

DIGITAL LEADERSHIP

An interview with

Pablo Rodriguez

Director of Innovation at Telefónica and
Head of Telefónica's Barcelona R&D lab

***Unlocking Innovation through
Intrapreneurship***



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Innovation in the Digital Age

Do you feel the need for a different approach to innovation compared to, say, a decade ago?

Perhaps the most important element that needs a rethink is the diversity of talent. Diverse teams are better able to spawn innovative ideas. Realizing this, we are adopting an entirely different way of setting up our innovation teams. For instance, our innovation lab in Barcelona has nearly 300 people from varied backgrounds, such as technology, psychology, design, political science and big data.

To thrive in the digital age, organizations need to evolve from hierarchical and process-centered structures to being talent-driven. They must empower people to propose and defend innovative ideas, and give them autonomy to execute these ideas.

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Beyond talent, how have you evolved your approach to innovation?

We have become much more open. We derive our insights and inspirations to innovate from many external forums, such as startup ecosystems, universities and collaboration with other industries. Telefónica is the founding partner of the European Commission's Startup Europe Partnership initiative, which aims to connect Europe's best startups to corporates. We're also part of the European Digital Forum, a think-tank dedicated to empowering tech entrepreneurs and growing Europe's digital economy. I believe that opening up innovation, working more with partners, and being agile enough to include everybody's contribution represents a big shift in innovation in this digital age.

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The 'Intrapreneurial' Approach to Innovation

How is Telefónica fostering innovation throughout the organization?

Our innovation team – Telefónica I+D – coordinates the global strategy for digital innovation across the group. We set it up in 1988 with a mission to make the group more competitive through technological innovation. We have about 650 employees as part of this group, with a majority of them being university graduates, representing 18 nationalities. From its inception, the group has been instrumental in churning out innovative products. For instance, it contributed to our public phone booths in 1990, internet access services in 1996, connected cars in 2000 and interactive digital TV in 2004.

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We have been a pioneer in adopting the Lean Startup approach for our internal entrepreneurship, or 'intrapreneurship' initiatives, where we promote our own employees to become entrepreneurs. It allows us to create opportunities that are not necessarily 'low-hanging fruit' and grow them to become sustainable businesses. Our intrapreneurs have helped us launch initiatives in some revolutionary areas, such as software-defined networking, machine learning, cyber security and privacy.

This approach is in stark contrast to the more conventional approach. That demanded elaborate business plans and years of investment, yet often the end result was a product or service that didn't meet customer expectations.

How does your 'intrapreneurship' initiative work? How does it nurture innovation projects from inception to reality?

We seek to promote employees who have a start-up 'mentality' and a determination to create new things. Any employee can participate in the program by proposing ideas at any time of the year. We pick up the ideas that demonstrate the potential to create future business for Telefónica over the next one to five years. We also encourage multi-disciplinary teams to come together and form a 'start-up' that can take their idea from concept to reality. The teams then need to mature their ideas into sound project proposals before they can secure resources.

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How much time can they dedicate to "intrapreneurship" activities at the different stages from ideation to design and implementation?

We run the intrapreneurship program several times per year depending on our need to fuel new projects into the innovation funnel. Each time we start the program, we select ideas from intrapreneurs and we let them work in their project full time for three months. During this time, we implement a safety net mechanism that encourages people to participate in the program: once the three months' period is finished we allow them to return to their original position if their idea doesn't succeed. But if they succeed they will continue working full time in the project during its whole life.

How do intrapreneurs secure resources for their projects and what happens to successful ideas?

Once an innovator's idea has been refined to a certain level, a venture-capital setup decides whether to invest in it. If funded, the project is executed by first testing its attractiveness among a set of customers. For this, innovators run two to six 'test-and-learn' cycles. Each cycle involves designing and building a prototype, followed by testing it in selected markets by working with local sales and marketing teams, and measuring the success. The key output of these cycles is the learnings from the market. At the beginning, projects work with minimal resources and then investment increases as projects validate their key hypotheses.

These projects start generating meaningful insights in one-and-a-half months or less. We have been able to accelerate innovation cycles by up to two-and-a-half times while using only half the budget required for usual projects. Some of the projects go on to become Telefónica's operating businesses or internal startups. Those are the ones that are defining new roadmaps for digital innovation at Telefónica.

Can you give us an example of a successful intrapreneurship project launched in the market?

One of the intrapreneurship projects that we launched in the Internet-of-Things (IoT) space is called "Thinking Things". It is a simple product for enterprises to help build their own IoT solution. The 'Things' in Thinking Things are modular devices such as sensors, actuators and a core module that helps these sensors connect to any telecom network. Like Lego bricks, customers can attach these devices to their machines or systems to remotely monitor their performance and take specific actions. For example, temperature status when it crosses a threshold, or reacting to an SMS for switching on irrigation in a field.

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Unlocking Innovation through Intrapreneurship

Telefonica



Invested nearly **€7 billion** in research, development and innovation programs in 2014



Open Future is *Telefonica's* global entrepreneurship and innovation network



World's second largest operator in terms of investments in R&D



Committed to **€300 million** investment along with its 62 partners, invested in **over 550 companies**

Telefonica is Redefining Three Key Aspects of Innovation for the Digital Age



Open Innovation

Founding partner of European Commission's *Startup Europe Partnership* initiative, aims to connect Europe's best startups to corporates.



Diversity of Talent

Barcelona innovation lab: 300 researchers from very diverse backgrounds – technology, psychology, design, and hacking.



Startup Methodologies

Internalizing startup methodologies such as – Lean Startup, Failing Fast, Test-and-learn etc.

Telefonica is Using Intrapreneurship to Foster Innovation

Intrapreneurship helps **accelerate** innovation cycles by up to **2.6 times** compared to usual projects, at nearly **half the budget**

Set up in 1988, *Telefonica I+D* coordinates group's global digital innovation strategy. Has nearly **650 employees** from **18 countries**

Innovation Sprouting Future Businesses

- I+D launched the "TU Go" app – allows users to make calls from any device and over WiFi
- Thinking Things – allows enterprises create their own Internet of Things (IoT) solutions using simple blocks of sensors and connecting devices

Can you tell us more about Telefónica's external forums for innovation, in particular – the Open Future_ initiative?

Telefónica has been very active in integrating with the entrepreneurial ecosystem through accelerators, venture capital funds and the Open Future_ program. Open Future_ is our global entrepreneurship and open innovation network, involving 62 public and private partners, entrepreneurs, startups and investors. Our aim is to encourage entrepreneurship in local talent, promote the growth of that talent with tools to accelerate their business, and provide necessary investment to those projects with the greatest potential, thereby helping them scale up.

“We have, along with our partners, committed to invest €300 million in the [OpenFuture_] program.”

Open Future_ operates in 17 countries and is very closely connected with the key technology hubs and countries where we operate. We have, along with our partners, committed to invest €300 million in the program.

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Creating a Culture of Innovation

Beyond intrapreneurship, what are the other initiatives that you launched to create a culture of innovation?

I believe relying on one or two programs to create an innovation culture can only have limited results. It has to be a combination of efforts led from the top. First, we have defined our way of working at the group level with three key attitudes: discover, disrupt and deliver. These attitudes also embrace a spirit of innovation that all employees are encouraged to embrace. Second, we have set up an innovation committee composed of very senior leaders and board members that meet several times a year to monitor and guide innovation projects across the group. Third, we organize major events, such as TEFcon, which is an annual conference to bring together more than 350 engineers, developers and designers involved in innovation projects from most of our group companies. Fourth, some of

our young millennial employees are also intrapreneurs and they actively participate in forums, such as One Young World, to spark a discussion on how a young workforce can change a corporate using intrapreneurship. All these elements have helped us percolate a culture of innovation through the organization. It made people feel that they are part of accelerating our transformation into a digital company.

“We have been largely focusing on predicting human behavior, IoT and privacy of identity.”

What are the key innovation themes that you are currently working on?

We have been largely focusing on predicting human behavior, IoT and privacy of identity. Predicting human behavior is opening up new opportunities by analyzing massive amounts of data, such as helping launch big societal initiatives. We funded one of our innovation projects in the area of 'Smart Tourism'. The project analyzes mobile network data to better distribute economic benefits of tourism among residents while helping tourists enjoy a high-quality experience. In the realm of privacy of identity, we have partnered with MIT, and the Open Data Institute run by Tim Berners-Lee and Mozilla Foundation, to launch the Data Transparency Lab. It seeks to advance transparency of online personal data.

What level of success have you seen with your innovation initiatives?

We have had a good track record of innovation successes during these years. The main difference from the past is how efficient we have been in using our innovations funds that has led to a high number of successful products launched to the market. As I've mentioned before, we have reduced our financial needs by half which, in the long term, will mean to double our success rate.

One example is the "over the top" television solution of Telefónica that has been developed internally within the innovation program. It started with the work of only three engineers and ended up with a solution that, at the end of 2014, has been deployed in 4 countries and has more than 400 million users.

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Recently, we became the first telco in the world to launch a browser-based calling product using WebRTC technology. This product – TU Go – is the result of our in-house innovation program. TU Go is an app that allows people to always stay connected and use voice calling and texting features through any mobile device, such as tablets and laptops, not just their mobile phone. We have found that TU Go users communicate more, have longer calls and are more loyal to Telefónica. After its initial success in the UK, we launched it in Argentina last year.

Through our Open Future_ program, we have invested in more than 550 companies and created new digital employment for more than 5,000 people. We have also been a part of successful funding rounds for Sigfox, which raised \$115 million, and Cyanogen, which raised \$80 million.

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Pablo Rodriguez is Director of Innovation at Telefónica and Head of Telefónica's Barcelona R&D lab. He also serves as adjunct Professor at the Department of Computer Science at Columbia University (New York) where he teaches Social Networks and Distributed Systems. Capgemini Consulting spoke with Pablo Rodriguez to understand how companies can look to 'intrapreneurship' as a tool to foster innovation. In 2014, Telefónica invested nearly €7 billion in research, development and innovation programs and it is the world's second largest operator in terms of investments in R&D.

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