

Towards the next generation of infrastructure



Expert comment by **Stéphane Ifker**

Antin Infrastructure Partners' senior partner sees the covid-19 recovery presenting a 'once-in-a-generation' opportunity

We are entering a new age of infrastructure, driven by technological advancement and societal change, and enabled by political will and public and private investment. Every sector is being impacted by technological and societal forces, including net zero carbon, sustainability, new ways of working, the internet of things, artificial intelligence and smart cities, among many others. These forces are ushering in a new era that is greener, smarter and more connected.

As Europe and North America emerge from the pandemic, we have a once-in-a-generation opportunity to upscale and build the infrastructure of tomorrow. Many GPs are actively exploring next generation infrastructure initiatives by targeting proven concepts and scale-up opportunities that will help to shape a more sustainable, low carbon and connected future.

Such initiatives should take a multidisciplinary approach to this, focusing on investing in the energy transition, environmental and green mobility, social infrastructure, digital transition and other compelling segments.

But even established infrastructure will need to transition to be greener, smarter and more connected, or risk becoming tomorrow's stranded asset.

That was a key consideration for the Smart Energy Network developed by IDEX, an integrated operator of energy infrastructure assets, for the city of Nice's new district called "Nice Méridia" in the south of France.

Putting theory into practice

The smart energy heating and cooling networks will allow a reduction in carbon emissions, control of consumption and increased safety for subscribed buildings compared with traditional boilers and room air conditioners. Heat and cold are produced simultaneously in a power plant via thermo-fridge pumps, which

are supplied by geothermal energy from the alluvial aquifer of the Var valley. Using this technical solution, the energy efficiency factor is significantly higher than using fossil fuel or traditional electricity-based technologies.

When user consumption is lower than production, energy is stored and returned during peaks of heat or air conditioning demand, thus optimising the usage of the produced energy. AI is at the heart of the network thanks to smart grid technologies; and interconnected installations make it possible to collect consumption data and anticipate the energy needs of users.

In the context of climate change, scarceness of resources and decarbonisation, IDEX's solution for Nice Méridia is a showcase for a smart energy network, using geothermal energy, a district heating and cooling network and a smart grid. Thanks to its ability to make the most of local energy sources, to optimise economic and environmental costs and to guarantee their performance in use, IDEX has been able to anticipate the challenges of the energy transition. More GPs and companies will need to think along these lines, pushing the boundaries of traditional infrastructure to fully unlock the next generation's potential. ■

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