#### October 2021

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It's becoming increasingly clear the pandemic has created problems of its own – supply chain crises, a worldwide energy crunch, and inflation. And it has masked others, as instability remains rife and climate pressures become more acute. Even the <u>somewhat mediocre goals of</u> COP26 are out of reach. The IEA says that under current projections, carbon use will drop by just 40% by 2050.

So now it's about developing resilience – in governments, civil society and companies. Scenarios are an excellent way to generate, as we say, "robust decisions in uncertain times". We've been surprised, and pleased, to see how many people are starting to get it. If you'd like to talk resilience, get in touch. We've got some good ideas.

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On November 4<sup>th</sup>, SAMI is running a *free webinar* on Patricia Lustig and Gill Ringland's recently published book 'New Shoots: people making fresh choices in a changing world'. The book provides evidence of the forces at work to help people make sense of these changes. It explores levers for change and includes snapshots of projects and people innovating and adapting. The book is designed to empower people to take action. The co-authors will use some examples from the book to explain why a combination of social change and technology makes them optimistic about the future. Sign up here.

SAMI has published a new *Working Pape*r, a review of the US National Intelligence Center's report: "Global Trends 2040: A more contested world". Find it on the <u>Presentations and Reports</u> page of our website.

## **Executive Education**

Our online course "Understanding the Future" will be run again on 22<sup>nd</sup> to 26<sup>th</sup> November. The course fee is £490 + VAT, and discounts may be available for self-funded individuals. For more information, please email us at training@samiconsulting.co.uk.

A range of information on various futures techniques – the basis of the GOS Futures

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Toolkit - is available on our website.

#### **Futures Issues**

Malaria parasites in Africa have <u>developed resistance</u> to a key family of drugs - artemisinin and its relatives - used to protect against them. Mutations are causing an observable drop in antimalarials' ability to quickly treat people with the disease.

Optic fibres can be configured as <u>vibration sensors</u> eg identifying a nearby digger, and alerting its owner that it is in danger of being dug up. A city's installed installed base of fibre could be turned into sensors that removes the need for loT devices.

A review by Thomas Frey of <u>developments in construction</u> identifies modular construction, 3D printing construction, and robotic bricklaying as having the most impact, in an environment of a declining workforce and increasing costs.

Recent reports of <u>China testing a new hypersonic missile delivery system have been denied by the Chinese government.</u> Hypersonic missiles have been a concern since before Russia's <u>successful Zircon tests</u> in October of last year. The concern is not so much speed – ballistic missiles are faster – but in manoeuvrability. Hypersonic missiles can change direction in flight, rendering anti-ballistic missile systems ineffective.

In trials of a <u>robotic milking machine</u>, combined with automated feeding and cleaning systems, cows <u>chose to</u> make 3.7 visits each day to be milked compared with twice daily milking on the traditional system. The average daily milk yield per cow has increased to 39 litres and resting time has lengthened by three hours daily, benefitting fertility.

In his new book, "<u>The Power of Geography</u>: Ten Maps That Reveal the Future of Our World", Tim Marshall explores ten regions that are set to shape global politics in a new age of great-power rivalry.

China's largest battery manufacturer intends to invest \$5 billion in <u>a battery recycling factory</u>. The new factory will recycle used battery materials and produce materials including lithium iron phosphate, lithium cobaltite, and cathode materials such as graphite and phosphoric acid. Chinese law imposes a duty on battery manufacturers to be responsible for recycling their products when they reach the end of their useful life.

WHO has issued its first global report on <u>Artificial Intelligence (AI) in health</u> with six guiding principles for its design and use. The growing use of AI for health presents governments, providers, and communities with opportunities and challenges.

# **Our Blogs**

In our blogs we have continued our short series on Patricia Lustig and Gill Ringland's new book with a look how thinking on the issue of limits to growth has changed since the publication of the book of that name in the 1970s. We also examined the recent report by the Parliamentary Office for Science and Technology on Smart Cities which reviewed the wide range of issues facing these cities and acts as a good introduction

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to the overall topic. Most recently we have begun a short series looking at the upcoming <u>COP26 meeting with a closer look at the first of their goals</u> – that of 'net zero by mid-century'.

If you'd like to receive reminders when our blogs are published, then <a href="check the link">check the link</a> on our website or if you would like to write a blog for us, then please <a href="contact us">contact us</a> here A lot of our conversations recently have been about robustness and resilience – about how to introduce a confidence in the future into organisations and companies. It is hardly a surprise – whilst vaccinations have reduced the death and hospitalisation rates from Covid, in the UK at least infection rates continue to soar. In the US, <a href="daily death rates remain above 1,500">daily death rates remain above 1,500</a>. And this at a time when we are meant to be "coming out of the pandemic".

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