Man versus machine: concern or opportunity?

Do you think that you can live without a digital footprint? With our lives being so intertwined with technology, is this even possible? These were questions posed by Rudie Raath, Chief Digital Officer at Datacentrix, in his address as keynote speaker at the Datacentrix Forum 2020 virtual event.

“In reality, we are all being logged as ones and zeroes without realising it, and often without our permission,” he stated. “And we have divergent views on this from two of tech's most recognisable voices. Elon Musk says that we need to take control of how artificial intelligence (AI) is being developed, asking what measures should be taken to ensure that it does not overtake the human race, while Mark Zuckerberg is completely opposed to this 'Doomsday' type of sentiment. Zuckerberg maintains that AI innovation must be ongoing because it can improve our day-to-day lives tremendously, and I tend to agree with him. We're missing the point: it's not about man being pitted against machine.”

By 2040 it is predicted that AI will have been developed and matured to the point that it will reach general, or human-level intelligence, said Raath. “And by 2060, we'll reach 'super intelligence' levels, seeing the way in which we approach and use technology helping to develop a new, more evolved level of humanity.”

Data and connectivity are key

“Data and connectivity are the building blocks of this innovation, but the question to ask is, how we use them as the foundation?” Raath asked, explaining

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that he believes data to be somewhat underestimated.

To put this into context, he unpacked the so-called 'four Vs of data': volume; variety; velocity; and veracity.

“There's a huge volume of data that gets thrown at us, and trying to understand it is a serious undertaking. And this is besides the variety of data we receive – it's no longer just structured data – the unstructured data coming through needs to be harnessed and embraced, and at great speed (or

velocity) too. How do we work through the volume quickly enough, understand the variety, and then deal with the speed at which it comes? And the last 'V' is the veracity of data, referring to the degree of accuracy of data."

Data is evolving every second, he stated, referencing an International Data Corporation (IDC) white paper, which predicted that in 2020 every person in the world would generate 1.7MB of data per second, or 2.5 quintillion bytes of data per day globally. "Analysts previously envisaged that by 2020 we would reach 40 zetabytes of data. In reality, we have already surpassed that, at 44 zetabytes. On a practical level, if we took the 44 zetabytes and copied it, it would take three million years to download. The most frightening part, however, is that 90 percent of this data was created in the last two years."

This growth is fuelling demand for advanced data scientists and AI, he added, to help humanity grasp and understand the sheer amount of data.

"How do businesses approach this kind of data themselves? There are certain questions to be answered, including the location of the data, where it is stored, and what the associated costs are. How many data backups do you have? How many business copies do you have? Where is the data backed up to, and for what purpose? Quick access? Long-term archiving?

"Yet, the most important question to be asked is around securing the data. Over this year alone we've seen local organisations, like the City of Johannesburg, Life Healthcare and Steffanutti Stocks, targeted by cyber criminals and having to go to extreme measures for remediation of these breaches. There are devastating knock-on effects of a cyber attack, such as impact on stock prices, reputational damage, loss in sales, and a drop in customer confidence. How then do you ensure that the data you have is protected and within your control?"

So, where do we start?

Before a company can look at the mining and monetising of data, we have to get the fundamentals right, Raath clarified. "We have to know its location; ensure that there are multiple copies of business critical data, especially in the case of ransomware; identify how data is accessed and for what purpose; and protect against

Rudie Raath,
Chief Digital Officer at Datacentrix

unauthorised access. Here, even for these basic principles, technology can help and support the back office and support staff.

"It is critical to fully comprehend an organisation's entire workload architecture – understand its data sources, dependencies the workload relies on and who has access to it, and then provide teams, analysts and support staff with the relevant tools to help them do their jobs better."

Data no longer resides in one place, and data sources from all over need to be connected. What is needed is an agile network with an intelligent automated fabric, not just within the corporate office, but everywhere, he added.

This connectivity phenomenon was accelerated in South Africa and across the globe earlier this year, precipitated by the COVID-19 breakout. Corporates scrambled to prioritise connectivity in keeping with the sudden shift in office-based employees to home-based work, moving all operations – like back office, finance and logistics – away from the office to keep business operating.

"What we've found is that people have worked more effectively from home, without a commute time, with more productive time spent on business tasks, and fewer interruptions. And connectivity was the key to unlock this value.

“Companies are now asking very different connectivity questions. How can I reduce my physical footprint? How do I relinquish some of the associated expenses? Do we really need a physical office? Face-to-face interactions are being reserved for customers, while internal discussions take place virtually. Suddenly, connectivity is enabling a corporate DNA transformation, and we could say that COVID-19 gave digital transformation a little push.”

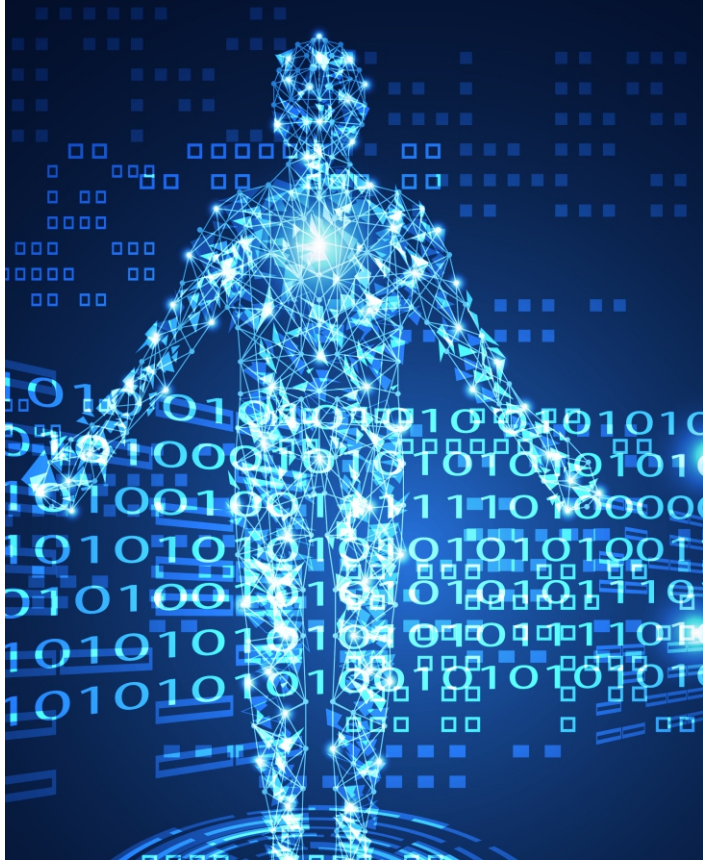
Trends beyond 2020

“Corporate software-defined networking (SD-WAN) infrastructure now includes home and pop-up offices, and is no longer limited to an organisation's bricks and mortar,” said Raath. “In addition, the impact of media-rich content is driving the adoption of Wi-Fi 6 and 5G networks, and we'll see the rapid and exponential increase in this type of technology.

“Network virtualisation and the expansion of policy-based routing into cloud workloads are becoming top priority for many organisations now, as they're closing down data centres and starting to leverage the power of cloud, with an almost hybrid IT environment being accelerated.

“In addition, WAN edge networking and unification of user control and access across all the media is on the upward trajectory. Security is now woven into the network fabric itself end-to-end, with an AI oversight to make recommendations to monitoring staff.

“So, the most important question to ask is, how do we enable this networking era? Technology innovation is helping to fuel evolution, and humanity needs to grow alongside. We must advance as a species, moving into a digital humanity (or digimanity) where technology is embraced, rather than held back. As humans, we have to stop overthinking evolution, but rather see the hope in every innovation,” he concluded.



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