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JOBS & SKILLS
IN THE LOCAL ECONOMY

Introductory paper

Experiences and first lessons learnt from Bilbao, Madrid, Milan and Rotterdam

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1.   Introduction

Four cities – four projects – four questions

The decision to include the topic "Jobs and skills in the local economy" in the first UIA Call for proposals in 2016 sent at least two clear messages to urban policy-makers and practitioners.

The first was that after years of financial crisis, negative growth and economic stagnation, urban authorities can play a key role in the recovery phase, addressing the immediate consequences (rise of unemployment and pressure on local welfare systems), but to do so they need to design and test new bold solutions.

The other, stronger, message was that the financial downturn and its dramatic consequences on local competitiveness, jobs and welfare systems should be considered as an opportunity to radically re-think local economic paradigms. An opportunity to lay down the basis for a really smart and inclusive growth.

Smart because it is led by new promising economic sectors, the ones able to make the most from new technologies (digital economy, manufacturing 4.0) but also the ones able to generate wider societal benefits (green, white and blue economy and more generally the so-called social innovation sectors).

Inclusive because it builds upon the local assets and, even more importantly, because it offers equitable opportunities to citizens and it shares the benefits with different sections of society. In other words a growth where no one is really left behind, where the local workforce has the right skills to contribute actively to the economic performance of their territories.

The messages were clearly received by the 123 urban authorities that applied for the first UIA Call under the topic "Jobs and Skills", which was the topic which received the most applications (33% of the total applications received in a call where other three topics were featured).

The four projects finally supported synthesise well the strong commitment of urban authorities to act as frontrunners towards a new economic paradigm. Although from different angles and with very different local contexts, they all try to build solid ecosystems for growing economic sectors to prosper (helping them to anticipate major technological disruptions or helping new and emerging sectors) while investing on local people and their skills to ensure that they will contribute to and benefit from the new growth.

The cities of **Bilbao (**AS-Fabrik**)**, **Madrid (**MARES**)**, **Milan (**OpenAgri**)** and **Rotterdam (**BRIDGE**)**, together with rich and diverse groups of local stakeholders are now half-way through their three years implementation phase. Initial results are being achieved, the first success stories are making the headlines of local media while new and unexpected challenges are being addressed.

All actors involved are unanimously convinced that the journey so far has been an incredibly rich learning experience. Lessons that will further improve the delivery of the UIA projects, that will be valuable for the four urban authorities in other policy-fields and future projects, and, even more importantly, lessons that can be extremely interesting also for other cities dealing with similar challenges.

In this perspective, building on the enthusiasm of the four cities to share the first lessons with a wider audience and thanks to precious work done by their respective UIA Experts, the four projects started working together and they jointly identified four main questions around which the most valuable lessons were being generated. These are:

1) How important is **industry clustering** in these projects' approaches to supporting the jobs and skills agenda?
2) What can the four projects say about city approaches to **talent management**?
3) How are the four cities developing **place-based approaches** to jobs and skills?
4) How are the four city authorities evolving their **roles as brokers** in the approach to jobs and skills development?

The present introductory paper, jointly produced by the UIA Experts supporting the four projects, aims to frame the four questions and to explain why and to what extent they are relevant for all the projects, highlighting the differences but also the common elements and the initial shared lessons.

The four questions will be publicly discussed during a workshop organised by the UIA Initiative in Brussels on the 22nd of June 2018. Representatives of the four cities will be presenting their experiences and lessons learnt around the four questions with the aim of inspiring other policy-makers and practitioners but also to receive feedback and comments that will further enrich their reflection.

Starting from this introductory paper and building on the discussions during the workshop, the four UIA Experts will produce a final paper (by the end of July 2018) capturing the different exchanges and highlighting concrete learning points for other urban stakeholders on how the four cities are dealing with the challenges linked to the four questions.

2. How important is industry clustering in these projects' approaches to supporting the jobs and skills agenda?

By Willem van Winden, UIA Expert for Bilbao, AS-Fabrik

2.1. What is industry clustering and why is it relevant?

Industries tend to cluster in particular places or spaces: Well-known examples are London's financial cluster, or **Milan**'s fashion cluster, but many cities have particular specialisations. Some have emerged spontaneously over the years, but often, local policy has a role to play in identifying them, boosting them, or connecting clusters to each other or to knowledge institutes. For policies in the jobs and skills field, industry clustering matters as well.

A key challenge for jobs and skills agendas on any policy level is to find a good balance between generic and more sector-specific, specialist skills. On the one hand, in a fast changing economy, generic and "meta" skills are gaining importance, such as communication skills, team work, digital skills, information gathering and processing skills, problem solving, and the ability to learn effectively. On the other hand, the economy needs specialists: people who master a particular field, discipline, or craft. A carpenter must have in-depth knowledge about construction, materials, and be able to handle tools; Professionals in the health care sector must have deep and specialist medical and pharmaceutical knowledge, and need long training to become professionals. In a well-functioning urban labour market, the skills of workers/professionals match the specificities of the local industries.

But this situation is in constant flux. Some sectors are hiring, such as IT-related industries, health care, and personal services; others are in decline. Cities face the challenge to improve the match between supply and demand of skills. For this, they can design policies to steer or nudge more students into promising sectors (this is the aim of **Rotterdam**), or through retraining schemes for people already in work. This asks for a sector- or cluster specific approach, and deep collaboration with sector representatives.
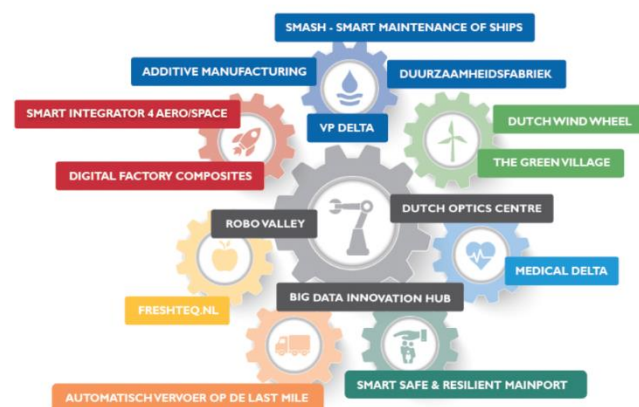

Figure 1: South Holland has a strong and growing fieldlab capacity; Source: SER/MRDH

Clusters matter for another reason as well: rapid technological change – especially digitalisation – has a deep and disruptive impact. Many firms have difficulty in catching up, and risk losing competitiveness. A challenge of the local jobs and skills agenda is to help and support companies in developing new competences, find new strategic directions, engage in innovative collaborations, and embed them in local innovation ecosystems. But technological change, though transversal, has a very different impact in different type of industries. Digitalisation in healthcare poses different challenges than digitalisation in manufacturing. Hence, a sectoral/cluster oriented approach makes sense.

In many cities, unemployment rates are still staggeringly high (especially among young people), and participation in the formal labour market is low. Promoting new types of local (social and/or collaborative) entrepreneurship is seen as a promising way to change this, and can at the same time improve the liveability of urban quarters. Although entrepreneurship –or being entrepreneurial- can

be regarded as a generic competence or trait, requiring many generic skills (social skills, communication skills, etc.), start up entrepreneurs also need specific skills and competences to create a successful company. So again, also in this policy field, a balance between general and specific must be found.

The value added of a local sector- or cluster specific approach is reflected in Europe's **smart specialisation agenda**. In the current and next programming period, European cohesion policy encourages regional economies to specialise in a smart way: not going for "one size fits all", chasing trendy growth sectors or over relying on physical investments to build a knowledge economy, but rather identifying and playing on the precise specifics of the local economy (i.e. its industry structure, growing and declining segments, knowledge bases), and by trying to match the local industry better to research and educational programmes of universities.

2.2. How "cluster-specific" are the projects in Milan, Rotterdam, Bilbao, and Madrid?

All of these UIA projects are cluster specific to a large extent, but from a different angle. In **Rotterdam**, a core aim of the BRIDGE project is to improve the job opportunities of young people in the deprived neighbourhood of Rotterdam Zuid. Unemployment is still very high there, but at the same time, specific local industries have difficulties in finding qualified staff: The port industries and the health sector are amongst these. A lack of awareness of these opportunities, and what young people need to do to access them, amongst schools, parents and young people themselves, is a contributory factor to high levels of unemployment and low income levels in the area. To address this mismatch, the BRIDGE project unites many actors that work together to "nudge" young people into education linked to these growth sectors. Employers in **Rotterdam** offer a job guarantee to kids who choose a pathway in health or port/industry related fields. Thus, this policy is quite industry specific.

The MARES project in **Madrid** has a sectoral focus as well, albeit in a different way. It aims to promote social entrepreneurship among citizens in four neighbourhoods that were hard hit by the crisis. In each neighbourhood, MARES trains and supports citizens to become social entrepreneurs, and develops community/incubation spaces for that purpose. All five "MARES" are specialised to some extent, focusing on care, energy, mobility, food, and circularity (recycling) respectively. These are seen as strategic sectors to introduce a new economic model in the city based on the social and solidarity economy values (green energy, clean transport, circular economy, fair trade, bio products, care).

This is a typical case of smart specialisation at the neighbourhood level: The project first maps and then builds on each neighbourhood's existing needs, skills and networks in this theme, and then builds innovations on that. The project leader, Roberto Corrales Moreno, stressed that there is no one size fits all, each specialisation requires a different approach. "Some clusters demand high qualification levels, for instance in solar panel technology, app development, others less so: bikers, shopkeepers". MARES develops "learning communities", led by experts and professionals, combining them with the regular offers of training courses for the unemployed people, to improve all these skills.

At first sight, **Bilbao's** AS-Fabrik project looks even more sector-specific. It focuses on the digitalisation of industry –often referred to as ""industry 4.0", and the development of knowledge intensive business services in the metropolitan area. For **Bilbao**, this is very important: manufacturing industries are still an important part of the economy, but to remain competitive, they need to adopt digital technology, and a more service-oriented approach. More collaboration is needed to get there. AS-Fabrik intends to build an ecosystem in which industrial firms work together with universities, service firms, ICT firms. Thus, although the project is sector specific, at the same time it blurs traditional boundaries between

production and service activities, and between innovation and manufacturing. The sectoral statistical categories that we still use to describe and measure urban economic activities, become increasingly obsolete.

Milan's OpenAgri project, as the title suggests, is active in the agricultural industry. The project intends to create an open Innovation hub on Peri-Urban Agriculture, integrating several food policy experiments in a single strategy, and operating as a living lab to foster innovation in the agri-food sector. Agriculture-related SMEs and start-ups will experiment with innovative tools for increasing and transferring capacities. Players from various parts of the value chain will be involved: farmers, but also suppliers of technologies, seeds, plants, materials; logistics, marketing, and knowledge/research institutes.

Thus, each of the four case cities' projects has distinct cluster specific features. **Bilbao** and **Milan** each opted to fully focus on one cluster of activities: industry 4.0 and agriculture, respectively, and seek to promote new types of synergies between actors to promote innovation; **Rotterdam** is trying to nudge more young people into a limited number of sectors that exhibit employment growth; **Madrid** goes for five clusters, to be developed in new neighbourhood hubs.

2.3. Lessons and key messages

- **Traditional sector or cluster oriented policies are becoming obsolete**. All projects reflect the challenge to transcend traditional boundaries between sectors or clusters. Typically, urban economies are still organised along traditional lines –with sector-oriented industry associations, government agencies and statistical categories- , but innovation comes from cross-sectoral collaboration, and from better alignment between industry and research/education.

- In many cities, **the education system is too slow to adapt to the changing economic reality**; this conclusion is in line with the chapter on talent management included in this publication. Even though there may be no jobs linked to particular courses, educational providers continue to offer them, and young people continue to choose them. This is partly due to national legal frameworks beyond the control of urban actors, but also to limited communication and interaction between business and educational/research institutes. The UIA projects are a key lever to make progress here.

- It is a challenge for cities to **maintain a healthy balance between the promotion of generic and specialist skills**. Generic skills – social skills, teamwork, problem solving skills etc. – are gaining weight, and lay a foundation under the development of more cluster- or industry specific skills. A key insight from the MARES and BRIDGE projects is that people, young or old, can only be economically productive when they feel safe, understood, recognized, and able to influence their own lives. In many deprived urban areas, these conditions are not met, and social projects that address them must be considered as key economic development efforts.

- Having said this, **specific competences and crafts are indispensable to access solid jobs**, or start successful businesses, in growing sectors such as technology, construction, and healthcare.

- The AS-Fabrik project shows that **new mixes of competences are the key to future competitiveness**, and it deploys innovative collaborative tools to identify gaps and promote more collaboration between industrial firms, service firms and education/research in the region.

3.   City Brokerage

By Eddy Adams, UIA Expert for Rotterdam BRIDGE

3.1.   What do we mean by 'City Brokerage' and why does it matter?

In the previous chapter we acknowledged the dissolution of fixed boundaries between traditional industry sectors. We also noted the continuous rise of cross-sectoral collaboration, and its importance for innovation. Relating to urban development, city authorities in Europe have long assumed a pivotal role in supporting this kind of activity. For example, the Quadruple Helix concept, involving public, private and academic partners, together with citizens, is well-established, with urban administrations often at the centre.

However, recent trends have affected the context in which this collaboration takes place, impacting on cities' brokerage role. One has been the growing scale and complexity of the partnerships involved in major urban projects. Increasingly, we see what Park Won Soon, Seoul's innovative Mayor, described as **super-sectoral collaboration**. This shift has been occurring at a time when, in large parts of Europe, there has been a diminution of public funds, often requiring city authorities to lever in higher proportions of external funds. This type of public sector behaviour implies a complex set of competencies.

City authority staff increasingly require a repertoire of skills to navigate this fluid landscape. This applies to elected officials as well as to public employees. A growing body of research evidence points to the growing importance of city brokerage (e.g. Koster, Katz and Nowak, URBACT) and to the importance of building public sector capacities in this area, as part of a repertoire of competencies required by the so-called **New Public Servant**.

Alongside this, there is a growing recognition of the public sector as a driver of innovation, beyond simply being a neutral broker. Marianna Mazzucato's work has shone a light on the public sector's central role in the development of many tech-related innovations where the scale of investment, degree of risk and timescales have deterred private partners. Her work has challenged previous assumptions about the public role in the collaborative innovation process.

3.2.   The role of the city authority as an innovation broker in these UIA projects

These four UIA projects confirm city authorities' roles as equal partners in these collaborative ventures. They also give an insight into the different dimensions of collaboration involved. These include cross-departmental activity, where the UIA team within the City Authority is managing horizontal relationships and, at times, challenging cultures and behaviours.

In **Rotterdam**, this internal relationship management function is evident in addressing one of the core challenges facing BRIDGE: the mismatch between the education curriculum and the labour market. The project's success depends on addressing aspects of this, particularly in relation to the respective expectations of schools, young people and employers. An important early message coming from BRIDGE project is that this expectations gap is a factor in the disconnect between the worlds of education and employment. Success for BRIDGE requires changing mind-sets and attitudes amongst colleagues in the education system, pushing teachers out of their comfort zones.

Alongside this sensitive internal agenda, is the equally challenging work of building sustainable trusted relationships with employers. Where businesses anticipate having first pick of the 'best' students, and access to enthusiastic motivated future employees, there can be a need for some management of expectations. The BRIDGE Interventions team is working hard to maintain the enthusiasm and commitment on both sides, and in doing so have realized that this task will be ongoing throughout the life of the project.

We see these patterns in other UIA projects. An equally complex partnership model is in operation in **Milan**, where the OpenAgri project combines a food-industry focus operating at city and neighbourhood level. Functioning credibly in this leadership role requires city staff to bring a sound understanding of the food sector, which **Milan** brings from long experience, most recently relating to the 2015 Food-Expo.

An important element of OpenAgri focuses on creating a vibrant food entrepreneurship hub. This involves working closely with start - ups, many of whom are young, focused on the circular economy and with limited experience of the public sector. One of the challenges here is ensuring that their enthusiasm and energy is retained when the pace of development may be a little slower than they expect. Again, this comes back to management of expectations and the city authority creating a niche position of trust within these collaborative models.

A high level of collaboration with new partners is also a distinctive feature of the **Madrid** UIA project. MARES operates in four specific neighbourhoods across the city, out of disused municipal premises. As we discuss in the preceding chapter, each of these assumes a particular sectoral focus.

Of the four projects, it is in **Madrid** that we see the highest levels of citizen participation. The aim is to empower and mobilise communities, requiring the city authority to allow high levels of devolution and local autonomy. Building on existing trusted relationships, the city administration has relied upon locally based community organisations to front these neighbourhood relationships.

These local actors have also mobilised the methods used to stimulate community participation and ownership. These have included tools like community lab sessions, as well as the use of digital tools and web applications. Although the city team has been involved in these developments, they have taken a back seat in line with the project's philosophy.

Co-ordinating this hive of activity across the neighbourhoods is an important element of the MARES project. Here the administration has assumed an important pivotal function. **Madrid** City Authority has established a database of actors involved across the entire project, functioning as a portal for neighbourhood requests for external knowledge and expertise. In this way the four participating barrios support one another.

In **Bilbao** this cross-neighbourhood need is absent, as the AS-Fabrik project focuses on a single location, the Zorrotzaurre peninsula which is earmarked to become a new industrial district. This is another large-scale complex project, involving partners across the public, private and academic sectors. The fourth helix dimension, involving citizens, remains work in progress, as the first Journal notes.

Bilbao has an established reputation for the management of complex urban developments, with the Guggenheim now a byword for ambitious urban regeneration, twenty years on from its opening. Consequently, the city authority role of marshalling partners and resources is familiar territory. However, through the UIA project the city authority is operating in new areas with the Basque regional government, relating to its RIS3 priorities. This extended multi-level governance cooperation reflects

the project's ambition to reclaim **Bilbao** as a centre of advanced manufacturing excellence in the region.

Although not a marked departure from its established way of working, AS-Fabrik has provided some challenges as the City Authority assumes its leadership and brokerage role. One has been the need for public-sector participants to be well-versed in the implications of Industry 4.0. Being able to demonstrate such awareness helps build trust amongst

Figure 2: Images from the road mapping sessions in Bilbao

the partners, reassuring them that the city authority is credible with industry players. In order to achieve this, **Bilbao** has provided training courses for civil servants and elected officials.

3.3. Lessons to share

Each of the four cities has useful lessons to share on how urban authorities can effectively assume this increasingly important brokerage role. Three key lessons emerge from these projects at this early stage:

- **City authorities increasingly need to assume a key pivotal role in these complex innovation projects**:
    - Increasingly, the boundaries between sectors – organisation and industrial – are blurring. Implementing innovative solutions requires public authority personnel to be confident operating in this fluid environment, as it is in the spaces between traditional fault lines where innovation is often found.
    - This has many implications for the way city authorities work. Those leading the process must be capable of working across established departmental silos, encouraging, supporting and challenging colleagues in other parts of the organisation.
    - At the same time, they must be at ease working beyond the public sector, and with colleagues from other disciplines and organisational types. Here, city authorities come as equal partners in the innovation process – at least – and in many cases provide the vision and driving force.
    - Cities do this from their position as trusted honest brokers, fulfilling a unique role in the development and management of the complex collaborative structures required to deliver on ambitious long-term city goals.

- **Cities must invest in their staff**:
    - The competencies required to fulfil this city authority role are found in talented and committed people. Often, their talents enable them to work in any sector, but they choose to work for the city. Quite often, they have switched between sectors, giving them credibility with industry peers, as well as important insights into different organisational cultures.
    - In **Milan**, for example, the Open Agri project relies upon city authority staff with a detailed understanding of the food sector. The commitment to extending the city's food sector's

innovative activity is a shared passion amongst those working across the public, private and NGO sectors.

- **Bilbao** provides another case where city staff require a certain level of sectoral competence to work credibly with colleagues in the private sector. The city authority recognises this, and one of the key beneficiary groups has been the public sector officials – staff and elected representatives – whose digital skills have been upgraded.
- It is too early to say whether this investment commitment in these cities represents a shift away from the outsourcing trend that has led to a reduction in the local authority skills base in recent decades. However, it certainly underlines the understanding that to participate as credible players, city authorities must develop the relevant sections of their workforce.

- **Trust others and don't be afraid to let go**:
  - As city authorities are developing their own trusted positions at the heart of these complex partnerships, so must they have trust in others and be prepared to let go. This means, in the true spirit of teamwork, to recognise when others are better placed to get results. To use a football analogy, it is as important to gain as 'assist' than to score yourself – so long as the team benefits.
  - Public authorities are not always good at this. The old command and control habits die hard. However, we can see in these projects the benefits of behaviour change which allows others to shine. The MARES project in **Madrid** is perhaps the best example of this. Acknowledging the special relationships in place within these communities, the city authority has taken a back seat, giving space to others to develop and implement the methods needed to get the best out of these barrios. In the background, the city authority continues to play a key role – holding things together across the neighbourhoods and making connections – but the front line activity belongs to others.
  - Not only does this free up city authority capacity, it also sends a message that the local players are trusted to deliver on one of the city's most emblematic projects.

4.   Place Based Approaches

By Alessandro Coppola, UIA Expert, Madrid MARES

4.1.   The relevance of this topic

The idea of bottom-up place-based policies in the areas of local economic development and workforce training is deeply rooted in the history of urban policy. This is evident from 1960s and 70s experiments in urban community development in the United States to the experience of "territorial pacts" and more widely "distretti" in Italy in the 1980s and 90s. Local development as the outcome of participative and coordinated discovery and mobilization of resources and skills embedded in a determined local environment has played an important role in the intellectual and policy history of development interventions.

However, this theme has acquired a new significance in the context of the wide structural changes that advanced economies have experienced since the late 1970s, with the crisis of old industrial regions and modes of production. This saw the rise of new kinds of industrial clustering and agglomeration dynamics in regions that had been peripheral in the previous mode of production and the transition of many urban economies towards a decisively larger share of services in both output and employment. Consequently, the emphasis on places – understood in terms of a complex ensemble of cultural, spatial and social characters – as factors of production in themselves has been constantly increasing in policy and scholarly discourses.

As a good example of such an orientation, discourses on "flexible specialization", "cognitive-cultural capitalism", and "the creative city", have pushed city and regional authorities to play an increasingly assertive entrepreneurial role in packaging particular policies. These have involved pursuing the strengthening of factors that are indicated as key for economic success. Typically, these include access to human capital (as discussed in our Talent section), a vibrant cultural life, enjoyable public spaces, opportunities for coordination among economic and social actors, specialized areas for business incubation and the scaling up of coordinated economic activities.

Alongside this, EU regional and urban policy has supported these efforts through a wide range of programmes and tools which has become increasingly sophisticated over time in terms of understanding, framing and defining what "local development" is. In the current cycle of regional policy programming - tools such as CLLD (Community Led Local Development) and ITI (Integrated Territorial Investments) have promoted a more closely integrated, place-based and participative framework for the implementation of regional policy.

Such tools have come to embody the idea that local development is possible when, in a certain territory, local actors' "knowledge and preferences" are identified and mobilized in a "process of self-discovery". Moving from the broadly regional to the urban dimension, Urban Innovative Actions have come to represent a consistent and advanced implementation of this approach in the urban realm bringing the traditional place-based participative stance of much EU urban policy making (e.g. Urban and Urbact initiatives) to a new level of "co-creation" and "co-production" also in the perspective of enhancing processes of place-based, inclusive, local economic development.

At the same time, besides the emphasis on place-based policies, a new focus on the role that discreet urban spaces can play in such policies is coming to the fore. In previous eras of urban policy this focus had mostly involved the creation of integrated settings for the delivery of certain services at the neighbourhood scale – in the form of community centres offering services ranging from health to

culture, education to training – and for the nurturing of civic participation at the local level in the context of wider processes of decentralization.

This focus, while retaining some of these legacies, is now shifting to the creation of a new generation of "hybrid" spaces combining functions of socialization, training and collaboration in the perspective of the creation of new services and economies at the local scale. The metaphor of new urban spaces as "hubs" – offering resources while fostering new projects among citizens – is becoming central in these conversations and is fully consistent with the new organizational landscape of the post-fordist economy and with the role that projects, networks and entrepreneurialism play many different realms of urban life.

4.2. What do these projects tell us about emerging city approaches to place based initiatives?

A variety of contexts and approaches characterises the four projects. First there is an essential difference in terms of what is the territorial scale – or the scales – at which the place-based approach is actually exercised. In two cases there is a clear focus on certain areas because of some socio-demographic characteristics that define a condition of relative disadvantage – the four neighbourhoods designated by MARES de **Madrid** and the large area of Rotterdam South in the case of BRIDGE in **Rotterdam**. In the other two – OpenAgri in **Milan** and AS-Fabrik in **Bilbao** – the scale is city-wide although the location of the project is in a certain

Figure 3: Energy MAR located in Madrid City Centre

area – Zortzaurre in **Bilbao** and the Vettabbia Valley in **Milan**. Here, the link with a place does not depend much on the disadvantaged character of the area but, more, on the availability of certain reconversion potential in the built environment (buildings to be repurposed), on previous planning decisions (an area zoned for economic development or agriculture) and on its relevance for the goals of the project (in the case of **Milan**, a decommissioned farm in a large agricultural park).
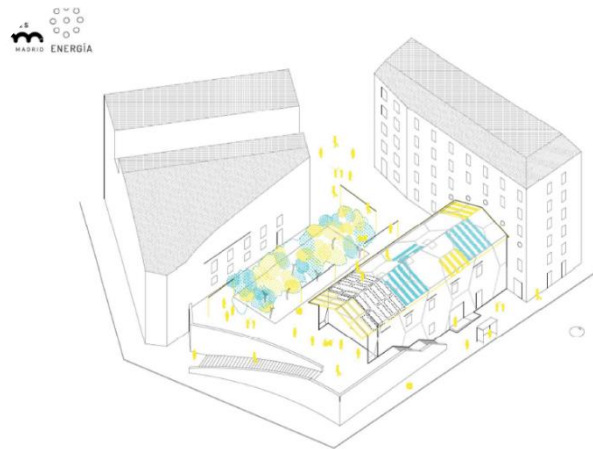
However, it is clear that – even if very differently – all the projects intend to deliver benefits that will be important at the city scale beyond their respective place-based approaches. If MARES de **Madrid** intends to deliver a stronger social and solidarity economy, BRIDGE in **Rotterdam** to deliver a better alignment between emerging job opportunities and job demand, OpenAgri to enhance and innovate the agricultural sector and AS-Fabrik to support wider smart-specialization they must deliver visible results, at some point in the near future, at the city or even at the metropolitan scale. At the same time, it is also clear how all projects – with the exception of BRIDGE – decisively invest in the creation of concrete, individual examples of that new generation of hybrid urban spaces that we mentioned above. These new spaces are supposed to play a critical role in the creation of a new localized community of practitioners that will ensure in the case of MARES de Madrid the development of new actors and networks of the urban social economy, of innovative manufacturing in that of AS-Fabrik and of urban agriculture in that of OpenAgri.

Spaces are seen here as concrete contexts to share services and information, nurture collaborations and also develop new identities both for the ones who directly use them and the generality of the

interested public at large (who can associate that space to a certain new economy or forms of social organization that the city is trying to foster and produce). In other words, these spaces are called to facilitate those processes of molecular agglomeration that have been considered by urbanists, sociologists and economists alike key in the production of innovation in the era of cognitive cultural capitalism.

4.3. Lessons and key messages

- We need to keep in mind the fact that a **place-based policy always involves a variety of scales** (and therefore more than one place) beyond the one that is immediately targeted – a disadvantaged area or a functional zone within the city – and that it is strategic to consciously articulate the relationship between the project and this variability of scales (e.g. which actions for which scales?). Furthermore, places are intermingled layers of policies and all projects derive from a variably higher-scale, previously established set of policies. – Therefore it is critical to clearly understand how projects can be consistent with these different policy layers, within a multi-governance context. Each of these projects offers insights into this.
  - Linked to this, "places" are made of very different actors, components, forms of knowledge and in this case as well the four projects offer different understandings of such variety. MARES de Madrid relies on existing local neighbourhood level actors, on city and even national level actors while having as a goal the constitution of totally new actors - the social economy enterprises that, at least initially, can be rooted at the very local level – in the perspective of making neighbourhoods both hubs for certain economic sectors and contexts in which to develop endogenous economies rooted in needs and skills that are locally available.
  - BRIDGE relies first and foremost on very important neighbourhood actors such as schools – that are already involved in a larger integrated urban regeneration initiative targeting Rotterdam South. These actors are now invited to play a larger leadership role in changing some highly localized and cultural elements such as the street-cultures, for example through role models and by establishing more systematic relationships with students and parents. At the same time – based on this highly local place-based work – the project intends to establish relationships with metropolitan scale employers. Indeed, a key challenge is to address the insularity of many residents in Rotterdam South, encouraging them to embrace wider opportunities.
  - AS-Fabrik relies on an existing city-level ecosystem comprising knowledge institutions and business organizations that – in partnership with city authorities – will leverage the creation of the new hub in Zorrotzaurre in order to create structured pathways for the generation of new enterprises or the enhancement of existing ones. Finally, in a fairly similar vein, OpenAgri leverages on already existing actors – knowledge institutions, anchors, "disseminators" in the project's language – to animate a hub space aimed at delivering a whole range of final benefits to the larger agricultural ecosystem that exists in **Milan**.

- Another element that needs to be kept in mind is that it is not enough to say "place-based", since actors and social groups can have **very different understandings of what a place is**. Therefore it is critical to consciously articulate projects' rationales and goals with the kind of actors (existing, new, higher scale?) and the kind of knowledge (citizens', institutional, expert) that the project intends to develop in its operations.
  - Therefore, it is important to keep in mind that if **developing a "place" inevitably means to be the protagonist of a self-discovery process**, the essential questions in any place-base

project are: what kind of knowledge needs to be discovered, created or organized in the context of the project? And how and by whom can it can be discovered or created?

- In this perspective, even if in different forms, all projects use places in order to produce forms of knowledge that in the long run are supposed to improve the effectiveness of policy-making and to allow economic development.
- Through very complex operations, MARES has been mapping skills and existing economic activities present in the four neighbourhoods in order to root new economic projects with realistic potential. Through the establishment of an observatory, AS-Fabrik intends to monitor the evolution of high-tech innovative manufacturing sectors and of the local performance in the area in order to make sure that projects incubated – and more in general the activities promoted – are in line with the evolution of the market. BRIDGE **Rotterdam**, goes beyond creating new knowledge, to bridge information between economic actors, the educational system, youth and families.

- In the generation of new urban spaces – in the sense that was specified above – it is critical that in the implementation of these projects, **the process that lies behind the generation of spaces needs to be considered a top priority by the city administration and other actors alike**. The experience of the three projects prove in fact how the design of new kind of spaces can prove to be a challenge to established design and public procurement of cities and that such challenges, if not anticipated, can become an obstacle on the way of their success by delaying activities and not delivering the expected improvement of neighbourhood contexts that it was promised.
  - Attention must be given therefore not only to the quality of the spaces created – that in some projects is ensured through the establishment of co-design processes aimed at making sure that future users' preferences and perspectives are included - but also on the level of procedural complexity and the time needed in order to actually produce and open them to both the community of practice that will use them and the wider public. One more critical aspect involves the equilibrium between the level of spatial specialization that is needed by economic actors – that need, especially in the case of AS-Fabrik and MARES areas and technologies of production that can be incompatible with other uses - and the inclusion of the local population of the neighbourhood where such spaces are located.

5.   Talent Management

By Miguel Sousa, UIA Expert for Milan OpenAgri

5.1.   What do these projects tell us about emerging city approaches to talent management?

The challenge for European cities today, is to stimulate job creation but at the same time to improve the added-value and social and economic wealth produced by the jobs created. Such a complex challenge calls for action and innovative solutions. The four projects (BRIDGE, OpenAgri, AS-Fabrik and MARES), are helping local ecosystems to rethink the resources they need to innovate and grow, in order to establish the means to inspire and attract the whole range of talent, including from agriculture, social innovation, artistic, creative and human sciences areas through to the new digital opportunities.

Much of the latest thinking on cities underlines the centrality of talent to successful urban development. For example, in the Triumph of the City, Glaeser stresses the importance of cities' capacity to nurture, retain and attract human capital. Access to a large diverse talent pool is vital for encouraging innovation and entrepreneurship as well as for promoting social and economic mobility.

This emphasis on human capital is also reflected in EU policy. The new Skills Agenda for Europe, adopted by the Commission on 10 June 2016, launched 10 actions to make the right training, skills and support available to people in the EU. The 'Digital Skills and Jobs Coalition' is one of the 10 actions that calls for the need to bring digital skills to a wider population, not just IT professionals. EU countries are working on developing national digital skills strategies, and cities play an increasingly important role in this, evidenced for example through the Urban Agenda for the EU.

Figure 4: Young talent in Rotterdam

Much work is taking place to better understand the changing need for skills. The OECD not only measures skills in student and adult populations, it also works with countries to develop skills strategies tailored to specific needs and contexts. Their evidence shows that using both cognitive (literacy, numeracy) and "soft" (communicating, influencing, negotiating) skills in the workplace and maintaining them over a lifetime is strongly related to greater skills proficiency – which, in turn, is related to economic and social well-being.

This is a complex challenge that cannot be addressed by traditional means. It is no longer (just) about creating employment, but how to attract, retain, adapt or convert talents into the present and future needs of the local economic and social fabric – and, vice-versa, how to adapt these needs to the new education and qualification dynamics, while facing competition from other world-wide cities. The integration between the qualification of talents and the provision of an ecosystem that can attract and realise the potential of such talents, is at the very core of the four projects.

The projects are addressing talent management at an urban scale, aggregating local actors to produce a new breed of blended talents, ensuring that supply and demand for new skills are matched, and contributing to the improvement of the average added-value produced by employees. These dynamics are only possible due the existence of solid local innovation ecosystems, with the presence of a strong

network of partners, under the coordination of the Urban Authorities, **Milan**, **Madrid**, **Rotterdam** and **Bilbao**.

5.2. The role of the city authority

The main added-value of the cities' approach relies on the integration of business, social and solidarity economy with an education and qualification system that ensures that the requested talent in terms of technological skills, but mainly on creativity, human sciences and innovation, are available at the local ecosystem.

Bilbao AS-Fabrik's project mission is to increase the competitiveness of companies in the advance services sector by developing an Industry 4.0 Hub. **Milan's** OpenAgri project, has the mission to develop a Peri-Urban Agriculture Hub, and both projects are implementing specialized education modules for students, young graduates and professionals to prepare them for the new realities in talent demand. Both are pushing the cities to move quickly and decisively into a new, enhanced, technological level, that will change the way the city actors perform and interact, making them trial cities for

Figure 5: OpenAgri's Approach; Source: OpenAgri partnership

Industry 4.0 and Peri-urban agriculture. The Hubs are the basis for the transition of **Bilbao** and **Milan** into a next economy based on knowledge and digital platforms, valorising R&D&I, valuing natural resources, and the development of new products, services and the growth or creation of new companies and jobs.
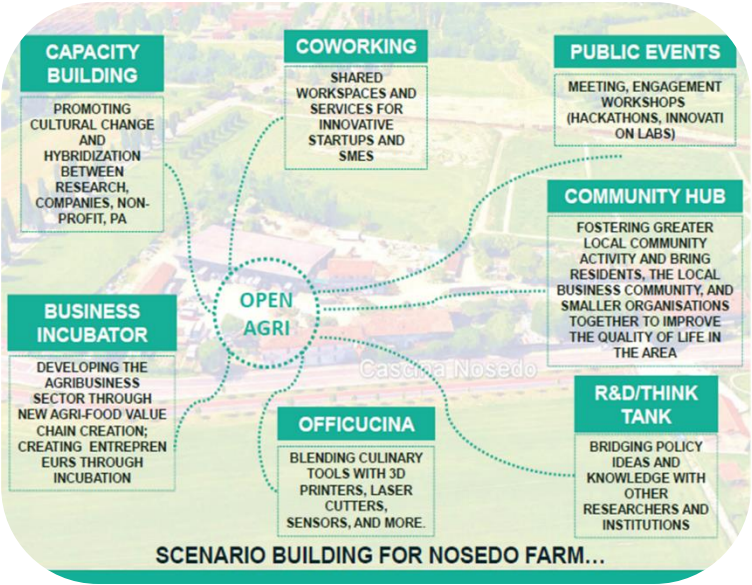
Madrid with the MARES project and **Rotterdam** with the BRIDGE project, are co-designing the future skills rethinking the way cities identifies and nurture talent as well the educational and qualification system responsiveness to labour market needs. MARES focuses is on people from all ages tapping into hidden or emergent talent within neighbourhoods making use of collaborative tools to stimulate local community participation. It's crucial for MARES to work with young people and adults to keep abreast of social and technological developments in a rapidly changing and inter-dependent world. BRIDGE is generating important findings in relation to the mismatch between education systems and urban labour markets.

Talent is a major driving force of growth through their effect on labour productivity. It's essential for young people to enter the labour market, access good-quality jobs and embark on successful careers. This work starts by identifying talent in a yearly stage of personal development at the ages of 8/9 and channelling those with the right skills and aptitude into sectors they may not think they could be interested in. BRIDGE is also conducting a pioneering work to identify the future skills needs of the Next Economy in order to gain a better picture of what kind of skills and talent we will need.

At this stage there are some initiatives in the four projects that are important to follow, such as: the OpenAgri internship programme for young graduates, including certification of competences and skills

through Open Badges[1] and valorisation of new emerging professions, such as aquaponics professional, food innovator and other hybrid profiles; the MARES project prototypes that have been formulated, coming both from laboratory activities and from new and already established on-line participative tools; the AS-Fabrik specialised education modules developed for both students and professionals, to prepare them for the new realities in modern manufacturing and related services and the BRIDGE Career Start Guarantee, which consists on the commitment of employers to guarantee an opportunity for young people in Rotterdam South who complete the relevant higher-level vocational training.

5.3. Lessons to share

- **Talent management requires a vertical and horizontal integration at city level** and a key lesson that is shared by all the projects is the need to have a strong partnership between the government, academia, R&D Centres, social organizations and enterprises where all stakeholders, including civil society, will be called to action.

- Also, **talent management can be drawn from project activities**, such as the OpenAgri Experimentation Laboratory in the Urban Agriculture acceleration program that was developed in a co-creation process between the OpenAgri team and the selected 18 projects.

- From **Rotterdam**, the outcomes of the pioneering work to identify the future skills needs of the Next Economy. It is expected that education providers will come forward with new types of qualification that **break away from the traditional classification of courses** in engineering, medicine, arts, etc. that is more than 300 years old, and adapt their offer to short-cycle courses that reinforce the digital skills of those outside STEM, enabling those with the technical knowledge to embrace industrial jobs. From **Bilbao**, we see similar developments, with **the rethinking of the educational and qualification system's responsiveness to labour market needs**, both on the supply and demand sides.

- From **Madrid**, the hidden and emergent talents that will come up from the neighbourhood local group's work represents an **open, inclusive and bottom-up approach** which puts local human resource assets at the centre of the regeneration process.

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[1] A way to communicate skills and achievements by providing visual symbols of accomplishments including verifiable data and evidence that can be shared.

6. Annex

Project descriptions

6.1. The AS-Fabrik project

Considering the challenge faced by manufacturing industries in the Bilbao area that are moving towards a 4.0 dimension, the AS-FABRIK project seeks to increase the competitiveness of the advanced services sector of Bilbao (Knowledge intense Business Services – KIBS), that will prepare current or future workers of the KIBS sector, to acquire the needed skills, in order to supply digital transformation demands.

Bilbao City council is therefore leading a strategic alliance between leading businesses and universities, local service providers and entrepreneurs, in order to shape a collaborative pilot ecosystem based on innovative pillars and hosted in a tailor made space for experimentation and incubation of new services. New education programs for university students, entrepreneurs and professionals addressing the new challenges of the industry 4.0 and the digital economy will be tested, while networking actions among the main stakeholders, supported by tailored IT tools, will ensure a good match between demand and supply. New business models will be prototyped to support specialised start-ups that will benefit from a Minimum Viable Product (MVP) test Fab Lab for the market validation of new products/services.

At the end of the project, KIBS providers from Bilbao will have access to AS-FABRIK, the "factory for the creation of advanced services for industry", that will gather in a physical space an integrated kit of tools in order to shape new products and services for the new industry needs, and to reinforce their competitiveness. This new model will lead to create a new generation of young and advanced service providers able to supply the challenging digital transformation demands the manufacturing sector is growingly facing.

Partnership:
- Ayuntamiento de Bilbao
- Bilbao Ekintza - Public Agency
- Mondragon Goi Eskola Politeknikoa J.M.A. S.COOP - Research Centre
- Mondragon Unibertsitatea Enpresagintza S.COOP - Research Centre
- MIK S. COOP. - Research Centre
- GAIA - Association of Electronic and Information Technologies in the Basque Country - NGO
- Deusto Foundation - Basque Institute of Competitiveness - Research Centre
- Asoc. Cluster Audiovisual de Euskadi - EIKEN BASQUE AUDIOVISUAL - NGO
- Mondragon Centro de Promocion, S.COOP - Business Support Centre
- IDOM Consulting, Engineering, Architecture, S.A.U. (IDOM) - Private Company

6.2. The MARES project

Since 2008, the economic crisis' impact in Madrid has produced several mutations. Social polarisation and spatial segregation dynamics have escalated, strengthening even more the income barrier between the north (exclusive urban services) and the south/ southeast (negative externalities concentration). The MARES project will initiate an urban and economic resilience strategy on employment through the social and solidarity economy in key industries to move forward a new model of productive matrix of the city.

Therefore, a comprehensive approach of actions will be deployed, based on four pillars:

- Activating recovery processes, prototyping and co-designing disused public spaces.

- Launching a competencies lab capable of promoting economic resilience strategies of civil society.

- Fostering territorial economic innovation processes which generate a new economic fabric through social economy formulas and improve the competitiveness and sustainability of the existing productive schemes in the city.

- Encouraging mechanisms for awareness raising, territorial economic revitalisation and cooperation among agents in order to articulate ecosystems allowing production diversification and more collective possibilities on employment and employability at local level.

The MARES project will launch in four city districts, Centro, Villaverde, Vallecas and Vicálvaro, four spaces called M.A.R.E.S. Every MAR will be specialised: M (mobility), A (food), R (recycling), E (energy) and S (social and care economy, common to the four MAR). These MARES will become a prototype of urban resilience on employment by encouraging social and solidarity economy on these strategic sectors. The project will generate economic activity and create stable jobs by deploying business models, principles and values of the social and solidarity economy. It will recover abandoned or disused common areas and make them available for the creation of new productive initiatives.

Partnership:

- Ayuntamiento de Madrid

- Agencia para el Empleo de Madrid (AE) - Public Agency

- DINAMIA S. COOP. MAD (DN) - Private Company

- Grupo Cooperativo Tangente (TNG) - Private Company

- SIC ARQUITECTURA Y URBANISMO SLP (SIC) - Private Company

- Vivero de Iniciativas Ciudadanas (VIC) - NGO

- Todo por la Praxis (TxP) - NGO

- Fundación Acción contra el Hambre (ACH) – NGO

- NUEVO ESPACIO INDUSTRIAL MADRID, S.L. - ECOOO - Private Company

6.3. The OpenAgri project

In line with the challenge addressed in the Milan Urban Food Policy Pact to make urban food systems more inclusive, resilient, safe and diverse, the OpenAgri project seeks to improve the urban entrepreneurship context by fostering the creation of innovative firms and social enterprises focusing on the agri-food sector.

An "Open Innovation Hub on Peri-Urban Agriculture" will be created, integrating several food policy experiments in a single strategy, and operating as a living lab to foster innovation in the entrepreneurial, social, sustainable and technological dimensions of the agri-food sector. At an entrepreneurial level, the Hub will promote development projects involving SMEs and 'startuppers', and will experiment with innovative tools for increasing and transferring capacities. At the social level, community-led initiatives for inclusion, urban regeneration, social, and territorial cohesion projects will be implemented, aiming to change the "Porto di Mare Area" from what is currently a problematic suburb into a great experience of collaboration and sharing of new knowledge and opportunities, targeted, in particular, at young people, disadvantaged groups and migrants. At the sustainable and technological levels, the project will develop disruptive and innovative solutions for peri-urban agriculture based on new approaches and tools for food production.

As a result, besides its potential to increase food availability, while assuring food safety and improved eating habits, the project aims to develop the zone's peri-urban agrifood sector in a way that will attract investments for further innovative processes. Last, but not least, the OpenAgri project will regenerate this peri-urban zone of the city by making it an example of social inclusion and innovation.

Partnership:
- Comune di Milano

- Camera di Commercio, Industria, Agricoltura e Artigianato - Chamber of commerce

- Fondazione Politecnico di Milano - Research Centre

- Fondazione Parco Tecnologico Padano - Incubator dedicated to technological companies and startups

- Università degli studi di Milano - University

- Politecnico di Milano - University

- Avanzi - Think Thank

- Cineca - Research Centre

- FUTURE FOOD INSTITUTE Trust (FFI) - Research Centre

- ImpattoZero Srl - Private Company

- La Strada Società Cooperativa Sociale - NGO

- Sunugal - NGO

- Poliedra - Centro di servizio e consulenza del Politecnico di Milano - Research Centre

- IFOA - Istituto Formazione Operatori Aziendali - Training Centre

- Mare s.r.l. impresa sociale - NGOFOOD PARTNERS SRL - Private Company

6.4. The BRIDGE project

BRIDGE addresses the urgent urban challenge of better aligning young people's educational choices with future labour market needs. Rapid transformation of many sectors of the Rotterdam economy has already started to change the skills that are required from the workforce. The associated unprecedented new economic opportunities and challenges will drastically change labour market needs. Consequently, qualification and skill gaps are expected to grow significantly.

The target area of South Rotterdam (200.000 inhabitants) has major disadvantages across key socio-economic indicators compared to the rest of Rotterdam and the country. Unemployment is at 21%, 32% of the children grow up in poverty and 39% have parents with no/low formal education. First and second-generation migrants make up 74% of the population in the focus areas of South Rotterdam. In this context, young people often make career choices that lack a realistic labour market perspective. The result is a persistent situation in which although the work is there, many of the 2.000 young people from South Rotterdam annually entering the labour market cannot realistically compete, either in the current, or in the EU vision of a green digital economy.

The proposed innovative urban action ensures that by 2020, 50% of secondary vocational training students in South Rotterdam, will have chosen a career in one of the major growth sectors. This ambitious goal will be achieved through close cooperation between employers, schools, national and local government. Pupils will follow a programme centred on the opportunities relating to the Green Digital Economy major growth sectors. Bringing together all 68 primary schools, 20 secondary schools and 3 vocational schools in South Rotterdam, all pupils and their parents will take part in the programme. This career and talent orientation programme will start in primary school (age 9) and end when students enter the labour market.

The crucial element in the programme is the Career Start Guarantee. Employers will offer 600 pupils per year a Career Start guarantee (420 for technology sectors and 180 for healthcare) at the moment they enter secondary vocational education and need to make the most crucial subject and career choices. Provided that the pupil chooses the training that the labour market needs, an employer will commit in advance to that individual with a guaranteed career start after graduation. Impact investment instruments (public subsidy based impact investing, social return on investment and social impact bonds) are an integral part of the project, supporting scaling and mainstreaming of the programme.

Partnership:
- Gemeente Rotterdam
- Metropoolregio Rotterdam Den Haag - Organised agglomeration
- SEOR B.V. - Research center
- Hogeschool Rotterdam - Rotterdam University of Applied Science
- RebelGroup Executives BV - Private Company

Urban Innovative Actions (UIA) is an Initiative of the European Union that provides urban areas throughout Europe with resources to test new and unproven solutions to address urban challenges. Based on article 8 of ERDF, the Initiative has a total ERDF budget of EUR 372 million for 2014-2020.

UIA projects will produce a wealth of knowledge stemming from the implementation of the innovative solutions for sustainable urban development that are of interest for city practitioners and stakeholders across the EU. This introductory paper written by UIA Experts captures and disseminates the lessons learnt from the project implementation and the good practices identified. It is part of capitalisation and dissemination activities of the Urban Innovative Actions Initiative.