

Digital Innovation Hubs & Smart Specialisation EIT House (Brussels) 28 Nov 2017

LITHUANIA:

ADVANCED MANUFACTURING DIGITAL INNOVATION HUB



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Regional context, RIS3 and DIH connection to the regional innovation ecosystem

I. In its active preparation for the EU structural assistance period 2014-2020, in 2012 Lithuania began the process of smart specialisation.

The need for EU Member States to formulate smart specialisation strategies was expressed by the European Commission with a view to ensuring more efficient use of funds and resources intended for the development of the research, experimental development (R&D) and innovation system. **II.** The Lithuanian DIH took active part in forming the S3 strategy. Experts, academia and business representatives, participated in:

- Working group activities;
- Forming the S3 strategy, that is made up of 4 parts;
- Setting the roadmap and priorities;
- Preparing the strategy plan;
- Created a study ANALYSIS OF THE FUTURE PRODUCTION BUSINESS ENVIRONMENT, describing possible directions of 4 technologies;
- Prepared an R&D&I report and Lithuanian business experience.

The beginning of DIH development reaches 2009, formation of:

- VIPKC virtual database of the R&D service providers and the engineering industry companies;
- **INTECHCENTRAS** smart manufacturing competence center.

Implementation of the "Intelect" and "Innocluster" projects was the background of fieldlabs and subcontracting services:

- Fieldlabs emerged;
- Subcontracting services;
- **Consulting** services.

As a part of the European DIH network, LT DIH works as an accelerator to improve technological basis of Lithuanian and region SMEs, prompt the transition of a higher added value products, remain in the European chain of higher value added products.



Studijos

LIETUVOS MTEP PARAMOS CENTRŲ PRIEINAMUMO INŽINERINĖS PRAMONĖS ĮMONĖMS PAGERINIMAS

Studija, Lietuvos MTEP paramos centrų preinamumo inžinerinės pramones įmonėms pagerinimas" yra skita įveritnia orgistusiojanty vaistelijų MTEPI centrali turi pakankama (intrastruktia) įr kaze, galinčių attikini sumanios specializacijos stratogijos vykdymą, konkrečiau – inžinerinės pramonės įmonėms aktualaus prioriteto Lankščos naujų produktų kolmo ir gamybos technologinės sistemos" įgyvendinimą. Šis darbas, atspindinis, visų pima, inžinerinės pramonės poreiklus MTEPI sityje, jinša svarų indėl sukaini strataginio likaio – MTEPI ir inovacijų sprendimais didinti aukštos pridėtinės vertės. Jinioms ir kvalilikuotai darbo įagai iminų ekonominų kajakies BVPI ir struktoriniamumas tiko pokyčiams. Lietuvos gamybinėms įmonėms, nes pačių įmonių turimų nuosavų MTEPI galaugų patieniamumas Lietuvos gamybinėms įmonėms, nes pačių įmonių turimų nuosavų MTEPI galaugų taksia nepakanka, juo labau, kad globali pažagan erikakalau nuotai atmaiginį fiseki MTEPI viekios sritis ridinitis paraudojime derktyvumą.

Studija "Lietuvos MTEP paramos centrų prieinamumo inžinerinės pramonės įmonėms pagerinimas"

SUMANIOS SPECIALIZACIJOS GAMYBOS SEKTORIUJE STRATEGIJŲ PLANAS

Sumanios specializacijos gamybos sektorijų stratogijų plano studija skirta parengti MTEPI veiklos gamybos (inžinerinės pramonės) sektoriuje sumanios specializacijos prioritetus ir jų įgyvendnimo kelrodžius, įvertinant Lietuvos inžinerinės pramonės ir susijais moksio potendalų ir poreiklus sparinti pridelinės vertės kūrima, tubi pat Europos gerajų praktiką, visų pirma, ES Velešosis ir privačiosis patnerystės. Atelitės fabrikai" parengtų sios sinties MTEPI veiklos plėtos prateginį kelori 2014-2020 metams, kuriamė nustativos prioritetinės tyrimų sirtųs "Hortoriats 2020" programi. Durbo procese buvo pasiekta tinkama sinegija su Lietuvos prioritetinų mokslinių tyrimų ir eksperimentinės (socialinės, kutintinės) plėtos bei inovacijų raikos (sumanios specializacijos) prioritetinų reingimo veika, kuri leido visiksi integrudi



Relation RIS3 – DIH

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How does the DIH influence the RIS3 strategy; how does the RIS3 influence the DIH; how does the DIH implement RIS3 activities?

The strategic objective of smart specialisation is to increase, through R&D and innovation (R&D&I) solutions, the impact of high added value, knowledge and high-skilled labour intensive economic activities on the country's GDP and structural economic changes.	Following the S3 strategy, companies were recommended to specialize in certain priority areas that are at the same time the key areas at DIH . Therefore companies submit applications according to DIH recommended directions. DIH and RIS3 are directly and closely interacting.
 Action plans for priorities of the priority area "New production processes, materials and technologies": Photonic and laser technologies; Functional materials and coatings; Structural and composite materials; Flexible technological systems for product creation and production. 	 DIH services: DIH consulting services FieldLab Contracted Services Digitization technological focus Priority directions: Formation of priorities for the development of scientific research & technologies; Creation and implementation of innovative high value-added products & processes; Development of new business models; Quality assurance for all levels of professional training according to the needs of industry; Development of social dialogue as a tool to enhance business competitiveness.

The feedback to the S3 is ongoing, LINPRA, the DIH coordinator

- Prepared the S3 strategy guide to implementation of the priority "Flexible technological systems of product creation and manufacturing" (2012-2013).
- Encourages companies to submit applications to structural funding programs, dedicated to finance technological initiatives.
- Organizes continuous activities with member companies: consultations and support is provided to prepare R & D projects according the guide to the same priority.



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Bottom UP Ecosystem | progressive BCT AGARGINTA Progressive prototype LEREKAS aedilis Business CO production SMEs – field labs GROUP () () () ()Networked, cluster organizations ilVita BACC LITEK LITHUANIAN PLASTIC CLUSTER Universities **R & T organization** CENTER SUNRISE VALLEY ŠIAULIAI SCIENCE ktu FOR PHYSICAL SCIENCES AND TECHNOLOGY UNIVERSITY VILNIUS GEDIMINAS KLAIPĖDA TECHNICAL UNIVERSITY **Incubator/accelerator** 1922 UNIVERSITY Start-up company Kitron **Partners / Supporting organisations:** RETAL WESTERN Large enterprises – partners BLRT GRUP LITHUANIAN LASER ASSOCIATION LITHUANIAN ROBOTICS ASSOCIATION Lithuanian Confederation of Industrialists infobalt CEEMET **Industry associations** EUPC .AGORIA CW European Composites, Plastics and MANUFUTURE-EU **Economic development agencies Polymer Processing Platform** () LIT mitc esta social social fund **IVPA** InTechCentras INVEGA **VET Educational institutions** VILNIAUS **JERUZALĖS National / Regional governments** URM OF EDUCATION VILNIUS

THE MINISTRY OF FOREIGN AFFAIRS OF LITHUANIA

AND SCIENCE

MINISTRY OF ECONOMY



Lithuanian R&I system (governance and funding)

European Commission





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DIH consulting services:

Search for innovations; Establishing the company's digital level and providing recommendations; Preparation of company's digital strategic plans and necessary investments; Training and consulting in the field of digitization and innovative technologies; Mediation between science and business and business and business; Studies.

FieldLab Contracted services:

Practical Digitization; Technology design / installation services; Demonstration, testing, production of prototype small quantities, including 3D printing methods; Testing of new functional materials for the engineering industry; Identification and harmonization of related and interactive activities; Collection and processing of data for statistical analysis of characteristics; Quality control of products, validation of produced batches, characterization; Safety tests and assessment of environmental and health impacts; the preparation of the technical documentation required for CE marking under the Machinery Directive etc.

Digitization technological focus:

Sensors, actuators, MEMS, NEMS, RF; Photonics, electronic and optical functional materials; Robotics and autonomous systems; Internet of Things (e.g. connected devices, sensors and actuators networks); Data mining, big data, database management; Simulation and modelling; Software as a service and service architectures; Cloud computing; Additive manufacturing (3D printing); Laser based manufacturing; ICT management, logistics and business systems.

Services Funding and networking in EU:

European Social Fund, National basic research funding, Private partners' funding and resources, Memberships fee, Horizon 2020, service fee.

- DIH Service providers has a real return on investment in line with the Business Model;
- The DIH acts on a commercial basis and seeks to be independent of project financing.

Challanges:

- Consolidated projects and building of MT&R. How to consolidate the community and invest in common projects while community members are interested in acting in their own favored areas and are not fully aware of the value of common projects. The challange – learning to maintain company's independence while working together.
- Developing of **soft competences** for DIH members.
- The creation of an enterprise self-assessment tool that would allow the enterprise to prepare for digitization how to become a FoF company. The challenge – a lack of a **common strategy** for large volumes of different specialization companies.
- One-stop-shop principle and its management. **Selling services** to potential customers, maturing their need of services.



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Good practices in the RIS3/DIH work

The DIH can demonstrate several "Success stories".

- In a project finished 2015, Baltec CNC Technologies44, De Futuro and Audimas have developed a "Smart Sensitive Sensor System for Human Health Monitoring {iMON)".
- In December 2016, UAB Baltec CNC Technologies and their partners started 4CHANGE, the "Industry 4.0 CHAlleNGE: Empowering Metalworkers For Smart Factories Of The Future project under the Erasmus program
- InTechCentras45, being the official representative of the German Innovation Center Industry 4.0 (Germany Innovation Center for Industry 4.0) in Lithuania, provides a three-level training course with a final exam assessment that results in a "Industry 4.0 Driver License".

LINPRA, coordinator of the Lithuanian DIH, initiated and was one of the authors of S3 development related studies, carried out and published online:

- Improvement of accessibility of Lithuanian R & D support centers for engineering industries
- Plan of smart specialization strategies for engineering industries
- Lithuanian enterprises in international R & D programs assessment of participation
- R & D network: experience and opportunities of international projects
- Guide to implementation of the priority "Flexible technological systems of product creation and manufacturing"
- Analysis of business environment for future manufacturing
- Lithuanian training institutions possibilities to ensure the development of engineering industry competitiveness

http://www.manufuture.lt/lt/studijos





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PAŽANGIOS GAMYBOS TECHNOLOGIJŲ CENTRAS

Coordinator

The Engineering Industries Association of Lithuania LINPRA www.linpra.lt www.intechcentras.lt LINPRA www.manufuture.lt/en/vipkc Engineering Industries Association of Lithuania

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* Website to be launched soon:

http://dih.linpra.lt/

Organizational form: Networked organization, without formal structure, bottom up Turnover: 250.000-500.000 Number of employees: 9 Evolutionary State: Fully operational Geographical Scope: National

Digital Innovation Hubs



http://s3platform.jrc.ec.europa.eu/digital-innovation-hubs-tool

Vision:

The driving force of Lithuanian ecosystem - a reliable and competitive partner in the whole European network of digital innovation hubs.

Mission:

By integration of Lithuanian ecosystem participants, in usage of digital technologies, to increase the competitiveness of Lithuanian enterprises.