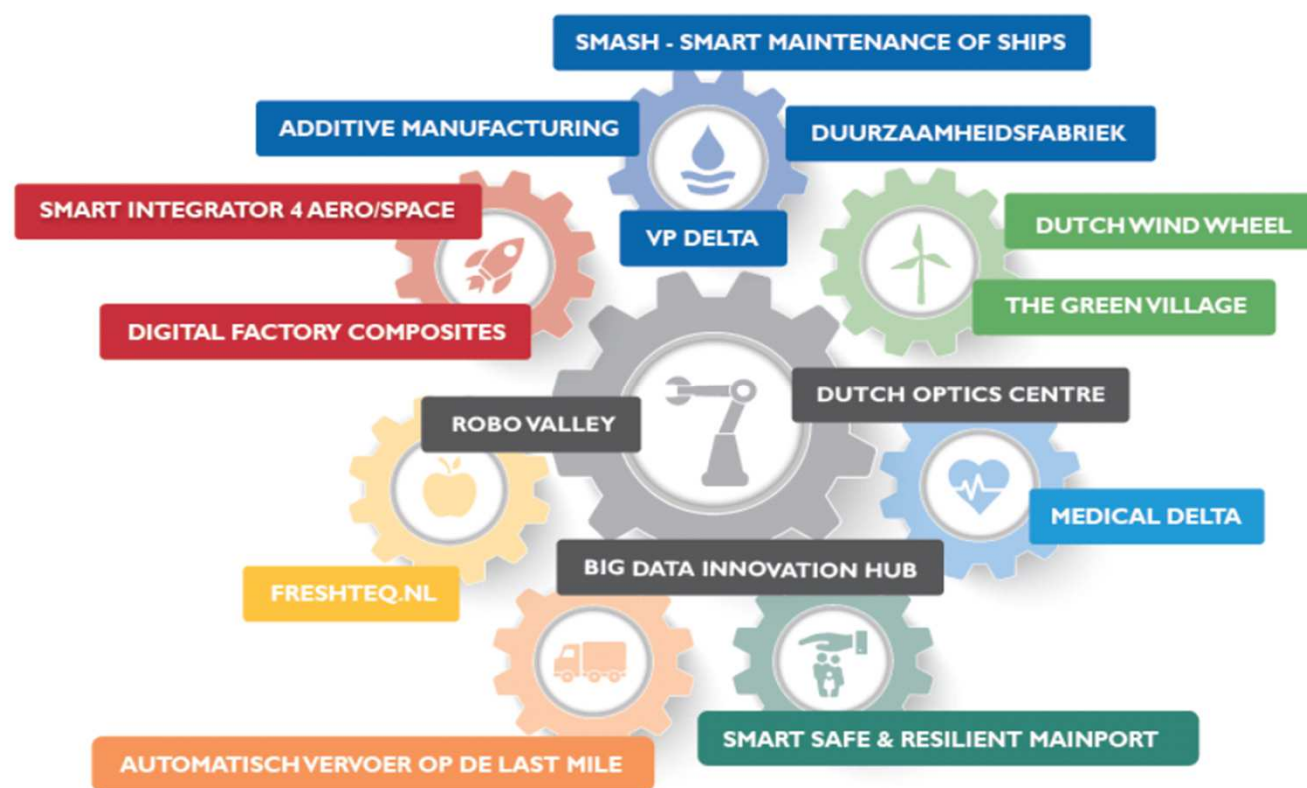


A Fieldlab is ...

1. A **shared facility** for research, development & preproduction that stimulates product development for a specific societal challenge and economic opportunity
2. A **portal to cooperation** within and between triple helix ecosystems
3. A **program for developing** technology, organization and market that enhances the opportunities for private investments in innovation



Fieldlab Infrastructure South Holland



Supported by



provincie **HOLLAND**
ZUID



METROPOOLREGIO
ROTTERDAM DEN HAAG



**Innovation
Quarter** / ir
ir
w

TNO innovation
for life





ROBOVALLEY

Network / Ecosystem

- Academic Network
- TU Delft Robotics Institute
- Industry Partnerships
- Startups

Knowledge Agent & Services

- International Masterclass
- Workshops
- Robot Master Team: Robotics Implementation
- Education support

ROBOQUARTER

- For Startups and Robotics Companies
- Workspace & joint Services
- RoboHouse joint facilities

Investment Funds

- RoboValley – Chrysalix Investment Fund
1st stage: €100m start-ups & scale-ups
- Accelerator program

Supporting the Fieldlab infrastructure South Holland

- Cross over collaboration
- Peer to peer network
- Funding
- Branding
- Startup – scale up -> Metropolitan Startup Lab
- Government as launching customer
- Legislation and regulations
- Alignment of regional, national and international innovation policies
- Education



What challenges do we face?

- Conclusion: Succesfull development from 15 fieldlabs to one fieldlab infrastructure
- Building regional (fieldlab) ecosystems: regional development funds are important.
- Smart Specialization Strategy : South Holland as the EU pilot region for fieldlab infrastructure development.
- How do we organize close cooperation with EC ?
- Who are our natural sparring partners in fieldlab infrastructure discussions ?



Part II

improving the support of field labs: the next step

The bottom up process of starting up field labs has been success full:

- How can we improve the quality of field labs?
- How can we improve the support of field labs?
- How to connect the challenges of the field lab development with possible European instruments? (I4MS)
- How to connect the Zuid-Holland Field lab platform to European platforms?
- How could Europe stimulate and support the development of regional field labs?





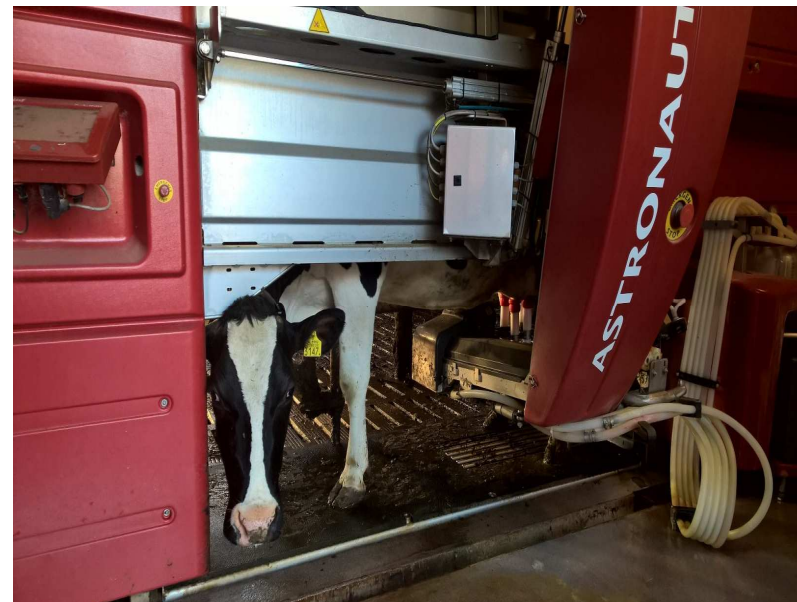
Looking for quality in a field lab

- **Focus on 1 radical innovation challenge**
 - supports the development of **new business models of companies**
 - contribute to **societal challenges**
- Builds on **existing DNA of a region** (mass of know how and industry)
 - To develop a regional, national or European position
- Has a detailed and realistic **funding plan** that
 - is based on (inter-) national market reviews
 - includes multi-funding model voor het fieldlab
- Shows a solid **organisation**
 - Governance: **triple helix**; industry-driven, not industry-owned
 - with **Open access**





Increasing the sustainability of dairy farming through real-time monitoring of dairy cows and data sharing in the chain



How can we improve the quality of field labs?

- Clarify the definitions, typologies and criteria for field labs.
- Start a process of 'portfolio management':
 - identify the successful approaches of field labs,
 - stimulate the cooperation between field labs with shared interests and or cross sectoral ambitions.
- Develop the (inter-) national support for the field lab approach:
 - International cooperation
 - Shared knowledge development



Funding field labs (*digital innovation hubs*) : public funding principles



- Mission of governments is to:
 - *Address Grand Challenges*
 - *Improve the economy at large*
 - *Do what other stakeholders can not do*
- Market and system failures are leading
- Many governments focus on lower Technology Readiness Levels (TRLs) and expect industry to address the higher TRLs
- Bound by State Aid Rules

Why do governments invest

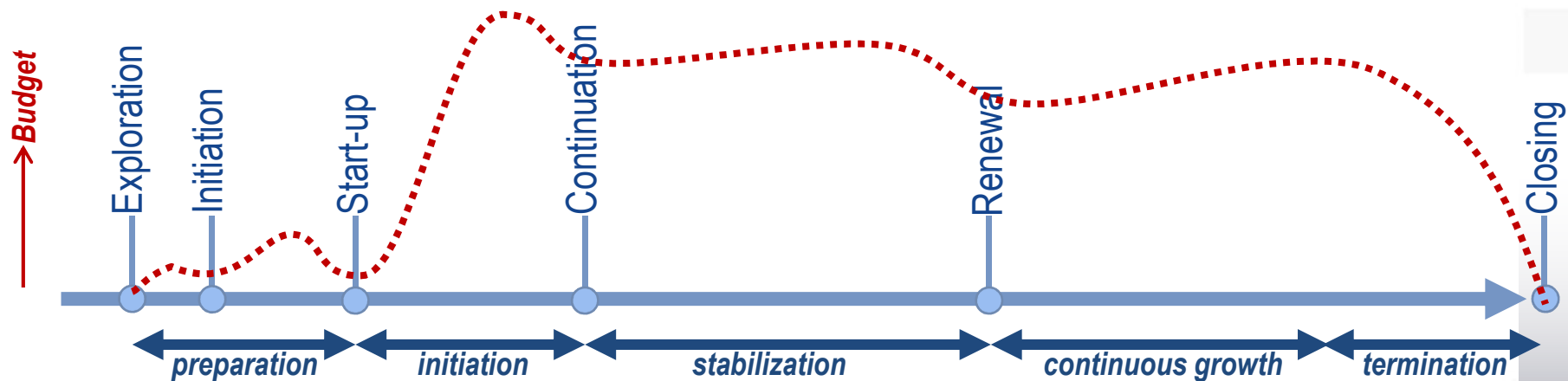
- **Knowledge spill-overs:** Knowledge and expertise created will benefit a lot of companies
- **Imperfect information:** sharing of information will enhance the information and expertise
Not just a few companies, but for many
- **Coordination/network failures:** Better coordinating partners and support coordination will enhance success and reduce costs
- **Public goods:** Educating/training of people is a governmental responsibility

Improving the support, typical field lab services:




| Objectives | Activities |
|----------------------------------|--|
| Community building | Scouting, brokerage, awareness creation, dissemination, ecosystem building |
| Visioning & strategy development | Market intelligence, market assessments, innovation strategy development |
| (Collaborative) R&D | Technology concept development, proof of concept. |
| Testing and validation | Certification, product demonstration, product qualification |
| Technical support on scale-up | Concept validation, prototyping, small series production |
| Skills and education | Courses, workshops, offering technological infrastructure for educational purposes |
| Incubator/accelerator support | Voice of customer, market assessment, business development, consortia building |
| Commercial infrastructure | Renting for R&D, low rate commercial production |
| Access to finance | Financial engineering, connection to funding sources, investment plans |
| Mentoring | Training of other hubs and competence centres |

Developing a field lab is an evolution



How connect the challenges of the field lab development with possible European instruments?

| | South Holland | EU |
|---|---|---|
| Align visions on the innovation challenges of Europe |  | <p>Grand societal challenges: Energy, health, climate, etc</p> <p>Enabling industrial technologies: ICT, nano, bio, etc</p> <p>Industry 4.0</p> |
| Align visions on field labs | Field labs South Holland | (Digital) Innovation Hubs Pilotlines |

Alignment of funding field labs



| Objectives | Public | Private |
|----------------------------------|--|--|
| Community building | H2020, ESIF, national/regional funding on networking | Brokerage fees, conference fees, memberships |
| Visioning & strategy development | H2020, ESIF, national/regional programs | |
| (Collaborative) R&D | H2020, ESIF, national programs, SMEs | Contract research, large firms, IPR, memberships |
| Testing and validation | H2020, ESIF, national programs, SMEs | Commercial fees |
| Technical support on scale-up | H2020, ESIF, national/regional funding | Contract activities |
| Skills and education | national/regional funding, ESIF, | Workshop/training fees, memberships |
| Incubator/accelerator support | National/regional programs, ERDF | Co-funding of SMEs |
| Commercial infrastructure | regional funding, EIB | Commercial fees |
| Access to finance | national/regional | Consultancy |
| Mentoring | H2020, ESIF, national/regional funding on networking | |

Alignment of funding field labs (2)



| Objectives | Public | Private |
|----------------------------------|--|--|
| Community building | H2020, ESIF, national/regional funding on networking | Brokerage fees, conference fees, memberships |
| Visioning & strategy development | H2020, ESIF, national/regional programs | |
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| Commercial infrastructure | regional funding , EIB | Commercial fees |
| Access to finance | national/regional | Consultancy |
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How to connect the Zuid-Holland Field lab platform to European platforms?

- Share insights on fieldlabs, living labs, etc.
- Identify shared interests for the European agenda



How could Europe stimulate and support the development of regional field labs?

Field labs seems a success full way for (regional -) governments to translate nowadays innovation policy challenges into practice.

- (Further) develop a shared EU-national-regional strategy on fieldlabs and related innovation policies
- Simplify and align instruments for fieldlabs;
 - One contact point at regional, national and European level
 - Same rules for same activities
 - Combine different financial resources in one instrument
- Tough job, great impact



Connected Fieldlabs South Holland

