EY & CIONET UK DIGITAL LEADERS FORUM

CONVERGING TO THE FUTURE

BALANCING NEW AND LEGACY TECHNOLOGY

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This article was written by Mark Samuels, Chief Editor at CIONET UK, and Roger Camrass, director of research at CIONET International. The content is based on the EY & CIONET UK Digital Leaders Forum event held on 24 April in the Temple Room at Andaz, London. Executive sponsor for Digital Leader Forum is Asheesh Malhotra, partner, technology strategy and transformation lead, Ernst & Young LLP

The context for the event

The pace of innovation has never been faster. Emerging technologies such as AI and machine learning are expected to enhance and disrupt business operations. But new technologies are not implemented in a vacuum: existing and legacy systems cannot be ignored.

This roundtable event discussed how digital leaders can embrace emerging technologies. Speakers included Cillian Leonowicz, EY Ireland partner and head of strategy and architecture, technology transformation, John Ward, chief technology information officer, health service executive, and Tim Willoughby, head of innovation and digital services, An Garda Siochana.

Asheesh Malhotra, introduced the event and suggested emerging technology presents exciting opportunities. However, chief information officers (CIOs) must also spend time maintaining legacy systems. Roger Camrass asked delegates to summarise their interests for the evening.

The following areas were mentioned: business use cases and assessing the value of AI, introducing artificial intelligence (AI) in slow-moving sectors, making the most of blockchain, considering ethical concerns, managing legacy information technology (IT), harnessing new technologies for user needs, understanding regulatory frameworks for AI, learning best practices for emerging technologies, dealing with the people side of change, and blending AI models effectively.

Key themes: Innovation, data, legacy, and people

The main discussion took place over dinner. Four key questions were considered.

How should digital leaders introduce emerging technology?

The best place to start is the front line. Senior stakeholders provide the financial backing for your project but it's front-line staff who understand the challenges. If you explore the working processes of staff, you will develop a sense of how data-led services can create improvements.

Focus on your use case. Start with the business problem you're trying to solve rather than being excited by the potential of AI. Define the business problem and then decide which tools to use. Think about how you can use Agile techniques to deploy that solution iteratively. C-suite executives will buy into your initiatives once they see the benefits.

Remember that it's early days for generative AI. Some industries are crawling towards implementation. The best use cases so far focus on marketing, productivity and coding. One attendee uses generative AI to power a rules-based system to track and trace a process. The key to success is finding the right problem. Run experiments in a containable pilot and scale the solution when it works.

Don't over-rely on vendors. You can use high-profile large language models in an attempt to drive change. But using the foundational models of the Big Tech specialists means you're reliant on these companies and their data. Vendors like to tell you they can solve your problems. Focus on business problems, not vendor solutions.

How can digital leaders make the most of data?

The introduction of AI might be your north star, but your data architecture must be sorted first. Think of AI like an iceberg. There's a small visible element, such as a generative AI user interface, but beneath the surface is the bulk of the system. Data standards, governance and platforms are the keys to success.

Data quality is crucial. If you can't rely on your data, your project will fail. Think of the split between structured and unstructured data. Creating a system that relies on unstructured data is difficult because variables can change. Some pioneering cross-organisation initiatives are helping public sector bodies to classify data and share it effectively.

Remember that AI is dynamic. Definitions of data fluctuate. People don't necessarily speak the same language. Bias is an issue, too. Models are often trained on data with inherent biases. Emerging technology can surface data that shouldn't be exposed. Responsible AI is critical, as models will hallucinate to fill knowledge gaps.

Digital leaders recognise they will create significant problems if their data foundations aren't strong. Information issues must be sorted at the source. Provide an enterprise-wide data lake and extraction layer, either off-the-shelf or internally, to create a single version of the truth.

Security is a concern. However, many organisations are still obsessed with the belief that it's easy to protect data kept in a data centre. Executives must recognise that cloud companies spend a fortune on data security. The blockchain is another potential route to data security.

How can digital leaders deal with legacy technology constraints?

Dealing with legacy platforms is like moving an oil tanker. It was suggested at the event there are two potential approaches: outside-in, where you build application programming interfaces (APIs) around your core system of record and focus on key elements for change, or inside-out, where you try and find a software as a service (SaaS) based alternative for your legacy system.

Big migration programmes will involve significant cultural change. The transformation might need to take place in stages. Sell the benefits of the change to employees. It can take months or even years of engagement with staff to ensure you have the solution for their challenges.

Organisations often have thousands of applications. Avoid adding more and more applications to your legacy stack during digital transformation. One speaker suggested categorising applications against your business strategy: buy (irreplaceable), hold (keep for now), and sell (no longer needed). A portion of your apps should move to 'sell' every year.

When your application estate is in order, you can think about innovation. New technologies move from the fringe to the core. Build an ecosystem to help your business make the most of innovation. Emerging AI tools might help us deal with the legacy constraints that hold our businesses back. But we must get the foundations right before we can exploit these advances.

The business often has a one-sentence demand for emerging technology, such as to reduce costs or increase sales. However, people dictate the success of your IT implementation, so focus on personas rather than processes. It was suggested the failure rate for digital transformation projects that don't involve the right people is as high as 64%.

We must consider the impact of AI on roles and responsibilities. Will AI make our workplaces better or worse? Some organisations might be focused on using AI to eliminate roles and responsibilities. Others are thinking about how to use emerging technology, such as automation, to augment and improve existing working practices.

IT teams and the rest of the business must work together if they want to create useful solutions. Some boards restrict access to off-the-shelf productivity applications. This approach makes it impossible to explore some generative AI tools. Testing should evolve to show projections for AI and allow for more effective scenario planning.

Communication is key. Don't just lean into quick fixes. Create cross-organisation initiatives to discover what people want and how emerging technology will impact roles. Keep repeating the vision so people see why emerging technology leads to better outcomes.

Consider bringing in a user experience (UX) researcher to work alongside your staff. That journey could take months of listening and understanding. Then work in an Agile way to deliver sprints of work often and regularly. Build an expectation of continuous innovation across the business.

Key takeaways: Five points to consider

1. There is enthusiasm for new technologies, such as GenAI, but the pressing issue is the state of the current technology stack, from fundamental infrastructures to enterprise applications. Data management is a prerequisite to extracting value from data.

2. CIOs must focus on business problems. Engage directly with the C-suite and the shopfloor to discover their challenges. CIOs must become the trusted enablers of the business. Educate people about the challenges and opportunities.

3. Legacy is a constraint to change, but CIOs can upgrade core applications and decades-old systems of record. Solutions include surrounding the core with APIs and SaaS-based services. Data lakes should be used to hold enterprise data assets.

4. GenAI can run on top of this layer and could be a solution to current inefficiencies. It might enhance the employee experience, too. However, people must be convinced that emerging technology leads to augmentation rather than replacement.

5. Trust is a critical success factor for change. Soft factors can impede change, with two-thirds of transformation projects failing because they involve the wrong people. Create a roadmap for change that people can understand and buy into.

Authors

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A pioneer of today's Internet as an ARPA research fellow at MIT in the seventies, Roger has spent over fifty years helping corporations harness the power of new technologies such as AI, cloud, mobile communications, e-commerce, voice recognition and satellite. He was a partner at EY responsible for e-commerce during the dot.com boom. He is a Cambridge University and MIT graduate and a visiting professor at the Hebrew University in Jerusalem.

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