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TMT AI

AI Monthly: from experimentation to integration - solving the AI scale-up challenge

While capital commitment by US hyperscalers is surging, the gap between AI pilot schemes and full deployment remains wide. Most enterprises have launched Gen AI pilot programmes, yet scaling to full production is often difficult. This shows that many firms see the potential of AI, but face organisational challenges in implementing the technology



Messy corporate structures and employee scepticism may be hindering the full AI scale-up

Building a use case takes time

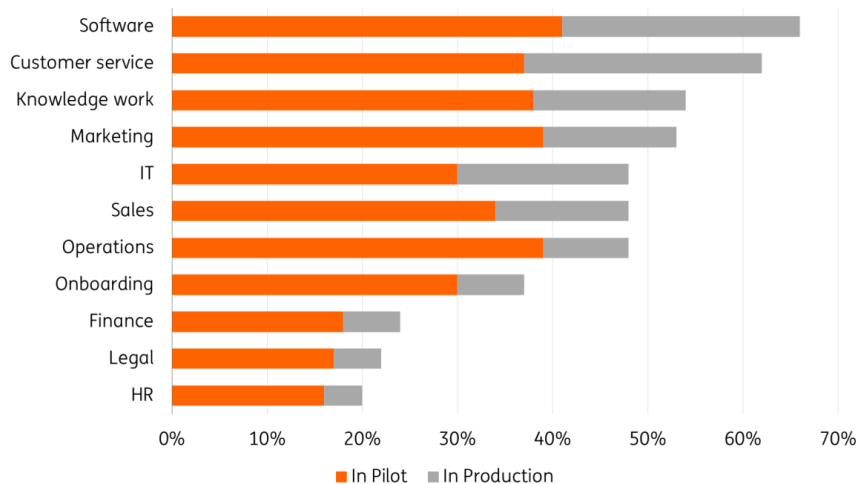
According to Bain data covering February, July, and December 2024, adoption of generative AI use cases has accelerated across nearly all enterprise functions. Software development, customer service, knowledge work, and marketing lead the way, with development or pilot activity close to, or above, 60%. It is no surprise, then, that capital commitments by AWS, Alphabet, Meta, and Microsoft are expected to amount to more than \$300 billion this year, more than double the amount in 2023.

Still, production deployments lag significantly - deployment percentages are often less than half the corresponding pilot rates. In sales, for instance, fewer than 15% of companies have AI tools running at scale, but over 30% are in the pilot stage. Legal and HR functions show even wider gaps, with less than 10% in production. The sheer volume of pilot programmes suggests

that few firms can afford to stay on the sidelines, but that many firms face organisational challenges in implementing AI at scale.

Pilot-deployment gap shows difficulty in deploying AI at scale

Enterprise use case adoption for generative AI in December 2024



Source: Bain Generative AI Survey

Messy corporate structures can prevent AI implementation

A [paper](#) by Ruthanne Huising shows why it can take time to build a use case. Her paper follows teams tasked with mapping out their company's internal operations. It reveals that many were struck by the surprising complexity and opacity of corporate processes and decision-making. As participants created these maps, from raw materials to finished products, they discovered outputs that were produced for no one, duplication of work, and non-hierarchical ways of getting work done. When presenting these maps to chief executives, participants found that executive boards often lacked knowledge of these design and operational issues. This, in turn, led to a sense of disillusionment among the mapping teams, as they came to realise that even chief executives can struggle to fully grasp the inner workings of their organisations.

In organisational theory, this is often dubbed the '[Garbage Can Model](#)'. It represents a mode of corporate organisation where complex and undocumented ways of doing things are key. In such a situation, it is hard to implement novel technologies such as AI, because the implementation of AI requires clear processes and rules, [especially at scale](#).

Employee scepticism may also contribute to the deployment gap

While the 'Garbage Can' model might help to explain the delayed scale-up of AI in organisations, employee perceptions about AI can also hinder progress. According to the [European Commission's Eurobarometer](#) survey, an average of 62% of the respondents in the European Union have a positive view of AI and robots in the workplace, yet 84% believe they require careful management. When it comes to decision-making, a little over half consider robots and AI suitable for making accurate decisions, and almost three-quarters support prohibiting fully automated decision-making by AI systems and robots. This suggests that while employees may rely heavily on AI for their day-to-day tasks, many remain unconvinced of its reliability in high-stakes or large-scale applications, potentially hindering broader adoption.

AI implementation at scale requires organisational readiness

For investors and policymakers, this divergence between invention and implementation presents both risks and opportunities, raising questions about utilisation efficiency, pricing power, and long-term monetisation. Overcoming the pilot-deployment gap will not only require technical readiness, but also organisational clarity, process transparency, and employee trust. As the data shows, enthusiasm is not the issue; execution is.

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