

# Forum for Reflection and Debate: Smart Businesses, Creating the Future

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**Abstract**—An interdisciplinary and multi-professional forum for reflection and debate was created in order to discuss and define relevant and significant indicators that enable us to identify, differentiate and promote smart businesses – those that promote the use of communication and information technologies as a means of improving citizens’ quality of life. Following an exhaustive literature review, the debate focuses on four axes: technology, innovation and quality of life; communication; leadership and people management, and smart businesses. In conclusion, we highlight a series of differentiating characteristics of smart businesses, in five areas: a) Technology: Humanization and creation of jobs of value in light of automation and digitalization; cyber security and data protection. b) Administration and management: Reconciling economic activity and value-generation for stakeholders; people management and value-based leadership; optimization of the work environment; fostering teamwork; care and appropriate management of staff; creating “pride of belonging”; giving back to society; respect towards generational, cultural and general diversity; promotion of volunteering. c) Research: Innovation: guided and applied research; university-business knowledge transfer, and knowledge creation. d) Education and training in values to face the challenges posed by technology; training; recycling in light of (climate) change e) Communication: Transparency; customer communication; democratizing social journalism, op-ed and testimony sites that foster corporate improvement and bridge the digital gap. Defining these qualitative and quantitative indicators will provide a business management tool for managing technology in organizations, at a time of transformation and big social challenges from digitalization and automation. The reflections, discussions, and knowledge arising out of this forum of experts seek knowledge transfer in four areas: research, education, entrepreneurship and business.

**Index Terms**—Automation, digitalization, discussion and reflection forum, leadership, people management, smart businesses, quality of life, technology, value-based businesses.

## I. INTRODUCTION

The University of Girona promoted a reflection Forum on smart businesses that use technology to improve people’s quality of life.

The discussion Forum, held on 22 November, 2016, was a meeting place designed to reflect on the Vusiness project [business, with a “V” for values], which aims to promote smart, open, democratic, sustainable and inclusive companies that inspire the future. The project is run by PhD. Carmen

Echazarreta Soler and PhD. student, Albert Costa Marcé, members of ARPA (Analysis group for reception and playback quality of Audio-visual Screens) Research Group, which forms part of the University of Girona’s Department of Philology and Communication.

The economic and financial recession had a very negative impact on the economic activity of European Union countries and produced job destruction and an increase in unemployment, causing a loss in living standards for a large part of the population. From 2008 to 2012, 7.2 million jobs were destroyed in Europe, and only 2.4 million were created, a net loss of almost 4.8 million. In the specific case of Spain, specialization in the construction industry and jobs being destroyed due to the housing bubble and the subsequent collapse of the sector have aggravated the position of specific social groups, who have been left jobless (Rocha & Aragon, 2012).

Mendizabal and Errasti (2006) asserted that globalization helps businesses relocate production, which universalizes outsourcing and offshoring with critical consequences in industrialized countries, directly affecting the production fabric and the social rights of workers, negatively and relevantly affecting their employment status.

In this vein, Echazarreta and Costa (2017a) state that: “The destructions of thousands of jobs, increasing job insecurity and unemployment constitute risk factors for social exclusion and marginalization. In industrialized societies the victims tend to be less qualified workers.”

According to Merino, Somarriba, and Negro (2012) Spain reached an unemployment rate of 22% in 2012. The government has taken a path to promote economic recovery and face job destruction by creating jobs, with a focus on quantity, rather than job quality.

Secondly, another currently alarming factor is climate change, which represents a pressing threat with potentially irreversible effects. In the current economic climate, globalization significantly increases the unsustainable use of finite, non-renewable energy sources. There is a need for sustainable businesses that reconcile business development with protecting the planet and environment (Echazarreta & Costa, 2018).

A third key factor that is beginning to make significant changes to the global economy, and specifically the job market is the 4.0 Industry. According to Ceballos (2016): “The confluence of technologies gives industry unimaginable opportunities, defining thus a new industrial model, based on digitalization. The effect of digitalization is felt in all areas of business, strategy, the offer of products and services, the business model, operations, and in organization and company culture. This change involves a new company model, and industrial profile, which must face this opportunity for reindustrialization.” The new model will probably result in the gradual disappearance of mass production as we know it,

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as the internet allows direct contact between consumer and producer, enabling product customization thanks to the automation brought about by technological advances.

According to Lasi, Fettke, Kemper, Feld, and Hoffmann (2014), the convergence of different technologies has the disruptive potential to transform businesses, sectors and markets. Furthermore, the fact that the latest technologies are affordable for the majority of businesses, regardless of their size and turnover, contributes to the democratization and digitalization of industry.

Lombardero (2015) asserts that the fourth industrial revolution will involve the digitalization of 90% of jobs in industry and services. The combination of advances in digitalization and automation may involve opportunities for innovation, growth and job creation. The resulting model may involve an opportunity to develop business models that require new occupations which help us end the recession.

Seghezzi (2016) asserts that with the new production model, workers will enter new occupations such as designing the production process, setting goals, and programming, supervising and maintaining machinery.

The web also enables the creation of a virtual market which brings about the collaborative economy, that is, the ability to access goods and services without intermediary companies (Todolí Signes, 2017).

At the same time, according to Echazarreta and Costa (2016): “online society has developed alternative communication models, which act as loudspeakers for citizens. Thanks to the development of new means of citizen expression, communication, and collaboration such as social media, op-ed sites, citizen journalism and the collaborative economy, we contribute to the democratization of society and freedom of communication.”

In contrast, Goerlich (2016) claims that the automation of production, and digitalization of services entail a large negative impact on the job market, causing significant job destruction. In a scientific study by Frey and Osborne (2017), 702 occupations in the United States job market were carefully examined, with the aim of identifying which ones were at risk from digitalization. They conclude that in the next two decades, 47% of jobs are at high risk of disappearing as a consequence of technological advances and their application to industry and services.

Arntz, Gregory, y Zierahn (2016) estimate an average job loss of 6 to 12% in the member states of the OECD, with the average around 9% in the next few years. In the same report they state that the impact on the configuration of job posts will be between 25 and 45%.

Torrent-Sellens (2017) concludes by stating that each time there is a disruptive technological advance, there is genuine concern about jobs in society. Conclusive data from economic analyzes indicate that technology does not destroy jobs, rather it skews abilities, tasks, and skills, and shifts jobs, occupations, and people.

According to Echazarreta and Costa (2017b): “To overcome the shortcomings of the current economic system we need smart businesses, championed by leaders who promote the use of communication and information technology as a means to improve citizens’ quality of life. Ultimately, society needs businesses and consumers to act in the free market responsibly, ethically, justly, and with

solidarity. They must make their economic growth compatible with the distribution of wealth.”

Eguiguren (2011), executive director of The Global Alliance for Banking on Values (GABV), came to the conclusion that the previous phenomena such as globalization, displacement, climate change and automation speed up the search for alternative economic models, which are capable of overcoming the shortcomings of the current capitalist model. We need businesses to act with corporate values worthy of a company culture that is savvy in its use of technology to improve quality of life, inclusive at a personal level and sustainable from an environmental point of view.

In view of these challenges, the Vusiness [business with a “V” for values] project is driven by the ARPA Research Group (Analysis group for reception and playback quality of Audio-visual Screens) of the University of Girona’s Philology and Communication Department. This project promotes open, democratic, sustainable, inclusive businesses that make a smart use of technology, with the challenge of becoming a transferable model in the fields of research, education, entrepreneurship, and business.

An exhaustive literary review has been undertaken since 2015, in order to lay the scientific basis for an alternative model centered on value-based businesses.

In order to complement and contrast the information gathered in the literary review phase, three forums are conducted, with the aim of reflecting, discussing, and detecting differentiating characteristics of inclusive, sustainable and technologically smart businesses. The title of the first one is: “People, at the center of business”, the second is: “Smart businesses, creating the future” and the third: “Sustainable businesses, facing climate change”. In all, around 30 professionals have actively participated in the three forums.

The Vusiness model is presented in multiple US universities such as Harvard University, MIT-Massachusetts Institute of Technology, Emerson College, Boston College and Suffolk University in Boston.

There are currently 50 professionals collectively creating the “Value-metre”, a tool to measure 50 corporate values linked to identity, administration and management, people, sustainability and smart technology in businesses, with the aim of transferring the knowledge to the business sphere. At the same time, a group of experts in entrepreneurship and business consultancy and development are developing the “Vusiness Plan”, a value-based business model to guide future entrepreneurs.

## II. METHODOLOGY

Forum II “Smart businesses, creating the future” was held on 22 November, 2016 in Meeting Room SD2 of the Tourism Faculty. The reflection of the forum centered on the singular aspects that configure smart businesses, championed by leaders who promote the use of communication and information technology as a means to improve citizens’ quality of life.

Participating in the forum are: Antoni Sudrià, emeritus professor at the Polytechnic University of Catalonia and former director of the CITCEA Center for Innovation and Technology; Carlos Grau, talent developer, and technology and innovation associate at Konsac group; Gema Guzmán, responsible for professional development projects at the

Princess of Girona Foundation; Isabel Godoy, responsible for inclusive tourism at the Costa Brava Pirineu de Girona tourist board; Ioanna Alsasua Pastrana, COO at SIMBIM Solutions; Joan Batlle Grabulosa, former director of the University of Girona from 2002 to 2005 and professor in the Computer Architecture and Technology Department; Joan Duran, strategy at the Ministry of Telecommunications, Cyber Security and Digital Society of the Generalitat de Catalunya; Marc Teixidor, PIMEC Young Businesspeople of Girona; Mariona Serra, co-founder and CEO of GoodGut, y Meius Ferrés, responsible for digital strategy tracking and protocol at the University of Girona. Dr Carmen Echazarreta, director of ARPA Research Group, expert in gender issues and associate professor of audio-visual communication and advertising, and Albert Costa, Doctoral candidate at the University of Girona, organize and drive the session.

### III. THE DISCUSSION

The main goal of the reflection forum is to identify the differentiating elements that characterize businesses that make a smart use of technology, in order to improve people's quality of life. Moreover, the reflection and discussion generate qualitative knowledge that complements the literary review.

At the **smart technology** level, the following specific goals are proposed, consistently with Echazarreta and Costa's (2017b) conclusions:

- Having an in-depth analysis of businesses with a basis in factors such as sustainability and inclusivity, necessary accessories to "smartness"
- Developing a unifying model, based on smart use of technology, sustainability, and inclusivity, focused on business creation, administration, and management.
- Defining quantitative and qualitative indicators for evaluating said new model
- Developing educational content and informative and training material for the new model, with the aim of raising awareness with the general population, and training executives, workers, suppliers and customers in order to favour the new model and thus contribute to corporate sustainability in the medium and long term.

Technologically smart businesses can improve the quality of life of people living in social exclusion. In harmony with the United Nations Development Programme, smart businesses direct their mission to build smart infrastructures, promote inclusive and sustainable industrialization, foster innovation, and promote sustained, inclusive and sustainable economic growth, full productive employment, and decent employment for all.

The debate about the smart use of technology covers four points that, according to Echazarreta and Costa (2017b), stand out in the previous, related studies: technology, innovation and quality of life; communication; leadership and management of human resources, and smart businesses.

### IV. TECHNOLOGY, INNOVATION, AND QUALITY OF LIFE

*How can technology contribute to a better quality of life for people? Does it depend on technological advances or corporate will? Do the tools have limitations? Innovation is fashionable because it is strategic to many companies, but how must it be applied in order to be much more than a strategy?*

Mariona Serra, cofounder and CEO of GoodGut, starts off the discussion: "**Innovation is a priority**, it must not be a fad, but rather an implicit value to all businesses. This is why a close relationship must be established for **transferring knowledge between universities, which create innovation and knowledge, and businesses, which develop and commercialize it**. Universities must **conduct research in a more guided and applied manner.**"

Carmen Echazarreta, from the University of Girona, continues by adding that, although it is necessary and evident that there must be a rapprochement between university and business to transfer knowledge, this causes a divide and debate in the heart of the university: "**Should knowledge creation be in harmony with corporate expectations? Or should it be pure knowledge, unconditioned by those expectations?**" In certain areas, such as engineering, economics or law, the application is heightened and more direct.

Joan Batlle Grabulosa, professor in the Computer Architecture and Technology Department, comments on the effect of technology on quality of life "**Technology improves quality of life in the physical world**. Yesterday I was chopping wood in the forest with a mechanical saw, which I carried in a trailer with my car. Our day-to-day is very physical: At home you cook, you use the washing machine... At the edge of this physical world is where **one must ask oneself if technology improves mental quality of life**, and this is where I have my doubts. Emails, messages... **There is a part of technology which falls outside my fundamental needs and which creates needs I didn't use to have**. New technology: social media, smartphones... has pros and cons."

Meius Ferrés, responsible for digital strategy tracking and protocol at the University of Girona follows: "**We must guide teenagers who come into initial contact with technology and teach them values**. There is a thing I always say in my course, which is: We teach them to put the world in their pocket and we don't teach them how to use it. This is a huge problem because they are alone, without teachers or parents. The parents have lost the battle, and teachers even more so. We have found that couple's relationships have lost value, we're regressing because of technology, as it introduces controls and bullying. This is why, **from the University we must educate, teach and warn in matters relating to cyber security and cyber bullying. We must attach added value to training, fostering competencies that last.**"

Revisiting the topic of values, Gema Guzmán, responsible for professional development projects at the Princess of Girona Foundation, asserts: "**Behind every quality of life improvement or positive repercussion from technology, there is a will, and a series of values, which ensure that the change is positive.**" She gives the example of Luz Rello, one of the latest people to be recognized by the Princess of Girona Foundation, who suffers from dyslexia and has developed a technological system for the early detection of

specific learning disabilities as well as their improvement and treatment.

Marc Teixidor, at PIMEC Young Businesspeople of Girona, claims: **“Innovation is what allows you to improve the value of your solution and solve the needs of the customer.”**

Antoni Sudrià, emeritus professor at the Polytechnic University of Catalonia and former director of the CITCEA Center for Innovation and Technology, follows up on the subject of the transfer of knowledge and values, confirming: **“Knowledge transfer is bidirectional.** The University transfers a specific type of knowledge and at the same time receives a different kind of knowledge from businesses, which is very enriching and allows the University to advance.

On the other hand there is a contradiction between technological development and quality of life, or sustainability. **Fads, and what they sell you in the media is unsustainable. In today’s society the most important value is economic.** This technological innovation, the new slavery in social media, young people’s dependency... **It’s a less autonomous society.** When a kid has to make a phone call, they find they’re incapable: **Their ability to reason and learn has been simplified. Technology causes a loss of human skills,** as before we were capable of designing tools, contributing to the environment being autonomous and surviving nature.

Finally, **there’s a clear economic incentive in putting products on the market to be consumed.** In contrast with waste and consumerism there are minority movements that support long-lasting technologies, for example, mobile phones that last 5 or 6 years and not the latest one that follows the trends and has just come out. At the same time, some manufacturers decide to lower the production rate of certain technological products, as they have found that the energy use is significantly lower, and not squander finite natural resources. **We lack social innovation and education in values.**

Joan Battle continues his intervention on technology, condemning emerging technologies: **“3D printers are the old lathes that have always been around, AutoCAD has always been used to draw, and all car parts have been made in 3D. Augmented reality, networking cars, drone robotics, smartphones, the cloud, big data, digital currency... The biggest risk with all of this are the massive servers that store all the information they generate, and which are controlled by multinationals who exert a huge and disproportionate control over society.”**

Furthermore, **“emerging technology creates costs and needs for society in areas where they didn’t previously exist. Online shopping, for example, and the need to have all your products such as food, clothes, etc. delivered quickly to your door. Services that involve transport, weight, consumption and energy, are the main generators of consumption from citizens. There is always a significant energy impact. It’s been years now since solar and wind power should have been the future. In 5 years’ time Germany won’t even have nuclear power.”** At an environmental level, the former president condemns the **lack of commitment and the indifference from society towards sustainability.**

Mariona Serra disagrees. **“It is precisely technology that promotes development and allows new business models to appear which are moving towards platforms and**

**communities which prioritize sustainability thanks to the collaborative economy”** with examples such as *carsharing* or *coworking* – shared workspaces; at a household level, home automation can also save energy.

Gema Guzmán adds: **“We’re talking about a qualitative jump thanks to the collaborative economy, such as the case of the non-profit, green energy consumption cooperative Som Energia.”**

Antoni Sudrià adds: **“Sometimes technology is abused, society pushes you to purchase goods that you don’t need at all and you end up doing social mimicry.** Is quality of life being able to spend more or is it about living equally well while spending less? Technology allows us to be more sustainable and have a better quality of life, but it’s important not to make a perverse use of it.

It is also important to note the **resistance from businesses to the digitalization process.** The problem lies in the fact that some companies that can still make profits without changing, may have disappeared in ten years if they don’t incorporate technology. On this point, there are noteworthy areas where there has been huge innovation in the past decades, such as in gastronomy with Ferran Adrià.

Joan Duran, strategy at the Ministry of Telecommunications, Cyber Security and Digital Society of the Generalitat de Catalunya: **“I believe that what is really important is the application of technology. If you are new to a platform which is uncharted territory for you and you don’t know what you want to get out of it, it’s better that you don’t use it.”**

Meius Ferrés says, along the same lines: **“I’m a fan of TED (Technology, Entertainment, Design, a US non-profit organization devoted to “Ideas worth sharing”). Very young people participate and they explain real actions through these innovative communication channels. For example, a group of youngsters explains that they are taking vaccines to India with GPS, which means they are combining innovation with sustainability. The danger is when people resist change. We must evolve communication with young people,** as they don’t read emails. It’s not their means of communication. At the same time, we need to educate them about the need to be on LinkedIn, not to search for work, but as a change in mentality, to display their biography. **Networks are for speaking about our professional and social life.** When you use them for personal use is when you have problems. When you search for jobs, a recruiter’s obligation is to check who you are on social media, as you see what values someone has through these networks.”

We close this first block in which key ideas come to the fore: **Innovation as a priority; guided and applied research; knowledge transfer between university and business; technology as an improvement of quality of life and at the same time generating consumerism; the need to educate with values in face of the challenges posed by technology, designing strategies and educating about cyber security and cyber bullying; lack of social innovation; resistance against digitalization and professional and social use of social media.**

## V. COMMUNICATION

**What changes can new and emerging means of communication generate, in the business sphere? How**

**can the relationship between the business and customer, supplier or distributor be boosted and stimulated?**

Albert Costa, Doctoral candidate at the University of Girona, explains that **social media sites such as Facebook, Instagram or instant messaging services such as WhatsApp, can be friendly environments in which to get closer and speak to young people** about their concerns and to receive psychological support and advice on intimate and confidential matters such as sexuality, drugs, couple relationships, eating disorders, etc.

He also points out the **democratizing role of networks, as any citizen can use them as a loudspeaker against social injustice, generating a certain media impact.**

Joan Batlle considers that the possible benefits of these networks are of interest, but he claims: “Keyboards should contain heat sensors, as often people give their opinion in a hot temper, without thinking.”

Mariona Serra gives her opinion on networks: “**Society itself penalizes and favors self-control.**” On the topic of communication in business she states: “**Communication and networks are key for gaining customers.** At GoodGut, before the first presentation press conference, we started following societies of patients with bowel cancer, intestinal illnesses, etc. After a few days the patients went to Trueta Hospital to see if the kit had been developed yet. Thanks to communication we can do market research. For example, a company that wanted to develop an app for showing which beaches had the most waves to go surfing on, based on the number of people interested in downloading the app, discovered that there was real demand, and that it made sense to develop it.”

Marc Teixidor continues: “**Communication is the Achilles heel of any company at all levels: production, people management, relationships with customers and suppliers, etc.** Communication even allows you to pre-sell your product before it exists.

Albert Costa continues: “**Social media sites allow small companies to segment their customers and nurture loyalty with them.** Years ago, companies invested in conventional advertising in the general media, with less strategic sense. For its part, **with social journalism you can condemn and show up bad business practice through networks, which democratize and enable freedom of expression.**”

On the subject of **business communication**, Isabel Godoy, responsible for inclusive tourism at the Costa Brava Pirineu de Girona tourist board, explains that they are working towards a diagnosis on accessibility for 700 Girona businesses in the tourism sector. They have been surprised, as with the case of a scuba diving business: “they have a platform that enables people with disabilities to go diving but they haven’t advertised this in any way. How is a tour operator supposed to notice this business and send tourists their way, if they don’t advertise this facility?”

Gema Guzmán: “The media becomes **a controlling element of how businesses act, as they tend to be very concerned about their reputation.** Through social media, citizens have a lot of power, and this contributes to businesses wanting to continually improve.”

Meius Ferrés, on the topic of business communication: “New youngsters do not trust institutional communication in the slightest, they go to **op-ed sites,**

**community testimonies.** According to Xavier Marcet, “Tripadvisor and Booking have changed the behavior of hotels and restaurants.”

Antoni Sudrià highlights the risk of agencies generating reviews online, but he admits that new technology has socialized communication. He also reflects on the **digital gap which creates inequality between people who have access to and knowledge of new technology, and those who do not.**

Joan Duran claims that businesses are placing more and more value on customer communication and use the best tools to get close to them and nurture loyalty. **But he sees challenges in the business-supplier relationship. He says that meetings and negotiations tend to be face-to-face and not easily substituted with technological communication solutions:** “You realize in fairs, such as the Mobile World Congress or the Smart City Expo, that businesses need to deal face-to-face with the people who they will sign a contract with, and will supply them.

On the subject of Smart Cities, Meius Ferrés suggests that **they should work for vulnerable people** and she condemns a case in Reus, a very technological city, where an elderly woman who had her electricity cut off, died in a fire started by a candle.

Joan Batlle says that “current technology is more than advanced enough for this to be avoided”. He explains that 8 years ago they developed a touchscreen with Skype code and a LED frame, which allowed any domestic television to be turned into a touchscreen. It was designed so that elderly people could be connected with their families for a very low cost, but it proved impossible to raise funding or interest from the administration, and advance this social project.

Antoni Sudrià comments on the needs of people at risk of social exclusion, explaining that **the study on individuals’ energy consumption patterns will enable us to quickly detect cases where an intervention is needed urgently.** “For example, you can detect if they have skipped their morning shower or not heated up their breakfast milk”.

Referencing new media, Joan Duran claims some social media platforms that are considered emerging are **Twitter, LinkedIn, Slack** –which is used for teamwork and divides conversations by topic-, **Telegram or Pidgin.** At the same time, he highlights the use of email and instant messaging for managing work with non-invasive tools. Tools such as **Drive or Dropbox are completely insecure from a data protection and confidentiality perspective.**

Returning to the original topic, Ioanna Alsasua, from SIMBIM Solutions, thinks about the **opportunities generated by new tools and emerging media in technology businesses** that have their focus on construction, and Smart Cities: “**The introduction of BIM (Building Information Modelling) technology** allows us to construct virtual prototypes of our buildings and see what will happen before we build them. We can work much more efficiently, as it allows us to, from the first phases, avoid construction problems, know the exact costs generated and how to provide maintenance for the building, etc. Ultimately, it allows us to manage the whole lifecycle of the building in a unified way.”

Carmen Echazarreta points out: “Technology allows us to optimize knowledge and **we save energy thanks to virtual systems, which contributes to sustainability.**”

On cost savings, Joan Batlle claims: “Thirty years ago people already worked online, the problem was **system speed** and **high costs**”, matters that have changed significantly in our time.

Ioanna Alsasua continues: “although architecture is an industry which has traditionally been reluctant to share information, **the technologies that get used tend to follow a model of collaboration between professionals. The main value sought by support tools is transparency.** Multiple architects can be working on the same file in real time, hugely optimizing their work, and cutting down on the amount of information that would have been sent through instant messaging or email. Although it must be said that there is a **lack of education when it comes to working with collaborative systems.**”

Joan Duran continues with the claim: “In time businesses will have to be more transparent. Suppliers will be forced to share their information more openly, allowing a more virtual relationship with their potential customers. CRM (*Customer Relationship Management*) software will become indispensable for managing customer relationships.

Speaking about the bases of the collaborative model, Antoni Sudrià claims: “**A lack of investment in Catalonia has promoted the creation of many industrial estates which don’t provide the necessary scope for businesses within to work collaboratively with their stakeholders**”.

The second block closes with some key ideas for examining the changes that new and emerging media can bring about, and how the business-stakeholder relationship can be improved: **Social media and business communication that can segment and bring in customers while nurturing loyalty; transparent communication management; guaranteed data protection and security; fostering teamwork; lack of education and training to work with new emerging models; social journalism with a democratizing role; appearance of op-ed sites and community testimonies which foster a concern for business improvement and reputation, and finally we highlight the digital gap which creates inequality between people who have access to and knowledge of new technology, and those who do not.**

## VI. 6. LEADERSHIP AND HUMAN RESOURCES MANAGEMENT

*Do we assume that management in a smart business is more collective than individual? What role do the teams have to take? What should leadership look like?*

In this new block Marc Teixidor begins by explaining that Sergi Garcia Preckler, who has been director, manager and vice-president of the Human Resources department at Sony Iberia for 15 years, leading a team of more than 3,000 people, delivered a conference at PIMEC and asked the managers in attendance: “What does your job entail? What is a CEO’s most important job?” Most of the answers were “I handle the big accounts, the most important customers.” Then, he compared this with family and children: “**You must give your employees the tools to develop and try to make them better than you, so that they grow. You must create an environment in your organization where employee motivation and recognition are first-rate. We need leaders who are talented, responsible and have the ability to communicate. A leader makes the people around them better. They must be humble, and capable of teamwork.**”

Gema Guzmán adds that the term used is no longer human resources, but **people management**: “We need **shared goals and vision.** You can’t have a team and not tell them where you’re going. This is why it’s easier to work in start-ups, as the team identifies more easily with the project.”

Meius Ferrés claims: “**48% of jobs will be taken up by robots in ten years’ time. Manual and mechanical jobs, which are not generally fulfilling,** will be done by machines. Carlos Zahumenszky, editor at Gizmodo ES, claimed at TEDxReus that we will have to find a new way of working. If our job is threatened by a robot, **we will have to make our job more human.** He spoke of doctors at a primary care center, who see an average of 35 patients from 8:00 to 15:00. Patients tend to use additional services such as psychology or homeopathy because they get seen for an hour. He claimed that machines may be able to do many of a doctor’s tasks, but **the job of understanding a person, can only be done by another person. Automation is a social challenge, we must support individual talent and promote more creative jobs.** Volunteering will also become important in future as it makes us better people.”

To Mariona Serra: “The team is the main building block of a business. Employees must understand that the company is their own, they must feel a part of it. In the newer generations we’re used to working **collaboratively, in multiple languages, and multitasking.** For example, the company Mango works with shared goals and vision. These times require **greater flexibility in working hours, to encourage harmony and enable women to take leadership.** On personnel recruitment, Michael Page, a leading worldwide consultancy in selecting qualified staff, point out that you tend to hire people like yourself. It’s important to **select people for the role they will fill. You must think of the profile you require for a specific role.**”

Joan Batlle highlights that “The problem lies in that **salaries are very low for the majority of people.** Automation will get rid of a specific kind of unskilled labor, but at the same time **will create more qualified jobs.**”

Antoni Sudrià highlights that: “**Human resources is changing significantly in highly technological businesses.** For example, Indra Sistemas S.A., a Spanish multinational in the communication and information technology sector, hires **on a project-basis, with no working hours, and does not provide a fixed workplace.** Hierarchies disappear and a method of cooperative active players who must be smart and communicate with each other, is applied.” At the same time, he highlights that “People with a lot of talent often have high mobility. **Talent is difficult to retain.** They tend to work on projects, and when they finish one they move to a different country and project. It is in times of recession when we have the best **knowledge transfer contracts** with businesses.”

Albert Costa claims: “It’s worth noting that not everyone has to be enterprising in their workplace. **We must expect employees to get involved to a reasonable extent. The person in charge is the one with all their capital at risk, and only the businessperson can gain all the profits.**”

In the same vein, Joan Batlle says: “The difference between business owners and workers is always there. In the middle of the recession, employees really felt for their company, until they were told their salary was cut in half. At that time, all they saw was the owners living in luxury homes, with nice cars and pools... The Catalan businessperson at an

SME, seeing things are going wrong, tries to hold on, a big mistake, and begins to use credit facilities and ask for personal loans to maintain workers who are like family. But then one day the employees discover that they're not family, and that this is not the company they thought they loved."

Some key concepts to highlight in this third block are: **"People management; leadership that is talented, responsible, with an ability to communicate, which improves the people it surrounds; teams with shared goals and vision; progressive automation and humanization of more creative jobs that boost individual talent; greater flexibility in working hours to encourage harmony and the importance of adequate remuneration."**

## VII. SMART BUSINESSES

*What characteristics define smart businesses? What do we mean by "smartness" in relation to business? Do we need education on the subject?*

Joan Battle begins the third block, by warning that **"The business must make a profit in order to be viable."**

Antoni Sudrià adds that, furthermore, **"it must generate knowledge by investing capital and valuing talent."** He comments that some Girona businesses, especially the family-run ones, find it hard to value knowledge and realize that to advance and innovate they must study certain factors. In the 4.0 Industry data analysis will become more and more indispensable for improving strategies. He also adds: "An indicator to evaluate if a company is smart or not is the **employee training program. How much money do they invest in training? Finally, he highlights the need to look after staff, and manage them effectively:** "It's important to detect states of stress or unhappiness. You must take an interest in the personal state of your employees. You must do the opposite of what business schools tell you: maintaining pressure does not work. **A smart business is able to recognize its mistakes."**

Marc Teixidor and Mariona Serra agree with Sudrià and highlight that smart businesses: **"Reconcile economic activity and all the players that make it possible. Generating value for every stakeholder and recognizing the value of knowledge created and employee training"**. Teixidor also highlights that **"management must be humble, and able to know their employees' names and what they do"**.

In the same vein, Gema Guzmán highlights: "It is the business that takes into account all its stakeholders for **the ultimate common good of all parties**. Another important point is to have a good **work environment."**

Meius Ferrés highlights the importance of **"Creating pride of belonging"**. She also highlights the need to **safeguard good working conditions in business**. She gives the example of bad practices in certain emerging collaborative businesses such as Uber, where there are no employees or workers' rights. Another characteristic feature of smart businesses in the **"ability to give back to society."**

Carlos Grau, talent developer, and technology and innovation associate at Konsac group, highlights that "the outstanding issue is the **university-business transfer**. At the same time, it's important to bring **innovation** to organizations. There is an important debate in industry surrounding big data, machine learning and business intelligence. **60% of jobs that consist of sequential and**

**repetitive information analysis, and aren't highly complex, will disappear in the US and in many businesses over the next 3 or 4 years.** Just as it happened on the factory floor, this will be done by robots that can semantically analyze documents. By using logic and algorithms, they can analyze steps and a process which was simply a controlled flow of information from one colleague to the next, for validation. The big opportunities for smart businesses are **tasks relating to online work, working with third parties, creativity, greater customer-focus...**

Smart businesses are the ones marching in this direction. They accept that the most repetitive, manual and tedious tasks will end up being substituted by automated systems. Everyone is terrified and believes their job will disappear. **The challenge is in creating many jobs of value."**

Joan Duran gives the antagonistic example of two companies: **"Apple** has historically fed on innovation. In Steve Jobs' time it could be considered smart because they tried to make varied products and deliver value. Since his loss, the strategy has changed. Instead of investing their profits in innovation, they distribute them to their investors, and the company will slowly lose market share. On the other hand, I believe that **Amazon** is smart, and worthy of examining. They are innovating in the ecommerce world. They create new products and services on a daily basis. It will grow indefinitely."

Gema Guzmán points out that, to the best of her knowledge, Amazon UK has dismal working conditions for its employees, unworthy of a smart company. There must be, then, a balance between innovation and people management. She continues and explains that in the Basque Country's 2016 unemployment forum, Michael West, professor at the University of Lancaster, intervened, stating that the most important thing is to **"treat people working within an organization with dignity, compassion and empathy, and to listen to them**, and that they will do the same with other employees, customers, or patients. **If we create a positive workplace atmosphere, we will be better people at the end of the day."**

Carlos Grau highlights that **the organizational cultures of smart businesses are based on features like creating fields of innovation, the ability to transform, constant humility and modesty however well things are going, being curious, respect to generational, cultural and general diversity, and pride of belonging to the project.**

He highlights a socially responsible labor integration project that was developed by **Fundación DKV Integralia**. He explains that they placed around 300 disabled people over 15 years and that the foundation is driven and managed solely by people with disabilities. They manage call centers, customer service centers for large companies and even ministries. "You see their success stories and their will to overcome and are impressed, you learn many things. Some companies develop CSR (Corporate Social Responsibility) themes around art, culture, entertainment and leisure... More importantly than which area you work in, what matters is that what you do is transversal, and that it generates a real impact in the business model. **Smart businesses involve their employees, create a sense of pride and belonging and promote volunteering."**

Another detail that Grau highlights is that “In the United States various companies are creating a professional profile that **apologises**. In a business culture of innovation and making mistakes, it is important to know when to apologise to customers. **Although every occasion where a problem arises with a customer is an opportunity to improve, managing the situation and knowing how to apologise is one of the most sophisticated tasks in the world**”.

In this last block on the characteristics that define smart businesses, we highlight the following concepts: **economic feasibility; generating knowledge; valuing talent; training and recycling for employees; care for and management of staff; reconciling economic activity and generation of value for stakeholders; humble and modest managers who know the names of their employees and what their tasks are; healthy work environment; pride of belonging and involvement of employees; care for working relationships; giving back to society; university-business knowledge transfer; progressively generating creative online customer-focused jobs of value in face of automation; treating customers with dignity and compassion; curiosity; respect for generational, cultural, and general diversity; promotion of volunteering and apologising.**

## VIII. CONCLUSIONS

Carmen Echazarreta concludes that we live in a time of great technological innovation, with the potential to help give an answer to a majority of social challenges: overcoming the economic and financial recessions, fighting inequality, eradicating climate change, eliminating child labor, counteracting the ageing population or stopping rapid urbanization.

As the forum progresses, we highlight a series of differentiating characteristics of **businesses that make a smart use of technology in different areas of knowledge:**

**Technology:** a) Humanization and progressive creation of online, customer-facing jobs of value in the face of automation and digitalization; b) Technologies for improving quality of life, and c) Cyber security and data protection.

**Administration and management:** a) Reconciling economic activity and generation of value for stakeholders; b) people management and talented, responsible leadership by leaders with an ability to communicate and improve the people surrounding them; c) optimizing the work environment, fostering collaborative work and teams with shared goals and vision; d) care for and adequate management of staff, valuing talent, increased flexibility in working hours to encourage harmony and the importance of adequate remuneration; e) generating a pride of belonging and involvement in employees; f) giving back to society; g) treating customers with dignity, compassion, empathy and actively listening; h) respect for generational, cultural, and general diversity, and i) promoting volunteering.

**Research:** a) Innovation as a priority; b) guided and applied research; c) transfer of knowledge between university and business, and d) knowledge creation

**Education and training:** a) Educating in values in the face of challenges posed by technology, designing strategies and training on cyber security and cyber bullying;

b) education and awareness for working with new emerging models, and c) training and recycling for employees.

**Communication:** a) Transparent communication management; b) social media and business communication capable of segmenting and capturing customers while nurturing loyalty; c) social journalism with a democratizing role, fostering freedom of expression and the right to gather information; d) op-ed sites and community testimonies that foster a concern for business reputation and improvement; and finally we would highlight e) the digital gap, which creates inequality between those people who have access to and knowledge of new technology, and those who do not.

Based on the parameters described here, some tools will be developed to foster the promotion of businesses that make smart use of technology and are able to favor useful dynamics for fighting the social effects of automation and digitalization.

Defining quantitative and qualitative indicators based on the conclusions of the forum “Smart businesses, creating the future” lays the basis for creating a business management tool aimed at the effective management of technology in organizations.

In line with that posited by Echazarreta and Costa (2017b), we highlight the need for a unifying model, based on the results of the literature review and the discussion forums centered on three areas: inclusivity, sustainability, and technology working to improve quality of life. Some experimental studies are also needed to contrast the suitability of the indicators defined by the various professionals in order to identify and support companies with values. Finally, we recommend the development of an easily applied instrument for businesses with the aim of fostering values related to inclusivity, sustainability and smart use of technology.

As with the first forum, the results and conclusions of the current debate need to be confirmed in subsequent research that includes other experts in the field as well as a different research methodology. We conclude that, faced with these new changing scenarios and challenges, research in this field must be both multidisciplinary and systematic.

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