

# Thrive Or Die - UK Healthcare And Pharma

## UK Healthcare And Pharma Edition — Two Speeds Of The Same Gap, Inside One System

A Charterhouse Consultants white paper by Bridget Convey, February 2026

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### Executive Summary

UK healthcare and pharma show the gap mechanism this paper series describes from two directions inside a single system. NHS diagnostic AI adoption is capability-constrained by fragmented governance and unclear accountability, exactly the Kodak-shaped incumbent problem. UK-founded pharma AI, led by Isomorphic Labs, is capability-forward, raising 2.1 billion dollars and signing over 1.7 billion dollars in Eli Lilly milestones alone, exactly the fintech-shaped inversion problem. Both halves of the same national health and life sciences system are running the identical mechanism in opposite directions at once.

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### The Premise: The Gap Is The Danger, Not The AI

In October 2023, a group including Turing Award winners Yoshua Bengio and Geoffrey Hinton, alongside Stuart Russell, Daniel Kahneman and more than twenty other senior AI researchers, published a consensus paper in the journal Science on the risks of advanced AI. Their argument was precise. AI capability and autonomy are increasing rapidly. Companies and institutions are shifting toward systems that can act and pursue goals with reduced human oversight. Governance is not keeping pace with that shift. The danger they describe does not come from AI itself. It comes from the widening gap between what a system can now do on its own and how closely anyone is still watching it.

That paper is about safety and governance at a societal scale. It does not comment on corporate or institutional strategy, and I want to be precise about that rather than overstate its relevance. What it gives this paper is not an endorsement, it gives us the mechanism. Capability grows. Autonomy grows. Oversight does not grow at the same rate. In UK healthcare specifically this is visible in the NHS's own evaluation of its AI diagnostics programme, which found that professionals and innovators consistently cited fragmented legal and regulatory frameworks and unclear governance within the NHS as a primary barrier to adoption, even where the underlying AI tools were already clinically capable.

This is the basis for the claim in the title. Thrive or die is not a slogan layered on top of the argument. It is the plain consequence of the mechanism. An organisation that builds governance at the same pace it builds AI capability closes the gap and survives it. One that lets capability outrun governance does not get a soft landing.

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### Thrive Or Die: The Pattern In Organisations That Did Not Close The Gap

Kodak invented the first digital camera in 1975 and its own internal research predicted by 1981 that digital would eventually replace film. What it did not close was the governance gap between that capability and a business model still built entirely around film margins. The company filed for bankruptcy in 2012, thirty seven years later. Blockbuster was offered the chance to buy Netflix outright for fifty million dollars in 2000, declined, and filed for bankruptcy in 2010, having eliminated close to eighty four thousand jobs in the collapse. Both prove the same point. The danger was never a lack of capability. It was a governance gap left open until it was unmanageable.

Kodak and Blockbuster show what happens when a slow-moving incumbent lets capability sit unused. The NHS side of this paper is closer to that pattern, more than 200 CE-marked AI products already exist for radiology alone, and NHS England's own 2023 programme to fund AI chest diagnostics across 66 Trusts took, in its own evaluators' words, longer than anticipated to procure and deploy, with governance frameworks still described as under development years into rollout. But the UK's pharma AI sector runs the opposite pattern, closer to the fintech editions of this series. Isomorphic Labs, a DeepMind-heritage, Alphabet-backed company led by Nobel laureate Sir Demis Hassabis, has built capability so far ahead of its commercial structure that it required a 2.1 billion dollar raise simply to keep pace with the pharma partnerships already signed. The danger in each half of the system is the mirror image of the other: the NHS risks capability sitting unused behind ungoverned processes, while pharma AI risks capability outrunning the clinical trial and regulatory infrastructure needed to turn it into an approved medicine.

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### The Evidence In UK Healthcare And Pharma: Capability Constrained On One Side, Capability Unleashed On The Other

Two pieces of evidence, from opposite ends of the same UK life sciences system, show both halves of the mechanism operating at once.

#### NHS Chest Diagnostics: Capability Existed, Governance Was The Bottleneck

NHS England launched a 2023 programme funding 12 networks across 66 NHS Trusts to implement AI for chest diagnostics, including lung cancer detection. A rapid, mixed-method evaluation of the rollout found that procurement and deployment took longer than anticipated, and that professionals, trusts and AI suppliers consistently identified fragmented legal and regulatory frameworks and unclear governance within the NHS as central implementation challenges, not the underlying clinical performance of the AI tools themselves. A separate scoping review of AI governance frameworks in UK medical imaging concluded that governance structures remained under development even as more than 200 CE-marked AI products for radiology were already commercially available. The capability was not the constraint. The governance structure around it was.

#### Isomorphic Labs: A UK-Founded Company Outrunning Its Own Commercial Structure

Isomorphic Labs, the Alphabet-backed, DeepMind-heritage drug discovery company led by Sir Demis Hassabis, raised 2.1 billion dollars in a single funding round and holds partnerships worth over 1.7 billion dollars in milestones with Eli Lilly and approximately 1.2 billion dollars with Novartis, alongside a newer agreement with Johnson & Johnson. GSK has taken a different structural approach, a five-year licensing partnership with AI biologics company Noetik built on a subscription-style model rather than a

traditional milestone deal, a genuinely new commercial structure for accessing AI drug discovery capability. Across the sector, more than 90 percent of drug candidates that enter clinical trials still never reach approval, a reminder that AI compresses early-stage discovery timelines without yet solving late-stage trial failure. The capability here is moving fast enough to require entirely new deal structures. The governance and regulatory question is whether clinical trial and approval infrastructure can absorb that pace without becoming the new bottleneck.

## UK Healthcare And Pharma In Three Horizons: The Gap Closes Or It Does Not?

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If the gap between capability and governance is the real variable, then each horizon below has two outcomes, not one. These are deliberately stated as firm positions, not hedged possibilities, because a board conversation needs something to agree or disagree with.

### Two Years: 2026 To 2028

What happens everywhere: NHS AI diagnostic tools move from pilot networks toward wider rollout, while pharma AI partnerships continue signing at record pace.

- Thrive path. NHS trusts adopt a standardised, centrally governed deployment framework, following the direction of NHS England's Artificial Intelligence Deployment Platform pilot, rather than each trust separately resolving the same governance questions the 66-trust programme already identified as a bottleneck.
- Die path. NHS AI adoption continues trust by trust, with governance treated as a local implementation detail rather than a national infrastructure question, and the capability documented in this paper remains under-used relative to what is already commercially available.

### Five Years: 2028 To 2031

What happens everywhere: the first wave of AI-originated drug candidates from 2024 and 2025 discovery work reach late-stage clinical trials.

- Thrive path. UK regulatory and clinical trial infrastructure has adapted specifically to AI-originated candidates, maintaining trial rigour while removing process bottlenecks unrelated to safety, keeping the UK a preferred jurisdiction for AI-pharma partnerships in the Isomorphic Labs pattern.
- Die path. Regulatory and trial infrastructure remains built for a pre-AI discovery pace, and the speed advantage AI created in early discovery is absorbed, and lost, in a late-stage approval process that was never redesigned to match it.

### Ten Years: 2031 To 2036

What happens everywhere: AI-native diagnostic and drug discovery capability becomes the default across UK healthcare and life sciences, not the exception.

- Thrive path. The NHS and UK pharma sector operate on a shared, mature governance standard for clinical AI, and the UK's early investment in both capability and the standards to govern it makes it a global reference point for AI-era healthcare regulation.
- Die path. The two halves of this paper's mechanism never converge, NHS adoption remains constrained by unresolved governance while pharma AI capability, developed substantially in the UK, is commercialised and approved fastest in jurisdictions that solved the regulatory bottleneck first.

## What I Am Recommending To Healthcare And Pharma Boards

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- For NHS-facing organisations, treat AI governance as national infrastructure to be resolved once, following the Artificial Intelligence Deployment Platform model, rather than as a local governance question every trust must answer separately.
- For pharma-facing organisations, engage with UK regulatory bodies now on trial and approval frameworks specific to AI-originated candidates, rather than waiting for the first AI-derived approval to force a reactive framework into existence.
- Recognise that capability and governance are moving at different speeds on each side of this sector, and that closing the gap requires different actions in the NHS than in pharma, not one generic AI strategy applied to both.

## Conclusion

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UK healthcare and pharma prove that the capability to governance gap this series describes is not one story with one shape. Inside a single national system, the NHS shows what happens when capability sits ahead of governance and adoption stalls, while UK-founded pharma AI shows what happens when capability moves so fast it requires new commercial structures just to keep up. Kodak and Blockbuster took decades to show what an unmanaged gap costs commercially. In healthcare, the equivalent cost is measured in diagnoses delayed and treatments that arrive later than the underlying science would allow. Closing that gap, on both sides of this sector, is not a technology question. It is a governance design question, and the UK has both the AI capability and the specific evidence, in its own evaluation reports, of exactly where its own governance is falling behind.

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*Sources: NHS England published evaluations (NCBI/PMC), Frontiers in Digital Health, British Journal of Radiology scoping review, MarketWise, Presenc AI, Pharma Journalist, Vision Life Sciences, GEN. All figures current as of mid-2026, verified at time of writing. This is a first draft prepared for internal discussion.*