

PARALLEL SESSIONS 22@ CLUSTER BARCELONA ICT CLUSTER

SPEAKERS:

Stuart Webb, head of innovation clusters and ICT policy, Advantage West Midlands.

Elisabet Juan, consultant, the Competitiveness Group.

Debate Panel:

Vicenç Gasulla, general manager, the Barcelona Digital Foundation.

Carles Gómara, director of Innovation, CIDEM.

Oriol Alcoba, project manager, 22@ Barcelona.

Moderator: **Miquel Mateu**, director of local promotion, Barcelona City Council.

This session focused on two very geographically distinct clusters that nevertheless share several functional and strategic aspects. England's West Midlands ICT Cluster and Barcelona's 22@ ICT Cluster both rely on close collaboration among the three elements of the *triple helix* as the basis of their strategy for local innovation and development in the face of strong international competition.

The Birmingham experience: the West Midlands ICT Cluster

Stuart Webb described the experience of the West Midlands—a territory which is socioeconomically similar to Catalonia—as a textbook example of collaboration among small and medium-sized companies, universities, and local and state government. Its success stems from in-house studies geared at predicting its strengths, and from external studies aimed at identifying and meeting the demands of consolidated and future markets. Its strong strategic management—based on the three axes of networking, innovation, and skills development—subjects project proposals to a rigorous selection process before approving any funding; those which are accepted then receive the Cluster's full support.

Webb began with a brief overview of Birmingham and the West Midlands region (where the ICT Cluster is located), highlighting their similarities with Barcelona and Catalonia, respectively. The capital city, with one million inhabitants, is considered England's second major city, and the region, with a population of five million, boasts an impressive business community of small and medium-sized companies, and is home to thirteen universities.

According to data provided by Webb, the ICT Cluster is primarily composed of small and medium-sized companies having an average of ten employees. It accounts for 5.4% of the ICT business volume in Great Britain as well as 6% of the business volume and turnover in West Midlands. He thus highlighted close collaborations among small and large (*e.g.* Marconia, IB, Fujitsu and Celestica) companies, universities and regional and state governments.

Webb attributes the Cluster's success to two factors: firstly, the fact that it has focused on companies that develop ICT and on the ICT market, and has created what he called a "knowledge pathway". "You must emphasise your strong points and exploit them to the

maximum," he affirmed; "we can not compete with Silicon Valley". Nonetheless, he said that the Cluster can strive for excellence in innovation, which in the mid-term can provide major benefits for the regional and national economies. "Clusters can transform economies," he stated, citing Malaysia and Singapore.

Webb expressed his firm conviction that companies operating in a cluster are more efficient, as they take better advantage of economies of scale and shared resources for innovation and knowledge transfer. He affirmed that "a cluster should not need us to be successful: innovation and competitiveness should be independent". As part of a group, companies can improve their source of new knowledge and seek opportunities for innovation through stronger links with institutions, service providers and universities. They can also better serve existing markets as well as future ones, by responding to change, and establish closer ties with clients and local markets.

The second factor that he believes is responsible for the Cluster's success is closely related to its organic functioning and its strategic management and is based on three factors: networking, innovating, and skills development. The Cluster's organogramme includes a general director and three departmental directors. These departments comprise one for general support for companies (*i.e.* in marketing, financing, etc.), one for development of skills; and one for innovation, which, as he reiterated, works closely with universities.

Of the ten projects currently underway at the Cluster, Webb highlighted four as paradigmatic: West Midlands Mobile and Wireless, which is related to wireless technology; IT Futures AI, an artificial intelligence research programme involving several universities; iCentrum, whereby several brokers explain and sell the business of small and medium-sized companies to large corporations; and the Photonics Cluster, "Which has sold technology to Hollywood," and has secured its position as an elite international centre of reference.

The Cluster's public activities include an annual conference during which prizes are awarded in four categories: Most Innovative Product/Service, ICT Excellence in a Public Sector Project, ICT Skills and Excellence, and ICT Excellence in Creative Associations. Whilst these awards carry a modest cash prize (€2,000), Webb explained that they have garnered great prestige and reflect a return on investment for the winners, providing them with more clients, better commercialisation of their products and new financing offers.

Webb then spoke on financing, specifically public funding, which he pointed out is scarce for the West Midlands Cluster—meaning that it must be incredibly selective when choosing projects to pursue. This challenge has actually become a strong point, by forcing the Cluster to reanalyse itself and its strategies—which are reviewed every three years—and explore new market trends. Webb illustrated this with the metaphor of a plant, which, "not only requires watering, care, protection and freedom to grow, but also requires controls so that its roots grow correctly."

For more information, see: <http://www.advantagewm.co.uk/>

The Barcelona experience: Presentation of the 22@ ICT Cluster's strategic plan

Elisabet Juan, consultant for the Competitiveness Group, explained that the strategic plan of the 22@ ICT Cluster is based on two objectives: firstly, facilitating the growth and development of the Cluster's companies; and secondly, promoting demand for these companies by increasing public awareness of them and explaining their business to consolidated sectors in Catalonia and in new international markets.

In order for 22@ to compete with the world's major clusters, it is endeavouring to strengthen its ICT companies through close collaboration among players of the *triple helix*. This is accomplished in the Plan by classifying the companies according to demand, product/service, local tradition and expertise, and growth.

Juan presented the Strategic Plan to Improve the Competitiveness of ICT Companies in Barcelona through the cluster model, which was stimulated by the Barcelona Digital Foundation and 22@ with support from the State Secretary of Communications, CIDEM and COPCA. She gave a detailed overview of work methodologies and objectives—none of which have yet been reached (the plan was only initiated in late December 2007). According to her data, the Catalan ICT sector is concentrated within the Barcelona metropolitan area and is principally composed of small and medium-sized enterprises. It encompasses 1,800 companies featuring a total of 150 R&D departments, employing 97,400 people and having global sales of €18.7 billion, and is increasing its productivity yearly. "The ICT sector is crucial in the world: it is practically the only one in which the productivity of companies increases by approximately 45%."

The Plan covers the four years from 2008 to 2011, and has an estimated budget of €12 million. Its mission is ambitious: it aims to grow annually by 10% to 15%, reach 28 billion in sales, create 25,000 new jobs for qualified individuals that will include on-going professional training and development, hone local demand and garner international weight. However, Juan said this alone is still not enough; she said that relations between the small and medium-sized companies involved and large corporations located at 22@ must be improved and that there must be true transfer of knowledge—not just locally, but at the European and international levels. She said that ICT companies in Barcelona must take advantage of "being under the same roof, provide support and have 22@ as a partner, owing to its international appeal".

To meet the aforementioned objectives, the Plan lays out two major strategies: firstly, amplify the products/services offered and foment ICT; and secondly, stimulate demand for ICT by spreading the technology in consolidated sectors in Catalonia (*e.g.* the tourism and textile industries). Meetings with various companies from the sector led to other strategies being included in the plan which, "though not very new, are effective". These include aid for corporate development and for internalisation; promoting quality by improving management of processes and human resources; and diversifying and encouraging financing (*e.g.* fomenting venture capital). The aim is that 22@ will be able to promote, foment and coordinate small and medium-sized companies, multinational corporations, local and state government agencies, and universities.

For Juan, the crux of the matter is ensuring that the Cluster is able to differentiate itself from others, given that "there are many clusters in the world, and we need to ask ourselves if we want to be just another dot on the map or if we want to shine with our own light". This is especially challenging given Spain's disadvantaged position: according to the latest studies by the World Economic Forum (WEF), Spain ranks lower in competitiveness than countries such as India, Israel and Estonia. Hence, there is a need for initiatives for strengthening domestic competitiveness and facilitating innovation, generating value, seeking clients, entering global and international markets, and "clearly understanding what our starting position is".

As such, the Plan divides ICT companies according to demand, product/service, local tradition and expertise, and growth. The major areas of demand comprise shared services (*e.g.* call centres and administration), health, banking and insurance, whereas those of products/services offered comprise digital security (*e.g.* phones and encryption) and mobility in general (land, sea and air transport, and mobile phones).

The areas of ICT to be strengthened at 22@ were identified based on this breakdown of supply and demand, and—owing to the dynamic nature of the sector—will be revised every year. They comprise: e-health (e.g. electronic prescriptions); e-business; e-learning; mobility; human-device interactions; digitalisation of processes; mobile phones; shared corporate services; and network security (e.g. for phones, internet, electronic payment, etc.) As an example, Juan cited a subsector of those mentioned above which is already fully functional at 22@: shared services, not only for creating call centres, but also for administrative processes and billing. These tools are already being used by companies such as Sara Lee and AVIS, both of which have recently established operations in Barcelona, which, despite being “a city with expensive real estate and high salaries, is considered to have star quality.”

In closing her presentation, Juan reiterated the need to execute a plan based on close collaboration among the players of the triple helix: universities; multinational corporations, and small and medium-sized companies from the ICT sector; and the public administration. These are all linked by the Barcelona Digital Foundation, which is “the natural choice to do this”, and by 22@ Barcelona, “which knows about clusters and infrastructure and offers major opportunities for the interface of ITC with areas such as media, energy and health”.

For more information, see: <http://www.competitiveness.com/>

The debate

Rather than a simple debate, the Session featured an overview of success stories from the 22@ ICT Cluster. These were based on analyses of the products/services offered and the areas of demand.

The first case study was presented by Pere Martínez Pérez of the company ITEC Group, which specialises in creating free software, namely for the Catalan *Generalitat*. Martínez explained “how, from a cluster, we were able to succeed with a project of this scale”. Firstly, a working group of six companies was created, “in order to reflect on, discover, identify and evaluate projects of interest for our sector”, specifically, to match supply to demand. Once this “work ecosystem” was created, missing knowledge was acquired by adding new companies and employing a series of identified good practices with “a lot of creativity”. Martínez said the results were optimal. The in-house benefits were not only economic: a group of small companies was able to achieve a degree of visibility and realise a major project that would have been difficult for any of them to undertake individually. Externally, the client was extremely satisfied, remarking on the high level of efficiency and quality of the results, and enjoying “direct knowledge transfer that met all of their expectations”. He concluded by stating that clusters are “a new business model, parallel to a traditional one, that enables small and medium-sized companies to be more competitive”.

The second success story presented was from the tourism sector. Francesc Mateu, of Androme Iberica (www.androme.es), explained how, starting with a consortium of ten small and medium-sized companies and two universities, and an investment of €600,000 for R&D, they were able to perform a market analysis that enabled them to develop technological products for the tourism industry. The crux of this project was placing and exploiting the product by incorporating new companies into the project that provided much needed information.

The third success story was described by Rafael Escudero, director of the Cluster for Innovation (www.clusterinnovacio.com), “an association of companies, universities and non-profit organisations that relies on the Barcelona Digital Foundation”. Its objectives are “to seek, identify and stimulate ideas that can be transformed into useful, timely and technologically feasible products in order to match supply to demand”. To reach this aim, they

have created a fun, uninhibited space called Ideing, which acts as a meeting point where representatives from various industrial sectors communicate their needs and debate the future from a multidimensional perspective. ICT experts attend these meetings—without participating and without the meetings “being turned into a marketplace”—in order to determine the needs of each sector. There is then a second session exclusively for ICT experts, who develop ideas together. Finally, in a third and final session, the experts communicate these ideas to members of the sector, proposing feasible technology to suit their needs.

In closing, the discussants came together to reiterate the main ideas presented during the Session. They affirmed that clusters are centred on networking, innovation and skills, and require collaboration among the players from the *triple helix*. They emphasised the need to match supply to demand, and, for the case of 22@, the need to create the critical mass required to internationalise, specialise, and compete with other territories.

Vicenç Gasulla, director, Barcelona Digital Foundation

Vicenç Gasulla began his brief speech by stating that the best part of the Session was the presentation of the three success stories from the 22@ ICT Cluster. He cited Stuart Webb’s presentation to express his conviction that “networking, innovation and skills are the way to make a cluster work; locating talent, being innovative and working in a network”. Gasulla affirmed that 22@ has been possible thanks to a “a communion between the private and public sectors as well as strong political will” that have recognised Barcelona’s power as a territory based on its industrial and university communities, among other things. 22@ is currently focused on “gaining volume; growing the critical mass” and may create sub-clusters in order to internationalise. He said that all of this has been possible because of the Cluster’s combination of very specific strategies and its immense flexibility to “enable us to change and redirect ourselves to follow the market”.

Oriol Alcoba, director, ICT Cluster projects, 22@ Barcelona

Oriol Alcoba firmly believes that “the objective of 22@ is to improve the competitiveness of the companies”, and that the Cluster offers the perfect environment to do that, as it is a place where companies not only compete but also realise that they must collaborate in order to reach objectives that they could not reach alone, such as internationalising. He said that the 2nd Symposium was “already a way of divulgating the Cluster’s activity” and is an important part of the Cluster’s ability to establish partners, find or communicate funding opportunities for projects, and identify business opportunities.

Carles Gómara, director of innovation, CIDEM

Carlos Gómara emphasised three ideas. The first was his own definition of clusters as a “a place with multiplicative effects of synergies”, where the information required for identifying needs, and adapting or creating new products, which is not provided by sector-based policies can be met. His second point was that, in the initial phases of a cluster, the public administration must “have great presence, serve as a motor; but afterwards, it must know how to step aside” and play a supporting role for companies. His third idea was related to this premise; he said that “You not only have to know how to identify companies, but how to identify the people that will drive the cluster”.

KEY IDEAS

Stuart Webb, head of innovation clusters and ICT policy, Advantage West Midlands.

- Identify your strengths

Small and medium clusters "can not compete with Silicon Valley"; to be successful, they must employ prospective studies and identify, improve and fully exploit their strengths. For the West Midlands Cluster, this is focused on the companies that develop ICT and on their markets, whether consolidated or future. The Cluster endeavours for excellence in innovation, which yields major regional and national benefits in the mid-term.

- Clear strategy

The second success factor in the West Midlands Cluster is related to organic functioning and its strategic management and is based on three elements: networking among all players; innovation in close collaboration with universities; and skills development.

- Converting weaknesses into opportunities

Lastly, the Cluster has been able to convert its scarce public funding into an opportunity to better evaluate projects for financing and reconsider the very concept of the cluster, especially strategies, which are re-examined every three years.

Elisabet Juan, consultant, the Competitiveness Group.

- Match supply to demand

The 2008-2011 Strategic Plan of the 22@ ICT Cluster and the Barcelona Digital Foundation is centred on two main points: firstly, amplifying the products/services offered and stimulating growth of IT, and secondly, increasing ICT demand and abilities in consolidated markets in Catalonia (*e.g.* the tourism and textile industries) while exploring future markets.

- Strengthening the Cluster through added value

Given the amount of clusters in the world, The 22@ ICT Cluster must seek a model which "shines with its own light". It needs initiatives for strengthening domestic competitiveness and facilitating innovation, generating value, seeking clients, entering global and international markets, and "clearly understanding what our starting position is" in order to become stronger.

- Crucial leadership

The 22@ ICT Cluster relies on close collaboration among the players of the triple helix: universities; multinational corporations, and small and medium-sized companies from the ICT sector; and the public administration. It is led by the Barcelona Digital Foundation, which is "the natural choice", and by 22@ Barcelona—two entities which offer expertise, infrastructure and major opportunities for the interface of ICT with emerging sectors.