

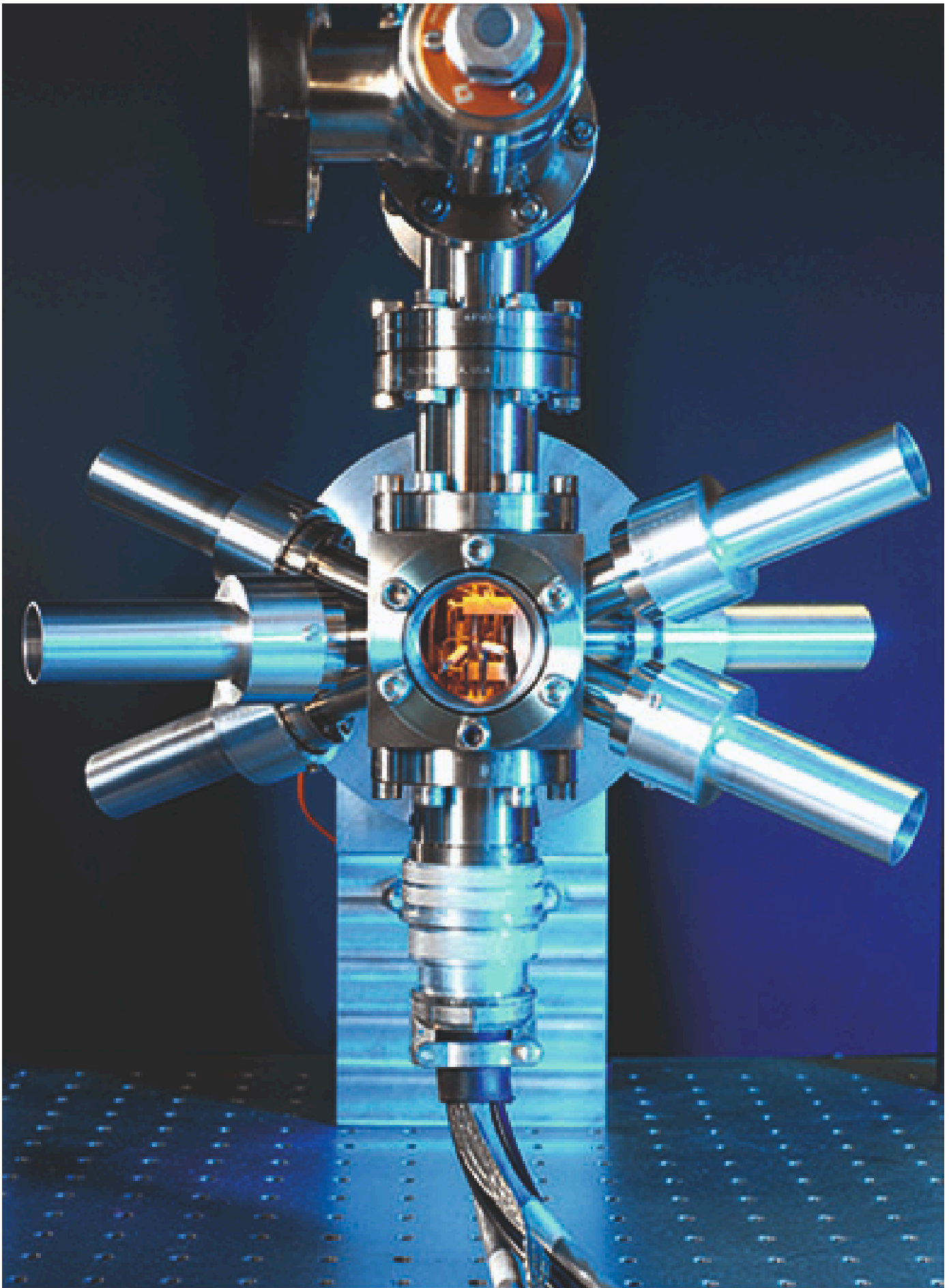
THE REVIEW (/cisiweb2/cisi-news/the-review)

The Review -Connecting the dots

For the 695th Lord Mayor, Professor Michael Mainelli, Chartered FCSI(Hon), life is all about making connections

by Natasha Turner





In an optical atomic clock, the

natural oscillations of the electronic cloud around atoms act like the pendulum in a conventional clock. However, atomic clocks are far more precise because atomic oscillations have a much higher frequency and are more stable under controlled conditions.

An optical atomic clock – a transparent case with a lattice of interconnecting metal rods suspended inside it – can be found on the winding staircase in Mansion House, the official residence of the Lord Mayor of the City of London. Its latest resident, Professor Michael Mainelli, seems delighted to have it there, on loan from the National Physical Laboratory.

“I am pleased that we got the atomic clock,” he says with a smile. In 1955, physicist Louis Essen made history by building the first atomic clock that was accurate enough to be a time standard at the National Physical Laboratory (NPL) in Middlesex, the UK’s metrology institute. According to the institute, the version on the Mansion House staircase was the world’s most accurate optical clock in 2004, and next-generation models are constantly being developed to improve timekeeping accuracy even further.

The atomic clock is just one of the ‘science experiments’ – including a trial on the use of seagrass in the Thames for carbon sequestration and a microplastics count around Britain with disability foundation Wetwheels and carmaker Suzuki – that Michael is championing during his time as Lord Mayor. It’s also an apt symbol of the progressive approach for which he’d like London to be recognised.

“As I travel the world, people say, ‘You claim London offers fascinating stuff. Prove it.’” Showcasing these scientific advancements, he says, highlights the “rich thinking going on here” and helps to “move the dial a little” so that the City is the first choice for entrepreneurs anywhere in the world to have their ideas realised.

Originally a research scientist in aerospace (rocket science) and computing (<https://www.cityoflondon.gov.uk/about-us/about-the-city-of-london-corporation/lord-mayor/lord-mayor-biography>), (architecture and cartography), Michael is no stranger to scientific and technological discoveries. He created the world's first complete commercial digital map (<https://www.cisi.org/cisiweb2/docs/default-source/cisi-website/the-review-archive/reviewoctober19.pdf#page=30>) in 1983 when he was 24 years old, and in 1994, he co-founded the City-based think tank Z/Yen, which looks to use "better finance and technology" to "advance society".

Human connection

Much like the NPL's objective to more accurately synchronise timekeeping worldwide, Michael sees his task as Lord Mayor to synchronise connections between people. He's homed in on this ambition through the theme for his year in office: Connect to Prosper.

When asked to elaborate on the theme, he references the City's history. London opened its first coffee house in 1652 (<https://halls.lse.ac.uk/walking-the-london-coffeehouse-trail-174256>), providing a unique space for people to connect and develop their ideas. Additionally, he says, as the historical centre of choice for 615,000 workers (<https://www.cityoflondon.gov.uk/supporting-businesses/economic-research/research-publications/city-statistics-briefing>), and 8,600 residents (<https://www.ons.gov.uk/visualisations/censuspopulationchange/E09000001/>), the Square Mile is "the world's oldest democratic workers' and residents' cooperative". This meeting of minds and multiple disciplines is what Michael believes makes London "much better connected" than many cities and is why he views it as "the world's coffee house".

"You're alone inside your head, and the only thing out there that's worth doing is connecting with other intelligences"

To celebrate this, he's launched an online lecture series during his time as Lord Mayor called Knowledge Miles (<https://www.greshamsociety.org/webinar-index/>), featuring speakers from every area of expertise within the Square Mile. Another of his initiatives as Lord Mayor, Coffee Colloquies (<https://www.cityoflondon.gov.uk/about-us/about-the-city-of-london-corporation/lord-mayor/lord-mayors-coffee-colloquies>), has been set up to cover each of the UN's 17 Sustainable Development Goals (SDGs). He describes the in-person events at Mansion

House as “speed dating sessions for knowledge sharing”. The format is simple: four experts each give a ten-minute presentation on their field (timed with a sand-timer), and the floor is then opened to 45 minutes of discussion, networking and, of course, coffee.

Meeting and connecting with people is a part of the job Michael appears to relish. During our interview, bagpipes are still visible in his office from a Burns Night supper with the First Minister of Scotland – “It’s a bit terrifying to play in front of people, but for the First Minister, I couldn’t resist.” His quiet humour and genuine interest in others’ experiences are evident throughout the anecdotes he shares. He switches easily between recollections of meeting a 16-year-old police cadet, and the gentle ribbing that followed when it emerged he knew her English teacher, to recounting his discussions on professional services exports with the deputy governor of the Bank of Japan.

“I’ve always tried to figure out how others think,” says Michael. “You’re alone inside your head, and the only thing out there that’s worth doing is connecting with other intelligences. Talking to somebody and seeing how they think differently to you – I really enjoy that. I think people are great fun.”



Going green

First Minister Humza Yousaf's visit saw the [signing of a declaration \(https://www.gov.scot/publications/city-london-burns-supper-first-ministers-speech-29-january-2024/\)](https://www.gov.scot/publications/city-london-burns-supper-first-ministers-speech-29-january-2024/) on a joined-up approach to promoting financial services in the UK – an approach that Michael describes as going “exceedingly well”. This includes an agreement to promote green finance – an area of particular interest for Michael, whose website describes him as a “committed environmentalist since the 1970s”.

Long Finance, the research and events initiative of Z/Yen (the think tank co-founded by Michael), publishes an annual [Global Green Finance Index \(https://www.longfinance.net/programmes/financial-centre-futures/global-green-finance-index/\)](https://www.longfinance.net/programmes/financial-centre-futures/global-green-finance-index/) (GGFI) evaluating green finance offerings from financial centres around the world. In the latest edition, published in October 2023, London retains the top spot. The index also notes the mention of carbon markets – the formation of which Michael says he personally had a hand in, although he notes they are still a “quite tiny market” – by many respondents.

- [Read our feature on carbon trading: 'Hero or zero?' \(https://www.cisi.org/cisiweb2/cisi-learning/review-article?learningid=12438\)](https://www.cisi.org/cisiweb2/cisi-learning/review-article?learningid=12438)

A particular focus for Michael, outlined in a supplement to the 2023 edition of the GGFI, is the issue of managing space debris, particularly in connection with addressing the UN SDGs. According to the report, almost 40% of the targets that support the 17 SDGs use “monitoring systems using geolocation and earth observation satellites”.

It's clear that the clutter beyond our atmosphere could have ramifications for our environment. The [695th Lord Mayor's Space Protection Initiative \(https://www.mainelli.org/?page_id=3711\)](https://www.mainelli.org/?page_id=3711) (see more in the box out) was launched in October 2023 to combine technology and financial instruments in tackling this issue.

Michael also attended COP28 in the UAE in December 2023, where headline outcomes included the UN's first [global stocktake \(https://unfccc.int/topics/global-stocktake\)](https://unfccc.int/topics/global-stocktake) and [agreement \(https://unfccc.int/news/cop28-agreement-signals-beginning-of-the-end-of-the-fossil-fuel-era\)](https://unfccc.int/news/cop28-agreement-signals-beginning-of-the-end-of-the-fossil-fuel-era) from participating countries on the need to “transition away from fossil fuels in energy systems”.

“I have a problem with even the idea of transition finance, which has got everybody going,” Michael says. “It is principally governments and NGOs talking about transition finance – from a business point of view, it just means ‘we take your money and tell you where to spend it.’”

The lack of consensus around transition markets and their financing mechanisms means that, in their current iteration, Michael believes “they're not going to go very far”. To him, progress in global green finance relies on moving harder and faster on emissions trading schemes (ETS)

which, along with carbon pricing, currently cover around **23% of global emissions** (<https://www.worldbank.org/en/news/press-release/2023/05/23/record-high-revenues-from-global-carbon-pricing-near-100-billion>). Emissions trading, also known as 'cap and trade', is where a government sets a cap on the maximum level of emissions and creates permits, or allowances, for each unit of emissions allowed under the cap to incentivise businesses to reduce their emissions.

To Michael, progress in global green finance relies on moving harder and faster on emissions trading schemes

In July 2023, Michael published a proposal, **All-In Finance Against Carbon** (<https://www.longfinance.net/news/pamphleteers/all-in-finance-against-carbon-initiative/>), calling for a "united front" on using the "totality of global finance to stop greenhouse gas emissions". His proposed steps include suggestions for making ETS markets work, setting standards and targets for government issuance of sovereign sustainability-linked bonds (SLBs), using insurance-issued performance bonds to establish the credibility of voluntary carbon markets, and building international public-private catastrophe reinsurance vehicles.

"Countries that have exhibited the most serious decreases in carbon emissions have been those that have had a good ETS because suddenly it's costing you money," Michael says, referring to the incentives inherent to the scheme. He also singles out SLBs, such as those **launched in 2022 by Chile and Uruguay** (<https://www.lse.ac.uk/granthaminstitute/explainers/what-are-sustainability-linked-bonds-and-how-can-they-help-developing-countries/>). As SLBs carry interest rates that are conditional on meeting predetermined performance indicators, he believes they "lead to the right sort of decisions".

Another part of the agreement made at COP28 calls on countries to accelerate low- and zero-emission technologies such as **carbon capture and storage** (https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf) (CCS). CCS has come under fire from scientists for being unproven to work at scale and distracting investors from eliminating the source of emissions.

Should green finance's focus be on decarbonising high-polluting industries or on scaling up innovation on nascent sustainable technologies? Inevitably, the answer lies in a bit of both. "Innovation isn't something that you can manage," Michael says. He uses the infancy of the internet and the initial infrastructure hurdles, such as installing fibre cables worldwide, as an

example. It was only when the market recognised the benefits the technology promised – and the losses that would be realised if it wasn't capitalised on – that innovation could truly happen. His implication is clear: a similar reckoning regarding the environment may be necessary to drive real change.

Fourteen centuries of work

That mix of the old and the new, tradition and innovation, is what charges through the City of London. It's a place in which ceremonies like cart making are preserved but also where development, such as sending the **first wireless signals** (<https://www.thecityofldn.com/our-story/>) or, for that matter, seagrass trials for carbon sequestration, takes place. Michael also refers to the City's "booming" tech sector – "see the atomic clock on the staircase" – and points out that **a third of the country's financial services jobs are in London** (<https://www.thecityuk.com/about-us/>).

"We're very proud of the City because we get things done," he says. "We're about commerce, community and charity. Our strategy is to create wealth and then use that wealth to improve our environment – both the business environment, regulation and training, and the physical environment. And then, we share that prosperity and return to creating more wealth. In London, that's been the past 14 centuries of work."

This local approach, with global results, is what Michael wants to develop even further during his remaining months as Lord Mayor. And his enthusiasm for the work shines through. "Why aren't there more Lord Mayors?" he jokes. "Everyone should be Lord Mayor for a year."

Time may be ticking on an increasingly accurate clock, but it seems Michael is just getting started.

FIVE OF THE LORD MAYOR'S INITIATIVES

Since we first profiled Michael for *The Review* in 2019

([https://www.cisi.org/cisiweb2/cisi-news/the-review-article-details?](https://www.cisi.org/cisiweb2/cisi-news/the-review-article-details?articleid=7614&learningid=10534)

[articleid=7614&learningid=10534](https://www.cisi.org/cisiweb2/cisi-news/the-review-article-details?articleid=7614&learningid=10534)), when he had recently taken up the role of Alderman Sheriff of the City of London, the world has seen dramatic changes. The Covid pandemic, in particular, taught Michael the importance of needing to adjust swiftly. He prepared extensively for his tenure as Lord Mayor so that the five major projects listed below could "hit the ground running".

GALENOS (<https://galenos.org.uk/>).

The Global Alliance for Living Evidence on aNxiety, depressiOn and pSychosis [sic], or GALENOS, was launched in June 2023. The Lord Mayor's Appeal charity has raised £5m

for the project, which works with partners such as MQ Mental Health and Oxford University to create an open-access database of scientific literature for the mental health community, with the aim of speeding up mental health research globally. "I really like a phrase I've learned from the mental health sector: 'You don't have to be ill to get better'," says Michael.

695th Lord Mayor's Constructing Science: Offices to Labs Initiative

(<https://www.mainelli.org/>)

This project aims to further science study worldwide by providing a standard for converting vacant office spaces to life sciences facilities.

695th Lord Mayor's Ethical AI Initiative (https://www.mainelli.org/?page_id=3730)

This initiative welcomes finance professionals from around the world to take the **CISI's 12-hour Certificate in Ethical Artificial Intelligence (<https://www.cisi.org/cisiweb2/cisi-website/study-with-us/professional-assessments/Certificate-in-Ethical-Artificial-Intelligence>)** – essential learning for anyone wanting to understand the ethical issues in the deployment of AI in professional services. It was launched in November 2023 with the CISI, the British Computer Society and the Worshipful Company of Information Technologists. At the time of writing, about 3,000 students from 54 countries and 250 organisations had registered, with 200 certificates awarded.

695th Lord Mayor's Smart Economy Networks Initiative (https://www.mainelli.org/?page_id=3704)

This project, led by City University and chaired by the Worshipful Company of World Traders, will work with global institutions (including the CISI) to develop international 'open data' standards and create a global centre for smart economy networks.

695th Lord Mayor's Space Protection Initiative (https://www.mainelli.org/?page_id=3711)

Launched at the International Astronautical Congress in October 2023 as a combined technology and financial services initiative to use space debris performance bonds and other financial instruments to keep space 'clutter free'. The programme supports the aims of the UN's Sustainable Development Goals – the 17 goals and 169 targets aiming to end poverty and protect the planet that all UN member states have agreed to reach by 2030.

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Natasha Turner has written for *Citywire*, *Money Marketing* and *The New Statesman* and publishes a weekly newsletter, *Rebalancing Act*, answering women's financial and economic questions.

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