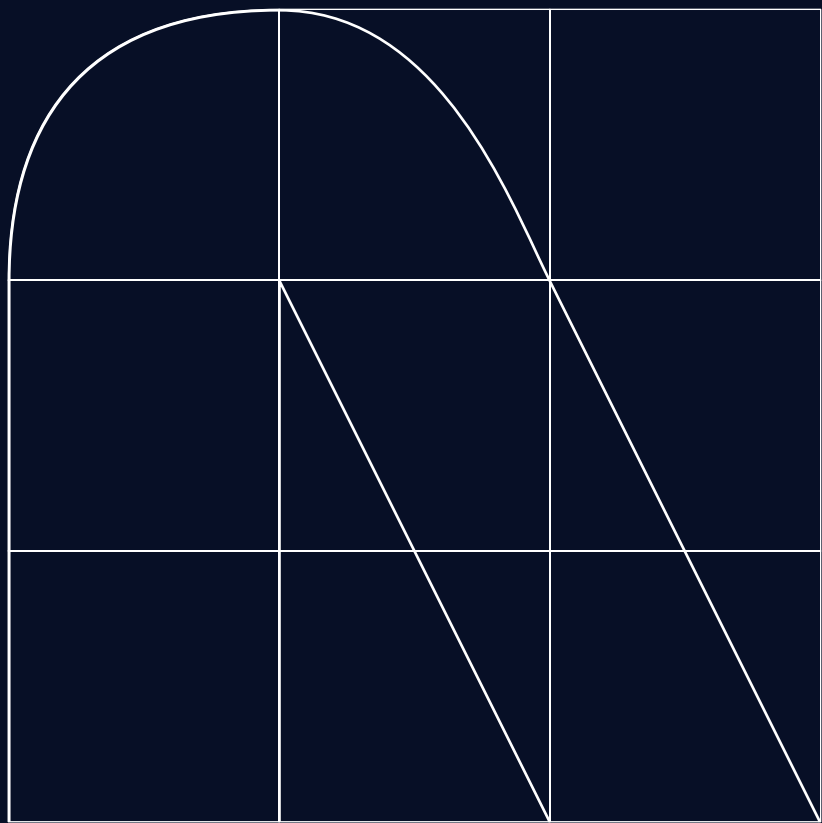


Navigating potential pitfalls in healthcare AI adoption

Transformative technologies like generative AI have the potential to tackle some of healthcare's biggest challenges, but you'll need a roadmap to get there



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Introduction

Healthcare and life sciences organizations traditionally have been behind the curve when it comes to integrating emerging technologies. But the potential benefits of generative AI (GenAI), such as reducing administrative burdens, personalizing patient care or increasing the speed of drug discovery, to name a few, have sparked a sense of urgency in leaders eager to address long-standing industry challenges.

Embarking on a GenAI adoption journey can be both exciting and daunting. Where do you start? How can you get the most value out of your GenAI investment? How do you manage the inherent risks?

Understanding the complexities of GenAI adoption from conception to implementation is critical to implement and scale GenAI solutions successfully. This is where a roadmap and an experienced partner can help you navigate challenges and potential pitfalls.

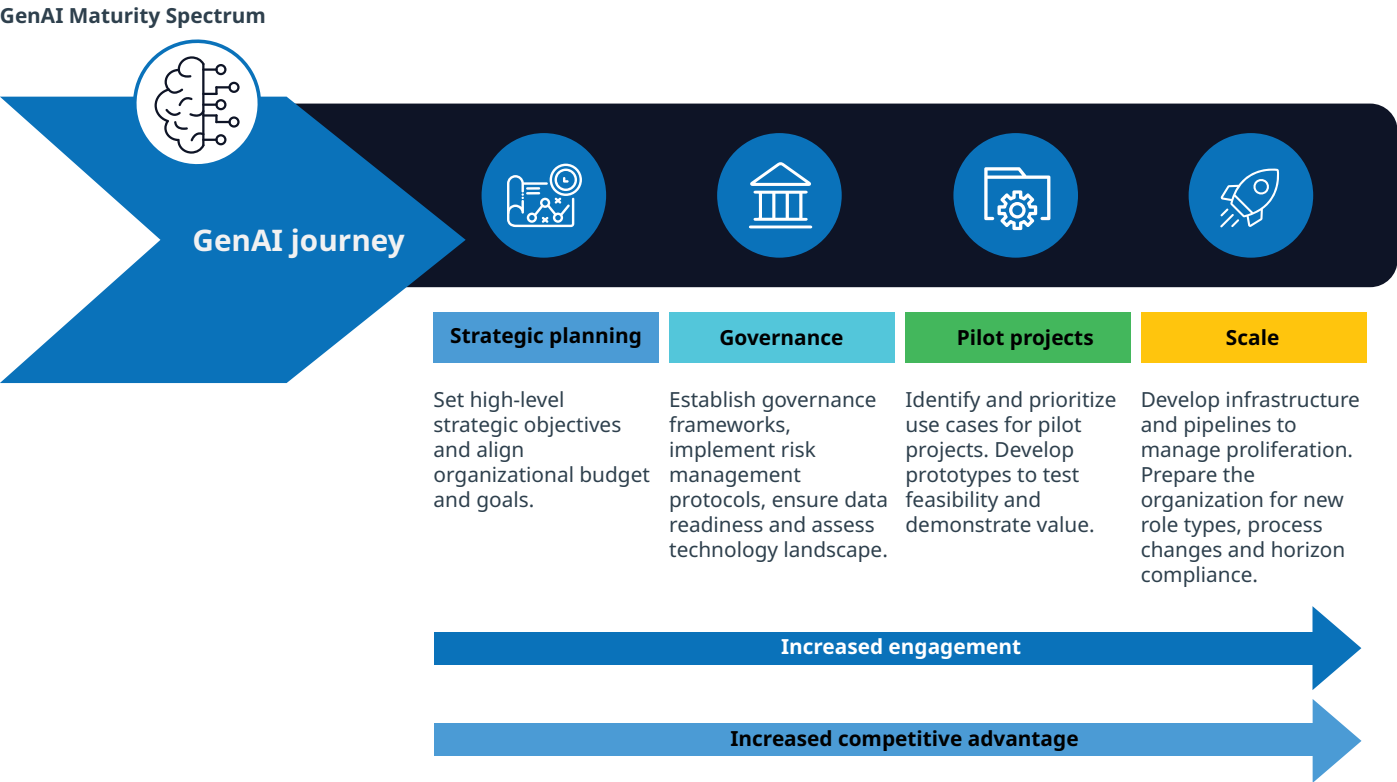
Let’s explore NTT DATA’s GenAI Maturity Spectrum, which outlines the critical steps healthcare organizations should take to ensure a smooth and successful GenAI journey.

GenAI Maturity Spectrum

Our GenAI Maturity Spectrum outlines the stages of GenAI adoption and maturity within an organization. It’s essentially a roadmap to help healthcare organizations develop and use GenAI solutions for competitive advantage. There are four main stages:

- Strategic planning
- Governance
- Pilot projects
- Scale

At first glance, each stage seems straightforward — but let’s put the GenAI Maturity Spectrum to the test. Let’s explore each stage to better understand the possible pitfalls that might occur. And then we’ll discuss approaches that can help you avoid those pitfalls and deliver a successful GenAI deployment.



Stage 1: Strategic planning — laying the foundation

To begin, healthcare leaders should step back and take a broad view of the organization's current maturity and the implications of using GenAI across the organization. Rather than diving into identifying specific use cases, you must contemplate GenAI's impact on the organization and community/stakeholder needs.

Strategic planning involves setting high-level goals and aligning budgets and those goals across the organization. Doing so prioritizes valuable artificial intelligence (AI) projects and ensures efficient resource allocation. You're laying the foundation for a structured AI adoption approach that includes governance frameworks, risk management protocols and data readiness.

Other key decisions during this stage include security, compliance, technology rationalization, internal competencies and vendor capabilities.

If you take your time, keep your end goals in mind and develop a strategic foundation, then you'll be one step closer to implementing your AI solution successfully. It seems straightforward. But we've seen some common pitfalls in strategic planning.

Pitfall 1: Lack of root cause analysis

One of the major pitfalls in strategic planning is the lack of a thorough root cause analysis. Often, organizations might select use cases based on expert opinions or the loudest voices in the room. This approach can lead to choosing projects that don't address the most critical issues.

For instance, a hospital system might prioritize a clinical AI project that a physician leader suggests without analyzing whether it truly addresses the root causes of the organization's operational challenges. Leaders also run the risk of overlooking quick wins that could have a transformational impact on the broader organization, such as improving administrative workflows or enhancing care management for chronically ill populations.

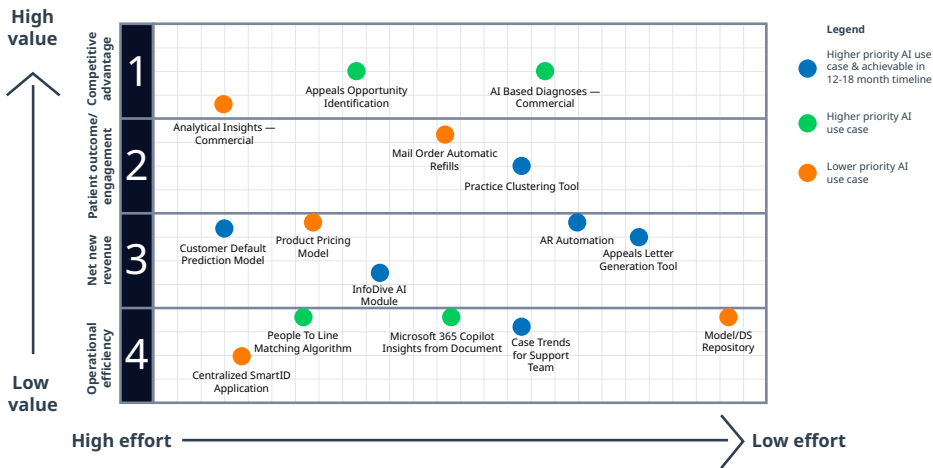
Pitfall 2: Misalignment with strategic imperatives

Another common pitfall is the misalignment of AI projects with the organization's strategic imperatives. This can result in wasted resources and efforts on projects that don't contribute to the organization's overall strategic goals.

For example, a health plan might invest heavily in AI-driven member communication tools, but this effort should align with a longer term omnichannel member engagement strategy.

Our approach

A thorough analysis of your organization's strategic imperatives ensures alignment with your goals and objectives. Tools like the Payoff Matrix help rank opportunities based on how each aligns with strategic imperatives, and its potential impact (see below). This approach helps you select projects that not only address root causes but also contribute to your organization's long-term goals.



NTT DATA's Payoff Matrix

Our Payoff Matrix considers several key factors to identify and prioritize AI use cases based on their total return on investment. The vertical axis of the matrix assesses the potential benefits of a use case, such as enabling operational efficiency, revenue generation, patient outcomes or engagement, and competitive advantage. The horizontal axis evaluates the difficulty or cost of implementing the use case, considering factors like complexity and expense.

By plotting use cases on this matrix, you can visualize which projects offer the most value and are feasible to implement. This approach ensures that you allocate resources efficiently and that AI solutions align with the organization's strategic goals.

Stage 2: Governance — ensuring continuous success

It's an understatement to say that governance is complex. This stage involves establishing governance frameworks, implementing risk management protocols, ensuring data readiness, creating and following compliance policies, assessing the technology landscape and more.

Not only is it all-encompassing, but it must also be transparent, have built-in accountability and be scalable. The best governance framework also ensures that AI projects continue to align with organizational goals and values while staying flexible for future improvements.

Complex? Yes. And complexity can add to confusion, which can lead to easy missteps. What might those missteps look like?

Pitfall 1: Lack of continuous monitoring

Without continuous monitoring, AI systems can suffer from output drift over time, which means that the performance of the AI model can degrade as the data it was trained on changes. This can lead your organization to lose confidence in the AI system and the system itself to lose credibility.

For example, if your organization uses an AI system for patient scheduling and you don't regularly monitor and update that system, it might start making scheduling errors, leading to staffing inefficiencies and potentially harming patients.

Pitfall 2: Neglecting human and product development sides

Another common pitfall is neglecting either the human side or the product development side of AI initiatives. Governance must address both perspectives to ensure the success of AI projects.

For example, if you neglect the human side, you might face resistance to adopting the AI system. On the other hand, if you neglect the product development side, the AI system might not be robust or scalable. Achieving the right balance is key.

Our approach

A comprehensive strategy will simplify the complexity of governance. Focus on both human and product aspects, along with the necessity of continuous monitoring. Doing so ensures a smoother and more effective AI implementation.

On the human side, the focus is change management, training and ethical considerations. This involves preparing staff and clinicians for the changes AI will bring. It provides your teams with the necessary training to work effectively with the AI systems. And it ensures ethical guidelines are in place to address concerns about bias, privacy and transparency. Engaging internal stakeholders early in the process and maintaining open communication helps build trust and acceptance.

On the product side, establish clear protocols for AI development, deployment and monitoring. This includes setting up frameworks for data management, ensuring compliance with regulatory requirements and implementing risk management strategies. It's important to have a robust system for monitoring AI performance. Adjusting that system as needed is also key. It ensures AI systems function as intended and deliver the expected outcomes.

Stage 3: Pilot projects — learn fast, fail fast

You put AI models to the test in the pilot project stage. Organizations identify and prioritize high-impact use cases, develop and test prototypes, learn from both successes and any unforeseen challenges, and refine AI strategies before scaling.

Testing your AI models is exciting. However, you must make sure you don't get ahead of yourself. If you do, you may trip into potential pitfalls.

Pitfall 1: Ready-fire-aim approach

One of the major pitfalls in pilot projects is the “ready-fire-aim” approach. This happens when you jump directly into pilot projects without proper strategic planning. Doing so can lead to failures and missed opportunities because the projects are neither well thought out nor aligned with your organization's strategic goals.

For example, your health system might rush into developing an AI-driven chatbot to handle basic patient inquiries without proper strategic planning. This can frustrate patients if you fail to understand their critical needs or address data privacy and security. It can also lead to a lack of trust among patients and staff, as well as integration inefficiencies across platforms and scalability issues.

Pitfall 2: Failure to identify potential challenges

Without pilot projects, you may not identify the challenges and obstacles that could arise when scaling AI solutions. This can be due to, among other things, data volume and diversity and the amount of time you dedicate to testing. Failing to properly test your pilot project can lead to repeated mistakes and inefficiencies during the scaling phase. This can result in terminating the specific AI solution you've been testing or threaten the development of future AI solutions.

Our approach

The goal of pilot projects is to demonstrate success early and identify any potential challenges up front. It is where you both learn and fail fast. Your AI solution will either adapt and succeed, or it will be scrapped. Then, you start again with another pilot project. Either way, you want to make sure to fine-tune your AI solution to minimize risk and maximize capabilities during the pilot project stage.

We use a combination of Agile frameworks, accelerators and a library of healthcare-specific use cases to strengthen the pilot project lifecycle and scale the AI solution quickly.

Case study: Implementing an AI digital scribe solution

NTT DATA worked with a healthcare organization to implement an AI digital scribe solution. During the pilot project, we discovered that physicians needed to modify how they interact with patients.

Their transcriptions were mostly conversational — “yeses” and “ums” — and without many medical observations or notes. Simply put, since their residencies, doctors had become out of practice when transcribing appointments. The organization needed to implement training and refreshers.

This pilot project lesson was crucial in implementing the digital scribe solution across the organization. After the training, the pilot project demonstrated early success, with physicians reporting improved efficiency and reduced administrative burden.

Stage 4: Scale — expanding efficiencies and capabilities

The final stage involves integrating AI solutions into your organization's broader business or clinical processes and ensuring each is scalable, robust and sustainable. Key aspects of this stage include seamlessly integrating AI solutions into existing workflows to increase efficiency and effectiveness. Doing so ensures AI solutions can handle increased workloads. You also need to set up management and support processes and frameworks for your AI solutions. Additionally, you need to routinely monitor and update these solutions for effectiveness.

By focusing on these aspects, your organization can maximize the benefits of AI solutions and achieve long-term success. Then it's time to celebrate, right? No, not so fast.

Pitfall 1: Set it and forget it

When organizations scale AI solutions, there's a risk of adopting a "set it and forget it" mentality. This means that once you deploy an AI solution at scale, you leave it to operate without ongoing oversight and monitoring. This approach can lead to several issues, including output drift and loss of credibility, among other unidentified issues. Sound familiar? A sound governance framework will help you avoid this pitfall.

Pitfall 2: Failure to learn from pilot projects

If you don't learn from pilot projects, your organization may repeat the same mistakes and face inefficiencies during the scaling phase.

For example, an AI model developed for a small-scale pilot might not work well at scale due to differences in data volume and diversity.

Pitfall 3: Lack of change management

Successfully navigating the GenAI era requires more than just implementing technology; you need a cultural transformation and workforce reskilling. Your organization must foster a supportive environment, encourage continuous learning and stay informed.¹

One of the major pitfalls in scaling AI initiatives is the lack of proper change management. When organizations scale AI solutions, they often face resistance from employees who are accustomed to traditional methods. Without effective change management, your stakeholders may not buy into the AI initiative, causing it to fail. This can also have a negative impact on staff and clinician satisfaction.

For example, implementing voice mining software in a health plan contact center can empower agents to provide a better customer experience for members or providers. Without a shared vision and staff buy-in though, agents may see augmentation as more of a threat than an opportunity. Creating a culture of experimentation and continuous learning will enable your teams to use the full capabilities of GenAI.

Our approach

When it comes to scaling an AI solution successfully, the worst thing you can do is become complacent. Complacency breeds stagnation, which leads to poor performance, broken solutions, wasted resources and overall failure. We can't afford that in healthcare.

You can overcome this challenge by refining your AI solution with ongoing pilot projects during the scaling stage. Using Agile frameworks, you can build confidence in other areas when testing the AI solution.

Additionally, adopt continuous monitoring when scaling. Staying on top of your AI solution as you input new data and increase flexibility in system capabilities lets you make quick adjustments and lower any negative consequences.

Finally, go beyond basic change management. Provide training and support for all stakeholders and users to increase adoption and minimize resistance.

Case study: Enabling new models of in-home care for cancer patients

NTT DATA and Duke Health are collaborating to create a highly interactive and technologically advanced model for augmented home care delivery.

This new model integrates multiple technologies, including a GenAI-driven virtual agent from Ellipsis Health, automation, device interoperability, remote patient monitoring, and a patient app and portal. The solution is designed to keep medical staff and patients in direct contact to ensure a human is always in the loop while allowing patients to receive more of their care at home.

To begin development of this new care delivery model, a clinical trial will test the patient experience and usability of an AI virtual agent in conducting teaching and technical support for remote patient monitoring devices. This groundbreaking approach will revolutionize healthcare by turning the patient's home into a human-centered and high-value care setting, taking today's best practices to the next level with the power of automation and GenAI.

Conclusion

The healthcare ecosystem needs AI-driven solutions that solve practical problems and provide tangible value. But as healthcare and life sciences organizations strive to enhance efficiency, reduce costs and improve health outcomes with AI, they must adeptly navigate the inherent challenges of this new technology to unlock its full potential. Our unique differentiators help ensure the successful implementation and scaling of AI solutions, providing significant value to healthcare organizations and the patients they serve. Whether it's through strategic planning, robust governance, agile pilot projects or effective scaling, our expertise can help your organization confidently navigate the complexities of AI adoption all along the GenAI Maturity Spectrum.

Want to know more?

NTT DATA works with healthcare and life sciences organizations to power positive health outcomes with comprehensive digital solutions. [Learn more.](#)

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Dr. Frownfelter brings more than 20 years of physician leadership experience to bear on the challenges in healthcare today. His health IT leadership roles in the C-suites of large provider organizations, including Henry Ford Health, UnityPoint Health and Trinity Health, are augmented by more recent work in consulting and with healthcare startups. He has a broad range of expertise in organizational care transformation, change management with health IT, strategic planning and using analytics to empower organizations at all levels. At NTT DATA, Dr. Frownfelter is leading several initiatives, including digital transformation through virtual care at home and generative AI for healthcare.



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Raleigh Murch is a Managing Director for AI supporting NTT DATA's Healthcare and Life Sciences sector. Raleigh led the technology organization for Slalom for the South-Central Region and was a regional SME for GenAI. Before Slalom, Raleigh was a leader within AWS' Global Specialty Practice for artificial intelligence and machine learning. He focused on computer vision and edge IoT solutions. His past roles include a Silicon Valley founder for a maritime engine analytics company, embedded hardware prototype consultant, and a long career in industry as a product and engineering organization leader. Raleigh has been working in emerging technologies for most of his career. He works directly with company leaders to help define the art of the possible in the industry.

Sources

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List of abbreviations

GenAI: generative AI

AI: artificial intelligence



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NTT DATA is a trusted global innovator of business and technology services, helping clients innovate, optimize and transform for success. As a Global Top Employer, we have diverse experts in more than 50 countries and a robust partner ecosystem. NTT DATA is part of NTT Group.