



## **Resilience First Webinar Summary**

### **Decarbonisation and the Role of Technology 12 October 2021**

#### **Chair:**

Robert Hall, Director of Strategy, Resilience First.

#### **Speakers:**

Caroline Field, Energy Sector Lead, The Resilience Shift  
Nayaz Mohammed, Partner, Resilience, PwC Middle East  
Andy Walker, Technical Marketing Director, Johnson Matthey

#### **Where we are:**

- Global megatrends are shaping our world: climate-change emergency, energy transition, mobility transformation, population and longevity.
- Running across this is the digital revolution, which will enable and accelerate some of these aspects. The key issue is the lack of clarity as to which way the world is going to move. There is, however, hope that the forthcoming COP26 will really start to provide the additional focus and impetus behind clean energy transition.
- Big challenge ahead of us: we need to reach a 1.5°C trajectory. Historically, emissions have been going up; to get on the trajectory we need greenhouse gas emissions to fall by about 45% over the next decade.
- There are grounds for optimism: 46 countries and states have defined dates to become net zero; almost 80% of global GDP has net-zero targets, while just two years ago the figure was 60%; and the COVID crisis has not slowed this trend. All of this is really going to help as we look to combat climate change and accelerate the mitigation.

#### **What's required to drive progress – the headlines:**

- We need to deploy today what we have, learn by doing, and move quickly to drive innovation. Over the next decade we need to invest in green technologies and all the approaches that we have at our disposal to bring down the emissions.
- Cross-sector coupling is essential. Sectors need to break down silos to find optimum solutions. All must contribute and move together. Systems thinking is key. As boundaries between energy, transport, water and digitisation are increasingly intertwined, changes in one system can have a ripple effect in other systems.
- Energy transition will be a change larger than anything the energy sector has ever experienced, with huge shifts in infrastructure, operation and regulation. The potential for a cleaner, greener, more responsible energy system is very real, but transition brings with it potential disruption, stranded assets, and overburdened communities. Creating a system

that is resilient is incredibly important. Sustainable energy generation, storage and management are required to enable smooth transition.

- Cities play a critical role in responding to global threat such as climate and ecological emergency, but they also need to face these challenges while also responding to the day-to-day needs of their residents, ensuring investments return tangible benefits and that effects are felt equitably. We need to ensure it's not tech for the sake of tech, but rather responds to climate change drivers and opportunities.
- Increases in energy efficiency – a quick win – with deployment of future low-carbon tech will play a major role, but this can only happen with an upskilled workforce to develop and implement technologies. Investing in people and innovation will be crucial if we are to stand a chance of achieving net zero by 2050.
- Important to learn from other countries, take the good practices, and apply; additionally, important, to look at regulation in other nations, customise, and apply.
- Circularity has a big part to play in mitigating the effects of depletion of the earth's resources and is gathering momentum, decoupling economic activity from the consumption of materials and energy and creating closed-loop cycles in which waste is minimised/eliminated and resources are reused. Sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible can tackle our global challenges of climate change, biodiversity loss, and waste.

#### **Data and cities:**

- We are generating so much data in cities, allowing us to monitor our systems and progress around building data, infrastructure, utilities and transportation. This will only increase. Managing that data and deploying it usefully is key – while also ensuring that we are not vulnerable to cyberattack.
- We need to inform stakeholders about why they need to pay attention to the data – and what action is required. As ever, human tendency to pay attention only to immediate risk can be dangerous. Data are there to drive the right responses.
- Climate data at city scale can mitigate impacts. But there is often a disconnect in that we are not necessarily using that data to inform planning and decision-making.

#### **Policymakers can play their part in unlocking the opportunity:**

- There are many plans and goals out there, but it's about implementation.
- There is a big role for policymakers to incentivise early production, early uptake and to bring spiralling costs down.
- Policymakers need to shift the dial from policymaking to stronger governance. Policymaking in itself is not the end of the road – it's the beginning. Measuring the performance of industries and sectors using KPIs annually is essential: companies will bring the tech to meet those targets.

#### **Technology is not the only answer:**

- While technology can bring significant wins, we need to ensure that we're not creating more problems. We also need to change our behaviour, helping people to understand what they can do to make a difference.
- Companies are looking at their sustainability profile and carbon footprint. We will likely see less use of aviation by business, particularly for short meetings.
- The pandemic has changed behaviours. We have an opportunity to keep that change, not to go back to where we were and use as a catalyst for permanent change.

- The challenge remains in getting across the message that climate change is going to have a much bigger economic and people impact than the pandemic. As a slower moving issue, it can be hard to communicate the sense of urgency for action.

A link to the webinar recording can be found [here](#).

## **Speakers' Bios:**

**Robert Hall** is the Director of Strategy of Resilience First. He was previously the Director of the Security & Resilience Network at London First. Before joining London First in 2013, he was Director of Resilience at G4S Risk Management Consulting. Robert has worked in the risk, security and resilience arenas in both the public and private sectors for many years.

He has held senior positions in two FTSE100 companies that specialise in financial services and manufacturing. He has also been Head of Analysis at a national intelligence agency and Managing Editor of security titles at an international publishing company. In 2000, he founded and managed an international forum on global security and law enforcement for senior executives in government, business and academia.

Robert spent his early career in the military before moving into the commercial world. He has written and presented extensively on strategic risk and security issues.

**Andy Walker** has 25 years of experience in the automotive emission control area with Johnson Matthey (JM), developing catalysts and systems to control emissions from passenger cars, truck, buses and off-road machinery. His most recent position in this area was the Global Technology Director, where he was responsible for leading Johnson Matthey's global technical activities in the Emission Control Technologies area. In January 2018 he moved to the newly created position of Technical Marketing Director for JM's New Markets areas, where his main focus is in the alternative powertrain area, driving the uptake of Battery Electric Vehicles and Fuel Cell powered vehicles globally.

Andy joined Johnson Matthey's Research Centre in 1991, where he worked in the field of automotive catalysis for 8 years. In 1999 he moved to JM's European Development Centre. Before being appointed Head of Global Technology and Development Andy held positions such as Divisional Technology Director for ECT catalysis and Heavy Duty Diesel Technology Director.

Outside of Johnson Matthey, Andy was elected Fellow of the Society of Automotive Engineers in 2011. He was also part of the local organising committee for Heavy-Duty Diesel Emissions Control Symposium (HDDEC).

Andy graduated from Trinity College Cambridge with a BA in Natural Sciences and a Chemistry PhD.

**Caroline Field** leads Arup's Organisational Resilience Advisory Offer in UKIMEA. Her team has developed a comprehensive "resilience in the round" approach that considers leadership, operations, people, supply chains as well as physical and virtual systems. They consider measures to reduce disruption but also to capitalise on business opportunities, creating a robust, inclusive, agile and integrated business. Caroline is also the Energy Sector Lead at The Resilience Shift.

She has over 20 years of professional experience including 12 years in counter terrorism, blast mitigation and physical security and 7 years in earthquake engineering and dynamics.

She has been active in developing standards in resilience throughout my career. She is the Chair for the recently published British Standard on City Resilience, Co-Chair for the ASCE Infrastructure Resiliency Division SPEED committee, Leads SME for the AEI Resilience program and member of the ISO Urban Resilience Standard Working Group.

She also regularly presents externally on the subject of resilience, with a recent keynote address at the ASCE IRD Forum in Washington DC and the 2018 Global Real Estate Sustainability Benchmark (GRESB) Resilience Conference in London.

She is a Chartered Engineer with the Institute of Civil Engineers in the UK, a Member of the Register of Security Engineers and Specialists, a licensed professional engineer in California and a Member of the American Society of Civil Engineers and is currently Visiting Professor at Loughborough University.

**Nayaz Mohammed** is a Partner in the Big 4 Firm, PriceWaterhouseCoopers in the Middle Practice.

Nayaz has over 22 years' experience in consulting in Resilience, Business Continuity, IT DR and Crisis management. He was the leader for SOC and Resilience Services across the Middle East and North African Region in another Big 4 Firm prior to joining PWC.

Nayaz completed his Master's in Business Administration and holds a Bachelor's Degree in Engineering.

He is also involved in various cyber security related engagements and eServices and Technology Transformation for Government.

Nayaz holds Certifications in ISO 22301 LI, IT DR Specialist, Certified Information Systems Auditor (CISA), Certified ISO27001 Lead Auditor, Certified Information Security Manager (CISM), Project Management Professional (USA), COBIT Certified.