

PLENARY SESSION

SESSION 4: CORPORATE DEVELOPMENT

SPEAKERS:

Francesc Solé Parellada, director and promoter of the Innova programme, UPC.

Benny Vaknin, chairman of the light train of Tel Aviv; chairman of the ATI technology incubator; and former mayor of Ashkelon.

Presided by: **Joan Trullen**, secretary general of industry of the Spanish government.

Creating new companies by translating research and ideas into successful businesses is not trivial. This was illustrated through two distinct examples presented at the 4th Session of the 2nd Symposium on Urban Clusters. The first, from local university UPC, allowed the attendees to reflect on local potential. The second, from Israel, described a programme that was conceived and successfully executed despite the Country's complicated political situation.

Entrepreneurship and clusters

For Francesc Solé Parellada, director and promoter of the UPC Innova programme, developing policies to stimulate the clustering of technology companies is extremely complicated. However, unlike ten years ago, this can now be done, although it requires sufficient resources, major planning, and above all, a lot of imagination.

In referring to the over 200 technology companies stemming from UPC in the past few years, Solé used the word "luck". He sought to transmit the difficulty of establishing policies to strengthen technology transfer and clustering in an environment marked by diverse variables. "I do not know to what extent—if any—our contribution was important to the birth of these companies, or to what extent the success of some initiatives, or the failure of others, can be rationalised," he affirmed.

According to him, the root of this complexity is the gap between the problems that an economic organisation may incur and its results: we often find ourselves in a much more difficult situation than expected. Corporate remedies, whether in the form of subsidies or industry and technology policies, evolve over time—just as the players themselves. "As such, the pieces of this puzzle among companies and research centres differ according to time and place," he stated. Hence, for Solé, imitation—assuming that we can ameliorate our situation with a strategy that has worked somewhere else—is a major danger.

Putting the pieces of the puzzle together

The head of the Innova programme believes that, unlike ten years ago, Catalan research can now be clustered. Catalan universities encompass between approximately 45 large research groups employing over 3,000 researchers. "But, the 'fuel' that you can extract in the form of spin-offs or patents varies with each case." That is why major planning is required before trying to put the pieces of the puzzle together. "Can I arrange them in a way to obtain more

'fuel'? Is the same thing happening somewhere else in the world? Is it really worthwhile to put these pieces together? And if so, then which ones?" he asked. He then explained that in Catalonia, universities are the source of opportunities for technology. These opportunities can not be clumped together like a mound of dirt. They require structure which must be understood and managed in terms of valuation in order to maximise results.

Solé then gave an overview of the strengths and weaknesses of the current system in Catalonia. Catalan universities are experienced in helping doctorates create companies. Science parks and technology centres can help identify fledgling opportunities. However, there are problems in intermediate markets. We do not have enough specialised business angels, and venture capital firms have a hard time recognising opportunities. Another local weakness is that large companies still do not outsource often. Regulators have helped with creating companies over the past few years, but not so much with aspects linked to managing these companies. Finally, we are endeavouring to form clusters, "a process which will be very difficult and will not be cheap, since it implies a lot of intelligence, travelling and management," he stated.

More than Gaudí and Barça

"What models can we envision for the system that we want to build?" asked Solé. We can develop industrial districts, try to complete a particular value chain or add the missing piece to an existing cluster. According to him, anything is possible. What is important is that whatever structure is ultimately chosen should be managed and well understood, and its companies and research groups must be strategically located.

Solé believes that clustering requires a lot of imagination for dealing with and knowing how to locate research, and for extracting everything useful with pre-established logic, "a logic of leadership, of districts, of innovative ways, but above all, a logic of the ecosystem". He concluded by alluding to the words of other speakers in referring to making Barcelona's key elements for international talent as strong as its tourist appeal, the architecture of Gaudí or FC Barcelona.

"If we ask ourselves today in this room what we all associate with the city of Boston, I am sure that the first thing that would come to everybody's mind would be Harvard University or MIT. We do not have to accept that Barcelona is only associated with Gaudí or Barça. It would really positive for the city if, in the near future, at least a small percentage of people mentioned one of our universities or the 22@ district as a highlight."

For more information, see: <http://www.pinnova.upc.es/>

The Israeli experience: investment and attracting companies

The Israeli technology incubators system is one of the most successful in the world. Benny Vaknin, chairman of the Ashkelon Technology Incubator and former mayor of Ashkelon, outlined the main characteristics of the Israeli incubators and the programme that supports them, as well as some of the success stories that have led to the fact that 75% of the Country's exports relate to high technology.

Israel is internationally renowned for its hi-tech companies. Surprisingly, 75% of its total exports derive from high technology. Moreover, Israel is second only to the United States in number of companies traded on NASDAQ. The feats accomplished in this industry contrast starkly to the complicated political situation of the country, and are down in great part to

government policies supporting the creation of hi-tech spin offs. Among these, the corporate incubator programme has played a fundamental role. Vaknin gave an overview of the Israeli model of these centres and of the programme which supports them. He then gave a more detailed description of the centre which he directs.

“The experience, skill and knowledge of an incubator’s management team are the key to its success,” said Vaknin. He also underscored that director positions at Israeli incubators are voluntary, non-remunerated and held by businesspeople and technicians with broad experience in developing technology, including its practical and commercial applications. The chairman of each incubator is also the president of each company that hosts it. Israeli incubators offer an array of services to entrepreneurs whose projects have been accepted: scientific and technological assessment; administrative support (*e.g.* secretaries and accountants); legal council; business management consulting; commercial and marketing assistance; and, of course, the opportunity to share a wide range of facilities.

A strict selection process

Choosing an entrepreneurial project in an Israeli incubator is a strict process that encompasses several stages of filtering and selection. Vaknin provided figures on the number of projects presented and those which were ultimately selected at ATI during the last trimester of last year. Of the 28 projects initially presented, eighteen were chosen for in-depth study; of these, only twelve were ultimately approved as final candidates. These twelve were then submitted for final approval to the chief science officer, who selected three to be carried forward.

The criteria for accepting an entrepreneurial project are centred on its translation from idea to product; R&D basis; degree of innovativeness and uniqueness; market potential; or if the idea is a project in the early stages of development. Vaknin highlighted other major aspects of the selection criteria, such the fact that only personal initiatives are accepted—never those of other companies or organisations. Nor are these incubators interested in start-ups based on computer programming or the internet.

The projects accepted at an incubator are immediately registered as companies. From that point onwards, the main demands for reaching feasible objectives comprise developing a project plan; creating intellectual property; demonstrating the viability of the technology; preparing a business plan; creating strategic alliances with partners; and obtaining funding.

Regarding to this last point, Vaknin revealed the figures on government investments for creating these companies. The government offers an average of \$500,000 per project, which generally constitutes 85% of the initial budget of the start-ups. This subsidy is offered for two to three years, or in the case of biotech companies, longer. In total, the government dedicates \$25 million annually to this programme, whose philosophy for financial participation is based on the three P’s of *public, private and partnership*.

Success stories

There are 24 incubators in Israel, fifteen of which are located in “peripheral areas”. At any give time, these incubators are involved in some 200 projects. Since the programme was started, 380 projects have been launched. “60% of the companies that started in the incubators are based on biotechnology or medical devices, although there is a strong desire to give greater weight over the next few years to companies related to improving or protecting the environment,” affirmed Vaknin.

The president of ATI mentioned several success stories from these centres, including Protalix, Compugene and D-Pharm. Protalix is dedicated to obtaining certain therapeutic proteins for various indications. It received financing of \$90 million after its IPO on NASDAQ. D-Pharm develops innovative medicines for neurologic maladies. It received \$60 million in financing after debuting on NASDAQ. Compugene, known within Israel as one of the country's most successful companies, develops drugs against cancer. It obtained \$150 million in funding from market trading. Its founder, who is widely popular in Israel, has written a book on the history of his company in which he explains how, when the biotech sector was still fledgling, his business project was rejected by various private investors—and was only accepted in its initial phases by an incubator.

For more information, see: <http://d495152.sk26.skytech.co.il/>

KEY IDEAS

Francesc Solé Parellada, director and promoter of the Innova programme, UPC.

-The Catalan technology transfer system must be improved

"We do not have enough specialised or experienced business angels. Venture capital firms have a hard time recognising opportunities. Another local weakness is that large companies still do not outsource often. Regulators have helped with creating companies over the past few years, but not so much with aspects linked to managing these companies.

- Barcelona should be known for more than just Gaudí and Barça

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- Project selection criteria

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- The first objectives of start-ups

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- Nobody believed in the Compugene project

The founder of Compugene, one of Israel's greatest corporate success stories, has written a book on the history of his company in which he explains how, when the biotech sector was still fledgling, his business project was rejected by various private investors and was only accepted in its initial phases by an incubator.