Evidence of intelligent life found on Earth

Applying new smart solutions to the world's cities is changing the energy sector. A 2018 report analyzes this transformation and its implications via 29 projects currently underway in urban zones on five continents.

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The magnitude of the refugee crisis raises new concerns about providing displaced people with basic services — such as energy, food and water. As waves of migrants leave one place for another, temporary camps are becoming small cities. For example, at the Adi-Harush refugee camp established in 2010 in Ethiopia, more than 10,000 Eritrean refugees were living

together as of early 2018.

In this settlement, the electrical supply has been extremely irregular and dangerous, providing only six hours of power per day between outages. In search of intelligent energy solutions to mitigate these and other shortcomings at Adi-Harush and others nearly in Ethopia's Shire region, public organizations and private companies came together to create the Alianza Shire in 2014.

The alliance's pilot project included an expansion and improvement of the camp's electrical grid enabling the connection of new services, such as a primary school and two communal kitchens, as well as four kilometers of public street lighting with LED technology.

In search of intelligent energy solutions

What does this camp have in common with Villa 31 in Buenos Aires, the Chinese city of Dezhou and the Parisian district of Clichy-Batignolles? They all serve as urban case studies for their thoughtful application of intelligent solutions to improve their sustainability and energy efficiency.

A total of 29 case studies are analyzed in Shaping the Cities of Tomorrow: Renewable Energies and Sustainable Urban Ecosystems, a report prepared by IESE's Specialist Center on Public-Private Partnerships (PPP) in Smart and Sustainable Cities. These case studies help illustrate good practices in the consumption and production of energy for more sustainable cities.

Data collected from these cases allow the report's authors to share insights that are applicable elsewhere, including a series of recommendations for policy officers. With over half of the world's population already living in cities, and more to follow, smart solutions can help urban ecosystems improve the quality of life for inhabitants.

Taking charge of urban energy

The report's case studies elucidate key changes in behavior that are possible for all participants in the energy sector. They include:

- **Transforming passive consumers into active consumers.** This transformation can have an impact on pollution output and minimizing climate change, as it is the first step towards encouraging more efficiency. For example, an ambitious project in a Stockholm neighborhood not only introduced an integrated energy, water and

waste management system for inhabitants, it also provided kitchen displays to show, in real time, their current use of heating, electricity and water to inspire users to take control of what they were using when. In addition, independent power producers allow people to play an active role in the neighborhood's energy supply, thereby helping to reduce reliance on the central network system.

- **Revisiting the roles of the public sector.** By providing financing or acting as indirect facilitators, authorities at the local, regional and national levels can all encourage smart solutions. For example, in 2015 in China, Dezhou's local government launched a program to transform it into China's Solar City and provided tax incentives, financing and land-usage policies to support solar-energy generation.
- **Creating new business models for energy.** For the energy and mobility companies now pioneering intelligent solutions, new ways of doing business are emerging. The report analyzes several initiatives that serve as good examples as they work on electrifying mobility networks, including charging stations for electric vehicles and car-sharing platforms.

For these changes to move in the right direction, the report offers a series of recommendations for policy officers in order to (1) promote partnerships and smart business models; (2) encourage smart citizens and improve awareness; (3) promote the use of efficient energy networks; and (4) create smart cities with an integrated strategy that coordinates the different public institutions. All to improve the quality of life in a sustainable way.

Methodology, Very Briefly

[PPP for Cities](#) at IESE, which is part of the PPP program of the United Nations International Center of Excellence (UNECE), created an advisory board of experts to determine which cases would be analyzed for this report. Once the list of cases was assembled, the relevant specific information was requested from the people responsible for each project. With this gathered data, research papers and other official reports, the researchers analyzed good practices and lessons learned for each case and provided general conclusions. The report is free to download.

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