

## KEYNOTE INTERVIEW

## The great leveller



*Digital infrastructure has the power to either address or exacerbate global inequality, says Actis' director of sustainability James Magor and global head of data centre operations Dalmar Sheikh*

### Q Why is digital infrastructure so important to delivering the UN SDGs and achieving a net-zero economy?

**James Magor:** From a societal perspective, 80 percent of the Sustainable Development Goal targets are dependent, at least to some extent, on digital infrastructure. As essential services ranging from healthcare to education to banking all move online, providing access to the digital economy is critical for addressing inequality. The fact that the UN has set broadband penetration targets across the world means it sees digital infrastructure as a global social development priority. Investing in digital infrastructure is one of the fastest ways to transition to a more equitable, efficient and prosperous society.

Then, from an environmental

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perspective, the development of solar and wind power generation, which is vital to achieving global net-zero ambitions, is growing at phenomenal rates. However, that power is typically decentralised and intermittent, requiring careful integration into electricity networks and grids. It is therefore very difficult to scale that kind of renewables technology without the equivalent growth in digital infrastructure, which helps balance supply and demand and stabilises networks.

In addition, when it comes to individual users looking to install rooftop solar at their business or home, you still need large batteries or a backup power

source for when the sun isn't shining, or the wind isn't blowing; and, if you are going to automatically switch between those power sources, you need digital technology to make that happen.

Finally, utility-scale battery storage is seen as another important component of the transition to net zero. But again, the autonomous charging and discharging of batteries in smart grids is only made possible by digital infrastructure.

**Dalmar Sheikh:** There is a fundamental shift underway in society which is impacting the way we interact with each other and with traditional services. That shift – the Fourth Industrial Revolution – is being enabled by technology. But if we fail to take people along on that journey, we could face a

huge unemployment problem and the intensification of inequality. Ensuring that everyone has access to digital infrastructure, and the skills to use it, is critical to achieving the SDGs.

### **Q** What is the scale of the supply/demand gap when it comes to that digital access?

**JM:** Broadband penetration in Africa today is less than 10 percent, compared with 90 percent in North America. Those are two extremes. But even if you look across Asia, which includes developed markets such as South Korea, broadband penetration remains at less than 50 percent. Meanwhile, Africa, with a population of 1.3 billion people, has the same data centre capacity as Switzerland, which has a population of nine million. That is indicative of a phenomenal supply/demand gap.

In addition to an infrastructure gap, however, there is also a huge skills gap. As Dalmar said, it is essential to bring people online so that they can reap the full benefits of the digital economy – but access is only part of the problem. There are people who live with high-speed internet coverage, for example, that don't use it. In fact, there are currently an estimated 3.4 billion people in that group, which is seven times the number of people living with no access at all.

Unless you address affordability and digital literacy, all the potential social benefits of digital infrastructure will fail to be optimised and, in a worst case, existing inequalities will be further exacerbated.

**DS:** From an investment perspective, Asia requires over \$500 billion by 2040 to narrow the infrastructure gap between supply and demand. In Africa, the figure is between \$200 billion and \$300 billion. But I agree that addressing the skills gap is also essential. Consider that 90 percent of businesses in the world are SMEs, responsible for 50 percent of global employment. All of those companies have to be able to



### **Q** Why is sustainability so critical to this sector, in particular?

**James Magor:** Sustainability is critical in every sector, of course. We believe that the global mega-trend of sustainability is irreversible; capital is aligning itself with net-zero strategies and sustainability factors are determining the appreciation of asset value.

Digital infrastructure, however, is in a unique position in that it has the potential to either address or exacerbate inequalities. It is vital, therefore, that we invest not only in the growth of the physical infrastructure itself, but also in the skills required to achieve digital infrastructure's full potential.

Actis has been at the forefront of the energy transition to net zero for many years and will continue to invest in critical infrastructure assets which catalyse systemic change and help the world align to a net zero pathway.

Investing in digital infrastructure, ensuring more people have access to more information, can help realise a low-carbon future and deliver a Just Transition, by supporting economic development and equitable, inclusive growth.

*“The autonomous charging and discharging of batteries in smart grids is only made possible by digital infrastructure”*

**JAMES MAGOR**

develop that digital literacy in order to connect with new technologies, otherwise the potential fallout in terms of unemployment will be significant. The prize is worth it: increasing internet penetration from 35 to 75 percent in underserved regions could create 140 million jobs.

### **Q** How is digital infrastructure specifically driving sustainability outcomes in the education, healthcare and banking sectors that you have referenced?

**DS:** I would like to share the story of our investment in South African

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DALMAR SHEIKH

fibre-to-the-home operator Octotel, where we installed, free of charge, a fibre connection to every registered primary and high school that the network passed. This provided those students with access to information and connected them, not just within the Western Cape, but with the rest of the world. Pass rates in connected schools have proved to be significantly higher than in unconnected schools. Octotel has been measuring those social outcomes as well.

**JM:** At Actis we focus our investment on real assets, but a good example of digital infrastructure creating positive impact in education, aligned to the UN SDGs, would be one of our past investments, Universidade Cruzeiro do Sul – a Brazilian tertiary education institution that introduced an online distance learning education programme. Most of the enrolment for the online programme came from working parents, in many cases mothers, who would simply not have otherwise been able to balance family and earning commitments with campus learning. In other words, digitisation opened up access to affordable tertiary education to a whole new demographic.

Electronic online healthcare records, meanwhile, have fundamentally enhanced patient outcomes. And if you take a market, such as Indonesia, where

doctors are particularly concentrated in urban centres, then the growth of mobile networks in rural areas is significantly increasing access to healthcare for patients across the entire country as healthcare services move online.

Finally, e-banking is important for enhancing financial inclusion, with particular benefit for women. It is also having a positive impact by formalising the SME sector.

**Q** **Despite the societal benefits and the role that digital infrastructure has to play in supporting the energy transition, the sector still faces environmental challenges. How do you reconcile the two?**

**DS:** Data centres are, of course, huge consumers of power. However, the inexorable rise of cloud computing is creating efficiencies. Cloud customers consume 77 percent fewer servers than enterprises that manage their data in-house. It is hard to predict how much you are going to need to compute when you have an on-premise model and so the tendency is overprovision. When you operate in the cloud, however, you pay as you consume.

Meanwhile, cloud service providers are very cost conscious, and with power one of their biggest expenditures, they are highly motivated to improve efficiency. Five or six years ago, the industry average PUE, or power usage effectiveness, would have been between 1.6 and 1.8. Now, efficiency drives mean some data centres are approaching 1.1 PUE. The anticipation is that the data centres sector can become carbon neutral within the next five to 10 years.

**JM:** I think you have to start from the premise that data storage is a necessity and not a luxury, for all the reasons we have discussed: enabling access to education, to healthcare, to financial services and facilitating the energy transition. In-house storage consumes between 70 and 90 percent more power than a hyperscale data centre. So,

yes, data centres are power hungry, but they are part of the solution and not the problem.

**Q** **How is Actis differentiated within the digital infrastructure space when it comes to sustainability?**

**JM:** Let’s start with governance. We are focused on sustainability from the very outset of our investment process and the boards of our companies are focused on sustainability, too. I would add that Actis has extensive experience in the renewable power sector, due to our long heritage of investment there. We can bring this experience to bear in the digital infrastructure space. That can be a huge competitive advantage as digital infrastructure businesses are increasingly seeking low-carbon power solutions.

In addition, we are equally focused on the social component. For example, we own a data centre company in Nigeria called Rack Centre. We launched a ‘Skills for Employment’ programme in Lagos, which is focused on providing young people living in the vicinity of the data centre with free access to digital training. Not only are we able to bring our power sector expertise to ensure the data centre has as low a carbon footprint as possible, but we are also integrating the social element. In fact, in April Rack Centre became the first data centre in Africa to be awarded IFC EDGE sustainability certification.

**DS:** The fact that we focus on investing behind major global themes, such as digital infrastructure, means that we have a huge impact in terms of job creation in communities where it is desperately needed. But I would also add that our approach is a differentiator when it comes to financial performance, and not just environmental and social impact. Our track record and experience of developing futureproofed sustainability leaders around the world means we can deliver superior returns to our investors. ■