

DIGIT Lab Innovation Workshop

Workshop Notes

DIGIT Lab Innovation event, 17 September 2026

10:05 | Keynote: Exploring the Future of Digital Transformation

Dr Dave Smith, National Technology Adviser

Introduced by Prof. Tim Vorley OBE

Core message

Digital transformation is not achieved by purchasing technology. It requires organisations to redesign work, build capability and make deliberate choices about the relationship between people, systems and increasingly autonomous AI.

Notes

- Digital transformation has frequently failed to deliver expected productivity gains. Buying and implementing a system is not the same as changing an organisation or delivering business value.
- Organisations often introduce tools to busy people without first understanding workflows, bottlenecks, information flows, decision points or accumulated employee expertise.
- Better organisations begin with work: they examine critical paths, cost drivers, duplicated effort and points where decisions stall, then apply technology to those realities.
- Human-centred AI is not simply a user-friendly interface. It is the design of work around the respective strengths and weaknesses of people and machines.
- Leaders should ask what human capabilities they need to preserve, including judgement, learning and expertise—not just which tasks can be automated.
- AI creates a distinction between three types of work: deterministic software, probabilistic AI models and human work. These should not be managed as if they are interchangeable.
- Technology has become a strategic dependency. Boards need to consider ownership, data location, vendor lock-in, pricing changes, regulation, geopolitical risk and exit options.
- Small, specialist models that run closer to data may offer greater energy efficiency, control and strategic flexibility than dependence on a single frontier model.

- Autonomous agents bring a new category of organisational challenge. They may need identities, permissions, authority limits, accountability, monitoring and rollback mechanisms.
- The opportunity is significant, but the path should be deliberate: redesign work, preserve strategic choice, build skills and use technology to improve what people and organisations do well.

Key quotes

- “Technology doesn’t produce transformation. People do, organizations do.”
- “Start with the work, not the technology.”
- “How do I use AI to make my people better at what they already do?”
- “Treat technology as a strategic asset, not a procurement category.”
- “Here are 10,000 autonomous digital colleagues. You can thank me later.”

10:55 | DIGIT Lab: Project Overview

Prof. Saeema Ahmed-Kristensen, Director, DIGIT Lab

DIGIT Lab’s approach and impact

- DIGIT Lab was founded in 2020 as one of five national digital economy centres, funded by EPSRC, industry and university partners.
- The Lab works across data, AI, digital transformation, responsible innovation, design and wellbeing.
- Its research is cross-sector, spanning manufacturing, defence, professional services, finance, insurance, agritech, creative industries and public services.
- The Lab’s design-led approach treats people, organisations and technology as interconnected, rather than considering technology in isolation.

Examples presented

- **Data-led innovation:** New approaches combine qualitative “thick” data with quantitative data to generate ideas, services and business models.
- **Smart cycling data:** Data from intelligent bicycle lights has been applied to cycling infrastructure, near-miss detection, pothole identification and behaviour-change programmes.
- **Digital maturity interview agent:** An AI-enabled interview process can help smaller firms assess digital transformation readiness without relying entirely on consultant-led assessment.
- **Conversational personas:** Patient and carer experiences were analysed at scale to create grounded, conversational tools that help service designers understand recurring patterns of need.

- **Human–AI collaboration in design:** The work distinguishes between replacing people, representing experiences, augmenting people and augmenting AI with human expertise.
- **Creative work:** Human expertise remains important for ill-defined problems such as design and creativity, where criteria and goals are not fixed.

Future direction

- DIGIT Lab is exploring how to sustain and extend its impact through research partnerships, commercialisation, executive education and consultancy.
- The Lab invited collaborators to help identify future challenges, opportunities and practical routes to impact.

Key quotes

- “We think about human beings and we think about the organizations around them.”
- “We have a design led approach... humans are together with technology.”
- “We don’t just want to do research and research publications.”
- “We want to leave a legacy which is beyond just research.”

12:10 | Panel: Digital Transformation in Agri-Food and Agri-Tech

Chair: Prof. Gerard Parr MBE

Panel: Kate Brunswick, Nektarios Georgalas and Simon Pearson

Main themes

Adoption and trust

- The biggest near-term challenge is adoption built on trust. Farms differ greatly in scale, business model, connectivity, digital maturity and capacity to invest.
- Technology must solve a practical problem for the farmer or food producer. Adoption will not follow simply because a tool is available.
- Farmers are more likely to trust peers than large technology suppliers or powerful actors elsewhere in the supply chain.

Cybersecurity and resilience

- Food supply chains have concentration risks: relatively few logistics and distribution nodes support a large share of UK food supply.
- Digitalisation expands the cyber-attack surface, especially as more sensors, IoT devices, telemetry systems and autonomous equipment are introduced.
- Resilience needs to address connectivity, physical infrastructure, device security, operational fallback plans and cyber governance.
- Rural and remote areas face different challenges from large, well-connected arable businesses; a single solution will not fit all agricultural settings.

Data ownership and sharing

- Farmers often sit between large suppliers and powerful retailers, creating low-trust conditions around data sharing.
- In principle, farmers should be able to access data produced by their equipment and operations; in practice, this can be difficult.
- Raw data, shared information and derived knowledge create different ownership and value questions.
- Co-operatives, farmer clusters and data trusts may offer useful mechanisms for peer-led sharing and clearer reciprocal value.

Climate and food-system resilience

- AI and weather data can improve forecasting, planning and precision decisions, but cannot eliminate the consequences of major climate events.
- Physical resilience—such as drainage, water storage and infrastructure—remains essential alongside digital tools.
- Food security was framed as an urgent systemic issue, shaped by climate volatility, geopolitical disruption and supply-chain fragility.

Skills and innovation

- The sector needs data literacy, AI and robotics capability, cybersecurity awareness, commercial understanding and technical support skills.
- Education and training need to make agriculture visible as a high-skill, technology-enabled sector.
- Start-ups are gaining traction, particularly where they are science-led, industry-co-created and focused on a genuine operational problem.

Group discussion prompts

- How can farmers retain agency over data while sharing enough to create wider value?
- What forms of digital and physical resilience should be prioritised across different kinds of farms?
- How can training and support be designed for farmers, contractors and the wider agricultural ecosystem?

Key quotes

- “Adoption and trust... is going to be the challenge.”
 - “The biggest opportunity, the biggest threat is cyber.”
 - “Farmers trust farmers.”
 - “You’re ham in the middle of the sandwich.”
 - “We are three meals from a riot.”
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13:45 | Panel: Future Challenges for Digital Innovation in Professional Services

Chair: Prof. Roger Maull

Panel: Hilary Smyth-Allen, Sarah Blair and Nick West

Main themes

Uneven adoption and regulation

- AI adoption remains uneven across professional services. Larger firms may have dedicated innovation teams, while many smaller firms lack capacity, confidence or specialist knowledge.
- Regulation and risk are important, but the risk of not acting is becoming more prominent for firms.
- AI-related failures, such as inaccurate legal citations, were described as failures of process, supervision and professional judgement—not solely technology failures.

The business model challenge

- The billable hour is both a pricing mechanism and a core operating model for many legal and professional-services firms.
- AI is exposing the difference between process-heavy work and work requiring senior judgement, creating pressure toward fixed fees, subscriptions, retainers, success fees and outcome-based approaches.
- Firms need to define what clients value: speed, assurance, quality, commercial outcome or another result.
- Technology costs may rise as providers move to consumption- or token-based pricing, even while clients expect AI to lower fees.

Client expectations and competition

- Clients increasingly expect firms to use technology and may arrive with AI-generated information or initial analysis.
- This can create friction when clients challenge professional advice with incomplete or inaccurate AI outputs.
- AI-native entrants may have an advantage in process-led work, especially when they combine a technology platform with a small human professional practice.
- Established firms retain advantages in brand, trust, experience and reputation, but cannot rely on these indefinitely.

Shadow AI and safe workflows

- Firms should not assume that banning consumer AI tools prevents their use.
- The practical response is to provide secure, useful alternatives, plus clear policies, education and workflows that make responsible use easier than informal workarounds.

- Technology selection should begin with a real business or client problem, not with an abstract search for the latest tool.

Group discussion prompts

- Which parts of professional work are process-led, and which require irreplaceable human judgement?
- How should professional firms price work when AI changes delivery costs and client expectations?
- What does responsible AI use look like in small and mid-sized firms without large innovation teams?

Key quotes

- “The risk of not doing something has got so great.”
- “Technology is a way of doing something. So you have to start from what problem am I trying to solve?”
- “Demand is changing. If demand changes, supply must change.”
- “If I’m not giving them a good way to do something, they will find their way to do it.”
- “The court system... is a shambles.”

14:50 | Panel: AI Technologies and their Adoption

Chair: Prof. Saeema Ahmed-Kristensen

Panel: Aaron Abentheuer, Paul Wood, Kirstine Dale and Lucía Elizalde

Main themes

Be precise about AI

- The panel urged greater precision: generative AI, predictive AI, machine learning, large language models and autonomous agents have different applications, risks and implications.
- “AI” is too broad a term for many practical, governance and adoption conversations.

Designing human–AI collaboration

- The most productive future is not simply automation or augmentation; it is a deliberate combination of both.
- Systems need to let people intervene easily, understand what is happening, provide meaningful feedback and exercise judgement at the right points.
- Existing chatbot interfaces should not be treated as the final form of human–AI interaction. Better, domain-specific interfaces and feedback mechanisms are needed.

Adoption is behavioural and organisational

- Buying a tool, announcing it by email and expecting usage to follow is not an effective adoption strategy.
- Organisations need to understand current practices, identify the specific behaviours they want to change and create the conditions that support those behaviours.
- Usage metrics such as logins, clicks, time saved and output volume are not enough. Organisations should examine how AI changes judgement, learning, decision-making, accountability and service quality.
- Incentives may support sustainable adoption more effectively than fear, but both are shaping behaviour.

Critical thinking and cognitive offloading

- Generative AI can lead to cognitive offloading: people may accept outputs without enough scrutiny, potentially weakening critical thinking.
- This risk may be particularly significant for students and early-career professionals who are still developing expertise.
- The panel called for disclosure and normalisation of AI use, including senior leaders being open about when and how they use AI tools.
- Human responsibility remains essential: the presence of AI does not remove a professional's accountability for checking evidence, advice or decisions.

Sector examples

- **Creative industries:** AI may support research, analysis and production activities, but human creativity, story development and judgement should remain central.
- **Weather and climate:** Machine-learning approaches can be extremely fast and computationally efficient, but physics-based models remain necessary for understanding atmospheric systems, producing training data and anticipating unfamiliar conditions in a changing climate.
- **Enterprise implementation:** AI is likely to become more proactive. This raises questions about when systems should interrupt people, what decisions should be escalated and how human attention should be protected.

Group discussion prompts

- Which uses of AI genuinely improve work, and where is AI not the right tool?
- How can organisations preserve critical thinking and professional judgement?
- What should meaningful measurement of AI adoption and value look like?
- How can organisations build trustworthy, transparent and domain-appropriate AI workflows?

Key quotes

- "AI adoption is not really a technology challenge. It's a change management challenge."
- "Telling people what to do is very ineffective."

- “We need to be thinking every single time, what is the behavior that we expect from people?”
 - “Generative AI... is a behavioral technology.”
 - “AI is not a hammer looking for a nail.”
 - “It is only ever a tool in the toolkit.”
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15:40 | Plenary: Reflections on the day and DIGIT Lab’s journey

Prof. Saeema Ahmed-Kristensen and Prof. Roger Mauli

Reflections

- Digital transformation remains uneven. Many smaller organisations, and some larger ones, still face inertia, limited skills and uncertainty about where to begin.
- AI is changing business models, client expectations, workforce structures and how value is measured—not only individual tasks.
- Shadow adoption is a persistent reality: organisations need safe, useful options and practical governance rather than assuming blanket bans will work.
- The day returned repeatedly to three connected themes:
- **Trust:** between people, peers, organisations, data providers and technologies.
- **Risk:** including cyber, regulatory, operational, commercial, strategic and cognitive risk.
- **Value:** defined through better services, judgement, resilience, creativity and outcomes—not only short-term efficiency.
- Participants were encouraged to pursue future collaboration with DIGIT Lab across research, commercialisation, executive education and consultancy.
- Future areas of interest include AI, data, human-centred design, responsible innovation and emerging technologies such as quantum.

Closing quotes

- “Trust, risk and value.”
 - “This is the start.”
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Overall takeaways

1. **Begin with the work, not the technology.** Understand processes, skills, decision points and the outcomes that matter before selecting a tool.
2. **Keep people and judgement central.** Technology can augment work, but organisations must preserve learning, expertise, accountability and critical thinking.
3. **Build trust and practical governance.** Adoption depends on usable tools, transparent data arrangements, cybersecurity, peer learning and appropriate safeguards.

4. **Expect business models to change.** AI is reshaping how services are delivered, priced and valued.
5. **Use a sector-specific approach.** The right governance, implementation and human–AI workflow will differ across agriculture, professional services, science and creative practice.