CLEAN ENERGY

The expansion of renewables in the US

INTERVIEW

Integral management of energy services

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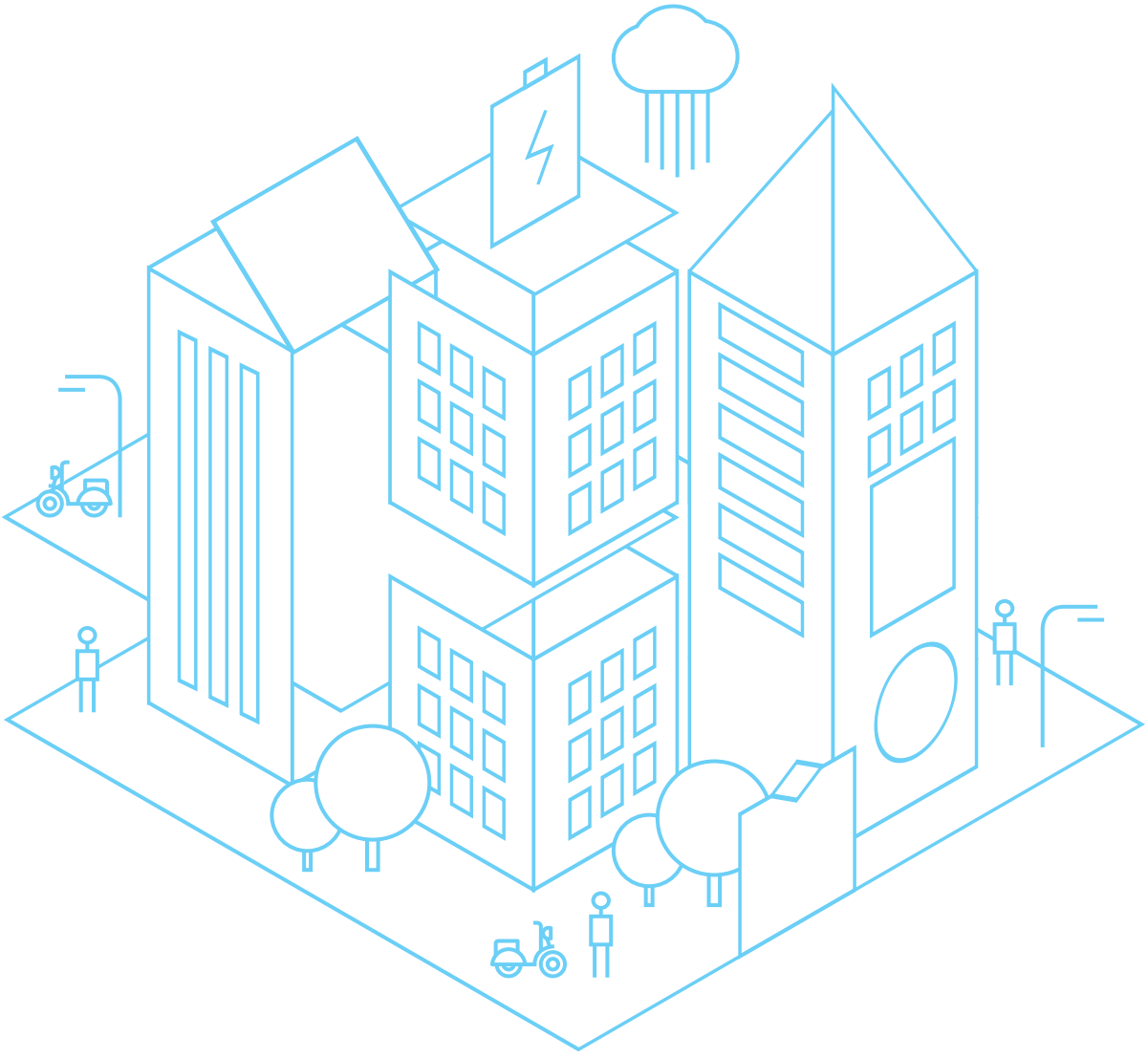
N.74 APRIL 2020



CITIES: THE NEW PARADIGM

AT THE SERVICE OF THE SUSTAINABLE CITY

One fundamental question defines our time: what kind of planet do we want to leave for our children? It sums up the main challenge facing today's generations, but also the sense of responsibility towards those yet to be born. Another question can be expressed in similar terms: what kind of city do we want to live in?

Equating planet and city makes sense, as population concentration in urban centers is set to continue unabated. This means such areas will also concentrate the greatest need for resources and measures in order to reduce both their emissions and their vulnerability to the climate crisis. The evolution of large metropolitan areas into more sustainable environments is one way of protecting the global city that the planet is becoming.

We already know the answer to that question: we don't just want, we need to live in cities that can minimize their environmental impact, that are organized and stimulating for economic activity and everyday life. On a human scale, although their growing size may not look like it.

For ACCIONA that smart city is a strategic goal to which we contribute from the perspective of how each business operates. We develop sustainable urban services in energy and water management — the top sustainability rankings have once again acknowledged our leadership in this aspect — as well as in transport and shared electric mobility, resilient infrastructure and construction, circular economy and waste, to protect green lung spaces and a model of integrated Energy Services management described by its Director, Elena González Sánchez.

These are specific responses to particular needs, but they can also interact within an ecosystem thanks to the management capacity of technology. This is why they respond to another, even more important need: the integrated Smart City, planned on cooperation between companies, governments, with an increasingly aware population demanding to be part of the solution rather than part of the problem. ■

> "We need to live in cities that can minimize their environmental impact, that are organized and stimulating for economic activity and everyday life"

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LAUNCHPADS IN ASIA

ACCIONA'S Presence in strategic regions

South-East Asia and East Asial, two of the areas with the highest economic profile and demographic weight on the planet. ACCIONA has eight infrastructure, construction and water management projects in three countries. Platforms for an unhurried yet relentless expansion.

Between them, the regions have more than

2.2

billion inhabitants,
close to

30%

of the **world's total population**

Their GDP is higher than

27%

of the **global economy**

VIETNAM

Nhieu Loc Thi Nghe Waste Water Treatment Plant

- Location: Ho Chi Minh City, 9 million inhabitants, the most heavily populated city in Vietnam.
- Capacity for 480,000 m^3/day and supplying a service to more than 1 million people.
- €200 million budget, 800 workers at peak periods and 25,000 hours of quality and safety training.

PHILIPPINES

PUTATAN 2 Water Treatment Plant

- Location: Muntinlupa, south of the Manila metropolitan area.
- Due to provide a service in an area with more than 6 million inhabitants.
- Capacity for 150,000 m^3 per day processed from the biggest lake in the Philippines, with a minimal carbon footprint.

Cebu-Cordova Bridge

- Location: between the industrial area of Cebu and Mactan International Airport.
- With a 650 m cable-stayed structure and a main span of close to 400 m.
- Part of a 8.5 km stretch of highway.
- Strategic work for relieving traffic congestion and developing the area, operational in 2021.

HONG KONG

Ting Kau Bridge

- Linking the port of Hong Kong with continental China.
- 1,177 m in length, one of the biggest cable-stayed bridges in the world.
- With a 278 m double cantilever.
- 3 towers of 158, 170 and 194 m designed to withstand typhoons.
- Built in 44 months.

Kowloon Public Transport Interchange

- Once the largest station in Asia, with underground platforms and pillars that together measure more than 33,000 m. Nowadays it is an interchange for trains, metro and buses.
- Construction work used 309,000 m^3 of concrete, 57,000 tons of steel and 495,000 m^2 of structural framework.

Ma On Shan Metro Line

- 11.4 km of double-decker viaduct, 4 raised stations and connections with Hong Kong's underground trains.

Lai Chi Kok Viaduct

- 1.4 km in length with 4 entry and exit points.
- Part of the new Route 8, which links the international airport with the Shatin area.
- Cantilever beams of up to 85 m and recycled concrete landfill to reduce environmental impact.

Tseung Kwan O Desalinating Plant

- Expected to supply 135,000 m^3 per day to mitigate the effects of climate change and lower rainfall in the region. Supplying a service to a population equivalent to 850,000 people.
- Becoming operational in 2023.

A DOCK FOR A GREAT HISTORY

CADIZ NEEDED A NEW PORT THAT DID JUSTICE TO ITS PAST. 20TH CENTURY ENGINEERING BUILT IT.

by Patricia Alcorta

The oldest city in the West, where Julius Caesar wept in front of Alexander the Great's statue, the platform of an empire besieged by rival empires, the liberal refuge that drew up the world's third constitution. When, in the late 1920s, Entrecanales y Tavora built the dock for the new quay, it stirred up water, soil and three millennia of civilization. This is a triply iconic project: the port geography that justified its foundation by the Phoenician within the boundaries of Europe, the attempt to modernize the present to bring it closer to that past, and the first great maritime infrastructure of many that the company would go on to build. The dock — 245 meters in length, with a beam of 38 meters and a draft of 10.5 meters — was built on dry land in sections that were then anchored in a dredged seabed on a rubble concrete foundation. Perhaps some witty Cadiz native, seeing the machinery, the scale and the speed at which it was built, was reminded of the legendary Labors of Hercules. ■

NET PROFIT OF 352 MILLION IN 2019

TURNOVER OF **€7.2** BILLION

9% EBITDA growth

Figures show net profit growth of 7.2% in comparison with the previous year and of 60.3% if we exclude corporate transactions completed in 2018. The balance for 2019 reflects the improvement in operational efficiency and the solid increase in business margins. Furthermore, 93% of investment and 83% of gross operational profit came from low-carbon activities, in accordance with the EU's new taxonomy. Debt fell below 4.00x, the target set for the year.

Energy was the business that saw the most investment, with more than 10,1 GW of cumulative installed capacity and another 13 GW in portfolio, while there was an increase of 5% in total projects under Infrastructures (Construction, Tenders, Water and Services). EPC (turnkey), for example, grew to €8 billion, due to €4.7 billion in new contracts, especially in relation to desalinization plants, bridges and railway lines.

MOTOSHARING SCOOTERS ALL AROUND MILAN

The shared electric mobility service was launched throughout the metropolitan area of Milan. So far, there are 300 scooters powered by 100% renewable electricity, but the fleet will gradually grow throughout the year. The number of zero-emission scooters in Lisbon has also increased: it now has 500, making a total of almost 7,000 if we look at numbers in conjunction with Madrid, Barcelona, Seville, Valencia and Zaragoza.

WORLD ACKNOWLEDGEMENT OF LEADERSHIP IN SUSTAINABILITY

For the third consecutive year, ACCIONA has been listed among the 100 most sustainable companies in the world, according to the Corporate Knights ranking, which is a benchmark worldwide. The report assesses 21 indicators—emissions, green economy turnover, water and waste management, innovation, tax contribution, accident rate, gender equality, etc.—at almost 7,400 companies. ACCIONA stands out for linking its business model to the EU taxonomy for sustainable economic activities and adaptation to climate change. Another ranking has just redoubled this acknowledgement: The Climate Change A List by the Carbon Disclosure Project (CPD), which assesses transparency, climate change strategy and contributions to decarbonizing the economy at 8,300 corporations. ACCIONA is among the leaders in Group A, comprising the top 179 companies.

TWO NEW RENEWABLE FACILITIES IN CHILE

The company has increased its operational capacity in Chile by 84% (to 536 MW) with the opening of two large power plants: the San Gabriel Wind Farm (183 MW) and the Almeyda solar plant (62 MWp), strengthening its leadership as the main generator of 100% renewable energy. This capacity will continue to grow in 2020 when another wind farm and a new solar plant that are currently under construction become operational.

PURCHASE OF EIGHT LARGE PROJECTS FOR GROWTH IN AUSTRALIA

The company's presence in Australia, one of its strategic markets, is taking a quantitative and qualitative leap. It has just purchased part of the Australian group Lendlease Engineering's project portfolio for €110 million, including eight large engineering and construction projects involving railway infrastructure, highway tunnels, large-scale movement of earth for an airport and road improvements. "The operation brings together a solid Australian team with our proven global experience in order to tackle important building projects around the country," says Bede Noonan, General Manager of Infrastructures for ACCIONA in Australia and New Zealand.

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INFRASTRUCTURE

SURVIVAL INSTINCT

RESILIENCE IS NOT AN EXCLUSIVELY HUMAN ATTRIBUTE. IT'S SHARED BY A HIGHWAY, A HOSPITAL, A WATER TREATMENT PLANT... THIS IS HOW INFRASTRUCTURE IS BEING STRENGTHENED AGAINST CLIMATE CHANGE.

by **Ramiro Varea**

Climate and disasters like wildfires account for up to 50% of the cost of maintaining European highways.

SUPER-FIRES IN AUSTRALIA, PORTUGAL, SPAIN AND CALIFORNIA. TYPHOONS IN THE PHILIPPINES, JAPAN AND CHINA. HURRICANES IN THE USA AND THE CARIBBEAN. EARTHQUAKES IN MEXICO...

Decarbonization is a must to prevent the effects of climate change becoming even more radical over the next few years. But, in the meantime, what can we do about them here and now?
Anticipate, strengthen social and economic resilience. This applies to infrastructure too. According to the UN, 72% of the budget demanded by the Sustainable Development Goals must be invested in this strategic sector. This means it's also strategic to plan them with the greatest possible resilience to the current climate emergency.
One example: according to the European Commission, torrential rains, heatwaves and drought, sharp changes in temperature, wildfires, floods and rises in sea level will take up between 30% and 50% of the costs involved in maintaining European roads. We're talking about 13,000 million euros a year and the trend is set to rise: 150 million a year from 2040 only for maintaining transport routes. The UN, the World Bank and the OECD are all insisting on the need to give top priority to preparing all types of infrastructure for weather events and population growth.
"Engineers can't change the climate, but we can develop more robust, more lightweight and more sustainable infrastructure. The task is an urgent one," emphasizes Sergio Ramírez, Director of ACCIONA's Infrastructure department in Mexico. The company is already doing this in roads, bridges and viaducts, buildings, ports and airports as well as hydro and energy plants using innovative construction techniques, new materials like carbon compounds, nanotechnology for increasing durability and micro-sensors in concrete to measure damage and wear and tear.

Investment in all types of infrastructure is the biggest allocation calculated by the UN to achieve the Sustainable Development Goals.

TECHNOLOGICAL INNOVATION

From the Engineering Division, the company also supplies this technological expertise to two European Union projects for urban rail tracks and roads that "improve safety, enable more efficient use of resources and make major savings in terms of conservation," explains Irene Sevilla, the ACCIONA representative on Panoptis, one of the projects.
"Climate events affect the state, evolution and maintenance of infrastructure, land behavior and materials subjected to spikes of stress that reduce their life cycle. Costs and user safety are both dependent on expenditure," adds Irene Sevilla.
This initiative links 12 companies, institutes and research centers from seven countries with very diverse climate conditions resulting in a full range of scenarios. The project seeks to integrate the latest monitoring, inspection and management technology in a single tool that minimizes damage and cuts to traffic flow. The projects are also working in Naples, Stockholm and Linz to apply these developments in infrastructure and urban transport routes.
ACCIONA is already using technology such as structural and corrosion sensors — fitted to early warning alarm systems to monitor conservation and anticipate faults — on a stretch of close to 80 kilometers on the A2 highway running through the province of Guadalajara, a strategic route between Madrid and Barcelona that takes a beating from heavy traffic.
The company will also be testing computational vision and artificial intelligence solutions to detect ruts, potholes and fissures in the road surface and cracks in concrete structures, 4D modelling techniques to measure stability and erosion on embankments, new algorithms for decision-making, a specific winter management tool and drones for maintenance and for accident and catastrophic event management.
Clarity is the other major European project involving meteorological agencies from Spain, Sweden, Italy and Austria. The project is developing an Integrated Climate Services System to assess "how weather events impact roads, railways and cities in order to design a new generation of infrastructure," says José Cubillo, the ACCIONA representative for the initiative.

FROM EUROPE TO THE WORLD

The company has already identified vulnerable points on the pilot section of the A2, including embankments, drainage systems and flood sensitive areas. Vulnerability and risk associated with climate change on the A66 concession between Benavente and Zamora are also being studied.
Once Clarity is implemented, the system will refine the analysis with deterioration rates following specific impacts like heavy rainfall or extreme temperatures, gales, wildfires and landslips.
The combination of both projects will enable specialist responses to be made to a complex combination of variables: infrastructure, geography, climate and emergency. For example, a road surface that can reflect heat and prevent distortion, new drainage systems in flood sensitive areas and predictive models for extreme weather events. A resilience that can be exported from Europe to the rest of the planet. ■

INNOVATION LEARNS FROM (BAD) EXPERIENCE

EARTHQUAKE PROOF...

Mexico and Chile, two major regions for ACCIONA with one problem in common: their vulnerability to earthquakes in two of the most seismically active spots on the planet. An extreme risk factor that the company is attempting to minimize in every new infrastructure. For example, it has installed a new anti-earthquake system in the Atotonilco Waste Water Treatment Plant in Mexico, the biggest of its kind in the world. The 30 meter-high water digestion tanks have been tightened with vertical and horizontal steel tendons that make them much more resistant to tremors.
In Santiago de Chile the company has built a children's hospital with steel and reinforced rubber pillars that work like car shock absorbers and absorb horizontal shocks. The Chilean government has decreed that all new public facilities should include them. With a curious effect: in the event of an earthquake, the building doesn't need to be evacuated, on the contrary, everyone has to stay inside.

... AND FLOOD PROOF

The Allison tropical storm (2001) in Texas was such a disaster that new hospitals like the ones in Houston included flood prevention measures, ranging from submarine doors in operating theatres to elevated power sources, water pumps and floodgates. They have proved their effectiveness in recent emergencies like the Harvey Milles hurricane.
In Queensland (Australia) the 2011 cyclone and tsunami flooded close to 14,000 kilometers of roads and rail tracks. Since then, services like electricity, communications and gas have been placed at heights out of reach of flooding.

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Elena González Sánchez

Director of Energy Services for ACCIONA

"WE WILL BE A KEY CONTRIBUTION TO MAKING SUSTAINABILITY MORE PROFITABLE"

by **Juan Pablo Zurdo** photos **Jacobo Medrano**

Elena González, who holds a degree in Physical Sciences, is also an expert in Energy, International Trade, Marketing Management and IT Business.

SHE DEFINES HER PROFESSIONAL LIFE AS A JIGSAW OF CHALLENGES, EXPERIENCES AND TIME.

The pieces are coming together to meet a goal she has had for two decades: "Seeing energy services as a comprehensive solution: not just meeting demand but supply too." She is achieving this at ACCIONA as Head of Energy Services, after running ANESE – the most important organization in the sector, founding and directing the EnergyLab research center and getting her hands dirty on big energy projects, renewables, strategic planning, transport, networks and smart solutions. All of that knowledge combines into a total management model, with sustainability and digitalization as differential characteristics. "We are undergoing an exciting change of concept, mentality, technology and market, and we will be a key contribution to making sustainability more and more profitable."

Her definition of energy services...

Comprehensive management of energy use by a customer's business. It goes far beyond the concept of energy efficiency because not only improves demand and usage, it also includes the other decisive factor: the supply of this scarce commodity. We tell the customer not to worry, we are a specialist team, we know how you use energy at your facilities, what you need to optimize your day-to-day, but we also manage other variables such as the types of energy available, where they come from, at what real-time rate, how to generate them and store them yourself. We guarantee that their lighting, their air conditioning or the usage at their facilities will always be the least quantity and at the best rate, and that what they save will pay for their investment in management and technology.

Does it involve a change of mentality?

Most companies usually understand that the sale of products or services pays for investment. The financial sector finds that change of focus especially difficult. It needs to see and touch commodities. Our model is like thinking backwards: you invest $100 to reduce costs, you save $20 every year and you get a return on investment in five. It is already being applied in other sectors, but not in the energy sector. Probably because we all already have basic notions and think we are experts, when it is actually becoming a more and more specialized and complex area. If we trust a doctor or an insurance advisor, the specialists in their field, why not energy management experts?

Outsourcing...

Of course, and not only for the savings. No customer outside the energy sector can keep up with technological developments to make the most of them. Furthermore, we tell customers that we are not only going to update their facilities, we will make the investment so that they don't have to use up their financial resources. They decide the level of service and we guarantee the savings. What do they provide in exchange? Time. A sustained commitment of several years. That's where the cultural change comes in, because many companies wouldn't usually sign long-term agreements, but this model provides so many benefits that they will want to.

And what customers already do?

We are working in the vehicle sector with Renault, Nissan, Ford and PSA. And we want to extend that experience to other strategic sectors such as the agri-food industry, with specific processes such

Benefits on projects lasting an average of eight years. Source: ANESE (Spanish association of energy service companies).

MORE PERSONAL

If she had chosen her profession, today she would be a...
Professional sportswoman, particularly a tennis player. I play everything. Sport is essential to me.

A personal motto...
Enjoy everything you can.

A song, a book, a film...
Tubular Bells, by Mike Oldfield, one of my idols. I would recommend reading *The Odyssey*. And films, lots of them... One I can think of right now is *The Pianist*.

An historical figure...
I would mention several. Beyond religious connotations, a person worthy of study is Jesus Christ. Aristoteles too. As a fan of history, I would say Queen Isabella I of Castile is fascinating, with an enormous capacity for enterprise, organization and management. And who wouldn't like to have been Da Vinci. Or closer to my own profession: Marie Curie.

as industrial cooling. And to the tertiary sector, for example, retail, where energy consumption is not included in costs as much as in the industrial area. To real estate, which can raise buildings with sustainable wiring to the premium category. We are talking to large corporations that understand our message and they are not only focusing on saving money but on reducing emissions too. They can have a knock-on effect for other smaller companies that, before joining the sustainable perspective, need to be sure of revenue. In addition, we are centering on the enormous potential of the thousands of public buildings.

Is sustainability differential at ACCIONA?
It has to be. It is our essence and we apply all of our knowledge as pioneers in sustainability, not just at management level but also to generation and reducing our carbon footprint. However, if we are talking about differential factors, we should also mention others, such as technological innovation.

For example?
Digitalization. We have very strong competition, which centers on the efficiency of facilities. I think that we are at the forefront by also including a digital layer of data analysis and business intelligence for managing both supply and demand and forecasting and better adjusting the customer's consumption. Whether it is better for them to use energy from their panels, of storage batteries, or the grid, at a given time. It allows us to manage not only fixed facilities, but also mobile environments, such as a fleet of electric vehicles. In the future, the customer will be able to reduce demand and sell the extra portion to a third party who needs it. However, the whole system has to be digitalized first, of course, the facilities and the connection to interchange markets in order to control signals of a decrease in demand, reward those kilowatts and do everything in a split second. Our goal is to improve the models for calculating and optimizing not only the energy mix but also the technological one, because many measures have a crossover impact. I can update heating and air conditioning, but I'm not really optimizing if I don't update and calculate the insulation at the same time too. Technologies are a way to achieve that goal.

Will these developments have a greater impact on the fight against climate change?
I don't want to sound pretentious, but I'm convinced that this service model will be part of the cornerstone of the energy transition. And its contribution will increase when the market understands that management of a key commodity such as energy involves optimizing all ways of using it, that many different savings percentages add up to a huge—and growing—total.

What do we need to accelerate the process?
The ambitious goals for fighting climate change are on the table. We have the EU goals, the climate agreements and, in Spain, the National Integrated Energy and Climate Plan. These are giant steps, of course, but they now have to be moved from the headlines to reality, put into operation. And, so far, we are not seeing the practical measures for implementing them, for example, tax reductions, instead of just fines, or real commitment behind regulations, in order to close the loop. ■

INTERVIEW
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"THIS SERVICE MODEL WILL BE PART OF THE CORNERSTONE IN THE ENERGY TRANSITION"

SUCCESS STORY AT HOME

How does ACCIONA apply its own energy service model? "We have a very powerful program for sustainability and analysis of our taxonomy," explains Elena González. "It analyses all the facilities to reduce CO_2 emissions, many of which now use 100% renewable energy generated by the company and the goal is for the remaining ones to do so soon." "The Energy Services team is proud to help and achieve this and to apply, here at home, the best of what we offer to our customers."

THE CITY AS A CHALLENGE

by Miguel Ángel Barguerño

THE CITY AS A SOLUTION

URBAN CONCENTRATION AND CLIMATE CHANGE, TWO FORMIDABLE CHALLENGES. TODAY WE ARE STARTING TO BUILD THE CITY WE WANT FOR TOMORROW, BASED ON A NEW PARADIGM: MINDSET, COOPERATION AND MANAGEMENT OF SUSTAINABLE SERVICES.

MASSIVE, VERTICAL, CROWDED... ALMOST UNMANAGEABLE. FILMS HAVE PAINTED A PESSIMISTIC PICTURE OF THE FUTURE CITY. A GLOBAL 'BLADE RUNNER'.

The Ridley Scott film popularized the dystopian city genre. Today, reality has surpassed fiction with a threat far greater than Scott's replicants: the climate emergency. And it's not merely a forecast for decades down the road, it is a present-day phenomenon that is steadily worsening.

Where fact and film coincide is with respect to the leading role played by the city, the great stage on which humanity's fate will be decided, for several reasons: the unstoppable concentration of populations in urban areas and cities' status as "the main consumers of energy resources and emitters of greenhouse gases, in addition to being the areas most affected by the climate change these gases cause," explains Frank Zamora, IT Manager in the Water department at ACCIONA.

But cities are anything but passive. They are working to ensure their future will prove dystopian pessimism wrong. They are evolving to tackle climate change by shifting to a new paradigm: the smart city organized around the management of sustainable services. The united city, too, where government, companies, science and citizens build alliances and share common interests.

TWO-WAY FLOW

This awareness works like a "two-way flow" according to Diego Marín, General Manager of the Concessions department at ACCIONA: "At first, there may be resistance from some citizens to adopting new habits being promoted by local councils, like separating waste. But now we are seeing the opposite happen: citizens are demanding environmental awareness from their politicians, telling them to include sustainability in their agendas and keep their promises. The new paradigm uses technology to manage urban services based on a new vision of the public domain."

Services in the broadest sense: from water management to transportation and mobility, from buildings to green lungs, from the shared use of resources to recycling, from civil protection to civic engagement. "Pulling everyone together on smart management platforms will result in resilient, circular cities able to supply quality services to the entire population," adds Frank Zamora.

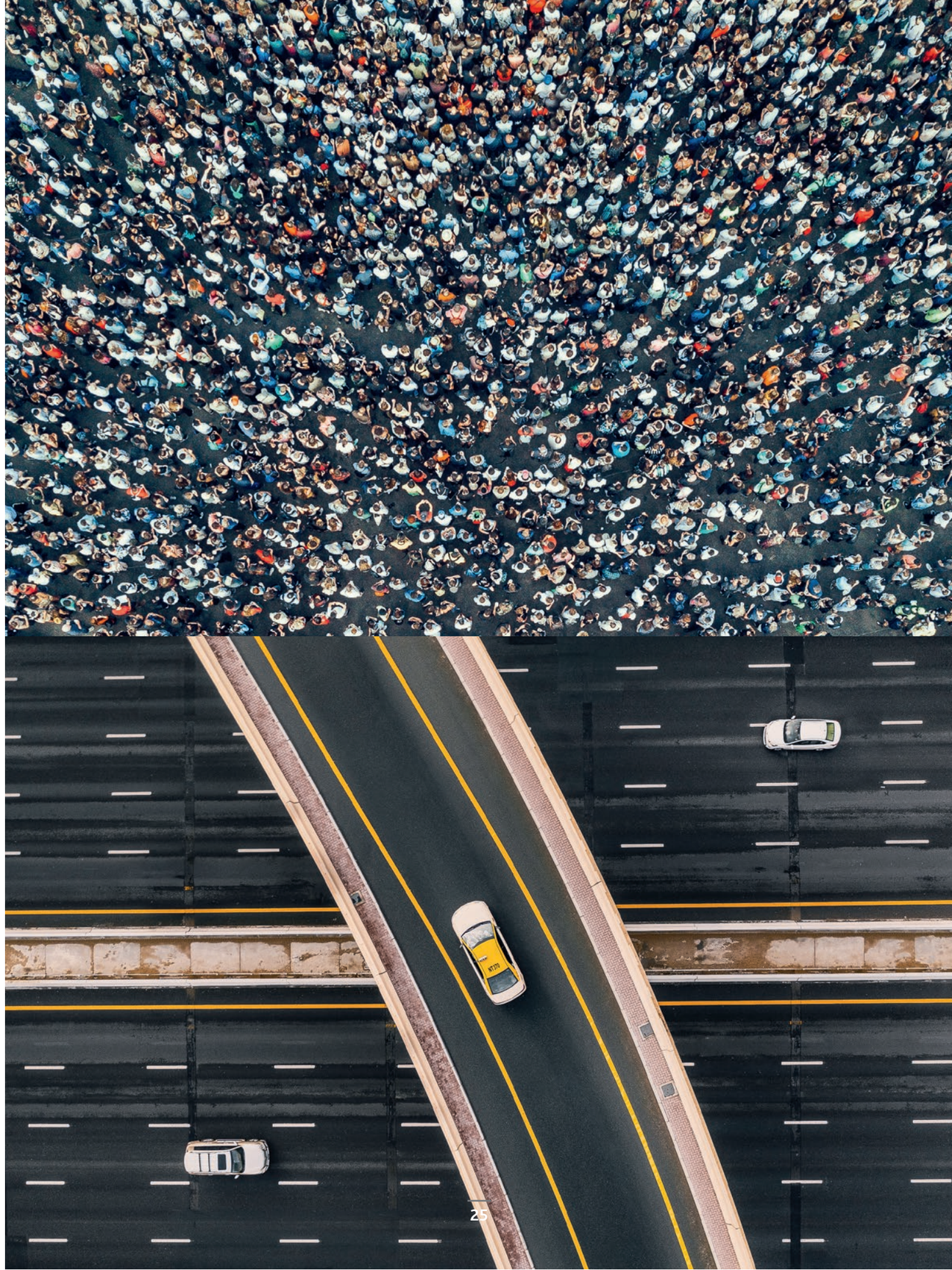
AGREEMENTS

Initiatives like the European Union's Green Deal and the UN's Sustainable Development Goals, supported by 193 countries, are certainly helping. However, "they involve targets with a long timescale and are not applied consistently in real life," emphasizes Diego Marín.

This is why initiatives by individual businesses or public private partnerships (PPP) are so crucial in order to drive change. "A local council — continues Marín — wants to replace a landfill site because it's almost full, because of complaints from residents and because of environmental awareness. That's good, but it's companies that create integrated waste management systems and solutions, optimizing our processes and generating the greatest wellbeing with the lowest possible impact."

ACCIONA's various activities try to meet every social need. Let's see how.

According to the UN, nearly 70% of the world's population will be living in urban areas by 2050. The current figure is close to 56%.



WATER MANAGEMENT

Needs

Along with energy, water is our most prized asset. Rapid urban sprawl and extreme weather events like flooding and drought threaten supply.

Solutions

- Smart management: the Smartwater model on the BIONS platform. Uses cloud-based machine learning techniques and data intelligence to detect, analyze and predict network incidents such as leaks, bursts, telemetry problems and operating faults. "It also uses artificial intelligence and machine learning to monitor network performance, predict demand based on patterns and solve supply problems preventively, reducing water losses," explains Frank Zamora. One example: the water service and anti-waste maintenance in Canal de Isabel II, Madrid, which has digital meters that collect and analyze data and carbon fiber pipes so that piping can be repaired with minimal on-site intervention.

MOBILITY

Needs

Reduction of emissions, mobility flow and electrification of the economy. "Citizens are migrating towards a pay-per-use mindset instead of ownership. We're backing that model and in 20 years it could achieve 20% penetration in Madrid. At present, urban mobility causes 40% of CO_2 emissions," says Ramón Piñeiro, Manager of Mobility, Transformation and Sustainability at ACCIONA's Services business.

Solutions

- Connected and shared vehicles: the Motosharing electric scooter service in Madrid, Valencia, Zaragoza, Barcelona, Seville, Lisbon and Milan. Almost 7,000 scooters, one of the largest fleets in Europe.
- Zero-emission public transport projects like the Quito subway, an undertaking with an immense social and economic impact, or the Zaragoza tram, named Best Environmental and Sustainability Initiative at the Global Light Rail Awards. The project will prevent the annual emission of 482 tons of NOX, 293 tons of CO_2 and 17 tons of solid particles.

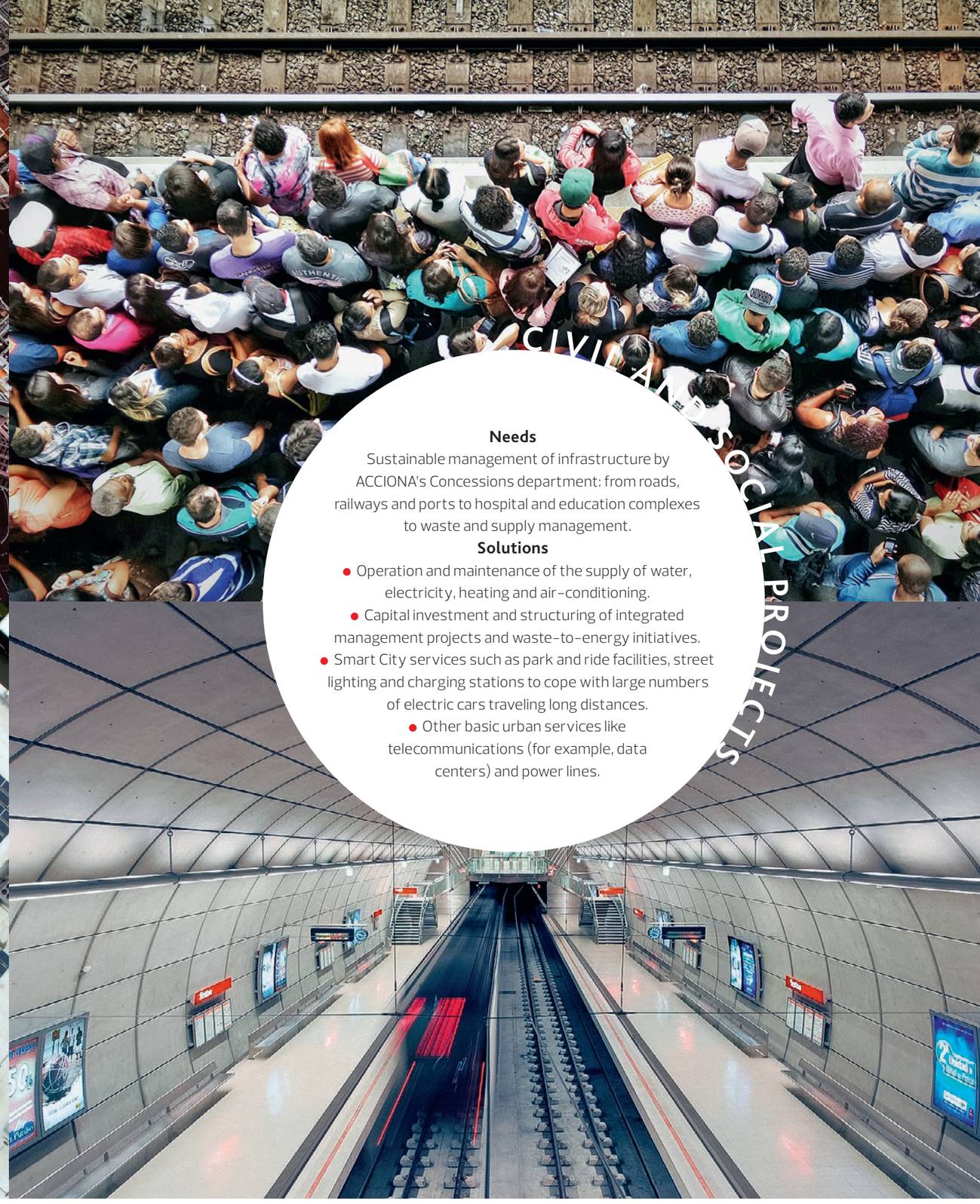
SUSTAINABLE CONSTRUCTIONS

Needs

Efficient management of resources and contribution to SDGs 9 (industry, innovation and infrastructure) and 11 (sustainable cities). "We're developing new materials, putting ambitious targets in place to reduce emissions, water and waste and we are also including social benefits for local communities," explains Antonio Roig, Business Development Manager and Sustainability Promoter at ACCIONA.

Solutions

- Management of administrative buildings supplied with renewable energy, such as the Madrid City Council buildings.
- Construction and operation of buildings with an integrated sustainable design, like the Reina Sofía Hospital (Madrid), which won the 2020 BREEAM Award for its energy efficiency and water management. Its carbon footprint has been cut by 30%.
- In the last three years, construction works by the company have reduced greenhouse gases by 35%, and more than 80% of revenue includes social management as a priority.



CIVIL AND SOCIAL PROJECTS

Needs

Sustainable management of infrastructure by ACCIONA's Concessions department: from roads, railways and ports to hospital and education complexes to waste and supply management.

Solutions

- Operation and maintenance of the supply of water, electricity, heating and air-conditioning.
- Capital investment and structuring of integrated management projects and waste-to-energy initiatives.
- Smart City services such as park and ride facilities, street lighting and charging stations to cope with large numbers of electric cars traveling long distances.
- Other basic urban services like telecommunications (for example, data centers) and power lines.

ENVIRONMENT

Needs

Management, protection and expansion of natural spaces and biodiversity inside and outside cities. Actions in response to initiatives like the ones in Riyadh (planting 7.5 million trees) and Madrid (75-kilometer forest belt).

Solutions

- Management of Madrid's historic parks and gardens and ecological restoration of the Manzanares-Madrid Río area.
- Smart irrigation to suit weather and species, selection of native varieties that are resistant to the local climate and also protect genetic heritage.
- Pruning, cleaning, waste treatment, fertilizing, maintenance and electric machinery following sustainable criteria.
- Environmental education programs to encourage citizens to commit to protecting their natural spaces, for example, protecting butterflies in Dehesa de la Villa, Madrid.

ACCIONA INNOVATION IN URBAN SERVICES

- **Citizen Control Center.** Real-time vehicle fleet management: consumption, inspection, emissions, efficiency, etc. Will include monitoring of roads, timetables and traffic to enable a logarithm to redesign routes automatically.
- **REBORN platform.** Developed by ACCIONA's Digital Innovation Hub to manage household waste recycling centers. Will enable citizens to exchange items and reuse them.
- **5.0 awareness.** Citizen awareness campaigns tailored to the problems in each municipal area. For example, by video mapping on public buildings.
- **In-house design of urban maintenance machinery** like electric cleaning carts or self-propelled sand cleaning machines.
- **Occupational health and safety.** The Remote Expert Prevention Program enables an occupational health and safety expert to assist operators on any task using a virtual headset and mobile applications.

LUIS ALONSO
Researcher in the City Science group at MIT Media Lab (USA).

"The Smart City isn't possible without collaboration between governments, business and citizens"

What does the future city paradigm look like?
We work in human-focused cities that are more efficient, more sustainable and healthier. Where all kinds of people can live, work and share ideas within walking distance of each other. Where there is a neighborhood culture, and public transportation and micromobility relegate cars to macromobility travel outside the city.

What is needed to drive the model forward?
A change of mindset and collaboration between governments, citizens, business and academia, everyone working together and trusting each other, even if they do not share the same ideas. It may sound like a utopian dream, but we will not have sustainable cities without this kind of mutuality.

Who must lead Smart City development?
Countries do not seem effective at bringing about the changes needed. Cities are more flexible and have to tackle local community problems on an everyday basis, so they are starting to take the lead. When we talk about climate change, we're talking about Tokyo, Paris or Madrid, not about Japan, France or Spain.

The biggest difficulties?
If a city's big data system, which might be run by CISCO, is unable to talk or share data with the Philips smart lights or with the Tesla or Google smart cars, we will end up with an IoT Tower of Babel and millions will be squandered on duplicated systems. But if business, government and citizens work together, we can obtain a mutualist system like that of nature, in which two individuals, through a selfish but mutually beneficial action, have a positive impact on the whole community.

Will Smart City innovations be uniform or will we see drastic differences?
According to the UN, 90% of new urban growth will happen in Africa, India, South America and Asia, and most of it will be informal growth in slums, favelas, etc. Forecasts for 2050 predict that 3.5 billion people will live in cities with no infrastructure. If we want to bring conventional infrastructure (roads, electricity, drinking water, internet, etc.) to these settlements, we will need the equivalent of the combined Gross Domestic Product (GDP) of the USA, China and Europe. Moreover, although the big cities in Europe, North America, Russia, etc. will continue trying to lead change, they will come up against fear of diversity and of collaboration.

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RENEWABLE POWER

IN THE SECOND RENEWABLE POWER WORLDWIDE, THE GROWTH OF CLEAN ENERGY IS GUARANTEED, ALTHOUGH THERE IS ALSO FIERCE COMPETITION FOR EVERY WATT. NO MATTER WHO IS IN THE WHITE HOUSE.

by **Yolanda Colías**

A country as big as the U.S. promises a growing level of consumerism for renewable supply. Generation will double over the next 30 years.

FROM COAST TO COAST

RENEWABLES WILL BE THE SOURCE OF ELECTRICITY GENERATION WITH THE MOST ACCELERATED GROWTH IN THE U.S.

At a recent meeting in Pennsylvania, while President Donald Trump questioned global warming and the appropriateness of clean energy, especially windmills, the U.S. Energy Information Administration (EIA) forecast a good outlook for wind generation and other renewable energy sources within the country.

In its Annual Energy Outlook 2020, the EIA forecasts that renewable generation will double by 2050, in comparison with the 19% recorded in 2019. In other words, it may total 38% by mid-century. Solar energy will contribute most, going from accounting for 14% of renewable energy in 2019 to 46% in three decades' time. Wind energy will come second.

"We are talking about a world power. It is the second largest market by installed renewable capacity, next only to China," says Rafael Esteban, Country Manager of ACCIONA's Energy division for USA. "This may seem to contradict the messages sometimes disseminated by the White House, but there is a clear commitment to this sector within the country at a corporate, industrial, technological, financial and citizen level. And many states and cities have strategies that set ambitious targets as regards both penetration of renewables and reducing emissions."

THREE FACTORS

This apparent contradiction is diluted by three factors mentioned by Esteban. The economic factor: "The impressive reduction in costs for wind and solar energy, which is pushing fossil and nuclear energy out of the market." The regulatory factor, in a country where "each state's regulations are of prime importance in the generation of new projects and their commitments are usually respected."

And a third factor parallel to the territory's degree of energy independence: the knock-on effect of large U.S. corporations and multinationals committed to renewable energy and sustainability on a large scale (via generation, consumption, promotion, emissions reduction, etc.). "Further ahead, we see the growing support of citizens, a vision of social engagement and the growth of clean energy in the present and in the future," adds Esteban.

The renewable market in the U.S. is strategic for ACCIONA, as it is one of the most promising due to its size and its role as a benchmark. "Our presence of almost 20 years provides us with in-depth knowledge, essential for tackling new challenges with guarantees. We have a highly expert team, the support of the entire organization and the image of a thorough company shown by our record of

ACCIONA will soon have 10 wind farms operating in the U.S.

The EcoGrove Wind Farm offices in Illinois, where ACCIONA also runs solar projects.

ACCIONA'S EXPANSION

In October, the company purchased the U.S. company Tenaska a portfolio of 20 photovoltaic projects spread out over Pennsylvania, Ohio, Kentucky, Illinois, Kansas, Oklahoma and Missouri. Eight of them are expected to be operational before the end of 2023.
Work has begun on the building of La Chalupa Wind Farm, the third farm in Texas and the largest of the ten in the U.S. It is in Cameron County and raises ACCIONA's wind capacity in the country to 1,064 MW. It will be put into service during the fourth quarter of 2020 and will generate about 666 GWh a year, the equivalent of the power consumed by more than 54,000 homes. It will prevent the emission of about 640,000 tons of CO_2.
Also in Texas, it has put its latest wind farm, Palmas Altas, into service, which will produce approximately 524 GWh of clean energy a year.

SOME KEY STATES ASPIRE TO 100% RENEWABLE ENERGY CONSUMPTION BY MID CENTURY

projects successfully completed within the country," adds the executive. The company currently has nine wind farms (one under construction), and a solar thermal and electrical plant, and it has recently acquired a portfolio of 3,000 photovoltaic MW and 1,000 MW of storage.
The states that drive clean energy the most are spread out around the map, on the West Coast, in Washington and California – also Hawaii, and on the Northeast Coast, for example, New York, Rhode Island, Maine and Vermont, along with some in the Rocky Mountains, such as New Mexico. And even Texas.
"The federal government only gets involved if a state policy might affect neighboring states, for example, authorizing and financing the building of transport lines. That is why it is perfectly possible for a Texas governor to promote wind energy because their voters value it, and for the President, who is also Republican, to reject it," says Jorge Sanz Oliva, Associate Director of Nera Economic Consulting and former advisor to Spain's Economic and Trade Office in Los Angeles.

THE (TECHNOLOGICAL) INDEPENDENCE OF THE U.S.

The technological development of wind and solar energy is a decisive factor in the global expansion of renewables. And it does not come just from R+D investment by companies; public administrations also take part, including the federal government through the National Renewable Energy Laboratory (NREL). It was created under the Carter administration in the 1970s—in the same time as the Solar Energy Research Institute—due to the oil crisis and rising awareness, based on necessity, that there should be a goal of diversifying energy sources. The NREL has had good and bad periods throughout its long history, but it has contributed numerous patents to the renewable sector and its work has been rewarded with more than 60 R&D 100 Awards, considered the Oscars of innovation.

2040 GOAL

Furthermore, most states have a target for renewable electrical energy consumption (Renewable Portfolio Standard, RPS, obligations regarding the purchase from distributors in their territory) which varies depending on their interests. While Oregon is satisfied with 50% by 2040, New York has promised to achieve 100% by the same year. California, Washington, Hawaii and New Mexico are aiming for fully renewable status just five years later: by 2045.
Electricity distributors can build their own clean generation facilities as project developers or buy clean energy from other generators over the long term. "The federal government has collaborated by providing tax credits that were very significant in the Obama period, amounting to 30% of investment in the projects," says Sanz Oliva. But wind and solar plants are now profitable at market prices and their implantation does not depend on subsidies. They have never been so independent in terms of expansion. ■

LAND OF OPPORTUNITIES... AND COMPETITION

The U.S., the world's second largest economic power, is a strategic market for ACCIONA's internationalization. But that business opportunity inevitably involves fierce competition between some of the best multinationals in the renewable sector. "You have to be very good to get ahead. With such huge volumes of renewable installation, we are undergoing a transformation process so that we can generate volumes that are appealing to the market, instead of going project by project," explains Rafael Esteban, ACCIONA's Energy Country Manager for the U.S.
Another added factor in the competition: low energy prices, influenced by the reduction in the price of gas since 2008 thanks to fracking. These rates mean that coal can be replaced in electricity generation, with the consequent reduction in emissions.

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THE PERFECT CIRCLE

IT MINIMISES CONSUMPTION TO MAXIMISE OUTPUT. WASTAGE IS A FOREIGN CONCEPT. IT REUSES AND RECYCLES EVERY LAST BIT OF WASTE. IT WILL BE OF STRATEGIC IMPORTANCE FOR EUROPE AND, BY EXTENSION, THE WORLD: THE CIRCULAR ECONOMY.

by
Juan Pablo Zurdo

The circular economy aims to achieve a balance between sustainability, competitiveness, and growth decoupled from the use of resources.

The need. Evolving from the linear economy model to the circular model is not just an option, it's an obligation if we want to achieve our climate objectives. This will entail a drastic change in our mode of production and consumption. In numerical terms, energy in a broad sense accounts for 55% of the current global emissions mix, while products account for 45%. How can we reduce the latter percentage? Carbon capture technologies, storage, etc. could be responsible for just over half of this reduction, and the circular economy model for the rest.

The strategy. On 11 March the EU presented its new Circular Economy Action Plan, which will be the overarching framework for the transition and an essential contribution to achieving the goal of climate neutrality by 2050. Not only must it overcome resistance to change, it must also ensure long-term competitiveness while decoupling economic growth from the use of resources.

The measures. Over the next four years, the Plan will implement phased measures to make sustainable products —how they are produced, used and discarded—, services, and business models the norm:

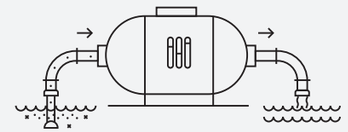
- Community rules are currently stringent with respect to energy efficiency, for example, but not with respect to design, labeling or public procurement based on ecological criteria. So far, these areas have been optional, but the Commission will be instituting mandatory requirements.
- It will issue laws to make the value chain sustainable and foster recycling of batteries and vehicles, packaging, wrapping, and plastic, as well as in buildings and construction —an activity that generates 35% of the EU's waste and 5% to 12% of greenhouse gases— and with respect to circular water management in agriculture and industry.
- Initiatives to cut waste from the manufacturing stage, optimize recycling systems and reduce urban waste 50% by 2030. Replace hazardous raw materials, encourage secondary raw materials, regulate certification of carbon removals with a verifiable measurement system, environmental accounting in businesses, and budget allocations to fund projects.

The opportunity. According to the Commission, the new model will allow Europe to grow resource productivity by up to 3% annually in the coming decade and generate an economic benefit of 1.8 trillion euros in material management and production.

HOW WE ARE CONTRIBUTING

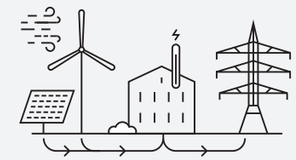
ACCIONA, a pioneer in sustainability, has embraced a vision of the circular economy since before the concept became popular. The model is about to take a quantum leap forward with the new European Plan and the company is already taking action, most notably with the creation of a dedicated team for the exchange of good practices and knowledge of processes and technology between its different businesses The impetus in Europe will enable the company to optimize its capabilities in projects in the rest of the world. It will also train the entire company on a range of cross-cutting circular economy solutions with an approach that brings together the interests of governments, civil society, and other stakeholders who stand to benefit. It will foster the participation of employees, encouraging them to share ideas, and will connect the external startups in the company's I'MNOVATION open innovation program.

ACCIONA'S CIRCULAR PROJECTS



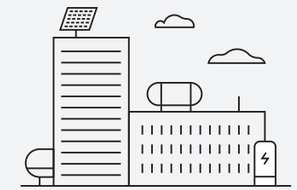
WATER

Treatment plants epitomize the circular economy: they collect dirty water and return it clean to rivers or reuse it in industrial applications and agricultural irrigation. They use algorithms for nutrient control, pollutant removal, and energy efficiency. They cogenerate biogas. The Arroyo Culebro WWTP (Madrid) covers all of its energy consumption in this manner, resulting in a 6% increase in its annual revenue. The Archena WWTP (Murcia) reuses sludge as agricultural fertilizer (reducing the use of chemical nutrients), manages by-products such as phosphorus, calcium, and magnesium, and supplements its power supply by incorporating renewable energy into its facilities.



ENERGY

Obviously, ACCIONA's wind and photovoltaic facilities are key elements in the model. But energy services for companies, with integrated supply and demand management including self-consumption, are also key. It also includes assets like energy recovery facilities, which extract electricity from non-recyclable waste, the last link in the chain.

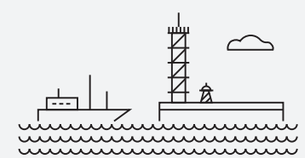


PUBLIC BUILDINGS

Administrative, educational, and hospital complexes. In its management of these buildings, it uses passive solutions for façades and glazing, smart interior and exterior lighting, electric vehicle charging points, condensing and microgeneration boilers, electric motors, and photovoltaic panels and glass in both the buildings and the exterior lighting.

CONSTRUCTION AND TRANSPORTATION

In the preliminary phase, it applies ecological design principles to reduce implementation time and energy consumption. It reuses waste in infrastructure construction projects. Example: Font de la Figuera highway (Community of Valencia), where it used ash generated by the paper industry instead of lime and cement. This resulted in significant savings in comparison to traditional construction. During demolitions, each material is separated and taken to different recycling points. Carpets, cables, brick, copper, etc. It combines this model with electric mobility on tram and subway lines and its shared scooter service.



MARITIME INFRASTRUCTURE

Ecodesign of ports and materials with a low carbon footprint as well as secondary raw materials that have been recycled. In Valencia, ACCIONA built the world's first lighthouse made of composite materials, which are more resistant to salt and moisture. With zero spending on maintenance, it is self-powered by solar panels and costs 242 euros per linear meter compared to 763 euros for a conventional lighthouse, calculated taking into account the entire useful life of the two construction methods.

ENVIRONMENT

It manages green spaces that reuse their own plant debris as fertilizer. Treatments in forest areas and parks generate biomass that can be reused to generate power. Example: reforestation and restoration of the landscape and local ecosystem of El Estrellín quarry (Asturias) and El Cabrito wind farm (Cadiz).

THE (GREEN) COLOR OF MONEY

SUSTAINABILITY: A DUTY, A RESPONSIBILITY—BUT ALSO A GOOD BUSINESS. TEN LARGE GLOBAL COMPANIES PROVE IT.

by
Patricia Alcorta

We associate the color green with money because for decades it was the standard shade of bills, like the ones that began circulating in 1861. The reason was merely practical: green ink was more resistant to erasure or counterfeiting.

So it is no mere coincidence that green is also the color of the new economy (and of hope). It is a powerful trend that appears in rankings such as the one published by Bloomberg on companies that have built their success in the sustainability market. ACCIONA is in the top ten—and it is the only Spanish company.

OPPORTUNITIES

It is no coincidence either that this trend supports one of the strongest driving forces against climate change. It was repeated at the climate conference in Madrid in December, and ACCIONA's Chairman and CEO José Manuel Entrecanales advocates for it at every forum. It is echoed by more and more corporations in their decarbonization commitments; take Microsoft, for example. In other words, for the green economy to progress at the necessary pace, sustainability (in addition to being a moral duty) needs to be big business. A combination of responsibility, interest and opportunity.

The report highlights the powerful effect of the ten companies: "The capital and interest flowing into sustainable enterprises helps to prop up a new generation of fortunes and businesses." From 2016 to 2018, the assets of firms that promote sustainable practices and offer climate-friendly products and services grew by a third.

Some of these pioneers need no introduction as they already have celebrity status, namely Elon Musk. He not only founded the world's most famous brand of electric vehicles, he also manufactures batteries. However, another company (a manufacturer of batteries for electric cars) outshines him: the Chinese company CATL. Its top position seems to reflect the metaphor of the Asian giant surpassing the North American giant. Moreover, four of the ten corporations are Chinese whereas two are North American.

VEHICLES AND ENERGY

Another way to look at it: the prominence of the automobile. In addition to CATL and Tesla, there are other manufacturers of electric vehicles like BYD, the Thai billionaire Somphote Ahunai (moving from palm oil production to biodiesel, and finally to zero-emission vehicles) and Nikola Motor, which specializes in hydrogen propulsion.

Of course, the technology/energy sector is also a dominant player. In addition to ACCIONA, it is represented by the wind turbine manufacturer Enercon; Longi Green Energy Technology, the largest producer of solar wafers and modules (with almost a quarter of the global share); and Hangzhou First Applied Material, number 1 in solar panels. The value of its shares grew by 80% in 2019.

The Austrian-based Pratt Group is the counterpoint and it reflects the growing diversity of the sustainable market. It is the world's largest company in the field of packaging and 100% recycled paper, affirming that its activity saves 68,000 trees every day.

Any bids to join the club? Impossible Foods and Beyond Meat are close to achieving this by replacing animal-based foods with vegetable-based foods, thus reducing the impact on livestock. According to the think tank Carbon Tracker, "Wealth will belong to the companies capable of creating new niches." ■

THE INTEREST OF INVESTMENT

- According to a study by Schroders (25,000 interviews in 32 countries), 57% of investors consider sustainability as part of their investment criteria.
- However, only 16% invest directly in sustainable products, although 32% are interested in the sector.
- For 65%, good legislation would encourage them to invest in sustainable products and services.
- 63% believe that climate change will have an impact on their investments.

PERSON TO PERSON AID

THE HUMAN ADVENTURE OF SIX VOLUNTEERS ON THE 'LUZ EN CASA' PROJECT. TAKING BASIC SERVICES TO REMOTE COMMUNITIES CHANGED THEIR OWN LIVES TOO.

by **Juan Pablo Zurdo**

Two ACCIONA volunteers converse with women in an rural community in Cajamarca, Peru.

The acciona.org Foundation not only takes basic energy and water services to poor communities in Mexico, Peru and Panama, it also takes the commitment of volunteers in the first person. All of the company's employees can volunteer, no matter where they come from, or their professional profile, because they are trained on the ground. All that is required is a desire to lend a hand, two weeks of their holidays and an open mind so they can adapt to social realities that are often very harsh. More than 90 volunteers have had the experience, and six of them tell us about it.

MIGUEL G. MANGLANO

From Spain to Cajamarca (Peru)

It is such an intense experience that it tests you both emotionally and physically. The order of priorities changes completely and I think it has strengthened my sense of connection to the company and its message. You see how its projects have a real effect on people. And you develop a way of understanding teamwork that is very useful in your day-to-day.

The experience of entering the first house is overwhelming. You are hit by a social reality that you can barely comprehend. But I'm going to remember the good stuff: after really difficult climbs to 4,000 meters above sea level, locating the houses and talking to their inhabitants. Understanding how three light bulbs and several sockets mean they can feel less afraid of the dark.

Or the old man who asked "the gringo engineers" to check out a connection at his house. It was a 40-minute walk and up and down he went like a 4x4, as we puffed and panted along. When we got there, his wife offered us food and he put on his party hat. Giving electricity back to that old couple sums up all the volunteering – the entire project.

ÁNJELO RAMÍREZ

From Chile to Cajamarca (Peru)

You learn to make connections between cultures, you learn to be humble, to have an open mind, you coexist with people who live in isolation and are always smiling in spite of that distance. Volunteering makes you an agent of change. You do your bit to fight injustice. I think that it has made me a better person and allowed me to develop

"I'VE LEARNT TO BE MORE FLEXIBLE, TO PRIORITIZE AND DISTINGUISH WHAT IS REALLY IMPORTANT FROM BANALITIES. I THINK I AM NOW BETTER EQUIPPED TO DEAL WITH DIFFICULT ENVIRONMENTS AND OPTIMIZE TIME"

Marta Serrano

From left to right:
MIGUEL G. MANGLANO, ÁNJELO RAMÍREZ, MARTA SERRANO, LUIS LORCA, CRISTINA TORRES and MAURICIO GARCÍA-HERREROS.

my capacity for understanding. I remember two moments that marked me: one was when a light bulb was turned on for the first time – it was wonderful to see the excitement on the faces of the entire family. The other was when we were on our way to a place near Oxamarca (Peru). We had to walk for six hours. It got dark and we spent the night at the house of a beneficiary family. I'll never forget their hospitality and how they gave us the best of what they had.

MARTA SERRANO
From Spain to Ngäbe-Buglé (Panama)

When you come back, you rethink what your life is about, if what you are doing is really any use, if it helps anybody. You wonder how there can still be people who don't have access to the bare essentials, when we have it all to hand. I see and do things differently now. I try to dedicate part of my time to helping others.
You see realities that make an impact on you. Lots of teenagers with three or more children by the time they reach 16, or wonderful people like those at Fundación Nuestra Señora del Camino, which helps sell articles made by the women and gives all the proceeds back to them. There is a feeling of constant giving back there.
I've learnt to be more flexible, to prioritize and distinguish what is really important from banalities. I think I am now better equipped to deal with difficult environments and optimize time. If I can, I'd like to sign up for different projects run by the foundation. What are just two weeks spent helping others in a whole year?

LUIS LORCA
From Chile to Cajamarca (Peru)

I wanted to contribute with my knowledge in the area of electrical inspections, which is what I work at every day. However, the experience exceeded all of my expectations because it allowed me to meet beautiful people who welcomed us with warmth, to discover remote areas of Peru in stunning scenery and, above all, to see how our work marks a point of change for the families. How the children were able to study better, the mothers do their housework at night or such basic things as charging a cellphone. We do not notice these things, but it is a whole new world for them.
On one occasion, we had to spend the night at the house we had been working on, and the gratitude of the family was very moving: they told us that, thanks to the electricity, their days had been lengthened. These experiences have made me question many things and have made me a better person and a better professional, because living such different realities first hand really enriches you.

The inspection of photovoltaic systems and running user satisfaction surveys are two of the main activities. But also to propose ideas to improve the project and the volunteering itself.

CRISTINA TORRES
Mexican volunteer in Oaxaca (Mexico) and Cajamarca (Peru)

I did a bit of everything. Visiting communities to present the project, georeferencing the housing, creating a census and drawing up contracts, inspections and maintenance...
I didn't think twice about signing up because I like helping, engaging with charity work, being useful in the building of a better world. That was what drove me to the adventure of volunteering and doing that alone—bringing renewable energy to the homes of those who need it and improving their lives—met all of my expectations.
Volunteering has had such an impact on me because I was able to understand the reality of those communities, the solidarity among them. That makes you value your own social, family, work or financial situation in a different way. You don't spend long with the families, yet they really make an impression on you. They help you become a better person every day, to form a more human relationship. And you are also collaborating on the Sustainable Development Goals.

MAURICIO GARCÍA-HERREROS
From Colombia to Cajamarca (Peru)

Direct contact raises your awareness in all regards, including in a professional sense, because you understand the vital importance of access to such bare essentials as electricity or water, and how you can help through your work.
Those disparities had an impact on me. The houses built out of wood, often without a toilet. Seeing old people out working hard in the fields, or the old lady carrying a big pot of water for washing wool. I thought, "What if she has an accident? Where will she be looked after? How will she be looked after?" The young people go away to the cities and the elderly tackle life as they can. That is when you realize the difference a cellphone makes, how useful it is for development, and how contradictory it is that the network is omnipresent in the air, but there is no electricity to charge a battery. That is why it is so gratifying to help make it possible for the children to study, to access means of communication, to be able to talk to their relatives – to improve their lives. ■

THE HEALTHY HABIT OF WORKING

HEALTH IS THE MOST VALUABLE THING PEOPLE HAVE. COMPANIES ARE PEOPLE. AND OUR SOCIETY IS FULL OF COMPANIES. SO THAT'S HOW NECESSARY OCCUPATIONAL HEALTH IS.

by
Ramiro Varea

Walking the equivalent of going around the Earth 10 times. 400,000 kilometers. This isn't something being achieved by elite walkers, but by employees like you. It's the target of the Healthy Cities project being run by Sanitas with the collaboration of ACCIONA and 39 other companies.

Small steps for each person, but a great leap for occupational health: each participating employee undertakes to take 10,000 steps every day for nine months. It isn't a race. Everybody wins. But in honor of healthy competition, we'll just say that ACCIONA employees have walked farther than anyone else. 160 million steps clocked up by the end of February.

"It is vital that we incorporate healthy habits into our companies because those habits improve the health of the population in general," explains Pilar Alfranca, Head of Occupational Health and Prevention. "Due to personal well-being, of course, but also because you are happier and more productive when you are healthy."

The Occupational Health and Well-being Plan is one of ACCIONA's strategic sustainability goals.

The Occupational Health and Well-being Plan is one of ACCIONA's strategic sustainability goals, which go beyond legislation in the area and are based on three cornerstones: food, physical activity and emotion management.

Intranet, webs, newsletters, corporate publications, salaries, conferences, workshops... The company uses all channels to raise awareness among its employees. For example, teaching them that the Mediterranean lifestyle is not just a diet but "a philosophy of life, and that eating local foods that are in season is good for you and also good for the environment," points out Pilar Alfranca. The Occupational Health and Prevention team has even hired a nutritionist.

MOTIVATION AND ACTION

Talks by top speakers—such as Dr. Alfonso Puig, a specialist in the digestive system, intelligence and cognition, or Dr. Marina Díaz Marsá, a psychiatrist and the director of SOMMOS Desarrollo Personal—provide motivation and keep the discussion going. And activities such as Healthy Cities try to turn the first impetus into a routine. Here occupational health has the advantage of motivation being shared among colleagues.

"There are always large audiences," says Alfranca. Especially at talks that tackle burning issues, such as the one in February, dedicated to coronavirus, which had almost 2,300 online connections in just half an hour.

The plan works on specific and general areas at the same time: the company's particular problems and long-term prevention in a society whose members are living longer lives, plagued by chronic and often silent illnesses such as diabetes or high blood pressure. Onerous for quality of life and public expenditure.

What are the solutions provided by ACCIONA? The needs are as diverse as our activity, with lots of office work but also physical work, for example inspecting a wind turbine at a height of 100 meters. But there is one thing in common: over-exertion. "We organize compulsory Pilates workshops every quarter to strengthen, correct posture and prevent lumbagos and muscle and bone problems," adds Alfranca.

A new project is being launched this year. Employee's relationships with food—contained, anxious, emotional and so on—will be specified through questionnaires and an app, an individual profile and personal monitoring. The name of the project: Coco-eating.

Yet another step forward. ■

IN NUMBERS

More than
600
ACCIONA
employees in
7
countries
have joined Healthy Cities.

More than
50%
do physical activity every day.

The project contributes to
2
Sustainable Development Goals:
3
(Good Health and Well-being)
and
11
(Sustainable Cities and Communities).

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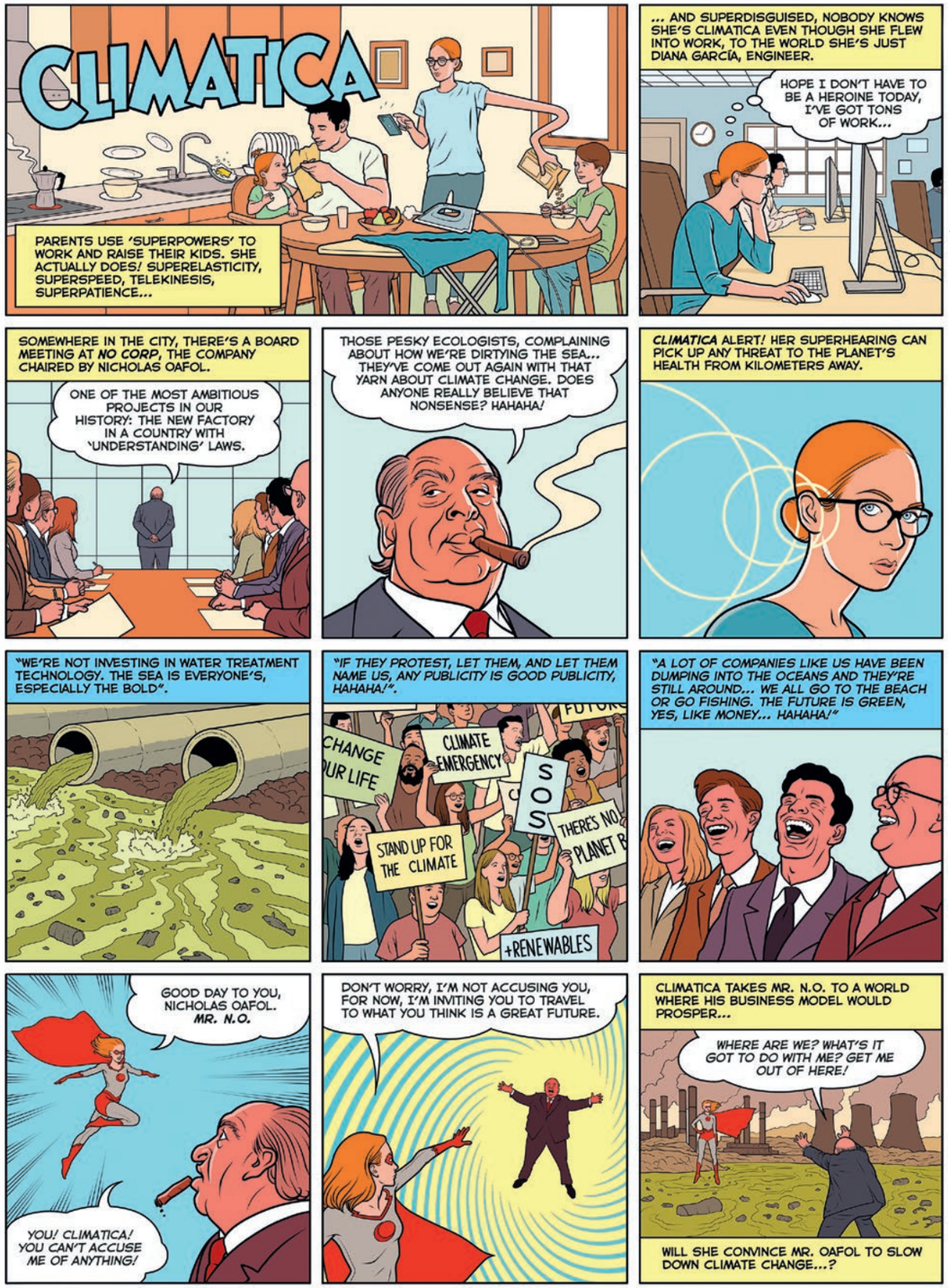

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