


Capgemini 

**FUTURE-PROOFING
INNOVATION x
HIGH TECH**

INTRODUCTION

Future-Proofing Innovation is a series of roundtable conversations hosted by Capgemini sustainability and business experts inviting clients, partners, academics, and influencers to discuss the general topic of sustainability in innovation. The global anchor for this series is James Robey, Capgemini's Global Head of Sustainability.

Each discussion focuses on a specific industry. The fifth roundtable took place in Paris on January 31st 2023, with a focus on transport. This article is based on that exchange, which you can find in full here: [insert link]

Most major multinational organizations are acutely aware of their responsibilities to the environment, and Capgemini is no different. We started to put our own plans in place over 15 years ago, we were one of the first to set science-based targets in 2016, and since 2020 we have been committed to becoming a net zero business.

However, as a professional services company, we recognize that our carbon footprint is relatively modest compared to many of our clients. Consequently, alongside our own decarbonization commitments, we have set a target to help our clients reduce their footprints, and we are systematically embedding sustainability across our portfolio of client services.

That's why this year we are holding roundtable events across different countries and different sectors with clients, partners, and other leading thinkers. We've been discussing sustainability, and what organizations can do to address the challenges while future-proofing innovation.

Dr. James Robey
Global Head of Sustainability, Capgemini

HIGH TECH ROUNDTABLE

CAPGEMINI SAN FRANCISCO AIE, JULY 26th 2022

The session was hosted by Sol Salinas, Global Executive Vice President & North America Sustainability Lead at Capgemini, with guests including Sandy Pentland (Professor at MIT and Stanford), Michael Bates (Global Sales GM, Energy & Sustainability at Intel), Sreejit Roy (Senior Partner, Hybrid Cloud Transformation at IBM), Mary de Wysocki (VP Corporate Affairs, CSR & Sustainability at Cisco) and John C. Havens (Sustainability Practice Lead at IEEE Standards Association).

In his opening remarks, Professor Sandy Pentland noted that, around 20 years ago, the UN started gathering data at country level to map trends in areas including poverty, inequality, and changes in the environment. With good data, it was felt, you could target investment much more effectively.





LOOKING TO THE FUTURE: A DIGITALLY ENABLED SMART GRID

Building renewables into the energy supply and using AI to balance loads is enabling companies, citizens, and consumers to write out the impacts of climate change – and in the process, we’re beginning to create a smart energy grid that’s even more distributed, clean, and resilient. It’s resilient in the sense of sustainability, and also because its distributed redundancy enables it to withstand cyberattacks.

Michael believed that in the short term, the focus would be more on climate adaptation than climate mitigation, and that this pragmatic shift would probably be more beneficial. In the longer term, he looked forward to what he termed a software-defined smart grid, where the highest and best-use energy supply is chosen based on market needs, regardless of where it resides on the grid, which doesn’t exist today. Based on some of the uses of the data being collected today, he saw this as the direction of travel.

Solutions to sustainability depend to a large extent on the data that organizations gather – but as Sreejit Roy, Senior Partner – Hybrid Cloud Transformation, IBM, pointed out, (a) there is so much of it, (b) the insights to be gained from it vary greatly by sector, and (c) organizations need to optimize it and to have a strategy for its use.

They also need to use technology to reduce the carbon footprint of the network on which the data resides, and that, in turn, means the data needs to be sufficiently granular. Why? Because if the reports indicate general data center energy usage but don’t break it down by virtual server, they’re not actionable, and they’re not ESG-compliant.

It’s a challenge that must be accepted – but it’s an attractive proposition too. As Michael Bates, Global Sales GM – Energy & Sustainability, Intel, said, “We’re all moving to a low-carbon world, but there’s an opportunity to make a big revenue play here as well. Forbes says it’s the largest commercial opportunity in a lifetime.”

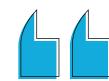


ESG REPORTING: ACHIEVING CONSISTENCY

For the environment in particular, which is our focus here, the difficulty has been that in business, the data hasn’t been dependable, and for two main reasons. One, some organizations have been reluctant to share details of their carbon footprint – although the advent of Web3 may enable value chain data to be aggregated and accessed without the need for individual parties to quantify and share their own numbers.

Two, there are so many variables. For instance, minerals are mined, moved, and embedded in increasingly large sub-assemblies, and then moved again, until manufacturing is complete – so at what point or points in the manufacturing and logistics cycles do we measure carbon footprint?

In short, we haven’t yet seen a standard approach to carbon footprint reporting, or indeed to any sort of environmental, social, and governance (ESG) reporting. However, pressure is growing to convene the high-tech industry around such a standard, and much of it is coming from the financial markets to do deep audits and risk assessments in the carbon footprint.



“Data, big data, and these new emerging technologies such as AI and quantum computing are really exciting for me. They will help us to understand complete lifecycles.”

Mary de Wysocki

VP Corporate Affairs – CSR & Sustainability,
Cisco



MEASURING THE RIGHT THINGS

John C. Havens, Sustainability Practice Lead at the IEEE Standards Association, spoke starkly about the scale and imminence of the climate change challenge. “There are no reports that I see,” he said, “that say we’re going to stay under a net temperature rise of 1.5 degrees.” That may sound like a gloomy prognostication, but John said he saw it as a “wonderful opportunity,” because it provides an imperative to innovate in a way that goes beyond net zero to “net positive” – to give back more than we take, and to establish what he called “long-term planetary flourishing,” which goes beyond traditional metrics such as GDP.

Sandy Pentland and Mary de Wysocki, VP Corporate Affairs – CSR & Sustainability, Cisco, each agreed that GDP as it was originally conceived didn’t factor in issues such as

environmental metrics or human wellbeing or community, and that this needed to change. Sandy said we needed to imagine “a world that counts. A world where people don’t do things that have negative impacts without having them counted and available to look at.”

Michael Bates said that recalibrating in this way didn’t preclude the possibility of growth. It needn’t be measured like GDP, but in the transfer of wealth from a carbon-based energy system to a new clean, resilient energy system. Sandy Pentland concurred, and said that a new paradigm could raise standards of living, enabling people to lead healthy, productive lives, but without needing to waste natural resources.

DIGITAL TRANSFORMATION AND SUSTAINABILITY: BUILDING A NEW REALITY

“What can we do,” Mary de Wysocki, VP Corporate Affairs – CSR & Sustainability, Cisco, asked, “to signal, to nurture, to start creating the market demand for a sustainable, green, inclusive opportunity, really moving to the values-based economy we’re discussing here?”

In reply, Sol Salinas, Capgemini’s Global Executive Vice President & North America Sustainability Lead and facilitator for this event, said that Capgemini was building consensus to make the principle of net positive a reality. The aim was to create a measurable and reparative business model across all use cases, and across all industries. Digital transformation will be critical in successfully achieving this consensus and establishing the business model.

One element of this model, said James Robey, could be the notion of a value-added carbon tax that is part of every data transaction. Another element, he added, could be a better way of conceptualizing carbon. Just as people understand that big swings in the Dow Jones or FTSE indices are good or bad, so a carbon measure of this kind could make the topic more real and immediate, so it becomes a kind of touchpoint in everybody’s lives.



“Unless and until we are thinking about sustainability in everything we do – until that mindset changes – any amount of technology is not going to be effective.”

Sreejit Roy

Senior Partner – Hybrid Cloud Transformation,
IBM





TAKING STOCK

What was most interesting about this discussion was that, while there was a clear consensus on the scale and immediacy of climate change, there were different viewpoints about the approach to take and about how to get there. Our panel members each brought their own knowledge, experience, and opinions to the table, and that made the conversation not only thought-provoking, but productive.

Other roundtable events are sure to bring additional fresh thinking to the topic. It's going to be not just a fascinating journey – but the most important one the world is facing.

WEB3 AND SUSTAINABILITY

The panel agreed that Web3 had a key role to play in sustainability efforts. Sandy Pentland said Web3 allowed organizations to keep their data locally and control it better, and that this made it easier to quantify the carbon figures implicit in the movement of materials, sub-assemblies, and products. He pointed out that this local quantification would make it easier to calculate the value-added carbon tax suggested by James Robey. "What's interesting to me," he added, "is that already 60% of all container shipping in the world runs on what might be called a Web3 system put together by IBM and Maersk. It makes it easier for organizations to make themselves publicly accountable."

Sreejit Roy confirmed that IBM was putting a lot of work into Web3. He said there were three critical success factors. The first two were the establishment of the complex infrastructure that Web3 needs, and the implementation of cross-industry consensus protocols. The third was the need for the culture to change – but the good news, he said, is that the next generation is more knowledgeable about sustainability than their predecessors, and they will take care of this cultural shift.

Mary de Wysocki took up this point. She said that current and emerging generations of technology engineers need to help organizations bring differentiated thinking to their innovation – for instance, by applying data center and smart building knowledge to ground-breaking nature-based developments.



"Innovation needs to come with societal KPIs. We need to measure and be accountable for long-term environmental flourishing and human wellbeing. It's not going to be easy, but it's essential."

John C. Havens
Sustainability Practice Lead, IEEE Standards Association



FUTURE-PROOFING INNOVATION:

The High Tech Panel



Sol Salinas
Global Executive Vice President & North America Sustainability Lead, Capgemini



James Robey
Global Head of Sustainability, Capgemini



Sandy Pentland
Professor, MIT / Stanford



Mary de Wysocki
VP Corporate Affairs – CSR & Sustainability, Cisco



Michael Bates
Global Sales GM – Energy & Sustainability, Intel



Sreejit Roy
Senior Partner – Hybrid Cloud Transformation, IBM



John C. Havens
Sustainability Practice Lead, IEEE Standards Association



About Capgemini

Capgemini is a global leader in partnering with companies to transform and manage their business by harnessing the power of technology. The Group is guided everyday by its purpose of unleashing human energy through technology for an inclusive and sustainable future. It is a responsible and diverse organization of over 340,000 team members in more than 50 countries. With its strong 55-year heritage and deep industry expertise, Capgemini is trusted by its clients to address the entire breadth of their business needs, from strategy and design to operations, fueled by the fast evolving and innovative world of cloud, data, AI, connectivity, software, digital engineering and platforms. The Group reported in 2021 global revenues of €18 billion.

