



Interreg Europe



European Union
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e Report

Staff Exchange 3: Birmingham to Emilia-Romagna (2018, March 28-29)

1. Participants

- Mark Reed (Birmingham City Council)
- Peter Laybourn (Industrial Symbiosis Limited)
- Rachel Lombardi (Industrial Symbiosis Limited)
- Ugo Mencherini (Aster)
- Sara Picone (Aster)
- Silvano Bertini (Director Research, Innovation, Energy and Sustainable Economy, Emilia-Romagna Region)
- Giorgio Moretti (High Technology Network Unit Manager, Aster)
- Manuela Ratta (Emilia-Romagna Region)
- Filippo Saguati (Aster)
- Lucie Sanchez (Aster)

For complete attendance list please see the attached signature sheets.

2. Staff exchange main topics and program

Day 1 March 28, 9:30-17:00

Emilia-Romagna context

The context of Emilia-Romagna region was presented by Ugo Mencherini and Sara Picone ([Aster](#)). Data about business sectors, research sector and innovation performance were explained. A focus on business excellence in Emilia-Romagna was made.

Birmingham has similar population and sectoral make-up, with a history of automotive manufacturing and engineering and a recent move toward more services and high-tech.

The ERDF 2014-2020 programme

The main structure of the [ERDF ROP for Emilia-Romagna](#) together with the regional innovation policy were presented by Silvano Bertini giving as well an overview of the regional performances in terms of competitiveness and innovation. The overall ERDF budget is 480 million euros, on 6 priorities and 140 are dedicated to research and innovation (Priority Axis 1).

With respect to Italy, Emilia-Romagna is well positioned in terms of R&D expenditure from the business sector as well as export. The regional business sector is mostly composed by

SMEs. Since 2009 the Emilia-Romagna region has dedicated ERDF funds to support the regional innovation ecosystem as a key to competitiveness. The regional support to innovation is composed by a mix of infrastructures (e.g. Technopoles, Open Labs), networks (e.g. High Technology Network, Mak-ER network, etc.) driven by an overall strategy (Smart Specialization Strategy, S3).

A discussion compared the approaches of ER and BCC on how policies and funds can facilitate the interaction between research and the business sector, since the challenge is shared between both regions. The strategy which was used in Emilia-Romagna was that of financing large collaborative projects, involving more than one research laboratory with the participation of companies. The strategy that BCC has successfully applied involves facilitated company engagement through industrial symbiosis networks (currently the BASIS project funded through ERDF), and liaising with the research and academic communities.

Smart Specialization Strategy of Emilia-Romagna

Giorgio Moretti described the main milestones of Emilia-Romagna Innovation policy and tools. Emilia-Romagna is the first Italian region having approved a regional law on innovation (2002). In 2004 the [Regional High Technology Network](#) was established. The High Technology Network includes 82 laboratories and 14 innovation centers dedicated to applied research.

The Regional Smart Specialization Strategy approved in 2014, is a framework for both ERDF as well as for FSE (ESF) funds. In 2017, in order to better connect the business sector within the research sector, the regional [Clust-ER](#) were funded with regional support from ERDF.

The Waste Management plan and the Circular Economy Law in Emilia-Romagna

Manuela Ratta presented the Regional activities related to waste management and Circular Economy. Particular attention was dedicated to the “Byproducts” permanent discussion table which was established by the Region with the [Circular Economy Law](#) of 2015, which is one of the Good Practices mapped in TRIS project. BCC and Industrial Symbiosis Limited were very interested in the approach and the links to the approach have been provided.

In both regions, the regional responsibility lies principally if not entirely on municipal waste but there is the willingness to support better performances in terms of industrial waste as well. BCC is facing the challenge of renewing its contract with the company managing the WTE plants (owned by BCC) and consequently is very interested in the waste management plan of Emilia-Romagna.



Figure 1- Day 1 presentation of Emilia-Romagna approach to waste management

Visit to Reggio Emilia Technopole

Alain Marengi from ASTER presented an overall view on the innovation ecosystem of Emilia-Romagna and its functioning. Alain raised the challenge of clearly identifying business needs; BCC shared its experience through BASIS with facilitated networks to engage businesses and gather relevant information. Thereafter, Marco Culzoni from Reggio Emilia Innovazione (Innovation Center from the HTN) presented how an innovation center works and REI core expertise. ISCO related this structure to Innovate UK activity.

A visit to [BIOGEST SITEIA](#) lab and [EN&TECH](#) was a deep dive into two strategic research projects financed by Emilia-Romagna ERDF with a particular focus on trying to capture value from waste streams: [Valoribio](#) and [Sostinnovi](#). The first one deals with poultry waste streams converted by means of insects to bioplastic components, the second one deals with innovation across the wine value chain covering multiple aspects (field, byproducts valorization, etc.).

BCC and Industrial Symbiosis Limited learned about some valuable technologies that are near market ready for possible dissemination to UK networks. In particular, a discussion with Professor Andrea Antonelli of Università degli Studi di Modena e Reggio Emilia regarding the application of biochar from pyrolysis to land remediation was interesting with regards to the current BCC waste strategy revision.



Figure 2 – Day 1 Visit to Reggio Emilia Technopole – Valoribio project

DAY 2: March 29 2018, 9:30 – 13:00

ERDF programme: policy improvements with a focus on research infrastructure from Interreg InnoInfraShare

Filippo Saguatti from Aster described the [Inno Infra Share](#) Interreg project, with a focus on policy instruments of Emilia-Romagna Region. The goal of INNO INFRA SHARE (Sharing Strategies for European Research and Innovation Infrastructures) project is to improve the accessibility and the exploitation of local Research and Innovation infrastructure (RII) assets by SMEs.

The selected policy instrument is the ERDF-ROP 2014-2020 of Emilia-Romagna, in particular the Axis 1-Research and Innovation, SO 1.5-Strengthening of excellence in R&I, Action 1.5.1-Support to the research infrastructures crucial for the territory. This policy instrument aims to reinforce the regional research and innovation infrastructures performance, improving their capacity to work within the regional innovation ecosystem in favour of territorial competitiveness and in line with the S3 specialization areas.



Emilia-Romagna Startup Network (ERSU)

Lucie Sanchez from Aster gave an overview on activities carried on with ERDF funds in order to support new entrepreneurship and startups.

In particular, [EmiliaRomagnaStartUp](#) (ERSU) was presented: ERSU is the main regional initiative for startups or future entrepreneurs. The community gathers innovative startups and business support organizations (public and private: Incubators, Innovation Centers and Chambers of Commerce); its services range from support on classical themes related to innovative entrepreneurship to specialized consulting, business development, internationalization and support for fund raising.

Further services to accompany new entrepreneurs over their whole development path were also described:

- The incubation program at [Le Serre di ASTER](#) (ASTER Greenhouse);
- Finance tools as [FINANCER](#) and [KICK-ER](#);
- Mobility programs as the Erasmus for Young Entrepreneurs;
- Networking initiatives.

BCC were particularly interested in the methods of coordination and marketing the services to start-ups, and the various mentoring and financial support that were available together with monitoring of the co-ordinated web-site platform traffic to ensure the information could be further tailored to meet start-ups' needs. BCC also shared its experience with a similar voucher-style ERDF project called Green Bridge, offered to more mature companies rather than Start-ups. BCC attributed its greater uptake (compared to Start-ups) to the ability of the more mature companies to manage the demanding application and reporting ERDF processes due to better systems in-house.



Figure 3 – Day 2 ERSU presentation

Visit to Technopole Bologna CNR, MIST E-R and Proambiente laboratories

The visit to the [Technopole of Bologna – CNR](#) was an occasion to make contact with an industrial research infrastructure realized with ERDF funds.

The Technopole hosts [Mist E-R](#) and [Proambiente](#) research consortia, and related research infrastructures. It was realized with a total investment of 24 M€, 50% co-founded by CNR and the consortia, 50% cofounded by European Programme ERDF 2007-2013 and regional funding ROP.

During the visit, the research activities of Mist E-R (R&D and technology transfer for industry, Prototyping, Optical design, Mechanical design, Formulations for cosmetic industry, Physical and chemical analysis, Spectroscopy, Rheology, Analysis of magnetic materials, etc.) and Proambiente (technology transfer & industrial research for advanced environmental solutions) were described, and several examples of collaboration with industries presented. Investment is focused on the TRL 4-6 “valley of death” between academic research and industrial application.

Here BCC were particularly interested in new product development for air monitoring equipment and ultra violet treatment of contaminated water.



Figure 4 – Day 2 Visit to Bologna CNR Technopole

Wrap up discussion

Mark Reed from Birmingham City Council briefly presented on a sub-programme (15 M€) under their ERDF current strategy, illustrating the focus on a large investment on a new high-speed railway (HS2) to be constructed. This looks at innovation, supply chains, symbiosis opportunities, environmental impact and energy efficiency. The aim is to maximize the economic impact of the new rail line to the city, creating additional wealth and jobs during and after construction as well as reducing its impact on energy and the environment.

The BASIS (Birmingham And Solihull Industrial Symbiosis) project, funded by ERDF funds within priority 4, was presented as additional strategy to unlock new industrial symbiosis opportunities coupling urban and industrial waste streams. This is required as currently BCC has no responsibility for the waste that SMEs produce but wants to minimize it where possible. Similarly, BCC had managed to ‘ringfence’ over 15 million Euros of ERDF funds to

support a Sustainable Urban Development Strategy (which includes active promotion of industrial symbiosis approaches). Both ASTER and BCC agreed on the difficulty of obtaining matched funding from SMEs although BCC had a good experience from its ERDF Greenbridge programme probably due to the maturity of the applicant companies.

Throughout the visit BCC and industrial Symbiosis Limited took the opportunity to explore industrial symbiosis ideas and potential links between projects and networks that could have real practical uses.

Giorgio Moretti from ASTER illustrated the process which led to the definition of priorities within the regional S3, and they were discussed by the participants.

BCC and Industrial Symbiosis Limited thanked Aster and their colleagues for a most productive and superbly organized visit.

3. Lessons learnt

Emilia-Romagna

The staff exchange was an occasion to reflect on our regional ecosystem and on current innovation projects financed by ERDF, here the main learning points:

- Value of peer to peer communication within the business sector to promote opportunities and services;
- Different ways to use byproducts involved in some of the regional strategic projects (e.g. use of biochar in ceramics industry)
- Input on how to make the Technopoles shared spaces more interactive so that the spaces themselves can inspire cross-fertilization of disciplines;

Birmingham City Council

Research approach insufficient to deliver desired outcomes on its own. Intermediaries required and the links to encourage SMEs to innovate to be promoted, with the projects run by research institutes having to demonstrate practical commercial outcomes for the private sector.

The approach of regional classification of by-products and codifying uses as exceptions was of interest as BCC reconsider their waste strategy.

Coordination of innovation bodies across the region potentially provides ideas for Birmingham to pursue in conjunction with the national body Innovate UK.

4. Follow up actions

The list of byproducts of Emilia-Romagna was shared and will be looked at in order to evaluate possible further implementation based on Industrial Symbiosis Ltd expertise.

The contact of one ERSU startup operating in the industrial symbiosis field will be shared in order to foster possible synergies.

Industrial Symbiosis Ltd. will share the report on the possibilities for industrial symbiosis within the construction sector.

Emilia-Romagna will share an additional presentation on the waste management plan.

