Driving business value through custom software: Growth, efficiency, and risk management

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Introduction

Custom software development (CSD) is at the heart of business transformation. With organisations under more and more pressure to innovate, differentiate, and create more value from their technology investments, leveraging the emerging technology trends that are reshaping the business ecosystem is crucial for long-term success.

This guide explores some of the megatrends that are set to redefine business value through custom software development.

From the transformative power of artificial intelligence (AI) and machine learning (ML) to the role of hyper-personalisation and data quality, businesses must navigate a complex yet rewarding technology landscape.

We will delve into how AI is evolving, its constraints, and its impact on legacy systems, as well as the rise of low-code and no-code platforms that democratise software development.

Beyond technology advancements, **this guide highlights the strategic business value of custom software and how it drives revenue growth, efficiency, and competitive advantage**. We will discuss key strategies such as monetisation through digital products, leveraging data ecosystems, and accelerating time-to-market with modern development tools. Additionally, we will explore investment considerations, operational sustainability, and the balancing act between innovation and risk.

Whether you are a digital leader, business executive, or decision-maker, this guide provides valuable insights into the forces shaping custom software development and the opportunities it presents for businesses looking to stay ahead of the game.

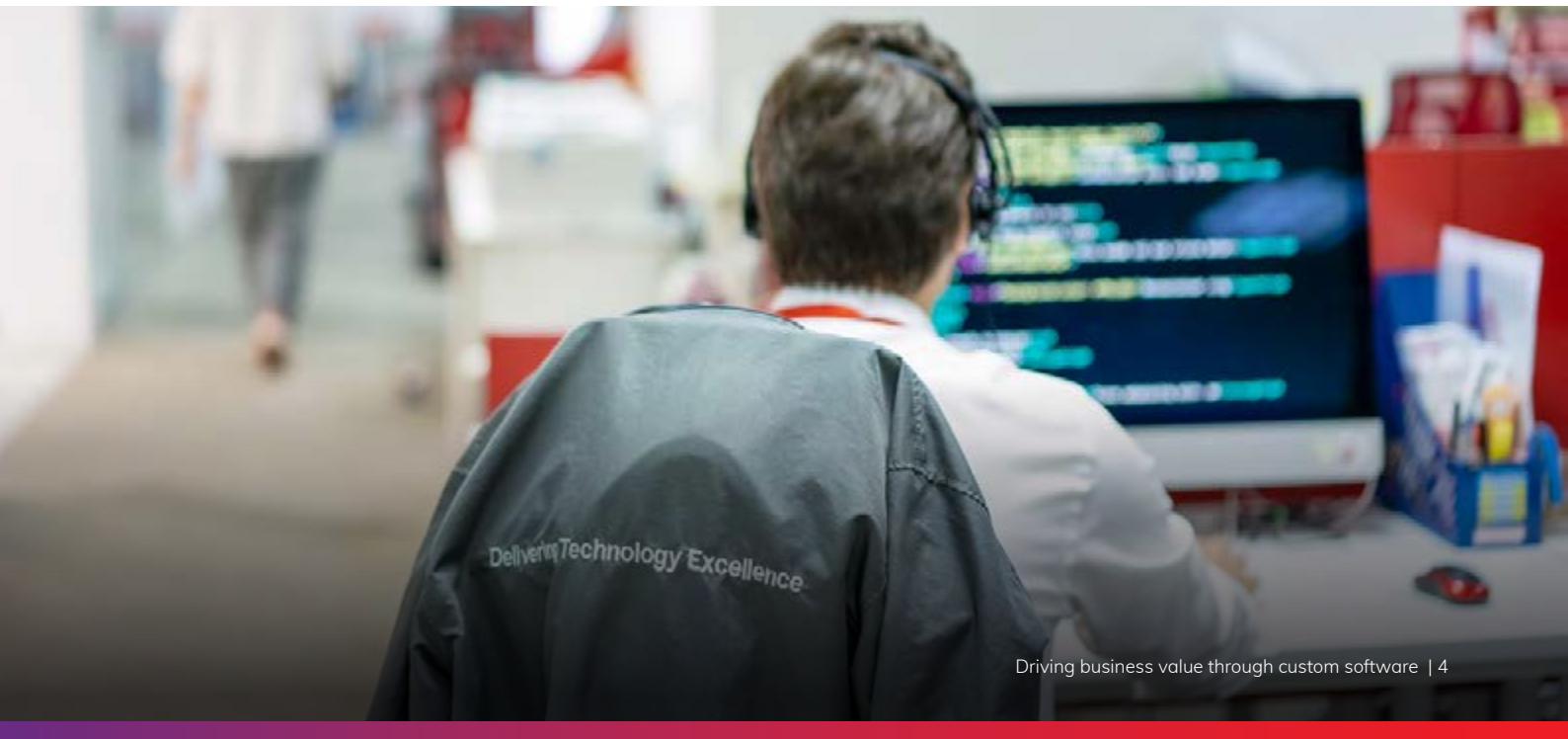
Custom software development: The megatrends set to redefine business value

The global services market for custom software development (CSD) was valued at **$35.4 billion** in **2023** and is expected to reach **$146.9 billion** by **2030**.

The widespread adoption of data analytics and the emergence of technologies such as artificial intelligence (AI), machine learning (ML) and robotic process automation (RPA), along with the growing use of low-code and no-code development, is speeding up how quickly businesses can deploy new, custom-developed applications and tap into emerging value opportunities.

As a global provider of custom software development services, NashTech experts share their views on some of the areas that will continue to change the face of custom software and where businesses might realise new sources of value, including:

- **The future of AI**
- **Hyper-personalisation**
- **The critical role of data quality**
- **The rise of low-code / no-code development**



The future of AI

AI—particularly Generative AI (GenAI)—is set to transform custom software development by accelerating productivity, modernising legacy systems, and enabling hyper-personalisation. Gartner predicts **spending on AI-related services to reach £443 billion by 2027**, with technology rapidly shifting from experimentation to essential infrastructure. As GenAI continues to gather pace, we are seeing GenAI streamline software creation, automate repetitive tasks, and, as NashTech's internal research suggests, **increase developer output by an estimated 25–30%**, significantly reducing time-to-market.

While GenAI is already streamlining new software development, the real transformation will come when GenAI tools can effectively tackle legacy modernisation. Currently, **managing technical debt consumes around 30% of IT budgets and 20% of resources**. As GenAI matures, businesses will be able to reduce modernisation costs, generate code, and identify optimisation opportunities, freeing up budget and capacity to invest in custom software that delivers true differentiation.

Despite its benefits, AI introduces challenges—from model bias and "hallucinated" code to security risks and potential lack of transparency. Skilled professionals remain essential for auditing AI outputs and maintaining code quality. What's more, emerging technologies like Agentic AI promise greater autonomy but raise questions around accountability and regulation.

To harness AI's potential, organisations must align strategy with practical implementation – by investing in clean data, ethical frameworks, skilled talent, and clearly defined ROI. Those who succeed will gain a competitive edge through more efficient, scalable, and intelligent custom software solutions.

Top tip

Invest in solutions that will provide industry-specific data to improve the quality of your AI outputs and see clearer value. Also, evaluate your AI needs carefully. Smaller, purpose-built models can offer faster, cost-effective solutions for specific tasks, while larger models are better suited for broader applications. Finding the right balance will maximise efficiency and impact.

A real world use case: Multi-faceted value of AI

NashTech developed a custom software solution that has transformed the way gastrointestinal diagnostics are conducted. It offers significant improvements in patient experience, operational efficiency, and cost savings.

Traditionally, procedures like colonoscopies and endoscopies required invasive methods and anaesthesia. This new software supports a non-invasive alternative where patients swallow a small camera that captures images as it moves through the digestive tract. While patients go about their normal activities, the software collects and processes the images.

A key innovation is the integration of an AI-powered neural network, which automatically analyses and stages these images for review. Instead of a doctor manually inspecting hundreds of thousands of images, the AI identifies anomalies and prioritises relevant findings. This allows nurses to handle preliminary reviews, freeing doctors to focus on more complex cases.

The software delivers value in three key areas:

Cost efficiency

By enabling nurses to manage image reviews and generate referrals, the software reduces the need for direct physician involvement in routine tasks.

Operational efficiency

Automating the staging of images speeds up the diagnostic process, improving patient throughput and minimising bottlenecks.

Patient experience

The non-invasive nature of the procedure is less stressful and more comfortable for patients.

The technology is currently being piloted in health services around the world to improve patient care while reducing procedural costs. It not only enhances existing medical workflows but also opens new avenues for innovation in healthcare diagnostics.

Hyper-personalisation

Hyper-personalisation uses real-time data and machine learning to provide more customised and contextually relevant customer experiences. It can be a key differentiator for organisations operating in competitive industries such as eCommerce, insurance, and retail.

From tailored eCommerce recommendations to customised financial products, hyper-personalisation can boost customer engagement and conversion rates using real-time, AI-driven interactions that offer dynamic experiences that adapt to individual behaviours and situations.

AI-powered chatbots and voice assistants, for example, will continue to evolve, delivering seamless, human-like interactions across digital platforms, while real-time data analysis helps organisations refine their marketing and sales strategies on-the-fly.

A key trend shaping the future of hyper-personalisation is the rise of composable intelligent services - systems that seamlessly collaborate in the background to deliver integrated, real-time insights and actions. For example, if a person regularly stops at a specific coffee shop on their way to work and their train is delayed, intelligent systems can detect the delay and adjust the timing of their coffee order accordingly.

Custom software that harnesses the power of hyper-personalisation can be a key differentiator, but success lies in being able to leverage high-quality, structured or unstructured data to drive intelligent automation and hyper-personalised experiences.

A seamless digital customer experience

Markerstudy Distribution (MSD) needed a smarter way to deliver seamless digital insurance experiences to its customers. Its legacy 'quote and buy' platforms were slow, costly to maintain, and difficult to scale. With an expanding portfolio of brands and aggregator partnerships, MSD sought a technology partner who could help them build a future-proofed system.

NashTech designed a cloud-based, modular quote and buy engine that streamlined MSD's customer journeys, reduced its operating costs, and accelerated new product launches. It could now onboard new affiliates in just two weeks instead of four months, significantly increasing its business agility.

But this wasn't just about technology, it was about people. NashTech's team worked closely with MSD, ensuring every detail aligned with their vision.

By empowering MSD's teams with intuitive tools, the NashTech teams empowered MSD to make real-time updates without relying on developers. This meant faster go-to-market strategies and a more engaging customer experience.

MARKERSTUDY DISTRIBUTION

This partnership delivered a 47% increase in journey completions, a 226% boost in quote-to-sale ratios, and substantial cost savings for MSD.

Read the full story here

The critical role of data quality

Access to the right data, whether structured or unstructured, is essential when developing custom software. As businesses generate more data through connected devices and digital touchpoints, the opportunity to build smarter, more adaptive software is growing rapidly. At the same time, advances in AI and automation are enabling custom software to go beyond static functionality, delivering dynamic, personalised experiences that respond in real time to user behaviour and business needs.

AI-powered development thrives on good data. Whether it's recommending features, streamlining user journeys, or automating tasks behind the scenes, AI needs clean, well-governed data to work effectively.

That's why data hygiene, governance, and the right platform are no longer optional, they're foundational to building reliable, intelligent applications that deliver lasting value.

For custom software development, this shift means faster iteration cycles, more targeted features, and systems that continuously improve. It also empowers businesses to build tailored solutions that reflect their unique needs and customer expectations, rather than relying on one-size-fits-all tools. As a result, the role of data in AI is evolving from a technical enhancement to a strategic enabler in the development of modern, high-impact software.

The rise of low-code and no-code development

With low-code and no-code platforms gaining significant traction, these platforms potentially allow non-developers to create applications using drag-and-drop tools, reducing the need for manual coding and accelerating development timelines.

These tools are estimated to **cut development time by up to 90%**, enabling faster delivery and greater flexibility. However, NashTech believes that while certain tasks can be simplified, they often introduce complexity down the road when trying to scale beyond basic functionality. As new features are added over time, they can become too unwieldy to manage without transitioning to fully custom-built software. This creates an ongoing need for professional development teams to scale, maintain, and reimagine these systems as they evolve. **The key is knowing when to empower business users to build with low-code / no-code versus when to utilise developer time for low-code / no-code development.**

NashTech experts suggest that complex enterprise apps should be developed by skilled developers to prevent challenges later, while simpler business unit apps could be created by business users, provided that adequate guardrails and patterns are in place to ensure they have the best chance of success and a quality outcome.

Looking ahead, the landscape will likely continue evolving, with AI, cloud, security, and business agility remaining central themes. The demand for custom software development isn't diminishing—it's growing more complex, and organisations like NashTech will play a critical role in navigating this evolving space.

Creating business value and mitigating risk

This section explores how custom software can help differentiate a business through the lens of four key sources of business value:

Driving revenue growth

- Monetising disruption and supporting new revenue streams
- Unlocking the value of your data
- Building ecosystems through integration
- Customer retention and expanding customer reach

Efficiency

- Agility and competitive differentiation
- Faster time-to-market for new features
- Leveraging modern development tools
- Operational models and sustainability considerations

Cash, costs, and investments

- Reframing the value of a custom software development services partner
- Budgeting advice for digital leaders

Balancing business innovation and risk

- Organisational life cycle and risk appetite
- Risk mitigation through control

Clearly articulating and extracting business value is becoming increasingly complex, particularly within large enterprises. Often, there's a disconnect between strategic conversations at the leadership level and the teams responsible for delivering the technology. Some organisations also struggle to clearly define the business outcomes they expect from their investments in custom software, leading to misalignment between technology initiatives and overall business goals.

In many cases, technical teams lack visibility into how their work contributes to wider business objectives. This disconnect can result in misaligned priorities, missed opportunities, and slower decision-making.

The organisations that will gain the most from custom software are those that **embrace agile thinking, foster a culture of innovation, and maintain a strong link between their technology investments and strategic business goals**.

Success originates from the ability to recognise disruption early and continuously reinvent the business with technology that strengthens your ability to adapt and grow. Select a development partner that understands your business and your goals and can proactively advise on key ways to differentiate.

Driving revenue growth

Megatrends such as **AI, data analytics, and hyper-personalisation** are creating strategic growth opportunities and new avenues for revenue generation. These advancements are turning technology from a cost centre into a profit driver, especially when **businesses invest in custom solutions that deliver differentiated, high-impact value**.

Monetising disruption and supporting new revenue streams

Technology leaders can drive business growth by monetising disruption through custom software that capitalises on emerging technologies, market shifts, and evolving consumer behaviour. Tailored digital solutions can create competitive differentiation, enabling new revenue streams and market expansion.

Technologies, such as open APIs (application programming interfaces), are crucial for unlocking new revenue. They are vital enablers for systems integration and the pooling and sharing of data and insights with third-party business partners and service providers. For example, a logistics company can monetise its global supply chain by offering APIs that integrate with eCommerce platforms, creating an additional revenue stream through usage fees.

Disruptive technologies like generative AI, automation, and AI-powered analytics are reshaping business models. Forward-thinking technology leaders are using these tools, not just to optimise operations, but to create scalable, revenue-generating opportunities through custom software.

Uber is a standout example of how custom technology can completely redefine an industry. By moving beyond the traditional taxi model, Uber built a custom platform that connected drivers and passengers through a seamless mobile experience. Real-time GPS tracking, dynamic pricing algorithms, and user-friendly interfaces revolutionised the ride-hailing process, eliminating the need for dispatchers or cash transactions. This tech-first approach not only enhanced convenience and transparency for users but also enabled rapid global expansion. By leveraging data-driven insights and continuous platform optimisation, Uber turned transportation into an on-demand service and created a scalable, disruptive business model that transformed the taxi industry worldwide.

Driving revenue growth

Unlocking the value of your data

Many traditional organisations, particularly those that existed before the digital age, possess vast stores of data accumulated over years of operation. Historically, these data sets were underutilised due to accessibility challenges and a lack of advanced tools for analysis. However, modern technologies and patterns like data mesh combined with cloud services enable organisations to build custom solutions that will transform data into valuable, marketable assets.

For instance, national weather agencies like the UK Met Office have pivoted from providing weather forecasts solely to major institutions to offering their vast troves of meteorological data via APIs. This allows a broad spectrum of businesses, from travel companies to logistics firms, to integrate accurate weather data into their applications and services. By packaging and selling their data in a more consumable format, these organisations open entirely new revenue models.

The convergence of AI, real-time data, and hyper-personalisation is reshaping business value in ways previously unseen. Businesses can now reduce operational costs, accelerate decision-making, and improve efficiency through intelligent automation.

Building ecosystems through integration

Custom software development also enables the creation of integrated ecosystems that facilitate new business models and new revenue opportunities to support growth. Companies can connect various digital services, supply chains, and customer experiences, effectively transforming into platform businesses.

Consider the rise of drop-shipping marketplaces. A company can develop a marketplace application that connects manufacturers, logistics providers and customers without owning physical inventory. Through custom APIs, these platforms can offer seamless integration between the product manufacturer, a shipping service and the customer experience, enabling a low-cost, high-scale business model. This ecosystem approach drives revenue not only from core products but also from the data and insights generated through these interactions.

Driving revenue growth

Customer retention and expanding customer reach

One of the most compelling advantages of custom software lies in its ability to deepen customer relationships. When businesses build bespoke solutions tailored to client needs, they foster a higher level of customer intimacy, **offering personalised experiences that drive trust and brand loyalty**.

By controlling the user experience, businesses can differentiate themselves, delivering seamless and unique interactions that competitors using standard software cannot replicate.

Retaining more customers through an enhanced customer experience is key to growth. Custom-designed and developed AI-driven user interfaces will simplify and enhance front-end user experiences, allowing organisations to focus their custom software development on complex back-end processes that drive real business value, offering a personalised, fast and multi-touch service i.e. transitioning to a subscription model from one-time purchases generates recurring revenue while enhancing customer loyalty.

By adopting a modular approach to custom software development and leveraging APIs, organisations can extend their customer base and reach new markets. For example, a hotel chain might share its booking logic with travel aggregators through an API, attracting new customers while maintaining control over pricing and availability. Similarly, retail businesses can integrate with digital platforms to reach global audiences without the need for physical expansion.

Driving efficiency through custom software development

Technology leaders can foster further value by driving efficiencies that leverage custom software to streamline operations, reduce costs, and enhance responsiveness. Custom-built solutions can enable automation, improve workflows and provide real-time insights. For instance, integrating AI-enhanced analytics with automated data processing can reduce manual workloads and increase the speed of informed decision-making. This operational efficiency leads to cost savings and allows teams to focus on higher-value initiatives.

Faster time-to-market for new features

Custom software development enables rapid feature delivery by eliminating the bottlenecks of standard commercial off-the-shelf software release cycles. This allows organisations to respond swiftly to customer feedback and emerging trends. For instance, an eCommerce platform can be extended through the use of custom software to implement personalised product recommendations, improving the customer experience and increasing revenue.

Leveraging modern development tools

Advancements in low-code/no-code platforms and cloud-based tools have lowered the barriers to adopting custom software. However, experienced professionals remain essential to ensure these solutions are scalable, secure, and cost-effective. Technology leaders can adopt a hybrid approach, combining low-code for rapid prototyping with traditional development for complex, business-critical applications.

Operational models and sustainability considerations

Custom software allows organisations to align with sustainability goals by optimising resource usage. Using cloud-based infrastructure and cloud-native principles in application deployment can reduce energy consumption and operational overheads. Additionally, flexible resourcing, balancing offshore and onshore teams, can lower costs while ensuring round-the-clock productivity.

NashTech supports technology leaders

NashTech helps organisations navigate the complexities of custom software development. We deliver future-ready, extensible solutions that seamlessly integrate emerging technologies. With deep technical expertise and strategic foresight, we empower technology leaders to drive efficiency, foster innovation, and achieve long-term business growth.

Cash, costs, and investments

Whilst some technology leaders are cautious about the costs and complexities of building software from scratch, NashTech has seen a noticeable shift in mindset for how technology investments are assessed and prioritised alongside the growing need for agility and tailored solutions.

However, cost-conscious CIOs and technology leaders should focus on adopting a hybrid model of leveraging commercial off-the-shelf solutions (COTS) for efficiency while investing in custom development to drive unique value. This approach is cost-effective and builds value more quickly.

It's also worth noting that the real value of custom software development isn't just in the initial build; it's also in the long tail. While projects often start with high investment and excitement, sustained success depends on long-term support, enhancements, and continuous optimisation.

Many organisations approach software development with a cost-first mindset, comparing developer rates rather than looking at long-term value. However, a true technology partner goes beyond just providing developers, they bring deep domain knowledge, reduce risk, and ensure a predictable outcome. Too often, software development becomes a feature factory, delivering tasks without considering the bigger picture. To drive real value, ensure your technology partner contributes to long-term roadmaps, architecture, and strategy, not just individual user stories.

Offshore outsourcing for custom software development offers significant financial advantages that can directly enhance a company's bottom line. By tapping into global talent pools, businesses can access high-quality technical expertise at a lower cost compared to local hiring or in-house development. This cost efficiency reduces overheads, accelerates time to market, and frees up internal resources for strategic initiatives. Additionally, offshore teams often provide flexible scalability, allowing organisations to ramp up or down based on project needs without long-term financial commitments, ultimately improving cash flow, maximising ROI, and supporting sustainable growth.

Top tip

Shift the focus from team augmentation to strategic partnership. Instead of just augmenting teams, technology partners should deeply understand your business, develop contextual models, and align with your solution architecture.

Balancing business innovation and risk

Driving value from custom software requires balancing risk and opportunity. Technology leaders must assess their organisation's risk appetite and secure executive buy-in for strategic investments.

Risk appetite often correlates with a company's stage of maturity:

- **Start-ups** tend to be more risk-accepting and willing to experiment with new technologies to drive rapid growth.
- **Mature organisations** are generally risk-averse, focusing on stability, compliance, and operational continuity.
- **Declining organisations** tend to become increasingly risk-averse, often stalling innovation due to fear of failure.

C-suite leaders are unlikely to take risks that have less than a 50% chance of success, no matter how big the potential payoff is. This is one of the reasons businesses leak value to other businesses, when forgoing the opportunity to take chances that drive success. Today's successful companies may have the assets, cash flow, and brand equity, but they also have a 'live for today' acknowledgment that great success comes with risk. And sometimes that risk comes in the form of new technology trend adoption.

In the context of custom software development, risk aversion means Technology leaders often prioritise the certainty of outcomes and minimising business disruption.

Technology leaders are also generally risk-averse, reflecting the cautious stance of their boards and investors, whether in publicly traded or privately owned companies. The fear of business disruption due to poor technology decisions drives this caution. A major concern for many technology leaders, particularly in large enterprises, is the growing risk associated with legacy systems. Despite recognising these systems as critical vulnerabilities, potentially leading to security breaches or data loss, budget constraints often prevent immediate fixes.

This tension between acknowledging risk and the inability to mitigate it is a constant challenge. Many technology leaders face pressure to communicate these risks clearly to leadership, but often, the magnitude of the threat is underestimated until something goes wrong. This dynamic can be especially tough for technology leaders who are new to their role and are trying to build trust while balancing transparency with the need to maintain confidence at the executive level.

Risk mitigation through control

For many technology leaders, risk mitigation is closely tied to the level of control they can exert. This is where custom software development plays a critical role:

- Custom software offers greater control over critical systems, reducing dependence on third-party COTS or SaaS providers. This limits exposure to risks like vendor lock-in, service discontinuation, or unexpected price increases.
- For risk-conscious CIOs, custom solutions provide predictability and ownership, allowing them to manage and mitigate operational uncertainties more effectively.

NashTech: Providing low-risk solutions

As a custom software provider, our objective is to deliver low-risk solutions that align with a CIO's risk appetite, offering tailored systems that combine control, security and adaptability while minimising the uncertainties associated with external vendors.

Custom software development is more than just a functional tool, it is a strategic enabler of innovation. For CIOs and CTOs, the focus has shifted beyond operational efficiency and cost saving to leveraging technology for new revenue streams, investing in industry disruption, maximising efficiencies, and balancing innovation and risk.

To drive sustainable growth, technology leaders must invest strategically in the solutions that will lead their industries and enable them to scale.

Top tips to maximise growth opportunities

- **Adopt a hybrid approach** – If time and money are not infinite resources, use them well. Adopt commercial off-the-shelf solutions (COTS) for standard functions and develop customised software to create something unique and achieve sustainable differentiation.
- **Prioritise data quality** – Ensure your data is clean, accessible, and ready to support advanced AI and analytics.
- **Focus on monetisation** – Explore ways to commercialise your existing data and digital assets through APIs and integrations.
- **Invest in agility** – Custom software gives you the flexibility to adapt quickly to evolving market demands.
- **Leverage AI thoughtfully** – Use AI-driven interfaces to enhance user experiences while focusing custom efforts on complex, value-driving processes.

Unified & NashTech: A partnership driving innovation

When Unified needed to scale its tech team and optimise costs, NashTech delivered by providing excellent offshore talent, seamless team integration, and strategic outsourcing. NashTech enabled Unified to focus on innovation, enhance analytics, and accelerate product development.

This successful collaboration has set the stage for broader efficiencies across Unified's parent company iHeartMedia, proving that the right partnership fuels growth, agility, and long-term success.

Summary: Custom software matters more than ever

The only constant in technology is change. However, paradigm shifts are rarer. Generative AI is the biggest disrupter to technology since the advent of Cloud computing. Generative AI is leading the charge as the vanguard for the normalisation of AI. It's reshaping how we build software, run businesses, and deliver value. One thing is for sure, AI powered custom software will transform how organisations view the buy vs build quandary.

Generative AI and Agentic AI challenge current, accepted technology architectures. A new architecture is emerging, defined by foundation models, vector and graph databases, AI agents, and robust MLOps layers. CSD is no longer just about building applications; it's about designing intelligent systems that continuously learn and adapt. This new kind of software architecture is built around advanced technologies like:

AI foundation models

Smarter databases (like vector and graph DBs)

Machine learning operations (MLOps)

AI agents that can act and learn on their own

These concepts allow businesses to build custom AI-powered systems that fit their unique needs, scale easily, and reduce costs over time.

What's more, **Agentic AI stands to transform both digital services and physical industries, not just changing how we write code. It's automating everyday business tasks**.

For example:

- Digital AI agents / knowledge-based agents are taking over customer support and even parts of software development.
- Physical AI agents, such as robots, are transforming manufacturing and logistics.

This means technology leaders, CIOs, CTOs, and digital decision-makers have a major opportunity to capitalise on custom software value by investing in new skills and focusing on building solutions tailored to their industry and business goals.

Rethinking roles, skills, and services

Roles like Software Engineer and Data Analyst will be joined by new AI-focused Prompt Engineers, AI Governance Leads, MLOps Engineers—that blend traditional coding skills with advanced machine learning, data science, and AI ethics.

Technology leaders must:

- Reskill teams around AI/ML, Prompt Engineering, NLP, and Big Data
- Reframe services to include AI strategy, agent deployment, and model tuning
- Reimagine partnerships to tap into emerging ecosystems of AI-first tools and platforms

Toward the next Wave of technology services

The emergence of a new AI centric wave in technology services, centred on the full lifecycle of AI-driven systems, will see more businesses use AI-native development, agent ecosystems, and continuous model improvement, ushering in a future where software is intelligent by design.

For CIOs and CTOs, this shift creates a multi-billion-dollar opportunity in rethinking enterprise technology strategy. Key growth areas include:

Data quality and infrastructure for AI

Model engineering and domain-specific SLMs

Generative AI feature development

Autonomous agents and AI orchestration

AI-ready physical infrastructure

Custom software is no longer what you do when you can't buy what you want , it is a strategic necessity for businesses looking to thrive and generate more business value.

By embracing AI, data-driven decision-making, and agile development approaches, organisations can unlock new revenue streams, drive operational efficiencies, and build competitive advantages that differentiate them in the market. However, to achieve these benefits, businesses must balance innovation with risk management, ensuring that investments in technology deliver tangible value.

We are experts in technology, delivering smart solutions that solve business challenges and create value. Our award-winning teams apply deep expertise and passion to deliver complex IT projects globally.

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