Regional Collaboration
Lara Ummels
Knowledge Broker at Leiden Kennisstad, the Netherlands

&

Marieke van Haaren
Project Manager: Learning with the City, Leiden University & Leiden High School of Applied Sciences, the Netherlands

Impact of Science
22-24 June, Leiden

AESIS
#IOS22
Leiden, Key to Discoveries
How city, region and academic institutions collaborate in building a resilient and sustainable society

Presentation AESIS
Leiden, June 22, 2022
Lara Ummels en Marieke van Haaren
Our long term strategy

Leiden, Key to Discovery

Leiden in 2030

International Knowledge

Historical Culture

Accessibility / Infrastructure

The strength of the city / Everyone participates
Historical Town:
3000 listed monuments
5 important Museums
Knowledge:
Oldest University in the Netherlands
Leiden Bio Science Park
Partnership Agreement July 2017

“Taking joint responsibility for the development of prosperity and social growth within the society of Leiden”

Goals -> to strengthen regional knowledge infrastructure
1. The best possible environment for knowledge institutions and innovative companies in Leiden
2. The city of Leiden and the region benefit from the knowledge brought by those institutions and companies
Organization of collaboration

Three main focus areas

- Health and Well-being
- Biodiversity & Sustainability
- Cultural Heritage
Examples

- Student Well-being
- Leiden Bio Science Park LSH-Campus development
- Prevention Agreement
- Prevention Intervention Team (PIT)
Examples

- Polder Lab Vrouwe Venne
- Sustainability Knowledge Studio
- Leiden Biodiversity
Examples Cultural Heritage

- Museums, collections & society (Leiden Collection)
- Literally Leiden Festival
- Things That Talk
Leren met de Stad

AESIS

Lara Ummels
Marieke van Haaren
We mobilize talent to work on the social challenges in the city. We share our knowledge and make (new) knowledge available to everyone.

In this way, the city benefits from (young) thinkers and doers, and we offer students a context-rich learning environment.
What & How?

AIM:
- Develop a learning environment and knowledge infrastructure to support collaboration and co-creation (engagement!)

BY MEANS OF:
- Network: municipality and societal organizations, f.i. welfare organizations, library, housing corporations
- Network events Meet & Match based on societal issues
- Education cycle: sustainable collaborations to create more impact
- Learning Community/ Community of practice:
  - sharing knowledge and good practices but also practice co-creation
What & How: in research

AIM:
- Develop knowledge infrastructure aimed at collaboration (within universities and with external partners)

RESEARCH:
- Support Interdisciplinary (research) programmes:
  - *Social Resilience and Security*: support for NWA-grant & (local) network
  - *Liveable Planet*: Polder Lab VrouwVenne and conference
- Leiden 'City criminologist': PhD-track, financed with municipality and local police department
- Learning Community: joint Research agenda around local societal topics
Societal issues for collaboration

- Social Impact after Corona, f.i. Poverty and Educational Gap
- Elderly in Leiden (Plan of action Municipality)
- Fight Loneliness (Plan of action Municipality)
  - Lifestyle and Health; Leiden Prevention Agreement (40 partners)
  - Security and Cybercrime (with municipality and police department)
- Knowledge Studio Sustainability and Circularity
  - Neighbourhoods: Leiden Noord & Slaaghwijk
Physical Location

- Het Gebouw
- Leiden Noord/North
- Socio-economic challenges

Societal Issues

- Vitality and prevention
- Low income
- Litter
- Youth & Change inequality
- Sustainability

Curriculum

Subject | Thesis assignment | Minor | Internship

Method

Transdisciplinairity & multi level (hbo & wo)

Innovation

Knowledge cycle
Transdisciplinary team of students commit research regarding health and prevention, based on Prevention Agreement.

Examples

Minor Changemakers
20 students work on wicked problems in Leiden Noord

Research Studio

Thesis Research Project
Psychology, Cultural Antropology (Policy in Practice), Industrial Ecology
Plans for the future

Scaling Up:

- Embed in Education and Research (regional Research Agenda)
- Create more ‘locations’/ hubs in other neighbourhoods and with new partners, f.i. libraries
- Education: involve new partners -> vocational and secondary education?
- Research: establish Chairs for research on regional collaboration
Alex Chaix

Deputy Director of Commercialisation of Research, UK Research & Innovation (UKRI), United Kingdom
Welcome
UK Research & Innovation: supporting and delivering impact of research through commercialisation

UKRI Commercialisation Shared Capability team – June 2022
UK Research and Innovation

• The largest public funder of R&I in the UK, bringing together 9 councils covering all sectors and disciplines
• We are part of a system, working with academia, business, public sector, third sector, and international partners – we are the ‘smart connector’
• We have a great opportunity to do R&I better, creating a system that gives everyone the opportunity to contribute and to benefit.

For more info visit UKRI.org
Our vision is for an outstanding research and innovation system in the UK that gives everyone the opportunity to contribute and to benefit, enriching lives locally, nationally and internationally.

Our mission is to convene, catalyse and invest in close collaboration with others to build a thriving inclusive research and innovation system that connects discovery to prosperity and public good.
The UKRI Portfolio

In 21/22 we invested (% of budget):

- £690m in PhD students/skills (9%)
- £180m in fellowships (2%)
- £950m in responsive research (12%)
- £530m in research targeting priorities (7%)
- £1,680m in university research (QR) (21%)
- £980m in infrastructure (12%)
- £850m in research institutes (11%)
- £540m in challenge-led funding (ISCF) (7%)
- £530m in responsive innovation (7%)
- £240m in Catapults (3%)
- £480m in international collaboration (6%)
- £390m in targeted Covid-19 funding (5%)
Our **strategic objectives** provide the framework for how we will achieve our vision and realise our principles through world-class:

- **Impacts**: Focussing the UK’s world-class science and innovation to target global and national challenges, create and exploit tomorrow’s technologies, and build the high-growth business sectors of the future.

- **People and careers**: Make the UK the most attractive destination for talented people and teams from the UK and around the world.

- **Places**: Securing the UK’s position as a globally leading research and innovation nation with outstanding institutions, infrastructures, sectors and clusters across the breadth of the country.

- **Ideas**: Advancing the frontiers of human knowledge and innovation by enabling the UK to seize opportunities from emerging research trends, multidisciplinary approaches and new concepts and markets.

- **Innovation**: Delivering the government’s vision for the UK as an innovation nation, through concerted action of Innovate UK and wider UKRI.

- **A world-class organisation**: Making UKRI the most efficient, effective and agile organisation it can be.
Renewed Government interest and focus on R&D and commercialisation of research linked to economic recovery and addressing regional disparity.
How do we define ‘commercialisation’

The crucial ingredient is new ideas, with some of the most valuable and significant of these driven by investment in R&D – both in businesses and in publicly-funded research organisations, such as universities and institutes.

It requires an intent and mindset to develop and apply an idea to a real problem or unmet need, and to successfully progress along the technical and/or commercial readiness pathway towards it being sold on the market.

Our new UKRI definition of commercialisation aims to be more inclusive of all disciplines e.g. social sciences, arts, humanities.
Why is commercialisation important for UKRI?

In answer to the R&D Roadmap, Levelling up, Innovation, People and Culture strategies

• Capture the economic and social benefit from research through improvements to innovation, knowledge exchange and scale-up.

• Accelerating the journey between concept and commercial application is critical to securing the contribution of our world-class research base to productivity, growth and social and economic benefits.

• But a common concern […] is that, while support is available for early stage research and development, this support falls away before ideas are commercialised […].

• Commercial and entrepreneurial skills and a mindset of enterprise and innovation are important across all academic disciplines to effectively leverage R&D investments.
Developing interventions addressing regional needs – Evidence based solutions
Using Logic Model and theory of change to understand and illustrate the difference we make
Connecting Capability Fund (CCF)

- Funding: In 2017/18 £100m split into £15m formula and £85m competitive funding

- Objective: to stimulate strategic collaboration between universities, enabling them to pool expertise, build connecting capacity and share good practice in line with delivering the industrial strategy.

- 18 projects funded over 3 years

- Follow on Funding £25m 2020/21 11/18 projects funded – awards of either 1 or 2 years.
Connecting Capability Fund

- An additional £152 million in funding was attracted.
- 735 businesses were engaged directly in projects, with a further 4,377 engaged in the projects’ wider works.
- 49 spinouts were created from the projects, with more in the pipeline.
- More than 4,760 people received training in commercialization skills.
- 1,523 new products and processes were developed, or are currently in development.
Innovate UK Action Plan for Businesses

Place and Levelling up

- Vibrant local business clusters attract investment and talented workers and help companies to grow
- Helping businesses in a local supply chain to innovate and do things differently can improve productivity and enrich local economies
- Supporting innovation in places will help to build strong national capability and support levelling up across the UK

Strengthening UK Capability in Places

Investing in local strengths that are critical to building and maintaining overall UK capability

Connecting National to Local

Making it easier for businesses to find the best support, whether local or national

Driving local impact

Tailored support to clusters of innovative businesses to improve local economies
Innovation Accelerator pilot

• £100m between 2022-23 and 2024-25 to pilot three new Innovation Accelerators.

• To develop UK innovation clusters, boosting economic growth by investing in high-quality projects to grow R&D strengths, attract private investment, boost innovation diffusion, and maximise the combined economic impact of R&D institutions.

• Each Accelerator will see local consortia developing a plan and identifying transformational projects to grow their innovation ecosystem.

• They will receive bespoke support from the UK Government, led by BEIS in partnership with other departments and their regional teams.

• Innovation Accelerators will be delivered day-to-day by Innovate UK on behalf of UKRI. Working in strong partnership and co-creation with local leadership.
Using data analytic to inform strategic engagements
Backing Innovation-led Businesses: The Role of public investments

Early evidence from data analytic collaborative project
Geographic challenges – financing R&D intensive early stage companies

Spinouts companies outside of the golden triangle are less likely to successfully raise initial and then follow-on equity finance rounds, and raise far less capital when they do.

Proportion of Research Council spinouts raising external equity by round, by geographic group (UKRI research spinouts founded 2010 – 2014)

Median cumulative value of Beuhurst deals over time raised by Research Council spinouts, by geographic group (UKRI research spinouts founded 2010 – 2014)
A lack of funded high-quality research capability or inefficient spinout generation does not appear to explain this deficit

*As defined through analysis by Cambridge Policy Unit, sample is: very large, very research intensive institutions, undertaking world-leading broad-discipline research. Full list in annex.*
Thank you
Claire Nauwelaers
Science, Technology & Innovation Policy Expert, Belgium

Richard Harding
Independent expert – EU Cohesion Policy

Impact of Science
22-24 June, Leiden

#IOS22
Towards Green Transition in EU regions:

Smart Specialisation for transformative innovation

Claire Nauwelaers & Richard Harding
June 2022

Project funded by the European Commission - Joint Research centre
The research question and method

**QUESTION:**
How do regional innovation policies evolve when taking a challenge-driven approach?

- Innovation as the most credible means to address societal challenges
- Transition dynamics - need to create *space for system change* - crucial role of *end users/citizens*
- Specific focus on *Green Transition* - role of *Smart Specialisation Strategies (S3)*

**METHOD:**
Inductive analyses based on *reality* of regions, informed by literature

- Capture *diversity* yet focus on *frontrunners*
- On site visits, interviews with *practitioners and stakeholders* - plus document review
- *Looking behind the dressed windows...*
5 Regional Case Studies

EU Regional Innovation Scoreboard (RIS) 2021

- East and North Finland
- Zuid-Holland (Western NL)
- Basque Country
- Western Macedonia
- Centro Portugal
East and North Finland  ’Strong Innovator’ EU RIS (2021)

THE REGION
- GDP per capita 120% of EU average (2020)
- Huge area - low population density - demographic ageing and decline
- Oversized carbon footprint - highly dependent on raw material exploitation, wood and minerals
- S3s at NUTS 2 regional level and for each of the 7 official NUTS 3 ‘regions’

INNOVATION-LED GREEN TRANSITION
- Well endowed with knowledge institutions - visibly innovation-led - high enthusiasm of ecosystem actors and internationalisation has bred institutional thickness
- Functional region - value chain approach - circular forest by-products, advanced water technologies, ‘greening’ of mining and steel-making - remote digital solutions
- EU leader in citizen participation - but generally limited to local-level initiatives
Zuid-Holland (Western NL) ’Strong Innovator’ EU RIS (2021)

THE REGION

- GDP per capita **151% of EU average** (2020)
- Highly urbanised - **one of most densely populated areas in the world** - population growing
- Largest port in EU and important **horticulture sector** - both high CO₂ emitters
- Major **knowledge institutions** present – but lack of **skilled workers** a growing concern

INNOVATION-LED GREEN TRANSITION

- National ‘**Mission-driven Top Sectors and Innovation Policy**’ - focuses on societal challenges and guides **Zuid-Holland Growth Agenda** and numerous local strategies
- **Established triple-helix partnership** led by Economic Board and substantial institutional thickness - highly ambitions plans for **greening Port of Rotterdam** and creation of EU green hydrogen hub
- **Citizen engagement** more within projects and local initiatives, rather than in strategy development
- **S3 and EU Cohesion Funds** not the main driving force - more the ‘icing on the cake’
THE REGION

- GDP per capita 102% of EU average (2020)
- High population density - growing population
- Basque society notably cohesive with low risk of poverty and social exclusion
- Autonomous Regional Government with wide-ranging budgetary and policy-making powers

INNOVATION-LED GREEN TRANSITION

- Holistic approach to Green Transition under ‘Basque Green Deal’, with major focus on industry and substantial coordinated input from research sector
- Regional S3 = the transition-oriented ‘STIP 2030’ = the main guiding force (although EU Cohesion Policy Funds barely needed or used) - implemented through strong triple-helix interaction
- Key strengths in circular economy / eco-innovation. Net-zero industrial super-cluster planned, based on energy transition. Experimental cross-sectoral ‘tractor-effect’ initiatives
- Citizen involvement mainly in local initiatives - e.g. housing energy renovation scheme

Photo source: Authors (2022)
Centro Portugal  
‘Moderate Innovator’ EU RIS (2021)

THE REGION

- GDP per capita 58% of EU average (2020)
- Population density relatively low - declining and ageing population particularly in rural areas
- Mainly specialised in traditional sectors - ceramics, glass, cement, forest - low salaries an impediment to growth
- Well-endowed with public research and technology resources - high tertiary education levels and good IT skills

INNOVATION-LED GREEN TRANSITION

- Creditable 63% renewable energy in final electricity consumption - chiefly from wind and hydro
- Main challenge is decarbonisation of high-emitting, energy-intensive industries - plus high material use
- New regional S3 has societal challenges as transversal objectives - green, digital and social transitions
- Strong national control over budgets and Cohesion Policy management. Region has little room for manoeuvre to deploy tailor-made funding instruments - but new local-level approaches tested
- Main green experimenters are the region’s universities, cooperative laboratories (part of national scheme) and related bodies interfacing with companies

Photo source: Authors (2022)
The Region

- Home to 80% of Greece’s lignite industry, supplying 70% of national electricity at its peak. Phasing out since 2010, with major plant closures - final plant will close in 2028
- GDP per capita 42% of EU average (2020)
- Small population - declining due to out-migration - high youth unemployment

Innovation-Led Green Transition

- Bold ‘Just Transition Development Plan’ to transform region into major green hydrogen hub - total €7.4bn investment foreseen, plus ‘White Dragon’ IPCEI - 1:1 job replacement envisaged
- Plans include new Innovation Zone for Clean Energy and Environmental Technologies, Centre for Hydrogen Studies, hydrogen cluster and technology park
- Few innovation actors in region, but green focus growing in local Research and Technology Organisations and University
- All key decisions taken at national level - region has little input, or capacity
- Local society resistant to change - citizen engagement with transition proving difficult
Drivers of Green Transition in regions

CARROTS

- Increased **economic value** of green/sustainable products, change in **demand** (final consumer and business demand) for greener products/solutions and for products of local/EU origin (reducing EU dependency), green public procurement, free **experimental** zones and regulatory sandboxes, ...

STICKS

- **Phasing-out** of coal, environmental **regulations**, carbon **taxes**, bans on plastic, low emission zones and phasing out of diesel-run engines, taxes on waste... also **perspective** of new regulations (e.g. on ecodesign of products) ...

SERMONS

- Buy-in to discourse at **EU level**, **new narrative** for regional development (SDG, Green Deal...), society-wide **consensus**, voluntary commitments....

Building strategy for innovation-led Transition

Traditional innovation

**Aim:** Regional competitiveness

**Key players:** Innovation ecosystem (private innovation actors, public R&D actors, RTOs, innovation intermediaries)

Innovation for transition

**Aim:** address societal challenges - within broad regional agenda

**Directionality**

**Key players:** innovation ecosystem and challenge owners (users, citizens, local authorities, utilities...)

**Wider participation**

- **EN Finland:** « greening » materials value chains vital for new economy
- **S3 = driver only in EN Finland, Basque Country, Centro**
- **(Users/citizens not much involved in strategy making)**
- **Citizen participation more within projects (West NL ERDF criteria), local level (EN Finland and Basque Country)**
Implementing innovation-led Transition

**Traditional innovation**

**Governance:** Led by Ministry/Agency in charge of RDI

**Policy tools:** RDI policy mix
- Upgrading individual instruments towards higher effectiveness

**Innovation for transition**

**Governance:** Led by large coalition spanning policy domains and levels
- Orchestrator role of Basque Government (+ skills agenda)
- (Centro and W Macedonia - region not in full control)
- S3 « leaders » in Centro, Basque Country
- Zuid-Holland Economic Board in NL policy framework

**Policy tools:** Coherent packages of instruments with experiments & scale-ups
- Basque Country cross-sectoral ‘tractor’ initiatives
- Zuid Holland ‘system interventions’

Greening actors’ agendas
- Transformative policy portfolios
Understanding innovation-led Transition

**Traditional innovation**

- **Policy capacity:** design, implementation, follow-up

- **Measure of success:** economic and RDI performance

**Innovation for transition**

- **Policy capacity:** enhanced need for consensus-building, openness, agility, anticipation, reflexivity
  - Smarter administration

- **Measure of success:**
  - economic and RDI performance and contribution to solving societal challenges ("missions")

**Examples:**
- Centro ‘distributed’ local EDP
- ‘Related diversification’ sector analyses West NL
- (W Macedonia - anticipation difficulties)
- Mission approach in NL and Basque Country
- (Monitoring systems not yet able to capture green transition holistically)
Conclusion: challenges ahead...

...for accelerating pace and depth of innovation-led Green transition

- **Directionality**: aligning multiple strategic agendas
- **Wider participation**: enhanced role of end users and citizens
- **Orchestration**: across domains (skills!) and across levels
- **Transformative policy portfolios**: leveraging actors’ agendas
- **Smarter administration**: upgraded evidence base
- **Monitoring contribution to solving societal challenges**
Good examples...

- **West Netherlands-Zuid Holland**
  Greening the Port of Rotterdam - experimentations and bold projects

- **Centro**
  Innovation for inclusiveness - bringing creativity and talent in rural areas

- **West Macedonia**
  The CluBE bioeconomy/envIRONnement cluster - a change agent in a locked-in region

- **The Basque Country**
  Synergetic initiatives for the circular economy

- **East and North Finland**
  Value-chain approach for green transition of water resource: cross-technology, cross-domains, cross-regions
Regional Collaboration

“Connecting the actors (better involve local actors), go for wider participation, bridging the gap between fieldlabs and sciencelabs”