

Forum for Reflection and Debate: Sustainable Companies, Tackling Climate change

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Abstract:- This paper presents the results and conclusions from a forum for reflection and debate among professionals from different fields to discuss and define relevant and significant indicators that facilitate the identification, differentiation and promotion of sustainable companies. Consistent with a prior literature review, the debate was organized on the basis of five axes: sustainable companies, climate change, the environment, mobility and corporate social responsibility. A series of differential characteristics of sustainable companies are highlighted in four areas: a) **Minimizing the consumption and promotion of renewable energies: transforming polluting sectors; internalizing the impact; renewable energy; recyclable and reusable products; energy demand management; segregation and waste management;** b) **Mobility: energy storage; increasing vehicle occupancy; using bicycles; electrified transport; improving freight transport; transport and mobility on demand; electric vehicles;** c) **Environmental, economic and social business management: contributing to improving the environment; the collaborative economy; innovative ecosystems; sustainable business strategies; flexibility; equal opportunities; collaborative innovation; teleworking; transparency; and d) Public administration: awareness; e) reducing emissions by between 7% and 8% per year; positive taxation; strategic management of the territory; promoting environmental certifications; promoting long-term sustainable strategies, and efficient and affordable public transport. Defining quantitative and qualitative indicators will provide a business management tool for the sustainable management of companies. The reflection, debate and knowledge generated in this forum of experts is aimed at producing qualitative research and the subsequent transfer of knowledge in three areas: education, entrepreneurship and business.**

Keywords:- Forum for reflection and debate; companies with values; sustainability; climate change; reducing energy consumption; renewable energy; transport and mobility.

I. INTRODUCTION

The University of Girona promoted a forum for reflection on sustainability and companies. The debate took place on October 18, 2016, and provided a meeting place for reflection on the Vusiness project [business with a “V” for values], which aims to promote sustainable, intelligent, open

companies that are democratic and inclusive and must inspire the future. The project is run by the Arpa Research Group (Audiovisual Screen Reception Analysis Group), which is part of the University of Girona’s Philology and Communication Department.

According to Echazarreta and Costa (2018): “Climate change represents a pressing threat with potentially irreversible effects. In the current economic environment, globalization significantly increases the unbalanced use of non-renewable finite energy resources”.

The Spanish Office of Climate Change (2006) has stated that: “At present, there is a broad scientific consensus that the phenomenon of climate change is an unequivocal fact, caused mainly by the actions of man”.

The studies conducted by Ordóñez y Masera (2001) similarly concluded that: “Human activities, such as the use of fossil fuels for producing energy and the processes derived from changes in land and forest use, are generating large emissions of greenhouse gases (GHG) such as carbon dioxide (CO₂), carbon monoxide (CO), chlorofluorocarbons (CFC’s), nitrogen oxides (NO_x) and methane (CH₄), mainly, CO₂ being one of the most important GHGs due to the large amounts in which it is issued.

Analyzing the origins of climate change, Moscoso (2018) states that during the 18th century, the Industrial Revolution was characterized by large-scale mechanical production thanks to the use of steam engines. This factor favored rapid growth and economic development but also meant the beginning of climatic imbalances generated by the massive use of energy resources such as coal.

In line with these conclusions, Acquatella (2008) argues that: “The most significant greenhouse gases generated by industry over the last century and a half are carbon dioxide, methane and nitrous oxide, the first being the most important, with an increase from a pre-industrial age value of 280 ppm to 379 ppm in 2005, surpassing its natural behavior over the last 650,000 years.” The authors propose technical, political, economic and scientific strategies to reduce and stabilize the increase in greenhouse gas emissions: drafting and approval of a specific legal framework for the control and reduction of atmospheric emissions, application of incentives and environmental taxes on companies, and the use of green technologies and renewable energies.

With regard to the effects of climate change in recent decades, Stocker et al. (2013) have the following to say:

“Since the 1950s, many of the observed changes have not had precedents in recent millennia. The atmosphere and the ocean have warmed up, snow and ice volumes have decreased, sea levels have risen and greenhouse gas concentrations have increased.” This author concludes that climate change generates adverse effects, the impacts of which can jeopardize the development of countries and the integrity of the world’s ecosystem. Numerous plant and animal species affected by pollution and habitat loss will not survive in the coming years. Scientific analyses predict that high temperatures, heat waves and heavy rainfall will continue to be more frequent in the future, which could be disastrous for the environment.

When it comes to recommendations, Bрева (2006) categorically and urgently states that: “As global geopolitics evolves, consuming less oil and more renewable energy is an urgent need for Spain, it must be an objective and a State policy. It is a unique opportunity because all the conditions are in place to achieve it and we are world leaders in renewable technologies, but it is necessary and urgent to transfer a different energy culture to society.”

Regarding the reduction of consumption, Linares Llamas (2009) stated the following: “Energy saving and efficiency are a fundamental element for improving the environment, especially in regard to global warming.”

With regard to renewable energies, alternatives to conventional ones based on oil, coal and natural gas, Boyle (2004) highlights the following energy alternatives: solar, thermal, photovoltaic, bioenergy, hydraulic, tidal, wind, wave and geothermal.

Another key aspect when dealing with climate change is influencing mobility. Miralles-Guasch (2002) stated that: “In recent decades, profound social, economic and technological changes have led to a new model of urban mobility.” This model, which tends to be implemented globally, is characterized by an increase in average distances traveled, changes in motives for travel and changes in the location of productive activities.”

Estevan and Sanz (1996) stated that cities were designed, reformed and built to satisfy above all the needs of motorized vehicles and, in particular, the automobile, which has generated consequences such as congestion, pollution and noise. These authors emphasized the need for new models of urban planning and mobility, which result in an ecological reconversion of transport.

In the same line, we can highlight research conducted by Mollinedo (2014), which analyzed the environmental and social unsustainability of the current urban mobility model, together with negative externalities caused by transport. This author presented some of the principles that should govern a sustainable urban mobility model to improve the quality of life and address climate change, while highlighting the need for an adequate public transport network. Technological advances are highlighted, especially in relation to the storage capacity of batteries in electric vehicles such as bicycles, motorcycles and cars. And finally, modes of collaborative economy are also mentioned, such as the new forms of shared transportation, car sharing, rentals by the day or hour and applications that offer a transportation service based on the user’s geolocation, such as

Uber and Cabify, which are causing great controversy in the traditional taxi sector.

According to Echazarreta and Costa (2018) “Sustainable companies are based on two fundamental principles, which are the environment (renewable energy resources, sustainable development, preservation of the environment, responsible energy consumption, minimizing emissions, eco-efficiency, the circular economy) and mobility (collective public transport, electric vehicles, clean and non-motorized mobility systems).”

(Eguiguren, 2011), Executive Director of The Global Alliance for Banking on Values (GABV), concluded that the management of phenomena such as climate change and economic, social or globalization crises accelerate the search for alternative economic models capable of laying foundations that provide a better response to the shortcomings of the current capitalism-based model. According to Eguiguren, companies are required that act out of a sense of ethics, responsibility, transparency, democracy and participation; companies guided by the corporate values characteristic of a sustainable business culture at an environmental level, inclusive at the social level and wise at the level of using technology to improve quality of life.

To contrast and expand the information summarized in the bibliographic review phase, three forums were held to reflect and debate on sustainable, inclusive and intelligent companies. The first was entitled: “People, the heart of companies”; the second: “Smart companies, generating the future”; and the third: “Sustainable companies, tackling climate change”. In total, some thirty professionals actively participated in the three forums.

The model was presented at different American universities: Harvard University, MIT-Massachusetts Institute of Technology, Emerson College, Boston College and Suffolk University in Boston.

Currently, 50 professionals from different fields are collectively creating a “Valometer”, a tool for measuring 50 business values linked to identity, administration and management, people, sustainability and smart technology in companies.

At the same time, experts in entrepreneurship and business consulting are developing a “Vusiness Plan”, a business plan model with values to guide future entrepreneurs.

II. METHODOLOGY

The 3rd Forum “Sustainable companies, tackling climate change” was held on January 24, 2017 in the SD2 Meeting Room of the UdG’s Faculty of Tourism. Reflection revolved around the unique aspects that make up sustainable companies, which promote values such as equality, transparency, joint responsibility and accessibility, and ultimately improve quality of life.

The following people participated in the forum: Pere Macias, President of the Circle of Infrastructures Foundation and Professor at the Polytechnic University of Catalonia; Imma Pérez, Director of Not topic - RSC, communication and networks; Sara Pizzinato, responsible for energy and climate

change companies at Greenpeace Spain; Joan Barfull, Technical Manager at the Girona SME branch and in charge of sustainability; Marc Casadellà, Director Par 3 Pitch & Putt Gualta and President of the Catalan Pitch and Putt Association, and Josep Serra, viticulturist and entrepreneur at La Vinyeta winery.

The session was organized and run by Dr. Carmen Echazarreta, Assistant Professor of Audiovisual communication and advertising, Director of the Arpa Research Group and expert on gender and publicity issues, and Albert Costa, PhD student at the University of Girona.

III. THE DEBATE

The main aim of the Reflection Forums is for professionals in the business sector to debate and define relevant and significant indicators that facilitate the identification, differentiation and promotion of sustainable companies. The reflection and debate generated in this forum of experts serves to generate qualitative research.

In terms of sustainability, according to the conclusions of research conducted by Echazarreta & Costa (2018), the following assertions can be made:

- Gaps exist in information and research related to climate change.
- The instruments currently used to mitigate its effects are insufficient and inadequate.
- Better governance indexes and a transnational strategy are urgently needed.
- There is a need for sustainable companies that combine business development with the environment and protection of the planet.

According to Eguiguren (2011), the mission of a sustainable company is based on ideals and values committed to the planet, contributing to the common good and at the same time generating a volume of profit similar to other companies.

According to the United Nations Development Program, sustainable companies focus their mission on promoting the following areas: a) Clean water and sanitation; b) Affordable and non-polluting energy; c) Sustainable cities and communities; d) Responsible production and consumption; e) Action for the climate; f) Underwater life; and g) Life of terrestrial ecosystems.

The debate on sustainability in companies was organized around five descriptors that according to Echazarreta & Costa (2018) stand out in the studies mentioned previously: sustainable companies, climate change, the environment, mobility and corporate social responsibility.

IV. SUSTAINABLE COMPANIES

What characteristics identify a sustainable company? What is meant by sustainability? Is there a lack of education on the subject?

Joan Barfull, Technical Manager of the SME Girona branch and responsible for sustainability kicked off the debate: “Sustainability is a cross-cutting issue that must be addressed at the environmental, social and economic levels. A key

indicator is that companies operate causing zero or negative impact on the environment. Although the company is founded with the aim of making money, there is increasing awareness that it must contribute to improving the environment in which it operates, contributing positive values to society.

Josep Serra, viticulturist and entrepreneur at La Vinyeta winery then added that sustainable companies are managed with a short and a long-term vision, internalizing the impacts they have on their environment, making the defense of their interests compatible with solidarity in their environment and thinking of future generations.

Continuing the discussion, Pere Macias, President of the Circle of Infrastructures Foundation and Professor at the Polytechnic University of Catalonia stated the following: “In a similar way, in the world of infrastructures, some forty years ago in the more advanced countries they started to evaluate the environmental impact infrastructures had on the territory. This area has now been overtaken by strategic environmental planning. In the area of sustainability in companies, beyond mitigating impacts, the key lies in sustainable business strategies. For example, if we produce diesel engines, even if we put a lid on it, the mistake lies in manufacturing this type of engine in the first place.” He then underlined the importance of maintaining an industrial culture characterized by capitalizing human teams trained to improve their production chain and make it more sustainable and not reduce costs thinking only of the short term.

Next, Sara Pizzinato, responsible for energy and climate change companies at Greenpeace Spain, defined sustainable companies as having zero or positive impact, taking into account the entire process, analyzing from the outset, for example, how they obtain and transport raw material, until the final consumption of the product. “Dangerous activities for the environment should be limited by legislation. Only sustainable activities should be allowed.” She went on to explain that the problem lies in the fact that voluntary recommendations are not followed by companies. For example, the European association of car manufacturers has been applying pressure for the last twenty years to make compliance with the objectives set out by European regulations regarding CO₂ emissions in cars voluntary.

She noted that: “The fundamental elements of sustainability are measurability and transparency” and gave as an example of the difficulties her organization faces that of obtaining electricity consumption data from large data centers belonging to companies like Facebook, Google or Amazon, which consume large amounts of energy.

Imma Pérez, Director of Not topic - RSC, communication and networks, continued with the theme, stating that sustainability lies in the company operating without harming the environment or society. It is important to differentiate sustainable strategy from “greenwashing”, which consists in companies presenting their services and products as being respectful of the environment even when this is not true. She argued that sustainability brings companies profitability and that other key aspects of sustainability are transparency and ethics.

When companies incorporate sustainable development into their business model, they have workers who are much more committed, innovative and talented, and are more accepted by the community as a whole. Sustainable companies are also collaborative companies, even with their competitors.

In line with this, Sara Pizzinato said that “Sustainable companies use their good practices, their desire to go beyond what is legally binding, to make others do the same. They use their representativeness and influence to promote a sustainable market and a system based on renewable energies that can be useful for all companies.”

For his part, Joan Barfull added that in Spain it is important to differentiate the big energy lobbies that have enormous influence, even in the drafting of regulations, from SMEs, small and medium-sized enterprises that have enormous potential to minimize and compensate all the negative impacts they can have. Despite the system of sanctions, it is necessary to take into account the possibilities offered by environmental certificates, which encourage truly sustainable companies. In this environment, the circular economy means a change of business model, as it seeks to enhance and extend the life cycle of products, materials and energy resources and reduce waste generation. Values increasingly have more market value.

Accordingly, Josep Serra explained that what is desirable is for “Sustainability to be part of company’s competitive advantage, add value and generate differentiation. Differentiation is valued and perceived by consumers. Good products are increasing in value and people are willing to pay a little more for them.”

As a counterargument, Pere Macias noted that becoming sustainable is more complicated in some sectors than others. He gave the example of the country’s meat industry, where there is a lot of competition and it is difficult to improve quality in the process between pig-breeding and meat exportation.

This is the end of the first section, in which the following characteristics of sustainable companies have been highlighted: a) Transparent; b) Ethical; c) Measurable; d) Focused on the environmental, social and economic level; e) Contributors to improving the environment in which they operate; f) With a short and long-term vision, internalizing the impacts they have on their environment and thinking about future generations; g) Managed by means of sustainable business strategies; h) Do not do greenwashing; i) Collaborative, even with their competitors; j) Sustainability arises out of competitive advantage.

V. CLIMATE CHANGE

Global warming is now a fact that is having, and will have more, serious consequences for the climate, atmosphere and biodiversity. How can companies help mitigate the consequences of this change? How can they reverse the situation?

This second section began with Sara Pizzinato stating that: “Climate change requires a State strategy, since an urgent reduction of emissions of between 7% and 8% per year is

needed in order to prevent global warming and try to reduce the average temperature of the planet by 1.5 degrees.” It is the State that must have a strategy and mark society’s priorities with regard to companies: “States must regulate taxation on certain products with greater rigor: airlines should pay taxes on hydrocarbons, diesel should have a higher taxation rate than gasoline and regulations should be provided to make charging points available for electric vehicles.”

She complemented the idea by stating that citizens must internalize the social, environmental and economic costs of activities that pollute. Sustainability has to be a fundamental, basic and obligatory value for any product, while excellence or quality can also make a difference.

In the same line, Joan Barfull said that use should be made of the Mediterranean climate to promote renewable energies. He believes that the government should facilitate the production and consumption of renewable energies, whereas the decree on self-consumption presents an opposite scenario, since it discourages companies from considering investments in this respect.

According to Pere Macias, one of the most important means of intervention available to States is taxation. Thanks to taxes, the State redistributes according to political priorities. The principle of tax disaffection has been applied since the 19th century, which involves taxes not being allocated to the same place they were collected from, but redistributed according to political priorities. It brought an end to the so-called portazgo, a medieval tax on the transit of people, goods or animals.

Macias believes that: “The tax disencumbrance model is in crisis because we need to internalize the social and environmental costs clearly. Only taxes such as water are invested from the first to the last penny in improving the water cycle. Citizens understand that they pay a lot for water because it has to come back clean. In cases such as air, the opposite happens, with diesel, which is more polluting, being cheaper. Transport also needs to internalize costs, promoting payment for use: those who travel have to pay all the costs of their movement, from the physical costs of fixing the road to the environmental costs of the pollution generated by their movement. Education is required for citizens to understand and accept this, since we are talking about transforming taxes, not raising or lowering them.”

Imma Pérez recalled the idea described in the first section, explaining that the circular economy is expanding and that the collaborative economy is also getting stronger. One process that is slower than consumers themselves is the definition of a legal framework for collaborative activities. A change of mentality is required to this end. For example, given the disadvantage of owning a vehicle there are more efficient and cheaper alternatives, such as the use of public transport or car sharing.

Sara Pizzinato continued on the theme of how to tackle climate change, establishing three types of companies.

“The first type of company is the one that has energy generation as its core or main business; these are the major emitters of greenhouse gases, including energy companies,

transport companies and poultry farming. As a country, we cannot continue to have thermal power plants or coal mines, or continue to burn fossil fuel if we want to prevent climate change. If our priority is change, then certain sectors have to be transformed 100%.” It should also be borne in mind that: “Some sectors are changing radically; for example, the biggest revolution in the field of electric vehicles is being headed by the electric battery manufacturer Tesla, and not Volkswagen.”

The second type are companies that do not have such polluting effects in their core business, but use finite energies to provide their services. Here we should highlight companies that are revolutionizing the use of renewable energies; for example, several vineyards in La Rioja have incorporated windmills.

The third block is comprised of companies that set out a long-term strategy and visualize the necessary services in a renewable, efficient and intelligent system: car-sharing services - hourly car rental service, carpooling - shared private transport system, demand management, ecological food and its distribution, etc.

Finally, she emphasized that the government has the responsibility to make the reduction of gas emissions compatible with a healthy economy.

In this second section, different actions were presented that could mitigate climate change: a) A State strategy to reduce emissions by between 7% and 8% per year and reduce the average temperature on the planet by 1.5 degrees; b) Strict fiscal regulation for finite energies; c) Sustainability conceived as a fundamental, basic and obligatory value for any product; d) The Mediterranean climate being favorable in promoting renewable energies; e) Internalization of social and environmental costs; f) Emergence of the collaborative economy; g) Transformation of the energy, transport and poultry sectors as major emitters of GHGs; h) Control of services provided by companies that use finite energy; i) Promotion of long-term sustainable strategies.

VI. ENVIRONMENT

What factors do you consider key in a company to preserve the environment? What measures should be taken?

Joan Barfull started the debate by stating that companies act appropriately from an environmental point of view when they minimize consumed resources and look for ways to reuse them. He also stated: “What the company produces must be easily recyclable or reusable. In addition, they have to make an effort to communicate it to their customers and consumers. Having environmental certifications such as ISO 14001 or the environmental quality label EMAS helps.”

In a complementary sense, according to Barfull: “The development and use of renewable energies at SME level in Spain is legislatively complicated.”

He went on to say that: “Pollution is not free. Regulation always determines the control and penalty system. If there are repeated infractions, companies can even be closed down.” The latest regulations favor the segregation and separate management of each type of waste. He added that the good practices some companies implement should be encouraged in a positive way, via positive taxation.

Pere Macias highlighted two factors: transport and travel. He explained that companies can influence both, starting, for example, with workers’ travel. In France, if you go to work by bicycle you have a higher salary and the company receives public subsidies. Some companies are organized to achieve the highest levels of sustainability even at the level of transportation.

He then argued that historically the use of the territory has consisted in segregating uses and that industrial estates have been separated from cities for this reason, although most operations do not currently require any special kind of segregation. Widely dispersed industrial estates force workers to travel, their geolocation hinders their mobility and the resulting organization of public transport is expensive and inefficient. This indirectly encourages the use of the private car.

Another relevant factor: energy. He explained that historically in Spain there has been much progress in cogeneration but that this model is partly in crisis. For Macias, another revolution is on the way: that of storing energy. Tesla and other manufacturers are applying the latest technological advances to optimize the capacity of batteries to such an extent that cities like New York are building energy storage facilities, which allows the city to operate more efficiently. One of the most revolutionary ways of storing energy is through the use, recycling and reuse of used vehicle batteries. Energy storage should also be considered for shared use on industrial estates.

Josep Serra introduced teleworking as an option that would avoid the environmental costs of transport, contaminants and large consumers of energy resources. He also introduced the concept of the local market, as a counterpoint to the corporate fashion of promoting import and export.

Imma Pérez spoke about energy use, highlighting management by objectives, teleworking and flexible timetables as factors that increase energy savings. There are now apps that report on traceability and environmental emissions by companies, which makes it easier for consumers to decide on their sustainable purchase.

She also noted the Unilever strategy of optimizing the transportation of merchandise by studying routes according to whether or not they require cold storage to emit less CO2 and increase profits.

She also referred to Knoor, which has involved more than 350 farmers in Extremadura in improving its production processes, increasing the amount produced, decreasing water consumption by 20% and making its products more sustainable; the measure has even brought back the local biodiversity.

She explained that in 2008 she had the opportunity to participate in a project that linked equal opportunities to productivity. The aim was for workers to work more efficiently based on their satisfaction. It involved 32 companies simultaneously and had a direct impact on some 3,000 people. More women than men work in the handling plants of many companies in the Vallés area. Due to the constraints of raising children and a lack of public transport, there were high absenteeism rates that ended in penalties and

sackings. On the one hand, the situation had a strong social impact for the families that were unemployed and, in turn, the company lost productivity due to absenteeism and the need to re-incorporate new workers and train them. In the municipalities of Rubí and Barberà del Vallès, the production chain schedules were scaled, making them compatible with those of public bus services. The measures increased loyalty, improved the working environment and increased productivity.

Another aspect highlighted by Pérez is the need to promote guided responsible activism among citizens. Raising awareness through educational actions is key to this end.

According to Sara Pizzinato, it is crucial that companies have a sustainable strategy. One of the aspects that stands out as fundamental is location, as Macias mentioned, to guarantee a sustainable mobility plan.

Regarding the idea that companies collaborate to optimize costs, she explained the case of Google, which agreed with Greenpeace to become 100% renewable. In the Netherlands, in collaboration with Siemens and another company, Google has signed a 25-year contract at a guaranteed price with a group of farmers and ranchers to invest in and receive renewable energy.

Also, with regard to managing energy demand, there are several options even if the company does not have battery storage capacity. Certain production processes can adapt their consumption to increase activity at off-peak times or slow down activity when demand increases.

Finally, she highlighted financing cooperatives, which support projects that have a positive effect on the environment: enhancing photovoltaic panels, purchasing sustainable wood, energy reform in a store, etc.

Measurable and objectifiable criteria are required, since money is not neutral. It is important to know whether a bank invests in coal or in weapons.

She also criticized the role of the State in favoring large electricity companies that do not pay the costs of CO₂ emissions as stipulated by the Kyoto Protocol. Even though they are the ones that make the most use of carbon and gas plants, it is always citizens who end up footing the bill.

Labeling products to inform the consumer is recommended. It would be positive if bad practices could be labeled: “This product has high emissions” or “This product is toxic”.

Dr. Carmen Echazarreta, Assistant Professor of Audiovisual communication and advertising and Director of the Arpa Research Group, agreed with regard to labels and added: “I think they are very important in reinforcing the decisions of committed consumers, because they affect the conscience. This type of process leads the consumer to pay a little more if necessary for a sustainable product and at the same time to penalize certain companies, such as some in the textile sector, which have transnationalized their production processes in a perverse way.”

In certain cases, the multinationals control the agenda setting of some media in such a way that they manage to hide

bad practices with respect to sustainability, meaning that information is lacking.

This third block highlighted that the key factors in a company when it comes to preserving the environment are: a) minimizing consumed resources and looking for ways to reuse them; b) manufacturing easily recyclable or reusable products; c) having environmental certifications or environmental quality stamps; d) segregating and managing each type of waste separately; e) positive taxation; f) transport, travel and sustainable mobility; g) energy storage; h) energy demand management; i) labeling; j) strategic management of the territory: location of industrial estates, empowering the local market; k) equal opportunities, teleworking and flexible hours; l) communicating sustainable processes to customers and consumers; and m) raising awareness through educational actions.

VII. MOBILITY

Thinking in terms of actions aimed at promoting mobility, which would generate the most impact? Which can be fostered via business initiatives? (collective public transport, electric vehicles, clean and non-motorized mobility systems)

Pere Macias began this section: “I like to define mobility as a historical process. When the railroads first appeared, people discovered that they could move collectively, comfortably, safely, with a certain speed, that they could move goods... Territories with a railroad were very different from those without one. It was the period of “We can move”. In the 20th century when Henry Ford began to produce the Ford T on a massive scale, mobility changed. Anyone with a car said “I can move”. Society was transformed to the point that people went to live on housing estates, the American system, and not next to the railway station. Now we are in the “I need to move” phase. Faced with this situation, there are some aspects that are the responsibility of society, others the administration and others still, such as mobility or logistics, that fall on companies.

At present, there are battles going on such as the need to organize efficient and affordable public transport systems; technological advances such as electric vehicles can help; energy storage to promote mobility or transport on demand. It is important that everyone assumes their mobility in a wise way, one step beyond smart or intelligent. It is also worth noting the importance of convincing citizens about the use of sustainable means of transport like the bicycle.

The administration has to take decisions such as the development of a large linked-up network so that cyclists can access and park anywhere. “Those societies that know how to build bridges between citizens, administrations and companies are going to advance the most. Sometimes you have to take unpleasant decisions, as the Norwegians and the mayor of Paris did when they banned the entry of diesel vehicles because of the high pollution rate and harmful effects on health.”

Imma Pérez stated that “It is important to note that society is increasingly becoming accustomed to car sharing, using bicycles and being a user of public transport. With

regard to public transport, people would especially like to use the train to go to work, but cannot trust it because it is not always on time and the company penalizes them for being late. The administration must make an effort to improve public transport and businesses to promote flexible hours and teleworking.”

She also reflected on the fact that sustainability and social responsibility are related to innovation. In this country, “innovation lives in solitude. First people think you’re weird, and then they copy you”. Committing to collaborative innovation is key for the future. It only requires belief and overcoming resistance to change.

With regard to innovation, Pere Macias believes that there are innovative ecosystems in our country, such as the 22@ District in Barcelona, and that many entrepreneurs are committed to innovation. Although it is true that for some years there has been a certain ideological hegemony of seeking assurances and staying in the comfort zone; in this sense innovation involves risk.

Joan Barfull criticized the fact that there are companies that will not select candidates if they travel to work by train. He also said that mobility plans are only regulated for larger companies. Small and medium-sized companies only have them based on their own convictions.

Sara Pizzinato highlighted that the reality of daily life forces us into an irrational mobility. She also criticized the way in which goods are transported. There are large international agreements for the import and export of certain products that are grown or produced here.

If we analyze greenhouse gas emissions in the different economic sectors, transport is the only sector where they are increasing in Europe, all others are reducing their emissions. Within transport, goods have a very important impact, but so does the mobility of people. Within this, private cars account for almost half of the emissions.

To reduce emissions, the number of kilometers goods and people travel should be reduced. Mobility on demand, public transport, bicycles, etc. also favor the reduction of emissions.

The second aspect is the electrification of transport, feasible for all types of transport and more complicated for aviation and international shipping. Currently in Europe there are 8 million electric bicycles and electric motorcycles. The electric car has autonomy limitations, it should probably be conceived as a mini bus for four people. In Spain, 30% of the train system is pending electrification and still depends on diesel locomotives.

A third aspect is increasing the occupancy of all types of vehicles: buses, trains, bicycles, motorcycles, cars, etc., although this does entail a change of mentality in the system, rethinking the ownership, service and use of vehicles.

A fourth element for reducing emissions is promoting proximity between work and school. It is estimated that 80% of movements by transport are captive. Josep Serra highlighted the need to commit to a balance in the territory, criticizing the overpopulation of cities while everywhere else is

underpopulated. He stated that “If people could live in villages in a deconcentrated way, they could access companies intelligently.”

Marc Casadellà, Director of Par3 Pitch & Putt Gualta, President of the Catalan Pitch and Putt Association and promoter of the *Burricleta*, an electric bicycle used in tourist activities, stated that the number one problem we have is saving the planet. Large doses of social awareness are required.

He explained that, as an industrial engineer, he has applied various measures to his Pitch and Putt course, which is located in a town of 300 inhabitants where he was born. He explained the difficulties that arose when he decided to buy the first electric lawn mower to be used in Spain from the United States. It only had 3 or 4 hours of autonomy, so he added a solar panel on the roof that fed an additional 5% energy and according to his calculations allowed him to save around 90% in consumption. And it did not generate noise pollution. At first he recalls that the biggest problem was with the people who had to drive the machine, because they did not trust it. They also decided to install solar panels to feed the underfloor heating and not to install air conditioning on the premises because it is only used a few specific days each year.

In the fourth section, the following actions aimed at improving mobility were highlighted: a) efficient and affordable public transport; b) electric vehicles; c) bicycle use; d) car sharing; e) transportation and mobility on demand; f) electrified transport; g) energy storage; h) improving freight transport; i) decision making by the administration; j) mobility plans; k) collaborative innovation and innovative ecosystems; l) increased occupancy of vehicles of all types; and m) proximity of work and school.

VIII. SOCIAL RESPONSIBILITY

Corporate social responsibility (CSR) applied to climate change and the environment is in fashion, because it is strategic for many companies, but how should social responsibility for the environment be applied to make it something more than a strategy?

Joan Barfull began by explaining a project centered around SMEs and developed three years ago that aimed to diagnose how they addressed CSR in environmental, economic and social terms. The results indicated that in most cases companies were working on some of the areas of CSR without the need for a quality stamp or certification. In all cases, they did so because it was practical and profitable. They believed that CSR improved the working environment, communication and participation in the company. Initiatives were implemented such as vehicle sharing, timetable flexibility, etc. They also concluded that in none of the cases were the measures communicated to improve their corporate image.

Josep Serra thinks that we have to raise awareness among companies and individuals, because in these times of crisis many of them go in the opposite direction from sustainability. Imma Pérez explained that it is common misconception that CSR is for large companies and expensive. It is important to draw up a strategy linked to concrete actions

and to measure it. It is also worth noting that it generates profitability. Pérez explained that the concept of CSR is being redefined and updated with “Sustainable Development”. Another positive aspect of this type of measure is that: “When companies achieve a good working climate and good economic returns, they attract talent. In five years, the so-called generation Y, also known as the millennial generation, will occupy jobs and we have to attract good people and generate companies heading in the right direction that make money but are sustainable and ethical.”

Finally, she explained the concept of intrapreneurship, which consists in carrying out entrepreneurial activity in the heart of an organization that already exists. Thanks to this, innovative initiatives are implemented to improve the business model, which can be a source of hope and motivation for many people.

Pere Macias criticized the RSC practiced by some of the big corporations, which are merely greenwashing: websites, fantastical reports, etc. He related an anecdote that a petrochemical company in Tarragona had an accident and to alleviate the effects of it wanted to do something for society. The administration ordered them to put up large informative billboards to report their emissions, and they did not like the idea. They ended up making a magnificent book about the landscapes of Tarragona.

He believes that small businesses carry out other types of actions that have a real impact. It is important to value and compensate the environment that allows you to make your products and services and consume them.

Marc Casadellà added the idea of proactivity as an important element in promoting sustainable development. He explained that we sometimes talk about businesspeople and workers as if we were in the midst of the industrial revolution, even though concepts have changed radically: “Today you are one thing and tomorrow another. The difference is between those who believe that the future depends on them and those who believe that their future has to be resolved by someone else. Proactive and passive. On Earth, there are those who dare and those that do not.”

Finally, Sara Pizzinato added the aspect of motivation, which the company has to promote among its workers in order to favor a CSR-friendly environment.

She thinks that companies should guide their CSR strategies in the core business as their main activity - improving it, setting objectives, strategies, etc. “If what you’re doing is compensating, penance, then you’re just greenwashing.”

In this final section, the following key aspects of CSR have been highlighted: a) CSR strategies aimed at the core business, the main activity; b) why they are practical and profitable; c) no need for a seal or certification; d) no need to communicate measures to improve the corporate image; e) they are not expensive; f) they are not only for large companies but for all; g) strategies linked to concrete and measurable actions; h) they attract talent; i) sustainable and ethical actions; j) intrapreneurship; k) proactivity; l) motivation, and the need to compensate the environment that

allows companies to make their products and services and for them to be consumed.

IX. CONCLUSIONS

Based on the results of the forum, a series of differential characteristics of sustainable companies are highlighted in four areas:

➤ *Minimizing consumption and promotion of renewable energies:*

Energy storage;

- A favorable Mediterranean climate to promote renewable energies;
- Communication of sustainable processes to customers and consumers;
- With short and long-term vision, internalizing the impacts it has on its environment and thinking about future generations; Labeling to guide consumers regarding consumption;
- Manufacturing easily recyclable or reusable products;
- Energy demand management;
- Internalizing social and environmental costs;
- Minimizing consumed resources and looking for ways of reusing them;
- Segregation of and separate waste management;
- Sustainability conceived as a fundamental, basic and mandatory value for any product;
- Transforming the energy, transport and poultry sectors as major emitters of GHGs.

➤ *Mobility*

- Energy storage;
- Increasing in occupancy of all types of vehicles;
- Bicycle use;
- Car sharing;
- Electrifying means of transportation;
- Improving freight transport;
- Mobility plans;
- Transportation and mobility on demand;
- Transport, travel and sustainable mobility;
- Electric vehicles.

➤ *Social, economic and environmental business management:*

- Concrete and measurable actions;
- Attracting talent;
- Collaborative actions, even with the competition;
- Contribution to improving the environment in which activities are carried out;
- Collaborative economy;
- Innovative ecosystems;
- Sustainable business strategies;
- Ethics;
- Timetable flexibility;
- Equality of opportunities;
- Collaborative innovation;
- Intrapreneurship;
- Motivation;
- No to greenwashing;
- Proactivity;

- No need to communicate the measures to improve the corporate image;
- Sustainable actions as part of the core business or main activity;
- Teleworking;
- Transparency.

➤ *Public administration*

- Awareness raising through education;
- Monitoring services provided by companies that use finite energy;
- State strategy to achieve a reduction in emissions of between 7% and 8% per year to reduce the average temperature of the planet by 1.5 degrees;
- Positive taxation;
- Strategic management of the territory: location of industrial estates, empowering the local market;
- Promotion of environmental certifications or seals of environmental quality;
- Promoting long-term sustainable strategies;
- Proximity of work and school;
- Rigorous fiscal regulation for finite energies;
- Efficient and affordable public transport.

Defining qualitative and quantitative indicators based on the conclusions of the forum “Sustainable companies, tackling climate change” will provide a tool for the creation, management and business promotion of sustainable management in organizations, minimizing the emissions of finite energies and boosting renewable ones.

In line with that posited by Echazarreta and Costa (2018), we highlight the need for a unifying model, based on the results of the literature review and the discussion forums centered on 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 applying the described values in organizations.

As with the first and second forums, 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. Faced with these new challenges, research in this field must continue to be both multidisciplinary and systematic.

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