



**P2L2**  
**PUBLIC POLICY LIVING LAB**  
 Study Visit and Limited Mapping  
**Aarhus**  
 27-29 Jun 2017

**DRAFT NOTES STUDY VISIT**

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**First Day – Tuesday, 27th June 2017**

**NAVITAS – Inge Lehmanns Gade 10, 8000 Aarhus - <http://www.navitas-aarhus.dk/en>**

### Welcome and Introduction (Ministry of Higher Education and Science)

(Charlotte Rohlin – Welcome and presentation of programme - 5 minutes)

- Presentation round of the participants (all – 10 minutes)
- Status report by LP (Bremen – 5 minutes)

### Smart Specialization in the Danish context

#### Danish Ministry of Higher Education and Science

Mr Uffe Andersen presented the way the S3 strategy is coordinated: There is a government (national) level, there is a regional level and a cross-regional level. The Danish cluster strategy is located in this cross-regional level.

The Danish approach to RTI policy development is a bottom-up process where relevant stakeholders also participate in the definition of new programmes and initiatives.

The cluster Strategy 2.0 covers the most relevant clusters and Networks in Denmark. There are 22 innovation networks at national level and 20+ at regional level. The Danish regions help in the coordination and dialogue between the national and local level, e.g. cluster fora and growth fora.

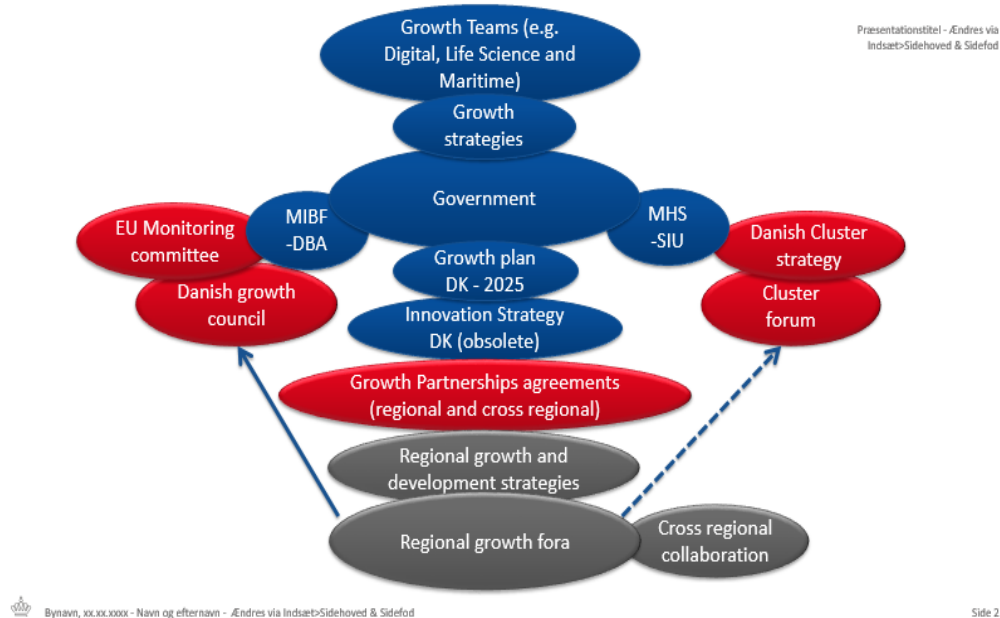


Illustration 1: excerpted from the presentation *The Danish policy framework on smart specialization*, presented during the P2L2 study visit in Aarhus, d. 27-29 of June by Uffe Andersen (DAIEG). For more information please visit the P2L2 shared working space: [here](#)

A new study from McKinsey Company found that there are more than 250+ initiatives. Uffe illustrated the complex startup ecosystem: for more information, please visit Inno-Overblik.

#### Danish Business Authority (Lone Rosen – 10 minutes).

Presentation of the different policy initiatives in the Danish Smart Specialization framework

Ms. Lone Rosen presented the different policy initiatives from the financing point of view. She belongs to the Monitoring committee of the Danish Growth Council. Regional Growth fora are at the center for participating at the Cluster Forum and the Growth council.

Denmark is organized in 5 regions and 6 fora. Regional fora have several tasks:

- Draft the growth related parts of regional development strategies
- Monitor local and regional growth conditions
- Develop activities, (i.e. innovation, knowledge distribution, new technologies, entrepreneurship, human resources, tourism, peripheral/rural areas....
- Calls and proposals for projects for regional council co-financing

- Calls and proposals for projects for co-financing to the MA (ERDF and ESF)
- Members of MC (ERDF and ESF)
- Ongoing exchanges between RGF and MA

Projects: a few examples, regional funds

- **Scale-up Denmark:** cross-regional cooperation for training entrepreneurs and SMEs in hubs comprising bio-economy, cleantech, food, maritime industry, energy, efficient technologies, health and welfare technology, etc. (ERDF 70mill. DKK)
- **D2i – Design to innovate:** a kind of clustering initiative in the design sector for helping companies to bring ideas into new products and design and cooperate with universities and other networks (ERDF: 2 mill. DKK).

The ERDF priority axes, specific objectives and its correlation with H2020 were presented.

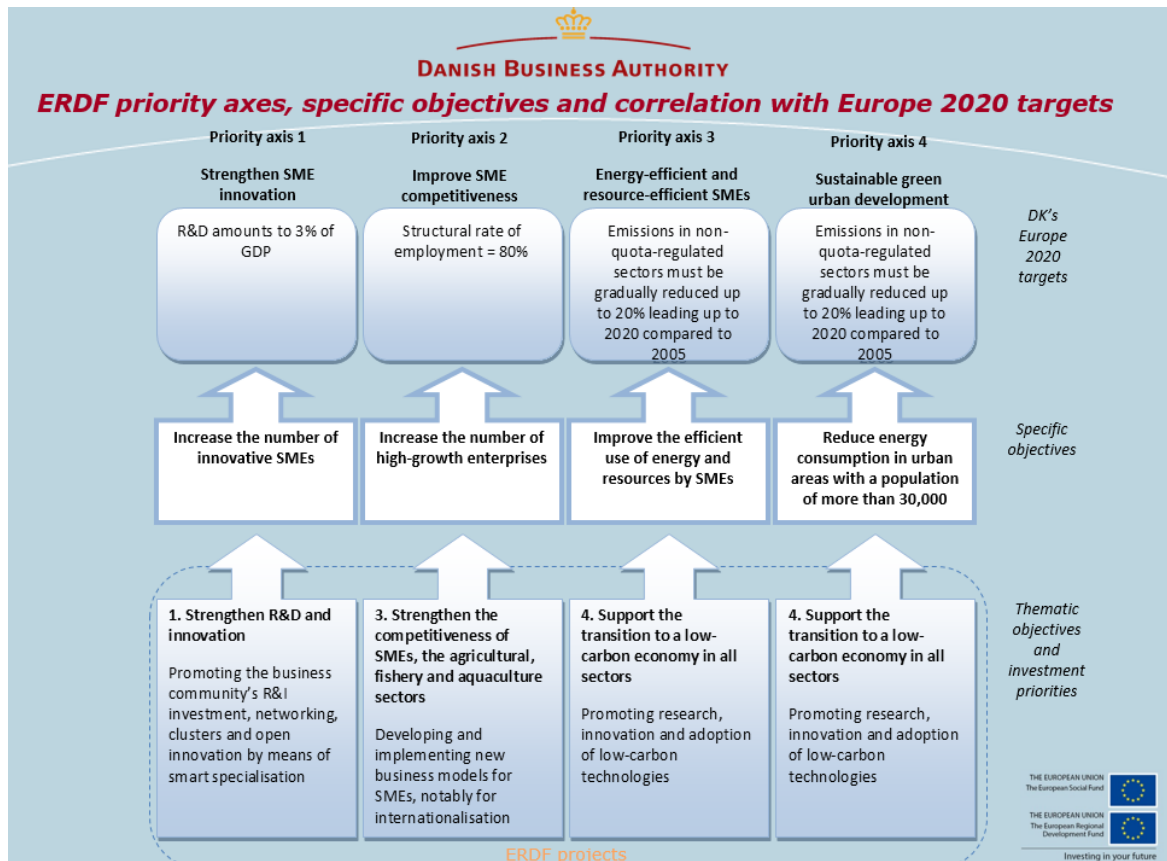


Illustration 2: excerpted from the presentation *Structural Funds management in Denmark*, presented during the P2L2 study visit in Aarhus, d. 27-29 of June by Ms. Lone Rosen (Danish Business Authority). For more information please visit the P2L2 shared working space: [here](#)

Discussion:

There are funds from regions and from private companies. Private funding has a strong weight.

They are not using structural funds for infrastructures, but for soft projects like the explained ones.

In Bremen companies do not have so much interest in ERDF projects, as the administration is cumbersome. Therefore much money goes into large infrastructures, companies do apply for regional and national funds instead.

Similar problem is found in Denmark. EU funding loses visibility to the final beneficiaries.

In Denmark there is an InnoVoucher scheme called InnoBooster, which can handle large amounts of money, starting with 500.000 Kroner. The most important programme is the innovation Networks, for bridging the gap between science and industry.

Since 2007 the Danish Business Authority is the managing authority for ERDF and ESIF.

In Bremen the same Ministry is Managing Authority for ERDF and ESIF, but in 2 separate Directorates and still there are not formal links between both of them for coordination purposes.

Clusters must be managed in order to encourage companies to participate in cooperation projects.

Regional strategic focus and positioning has been selected for each region strategy. Sector focus clusters are working in a cross-cutting approach and covering new emerging technologies.

Question related to the definition of the S3 strategy and the participation of the companies: in LT there are a few big companies, influencing in a strong way. Maybe a cluster strategy could be interesting approach to be imported from DK to LT.

### The Danish Cluster Strategy and cooperation model - Cluster Forum

Mr Olav Sønderskov Senior consultant for the region of South Denmark. Joint Danish Cluster Strategy

Growth Forum is the one deciding how to spend the ERDF money

The Cluster Strategy has been renewed. Current version 2.0 (2016-2018) covers 45 clusters and innovation networks (can be downloaded from: [www.ufm.dk/en/publications](http://www.ufm.dk/en/publications)). Why it is necessary a joint Cluster Strategy? In 2009 in the Region of South Denmark only there were 87 cluster initiatives. There was not a common understanding how to use the cluster initiatives in an efficient way.

In 2013 there were to national cluster support organizations, funded by different regions and administrations. The need for coordination between clusters and between regions was a reality.

The cluster strategy has 5 focus areas:

1. Clusters as a bridge builder to research and development
2. Clusters as a driver of internationalization: the companies of the cluster to become more international and competitive
3. Clusters as a driver in the regional ecosystem: clusters as dealmakers
4. Development of strong professional Danish clusters: ESCA certification processes for paving the way to excellence
5. Cohesion in the cluster policy and structure

## The Cluster Strategy

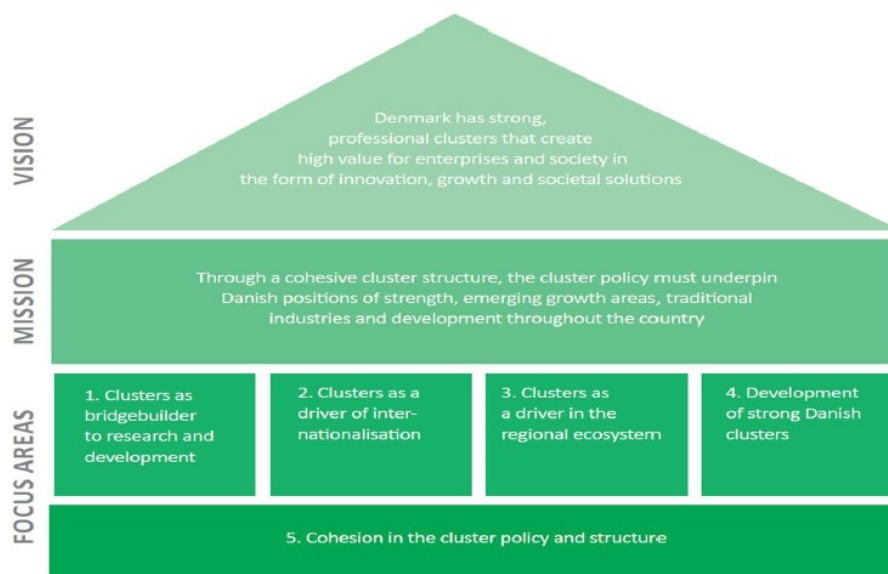


Illustration 3: excerpted from the presentation **Joint Danish Cluster Strategy**, presented during the P2L2 study visit in Aarhus, d. 27-29 of June by Mr. Olav Sønderskov (Senior Consultant, Region of Southern Denmark). For more information please visit the P2L2 shared working space: [here](#)

### Intervention logic and indicators: strategy

Key tools for intervention are:

- A Cluster Forum: A cluster forum was established, where actors from the national, regional level and local levels meet as a platform to discuss and create the cohesion and coordinate efforts between the different players. Main challenge was to create an overview about the Danish cluster, establishing even criteria to decide what a cluster is and to distinguish it from other initiatives.
- Cluster Excellence Denmark: [Cluster Excellence Denmark](#) is a cluster support service offering services as a back office for the clusters.
- Cluster Label system: The certification label system was also important (gold members, silver members and bronze members).

Region of Southern Denmark may be an example to illustrate the relationship between the smart specialization strategy and the cluster strategy.

In the region there are three main pillars:

- Sustainable energy (renewable wind turbines offshore and oil and gas)
- Health and Social care innovation
- Experience Economy (tourism and creative industries)

There are several clusters covering these fields: D2i, Offshore energy DK, Welfare Tech DK, Clean cluster (energy efficiency technologies).

There are a scale-up hubs for each of these pillars and they have a national connection to implement the national strategy and the regional strategy in a aligned way.

Challenges still exist and keep working: e.g. one of the big topics in the national agenda is what is going to happen in the national policy after the forthcoming elections. For example there are several clusters within the food industry.

An example of cooperation with other regions was presented: establishment of partnerships in the western part of Denmark, regarding production for example. OECD Review for the western partner, recommended to reinforce the cooperation between the regions. Western Denmark has created a "Business Partnership". Example in sustainable energy: Wind Turbine manufacturing, taking place in Western Denmark (Esbjerg).

Selected priority areas in Western Denmark are:

- Sustainable energy
- Health and social innovation
- Food innovation
- Industry 4.0
- Attraction and retention of skilled labor
- Design

Regions involved in the partnership are : North Denmark region, Region of South Denmark ad Central Denmark Region (include graphic from the presentation).

Guiding principles of the partnership are: competitiveness, simplification, openness, coordination and proximity. The latter of the three growth fora support the regional clusters, which gave a national character and are of significant importance to DK's international position in this area.

A stronger and simplified cluster organization is another of the principles guiding. One national cluster within each field with local hubs, coordination of regional clusters, ensure coordination of business contacts, company-driven cluster organization, incentive to coordinate throughout common requirements for financing and performance contracts.

Questions arising during the debate were:

- Average number of members of a typical Danish cluster?
- How many innovation projects does carry out in a year a typical Danish cluster?

There are clusters located at universities, at ports with more or less knowledge intensive orientation and sometimes the role of the cluster bringing knowledge to companies and sometimes is the other way round.

A new regional innovation scoreboard has been published but sometimes headquarters and R&D facilities are installed in capital region and distortion the results of the scoreboard.

### **Implementing smart specialization in a regional context**

#### **Central Denmark Region (Pia Fabrin – how Central Denmark Region develop and administer regional growth and development strategies – 15 minutes)**

Ms Pia Fabrin, Head of Secretariat, International Relations and Analytics, presented some stats of the Central Denmark Region. The region has a big university with more than 42.00 students and a university college.

#### **Regional tasks**

Growth forum and regional council are both responsible for the definition of the S3 specialization. (see graphic)

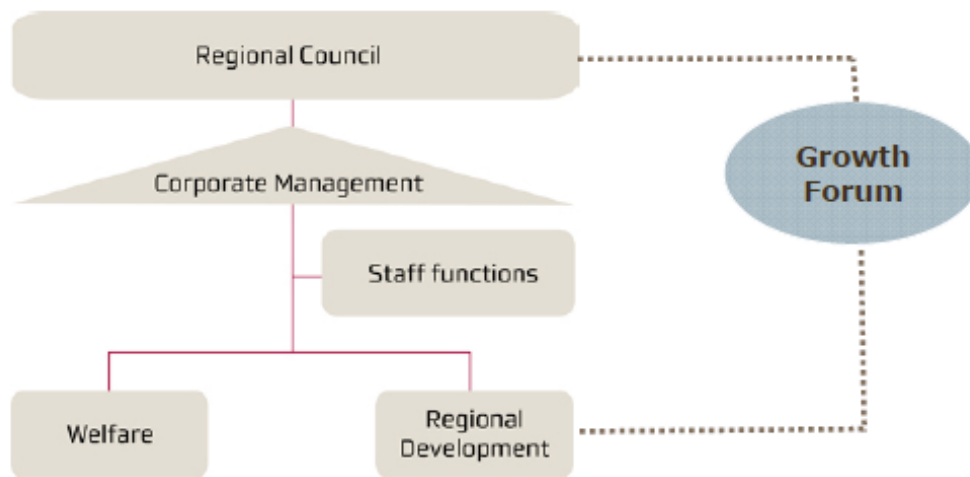


Illustration 4: excerpted from the presentation *Implementing Smart Specialization in a Regional Context- Central Denmark Region*, presented during the P2L2 study visit in Aarhus, d. 27-29 of June by Ms. Pia Fabrin (Head of Secretariat, International Relations and Analytics). For more information please visit the P2L2 shared working space: [here](#)

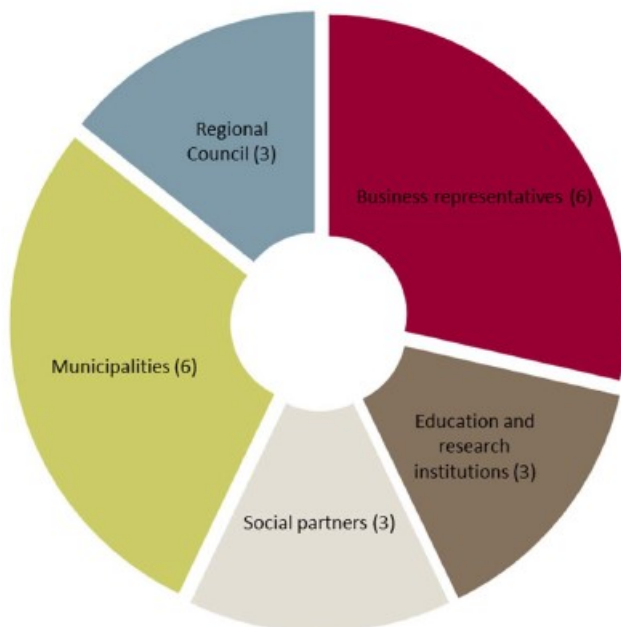


Illustration 5: excerpted from the presentation *Implementing Smart Specialization in a Regional Context- Central Denmark Region*, presented during the P2L2 study visit in Aarhus, d. 27-29 of June by Ms. Pia Fabrin (Head of Secretariat, International Relations and Analytics). For more information please visit the P2L2 shared working space: [here](#)

The growth forum - a partnership composed of municipalities, regional social partners, universities... but also counts with other important stakeholders (ministries, Danish Growth council, Employment region, Business development and Innovation Actors, Other Growth forums...).

In central Denmark region there are 4 focus areas:

- Food,
- Creative business, ICT and Tourism
- Energy and Climate
- Smart Industry

Innovation system drivers:

- Internationalization and export
- Knowledge and competences
- Innovation and business development
- Digitalization
- Entrepreneurship and capital

The regional council provides funding for implementing the S3 strategy. The growth forum proposes and the decision is made by the regional council. The regional council also decides on who is represented there, from the organizations and different administrative levels.

The new plan goes along with the UN Sustainable Development Goals.

## Business Development Centre Central Denmark (Peter Ekmann – the role of the Business Development Centres in the development and implementation of regional growth and development strategies, including the selection of ERDF-supported Regional Fund projects)

Denmark's Business Development Centres are a central element in the government's strategy, as a way of enhanced cooperation between the state, regions and municipalities, including setting up of five business development centres.

[Business Development Centre Central Denmark](#) is one of Denmark's five Business Development Centres (Væksthuset). Business Development Centre Central Denmark has two main types of offers to entrepreneurs and companies: Growth mapping and co-financing for growth (from DKK 17,000 to DKK 700,000 depending on the age and growth potential of the company). These can be divided into five themes: Internationalization, Capital and financing, Strategy, Technology and Sales and marketing.

The business development centre creates a meeting place for all guidance counselors, advisors, networks, entrepreneurs and business, offering guidance. Is a non-profit organization, with a budget of 25 mio Euro, partly financed by local and national authorities responsible for providing business support in the region of Central Denmark. Is active in creating appropriate instruments, tools and series for the growth of entrepreneurial business in the region.

The centre offers a unified business service system in the innovation system of Central Denmark Region.



Illustration 6: excerpted from the presentation, presented during the P2L2 study visit in Aarhus, d. 27-29 of June by Mr Peter Ekmann (Business Development Centre Central Denmark). For more information please visit the P2L2 shared working space: [here](#)

The support has different levels of complexity: from a simple guidance (business plan and entrepreneurship) to a specialized guidance on strategy, customer relationships, technology and innovation, finance and funding, export and internationalization.

Problem resolution through programmes:

- **National programmes** (Enterprise Europe Network, automation and digitalization, early warning); and
- **Regional programmes** (programme for start-ups, for SMEs, *competencemidt* for skills planned development, internationalization, more creative for the creative industries, *midtnet* China that advice on innovation in China, Future Food innovation providing advice for food companies...;
- **International programmes** (GrowIn 4.0-Growing into Industry 4.0 Accelerate growth in manufacturing SME's; IRIS-Improved Result in Innovation Support; SNOWMAN-Supporting non-technological innovation in owner managed manufacturing SMEs).

Many of these programmes are funded by ERDF

Results and impact obtained thanks to the Business Development Centre is monitored every year in terms of employment, turnover, innovation... (Information can be found under: [www.vhmidtjylland.dk](http://www.vhmidtjylland.dk) + [www.imidt.dk](http://www.imidt.dk)).

The centre also has cooperation with universities and research centers and technology centers.

There are specific programmes promoting technology transfer from the Universities and other knowledge institutions. In fact it is a prerequisite for many of the programmes.



After an interesting guided tour at NAVITAS, the consortium visited the Nanoscience Center at Aarhus University



P2L2 Consortium and Stakeholders during the SV in Aarhus (picture by Kasper Bosek).

**Nanoscience Center, Aarhus University** - <http://inano.au.dk/>

Presentation by **Marie Louise Conradsen**

RADISURF (spin off company) a story about research collaboration. By Mikel **Uffe/Charlotte please insert last name**

Inano is a center promoting cooperation between all faculties of the University Engineering, Physics, Chemistry, Biology, Mol. Bio and Medicine.

Areas of research:

- Nanomaterials/ materials science
- Nanomedicine
- Nanofood

Main mission of Inano is research, but also education and innovation; providing an innovative interface for transfer and transformation of basic scientific knowledge to Danish industry and society.

Has facilities and laboratories, like cleanroom, synthesis laboratories and other equipment that also serves for collaborating with the industry.

Inano strategic areas: molecular dynamics modelling, Density functional theory calculations.

Radisurf – A timeline

2004-2008: Basic research

2008-2013: Applied and basic research

2013-2015: intermediate projects together with SP Group kept the dream alive

A common interest between the university and a couple of companies (grundfos and SP group): Innovation fund grant for creating a molecular glue (11 mio Kr.).

Research collaboration: The real value is not only the result achieved, but the knowledge gained during the process.

#### **BROKERING TRUST**

Using open Science to create long-term collaboration between the industry and university

Presentation by **Marie Louise Conradsen**

New models for collaboration between industry and Research

How is knowledge put to industrial use?

- Co-financed research
- Students projects
- Shared PhD/ Postdoc
- Access to facilities
- Tech transfer (licensing etc.)
- **Open Science (new)**

It is necessary to find something new, in order to complete the traditional ways. Most of SMEs do not finance a big percentage of their income in R&D.

Open Science is free and includes open access, open research, open data, open notebook science, citizen science. The university is interested in publishing, in order to attract other research and

Open science on inano is a pilot project on material sciences

- Original members are inano, Alfa Laval, SP group, Ecco, Newtec, Lego, Velux, Radisurf, Vestas.
- Now 16 and counting
- 4 more universities
- 3 main areas: reversible, tunable and sustainable materials

Open science, how does it work. Companies proposes a project to the university. Results are made available for the commercialization in an open database.

- New U-I collaborations
- IPR on applications
- New products and process
- New I-I partnerships
- New research ideas
- Publications
- Employment of alumni
- Spin-outs (market pull)

Include the graphic on development of new classes of materials.

- The model has to face many challenges yet:
- Explosive growth in 3 months – but no organization to handle it
- Structuring a fluid movement
- Recruiting enough students
- Collective responsibility= no responsibility
- Create a proof of concept for almost no funds

And the political challenges, because if the model would succeed, it will bring about changes

- The university act
- Basic vs. applied research funding
- Incentive/ review structures
- Journal business models

Read more [www.spoman-os.org](http://www.spoman-os.org)

Contact: Marie Louise Conradsen

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## Transport from Inano to First Hotel Atlantic

### First Hotel Atlantis

#### Working session (Bremen/IkerConsulting)

- Identification of good practices to be transferred
- Practical use of case studies and policy brief templates

Michael Boronowsky presented the aim of the session.

The hosting partners are responsible for the preparation of the Case Studies. Visiting partners are responsible for providing input to the hosting partners completing the separate questionnaire.

Concerning the study visits that took place in the past, hosting partners are invited to circulate their draft case studies to the others, especially for Bremen and Rzeszow, also for Vilnius in order to gather input from the partners, identifying best practices or solutions adopted in other regions for solving similar problems. The input from the visiting partners will be incorporated to the case studies, to justify and document the policy learning exchange and also to justify the policy instrument's improvements planned in each region.

Ms Caroline Privat presented the Bremen experience when drafting the case study and the plans for drafting the Regional Action Plan for improving the Policy Instrument ECOMAT.

- The mid-term evaluation will be tendered next year with the aim to finalise the evaluation itself to be ready by end 2018;
- In parallel, Bremen is preparing the process for the re-indorsement of the regional Parliament for the EcoMaT.
- Bremen is planning to set up a foundation for the EcoMaT.
- This could be an example to proceed, implementing other complementing or accompanying initiatives.
- The physical structure of the EcoMaT offers companies and other actors an opportunity to come together and cooperate
- In 2018 there will be a new political decision in Bremen about the money to be allocated to the clusters for the next 3 years. Could be decided to allocate money to new materials, e.g. instead of allocating it to the aerospace sector. The rough ideas of this change will reflect the changes intended in the Regional Action Plan.

LP suggested to also include the limited mapping tool and the results of the assessments in the whole process. For example, ECOMAT or the LT innovouchers are policy instruments contributing to the implementation of the S3 strategy. Hence, the regional analysis carried out in the project about the process for defining and implementing the S3 strategies may also be subject of improvements itself. This is particularly relevant for those regions selecting the S3 strategy itself as policy Instrument

The Policy Instrument in Denmark is the Cluster Strategy but the improvement will be the Growth Forum and innovation networks.

In LT working on the innovation vouchers: 2 big problems one is the amount of money, that cannot be changed and the other one is the red tape, because bureaucracy is lasting the results and potential impact of the PI.

Rzeszow PI is the S3 strategy. Main change is the Podkarpackian Innovation Center (this center could find inspiration in Navitas or ECOMAT).

Piemonte presented 2 best practices: one related to innovation cluster and another one about tech. platforms. The Spring 2018 SV will be concentrated on research and innovation in new materials focused in aerospace. Improvements planned are: reduce the fragmentation of productions and policies aligning them in order to improve impact of R&D.

Nouvelle Aquitaine has the challenge of 3 merged regions and the alignment of s3 strategies. Also the roadmaps and the whole value chain from the raw materials to the market.

All partners are requested to work on their own case studies and contribute to the other case studies (via questionnaires or directly commenting providing input to the draft case studies from the other regions)

Time schedule:

- Sept 2017 – Case Study ready and circulate to peers for comments
- Peer comments until end October 2017
- 7-9 Nov 2017 – Case Study discussed, detailed session: 30 min each (10 mins presentation, 10 mins open comments, 10 mins how-to-finalise)
- End Dec 2017 – Policy Brief ready. Again similar commenting procedure.
- March 2018 - Regional Action Plan ready!

*End of Day 1*

**Second Day – Wednesday 28th June 2017 DTI – Technological Institute, Kongsvang Alle 29, 8000 Aarhus - [www.dti.dk](http://www.dti.dk)**

**Introduction to the Danish Innovation Network Programme (Ms Charlotte Rohlin)**

The objectives of the innovation Network Denmark are:

- to increase innovation in SMEs
- Support development of business Strengths

- Enhance public private research...

Innovation Networks in the different sectors were presented: Production, Energy, Environment, Health, Life Sciences, Food, Construction, ICT, Service, experience economy and tourism.

#### **Danish Materials Network - the role of DMN as a network within the network programme ( Ms Dorte Walzl Bælum)**

DNM is one of the 22 Danish innovation network. Was founded in July 2014 after merging 3 independent networks dealing with materials in the field of aluminum, polymers and steel.

The role of DMN is to innovate the use of materials in order to obtain competitive and unique end-products, in combination with the use of advanced production technology.

The DMN strategy has a set-off in the European industrial policy formulated by the European Commission, where a set of KETs are instruments for modernizing Europe's industrial base and in driving the development of entirely new industries. The industrial Technologies Programme (NMP) focuses on four KETs: nanotechnologies, advanced materials, and advanced manufacturing and processing and biotechnology. KETs have a huge potential for growth and employment. That is why they decided to concentrate on these KETs.

The legal entity of DNM is a foundation and the members pay a fee depending the size of the company.

#### **Competences:**

- Knowledge about aluminum, polymers and steel.
- Bridge building between industry and universities,
- Matchmaking, networking and sharing knowledge,
- arrangement of events,
- internationalization,
- courses,
- project management, project administration and project application.

Partners are companies, research institutes, industries in the steering group.

#### **1 day events:**

DNM is involved on a series of knowledge transfer activities with the Technical University of Denmark, Aalborg university, Uni southern Denmark... On specific new materials topics. DNM has organized 50 events with 1.250 participants in 2.5 years.

#### **DMN projects:**

Demonstration projects and larger research projects in different topics, like circular economy, bio polymers, fibers for alternative use, green aluminum surfaces for aerospace...

#### **Internationalization:**

Innovation Express - focus on the medical device industry in Ireland, thermoset industry in Lithuania, packaging and process equipment in Catalonia

For becoming a member of the network the partners are expected to come up with a problem or project idea, to be evaluated.

#### **Contact:**

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#### **Inno-Pro - the role of Inno-Pro as a network within the network programme (Mr Klaus Bolving)**

CenSec center for Defense, Space and Security is the prime Danish cluster organization for companies with an interest in high tech industries like defense, homeland security, maritime, space, aerospace, railway and dual-use. CenSec is a private non-profit organization funded by member fees and projects. Founded in 2004 as a network, was established as an industrial cluster in 2007.

It counts with more than 100 members with leading edge skills within advanced production manufacturing, electronics, mechatronics and software. Leading Danish universities and Research & Technology Organisations are among the members. More than 50 companies outside CenSec's core member base participate in CenSec's open innovation projects as well.

CenSec' secretariat comprises 7 employees and additional ad hoc consultants & advisors.

Inno-Pro Innovation civilian cluster for production: enables scientific research and development and transfers high-tech competences and technologies to the advanced production industry. The concept is about building bridge between knowledge institutions and companies in order to create jobs, growth and industrial competitiveness.

Dual use concept of cooperation between Censec and Inno-Pro for the creation of jobs, growth and capabilities.

### Business cluster concept

In the network there are represented: clusters, public authorities, knowledge institutions, networks of clusters, at European and international organizations.

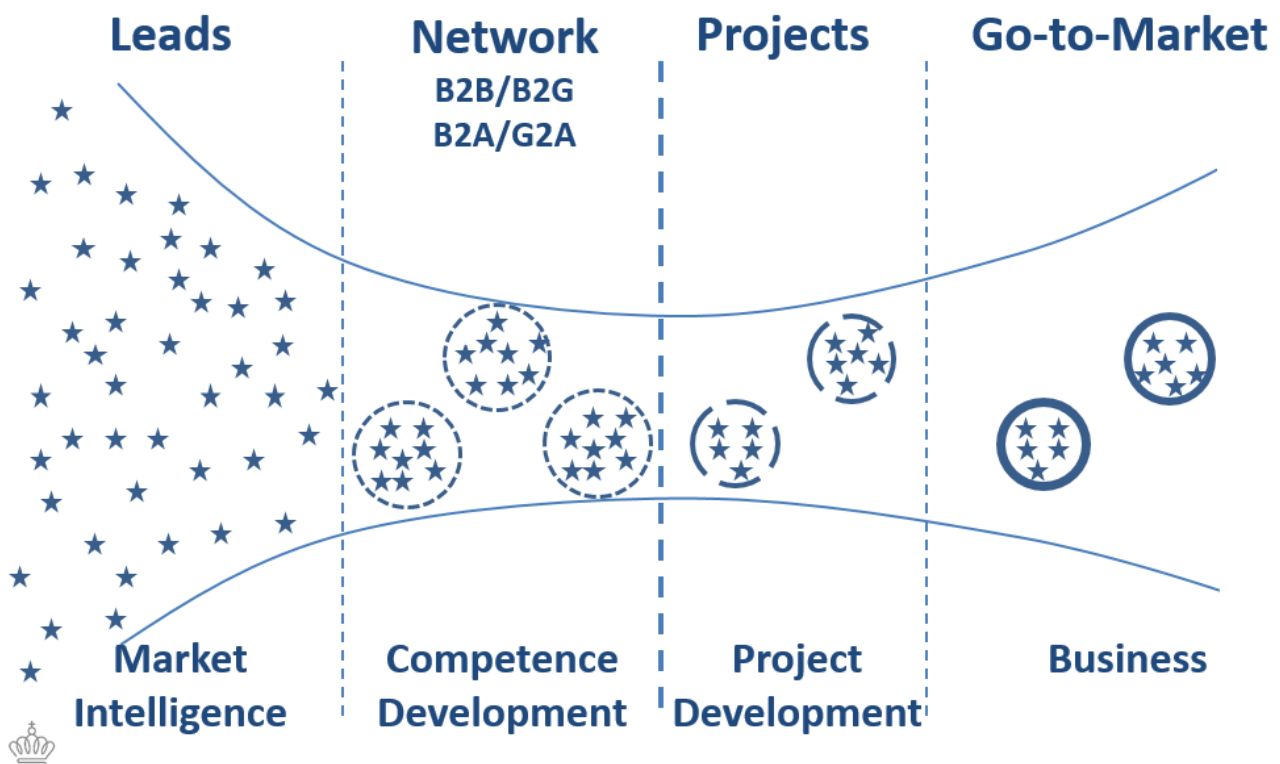


Illustration 7: excerpted from the presentation, *Inno-Pro, A network within the network programme* presented during the P2L2 study visit in Aarhus, d. 27-29 of June by Mr Klaus Bolvig (CEO at CenSec Center for Defense, Space & Security). For more information please visit the P2L2 shared working space: [here](#)

CENSEC has a strong Network at 3 different levels:

Regional:

- Companies (Defense/Security/Aerospace/Space/Maritime a.o.)
- Network og Clusters (IT/FinTech/Green Tech/Maritime a.o.)
- Authorities (Defense/Security/Business-Trade/Research a.o.)
- Knowledge Institutions (Universities, RTOs, Academies a.o.)
- Other organizations (Associations, Interest Groups, a.o.)

European:

- Companies (Defense/Security/Aerospace/Space/Railway a.o.)
- Network og Clusters (Defense/Security/IT-Cyber/ e.g European Cyber Security Organisation, European Network of Defence-related Cluster and the European Security Cluster Network (NL-GE-FR-FI-DK)
- Authorities (Defense/Security (EU-Commission/EDA/ NATO/NSPA) (Eg: Innovation Centers, Embassies a.o.)
- Knowledge Institutions (Uni., RTO, Technology Centers a.o.)
- Other organizations (Associations a.o. (EURADA/European Secretariat for Cluster Analysis/European Cluster Collaboration Platform)

**International:**

- Companies (Defense/Security/Aerospace/Space a.o.)
- Network of Clusters (Defense/Security/Cyber-IT/BD generally)
- Authorities (Embassies/Governments (Trade & Innovation)
- Knowledge Institutions (Uni., RTO, Research Centers a.o.)
- Other organizations (UN, Trade & Innovation Associations a.o.)

**Contact:** CenSec: Center for Defence, Space & Security CEO Klaus Bolving ([klaus@censec.dk](mailto:klaus@censec.dk))

**Cluster Excellence Denmark, CED - the supporting role of CED to clusters and networks (Ms Britt Sandvad)**

There are criteria for the consideration as a cluster: related to the structure, minimum number of participants, include triple helix, willingness to share knowledge and cooperate. in that case they can belong to the cluster catalogue.

Currently there are 47 significant cluster including the 22 innovative networks.

**Funding source:**

- 37% from national funding
- 34% regions and municipalities
- 2% knowledge institution
- 14% from companies in cash
- 9% EU funding

Cluster Excellence Denmark has a support function and is co-funded by the Ministry and the 5 Danish Regions.

The objective is to provide services and tools to professionalize the cluster management and develop competence on cluster.

Services provided to the clusters are demand driven:

- Focused exchange groups, stimulate cross cluster activities and exchange of knowledge
- Contact and feedback
- Master clusters with international capacities for strategic development
- Annual innovation camps for cluster management
- Develop tools for supporting clusters in their internationalization processes
- Certified Benchmark expert and trained assessors within ECEI (bronze, silver and gold labels)

Currently there are 3 experience exchange groups on:

- Gold label cluster managers
- Internationalization and
- Communication.

There is an innovation network programme that publishes calls with criteria.

The cluster excellence Denmark team works in close cooperation with the Enterprise Europe Network.

The Cluster Matchmaking Conference was presented. This will take place in Stuttgart (September, 21-22 - 2017) offers excellent matchmaking opportunities with Europe's leading cluster organisations, lot's of networking opportunities and a thrilling interactive programme in a vibrant and learning atmosphere. So far more than 130 clusters from 26 countries have already signed up. For more information, please visit: <https://www.b2match.eu/cluster-matchmaking-2017>

**Introducing the GTS Advanced Technology Institutes – independent Danish research and technology institutions**

Danish Technological Institute, DTI (Mr Jens Christiansen). Opportunities in the Danish GTS institutes – facilities and infrastructure.

GTS network is composed of 7 institutes. To become a member they have to be independent and non-profit organizations focused on ICT, BIO technology. The role of GTS is bridging the gap from knowledge to value.

GTS network is active in commercialization, knowledge dissemination, characterization of materials proof of concept... specially in the TRLs 4-9 Not that much basic research and education.

Most of the customers are small and medium companies.

Inno booster – one of the innovation tools for supporting SMEs and financing the services provided by Tech centers and laboratories with an intensity of 33% .

**Danish Technological Institute**

For more than 100 years, DTI has ensured the translation of the latest knowledge and technology into real value for Danish Businesses.

DTI has offices in DK and Europe (Stockholm, Göteborg, Barcelona, Warszawa) in order to support SMEs mainly in the development of EU projects.

Revenue 2016: 150.2 Mio EUR 42% from Danish companies.

Some projects developed by the DTI are presented:

- Green fiber bottle prototype made of sand and rest of papers;
- Dirt repellent coating helps the Danish Oil industry;
- Herbert, the full automatic factory worker with computer vision;
- Insects in future animal feed and food;
- Green magnets protect the environment and reduce the costs.
- Advanced materials characterization (horizon 2020 proposal: use the new facilities in Lund).

For more information about the application of the technology to development of new products please visit the presentation [here](#).

Annual report can be found under: [www.dti.dk/about](http://www.dti.dk/about)

#### **Business opportunities' in the ERA-net and H2020 calls (Bremen/IkerConsulting)**

Application for an ERANET scheme was initially proposed by the Aquitaine Region. Now, after creating Nouvelle-Aquitaine, they are already participating, because one of the former regions was member of an ERANET.

Anyway, it is an interesting possibility, that should be considered in the framework of P2L2. Reinforced cooperation between the regions is still possible, coordinating the preparation of proposals related to new materials under the H2020 or other programmes like BBI-JU, etc.

Each partner is requested to nominate a responsible person within the consortium to create a working group interested in exploring these business opportunities. Each region will also contact the ERANET responsible in their region in order to:

- a) Analyse already existing ERANETS
- b) Decide if the regions are interested in creating a new one or taking benefit from the already existing ones
- c) Analyse other calls within H2020 and related programmes to promote further cooperation of the partners and relevant stakeholders of each region.

Mr Uffe Andersen (DAIEG) volunteered for coordinating the initial steps, putting into contact and analyzing the interest of the regions. IkerConsulting will create a new distribution list with each partner representative appointed for this purpose.

#### **Company Visit - Advance Nonwoven – [www.advancenonwoven.dk](http://www.advancenonwoven.dk)**

Møllerupvej 26, 8410 Rønde

The company was established in 2006 with the objective of creating new commercial opportunities for sustainable and renewable products made from natural fibers, waste or recycled material. Nonwoven provides:

- Technology that facilitates environmentally sustainable production by allowing the use of natural fibers to create products that are safe for the environment;
- Technology that facilitates environmentally friendly production by allowing the use of recycled waste to create products that are an asset for the market and the environment;
- Patented CAFT- Carding Airlaid Fusion Technology and SDIL - Spray-Dry-In-Line technology introducing capacity for new manufacturing processes;

The CAFT technology facilitates the use of sustainable and renewable resources creating a variety of new products.

The patented SDIL - Spray-Dry-In-Line - enables to treat fibres very efficient in-line, such as fire retarding, alternate hydrophobic or hydrophilic capabilities, anti-microbial agents, dust binding and a variety of coatings are made possible by this technology.

A broad selection of products can be produced with the CAFT technology - ranging from thin tissue-like textures to lofty structures and from low to high-density compositions.

Treatment of fibres with the SDIL technology secures that the products will comply with legal and specified functional requirements.

During the visit, the consortium was able to visit the production facilities and examine prototypes of products developed with biofibres and bio materials applied to different sectors.

**Company Visit – TERMA - [www.terma.com](http://www.terma.com)**

Fabrikvej 1, 8500 Grenå

Mr Benny Daugholm presented the company and the different business areas, processes and products.

The Business Areas of the company are:

- Command, Control & sensor Systems
- Airbone systems
- Global support and services
- Aerostructures

Terma is a global company with daughter companies all over and with Danish strong roots.

**AES manufacturing- mastering new processes**

15 years ago the materials were completely different and the company had to re-invent itself in order to start using composites. 200.000 million Dkk were invested to renew all manufacturing processes.

F-35 is the main product. Terma is involved in several parts, in design and in manufacturing. The plant in Aarhus is a manufacturing facility only, while the design is done in other companies.

Terma composite center processes are: receiving the raw material

- Nesting and cutting
- Lay-up
- Curing/post cure
- Non-destructive testing
- Composite machining center
- CMM
- Assembly
- Painting

The company is growing in several phases: number of employees is expected to grow up from 250 to 500 employees and important investments in facilities and equipment in order to increase the production capacity.

**End of Day 2****Third Day – Thursday 29th Jun 2017 Transport to Billund Airport and Company Visits****Working session on bus**

Partners are requested to provide input to the hosting partner, filling in the separate study visit [questionnaire](#). The hosting partner will gather this information for the completion of the [Case Study](#). By clicking on the hyperlinks, you can access to the templates of these documents.

**Company Visit – LEGO Sustainable Materials Center – [www.lego.com/da-dk/aboutus/contact/sustainable-materials-centre](http://www.lego.com/da-dk/aboutus/contact/sustainable-materials-centre)**

Aastvej 1, 7190 Billund

The LEGO Group establishes LEGO Sustainable Materials Centre and expects to recruit more than 100 employees in a significant step up on the 2030 ambition of finding and implementing sustainable alternatives to current materials.

On June 16, 2015 the LEGO Group announced a significant investment of DKK 1 billion dedicated to research, development and implementation of new, sustainable, raw materials to manufacture LEGO elements as well as packaging materials.

The investment will result in the establishment of the LEGO Sustainable Materials Centre. The centre will be based at the LEGO Group's headquarters in Billund, Denmark, and include all current functions and employees working to find alternative materials. In addition, the LEGO Group expects to recruit more than 100 specialists within the materials field during the coming years to work on this challenging ambition.

Stakeholders who want to contact the centre are welcome to use this e-mail address: [smc@LEGO.com](mailto:smc@LEGO.com)

**TO-DO LIST**

Description	Responsible	Deadline
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Confirm the exact dates of Next Study Visit in Bordeaux	Maud Pawlowski	31 <sup>st</sup> July 2017
Provide input to the hosting partner, filling in the separate study visit <a href="#">questionnaire</a>	All Partners	7 <sup>th</sup> August 2017
Each partner is requested to nominate a responsible person within the consortium to create a working group interested in exploring these business opportunities.	All Partners	7 <sup>th</sup> August 2017
Create a new distribution list with the responsible person within the consortium to create a working group interested in exploring these business opportunities.	IkerConsulting	7 <sup>th</sup> August 2017
Provide guidance to the partners about next Communication activities: Next Newsletter issue, Publication of Press release, preparation of project leaflets for Nouvelle Aquitaine and Piedmont, further dissemination activities	Tanja Woronowicz	7 <sup>th</sup> August 2017
Preparation of <a href="#">Case Studies</a> Circulate to peers for comments (Bremen, Rzeszow, Vilnius, Denmark. Also recommended for Nouvelle Aquitaine and Piedmont to identify main challenges and potential improvements of their PI)	All partners	End September
Peer comments to Case Studies	All partners	End October
Spending targets for Semester 3 and 4 to be sent to IkerConsulting	All partners	31 August 2017
Case Study discussed during the SV in Bordeaux, detailed session: 30 min each (10 mins presentation, 10 mins open comments, 10 mins how-to-finalise)	All partners	November 2017
<a href="#">Policy Brief</a> ready. Again similar commenting procedure.	All partners	December 2017
Regional Action Plan ready!	All Partners	March 2018