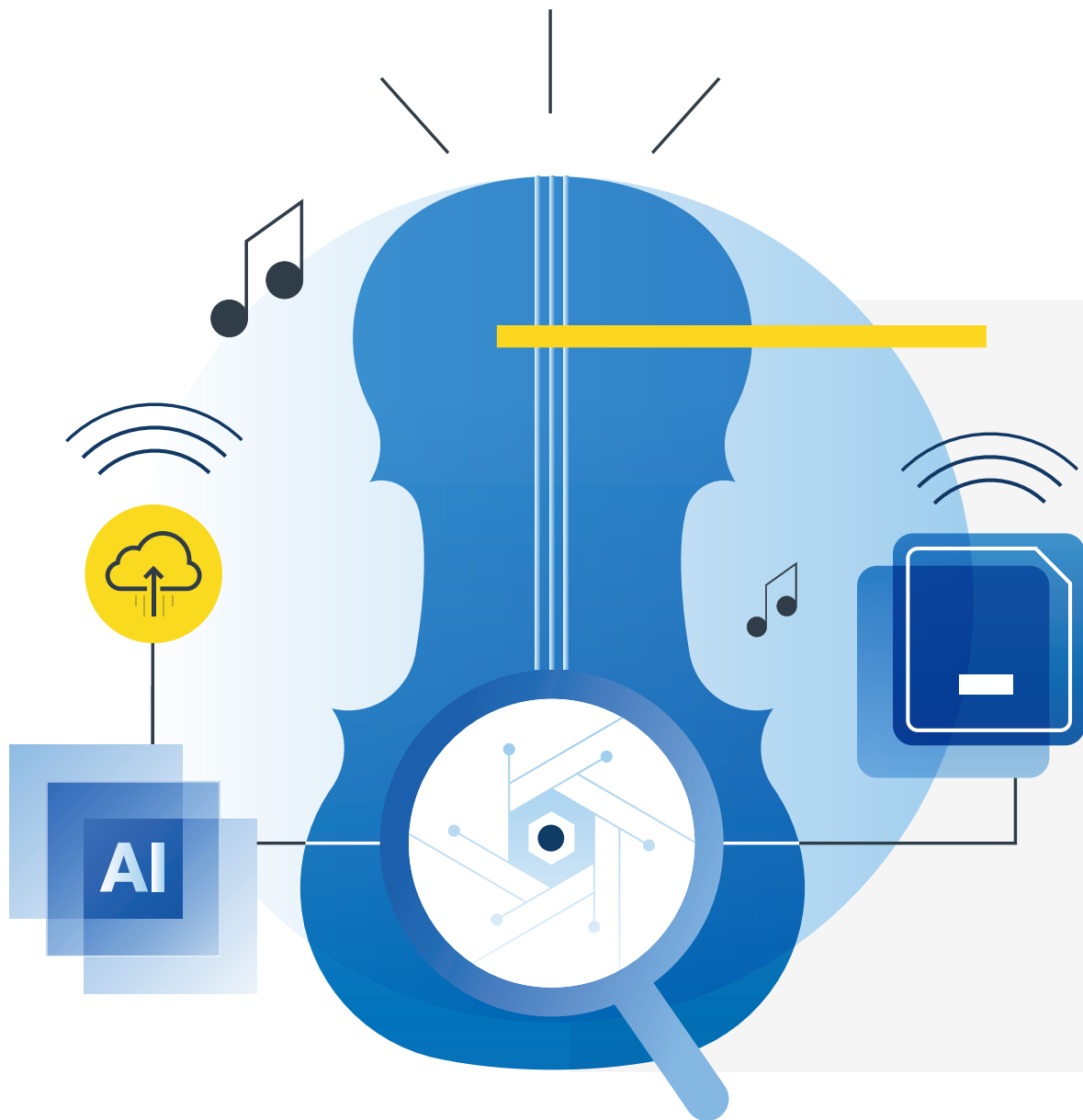


ARTIFICIAL INTELLIGENCE

Orchestrating Legacy System Transformation with AI

Be the Conductor for AI-Powered Modernization



As the harmonious blend of tradition and innovation takes center stage, businesses face increasing pressure to adapt. Across industries, the need to modernize is becoming increasingly urgent; 70% of global CXOs view legacy modernization as a top business priority.¹ Nevertheless, composing a modernization effort is a formidable challenge. A recent survey indicated that over two-thirds of businesses use legacy applications or code for operations, and more than 60% of these businesses rely on legacy systems for customer-facing interfaces.²

It's not that these organizations want to operate on legacy systems; rather, many of these businesses have a great deal of technical debt. Embarking on a modernization initiative requires a significant upfront investment that can create instability due to data migration challenges in the short term. But the cost of change is minimal compared to the cost of staying stagnant.

According to Gartner, companies will spend 40% of their IT budgets on maintaining technical debt, even though these systems pose efficiency and cyber security issues.³

In contrast, the adoption of AI across industries demonstrates the compelling benefits of modernization, with employee efficiency improving by:

30% in manufacturing



25% in healthcare



28% in logistics



Source: American Journal of IR 4.0 (2024). The Role of Technology in Improving Operational Efficiency. [researchgate.net](https://www.researchgate.net).



Imagine the conductor of an orchestra guiding a symphony of AI-powered modernization to address your legacy systems. With AI, you hold the baton, transforming challenges into opportunities and converting technical debt into boundless innovation. AI can be a powerful instrument that resets the modernization feasibility equation. Where manual efforts are more susceptible to faltering due to sheer complexity and scale, AI-driven processes excel at automating critical tasks and uncovering insights with focused precision. This capability can allow human conductors to focus on the more intricate, multifaceted challenges of modernization.

Benefits of AI in Orchestrating Modernization

By leveraging AI in modernization strategies, companies can create greater agility, innovate more effectively, and implement leading-edge technology to meet customer demands, all while decreasing risks. Key benefits of this approach include:

- **Enhancing Efficiency and Reducing Costs:**

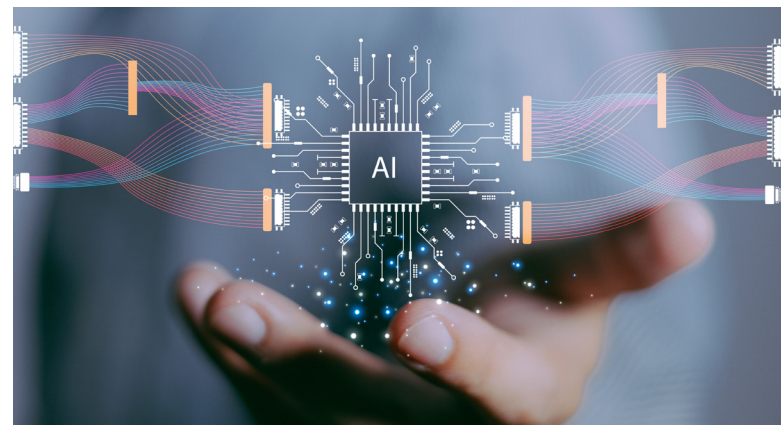
AI-powered tools and automation streamline processes, allowing organizations to complete tasks faster and with fewer resources. This efficiency translates into significant cost savings, as manual efforts are minimized and operations are optimized.

- **Shortening Project Timelines:** Organizations can accelerate project timelines by automating repetitive tasks with real-time insights from an AI accelerator. This speed enables associates to meet deadlines more consistently and adapt to ever-changing regulatory requirements.
- **Decreasing Risks:** Organizations can enhance their risk management by using AI to identify potential issues early. This proactive approach helps organizations mitigate risks and ensure compliance with industry standards and regulations.
- **Focusing Human Effort on High-Value Tasks:** One of the significant advantages of AI in orchestrating modernization is its ability to automate content migration, freeing up valuable resources to focus on more complex or nuanced projects. With the help of AI, organizations can efficiently manage the migration of vast amounts of content, ensuring that employees can dedicate their time and expertise to more strategic priorities.

Benefits of AI After a Modernization Initiative

The capabilities of AI extend beyond the completion of modernization efforts, offering sustained enhancements in enterprise efficiency. With AI, organizations can continuously leverage real-time data streams to optimize operations and drive innovation by:

- **Creating Greater Agility:** A modernization effort with AI assistance enables companies to respond quickly to market changes and customer needs. With AI-driven insights, companies can make fast, informed decisions that drive growth and innovation.
- **Increasing Ability to Innovate:** AI empowers organizations to implement cutting-edge technology and develop innovative solutions that address complex challenges. By harnessing AI, companies can stay ahead of competition and deliver superior products and services.
- **Enhancing Decision-Making Capabilities:** Leveraging AI post-modernization equips organizations with advanced analytics and predictive insights that facilitate strategic decision-making. This empowers businesses to anticipate market trends, optimize performance, and refine strategies to remain responsive to customer demands.



AI Applications Across Industries

AI's diverse capabilities make it a powerful tool for driving modernization in multiple sectors. CapTech has partnered with clients across industries to help them identify their unique modernization challenges and develop an AI-powered approach tailored to fit their industry.

Healthcare

One state healthcare agency faced challenges when trying to access vital data on its legacy system, including long call times, delayed application processing, and multiple identification numbers assigned to beneficiaries.

Unsatisfied with the traditional approach to benefits, the state healthcare agency partnered with CapTech to leverage human-centered design to create a modular, single access point for all Medicaid-related services. This included implementing a Master Data Management (MDM) system and adopting event-driven architecture to ensure that enrollee-related data is consistent and accessible across all touchpoints.

The new enterprise platform, powered by AI, allows enrollees to access their current benefits while matching them with other relevant programs, like the Supplemental Nutrition Assistance Program (SNAP) or Temporary Assistance for Needy Families (TANF).

It also reduces administrative costs by streamlining the enrollment process and minimizing the need for multiple applications and verifications.

This capability also relieves state workers of administrative frustrations as the transformation enables seamless data transfer, providing transparent and auditable data for enhanced security and trust.



Financial Services

A top 10 U.S. bank needed to integrate the teller and back-office operations from an acquired bank into its existing operating infrastructure. This was not a small task, as the modernization initiative required the existing systems to support new regulatory and business processes for over 400 branches and train more than 8,000 employees on the updated systems and related processes.

Seeking a scalable, strategic solution, the bank partnered with CapTech to develop a comprehensive roadmap for total integration with the potential for future scalability. This implementation included developing an integration strategy, assessing risk and issue management, and configuring external vendor management. To ensure consistency across all platforms, CapTech implemented AI-assisted automation to ensure consistency and compliance across the updated infrastructure.

By leveraging AI, CapTech was able to deliver the \$50 million program on time and under budget. The team also established a standardized project management office with guidelines, processes, and AI-assisted support tools. CapTech also developed a playbook to guide future integration efforts, in the event the bank made additional acquisitions.

Public Sector


One state's Department of Labor wanted to actively pursue a modernization initiative that transformed its legacy, paper-based Workers Compensation Board (WCB) into a single state-of-the-art, modern, web-based technology. This effort included a monumental shift from paper forms to an MDM system, while also training state employees on the new processes and architecture.

The state's WCB partnered with CapTech to develop an AI toolkit that could automate complex tasks, streamline variance requests, and flag missing or inaccurate information on worker compensation forms. Implementing an overarching solution such as this enables the WCB to reduce its technical debt while allowing state employees to focus on complex worker cases and high-level strategic initiatives.

The MDM enabled the WCB to eliminate 900,000 scanned documents each year, resulting in more than \$850,000 in annual savings. The automation toolkit also reduced approximately 50,000 manual orders per year.

Rather than waiting on a state specialist to manually contact payers, the AI toolkit automatically authorizes treatment when a payer fails to respond to an authorization request.

The implications of reducing these redundancies are immense. This transformation streamlines operations and enhances the overall efficiency and effectiveness of the WCB. In total, the initiative eliminated almost 45,000 forms with missing or inaccurate information.



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Getting Started with AI-Powered Modernization

Steps to Initiate a Modernization Project

1



Thoroughly Assess Your Current Systems

To begin a modernization project, it is crucial to have a comprehensive understanding of the current system architecture, integrations, and business processes. AI can considerably cut down on this step through automated data sorting and data mapping. This entails mapping out the existing architecture, documenting the integrations, and analyzing business processes to identify inefficiencies.

2



Break Work Down to the Feature Level

Deconstruct the modernization project into manageable features and ensure stakeholder alignment on the scope. AI-driven tools can provide real-time insights and predictive analytics to track progress and manage changes effectively. This strategic approach allows for clearer planning and streamlines execution, making it easier to track progress and manage changes.

3



Identify Complex, Uncommon Scenarios

For scenarios that are too complex for immediate automation, start with manual execution while planning for future automation. This approach allows organizations to identify optimal strategies for integrating them into an AI-powered system, paving the way for later, more informed automation solutions.

4



Automate Common Scenarios for Efficiency

Use AI tools to recognize patterns and optimize automation strategies for regular, repetitive tasks. By focusing on common scenarios that benefit the most from automation, your team can streamline operations, boost productivity, and optimize overall workflow efficiency.

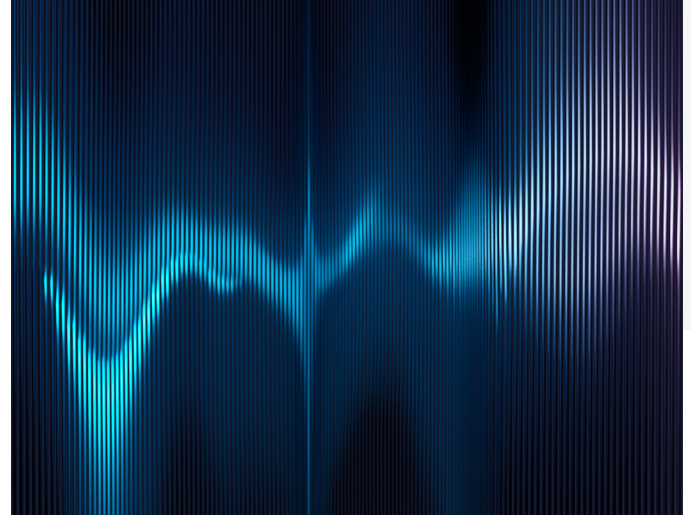
Key Considerations and Best Practices

Understanding the current system architecture and business processes thoroughly is crucial. Breaking down work into manageable features and aligning them with stakeholders ensures smooth progress. Planning for the manual execution of complex scenarios while keeping potential future automation in mind is advisable, while initially focusing on automating high-volume tasks can significantly improve efficiency. Meanwhile, keeping stakeholders engaged and continuously monitoring the process allows timely addressing of any issues that may arise.

Start Developing Your Symphony

As the need for modernization becomes increasingly pressing, AI offers a way to supercharge organizations' efforts by automating complex tasks, streamlining processes, and uncovering valuable insights at unprecedented speeds. By adopting responsible AI practices and utilizing AI tools strategically, organizations can reset the feasibility equation, enhancing their modernization efforts and developing a roadmap to update even the most challenging legacy systems.

To return to the orchestra analogy, with you as the conductor, these tools can come together to create a seamless, efficient, and productive workflow, ensuring that every aspect of modernization remains in tune.



References

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