

Medium-sized organizations in the United States are quickly adopting artificial intelligence technologies to become more competitive and to overcome the operational and business challenges increasing across the market.

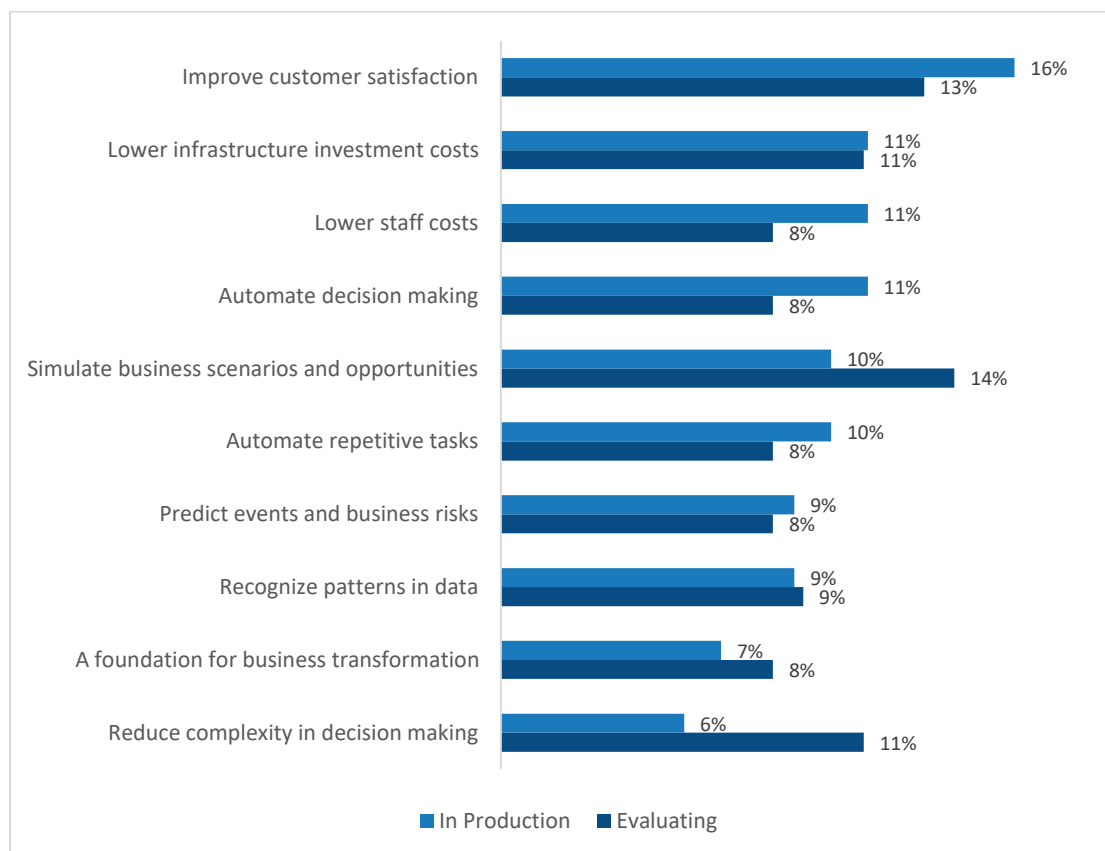
# Winning the AI Race: How AI at Scale Is Driving U.S. Midmarket Business Opportunities

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FIGURE 1: *AI at scale makes companies more agile and better able to respond to customer desires and demands.*

Q What do you see as the main two benefits of AI to your organization?



*n* = 800

Source: AI InfrastructureView Survey, June 2021, IDC

## **I. Introduction**

The current economic climate is placing a spotlight on technologies that enable medium-sized businesses to gain a competitive edge while driving efficiencies across their organization. Artificial intelligence (AI) is one such technology, offering gains for companies willing to take the plunge and transform the way they leverage and deliver insights across their business. Successfully deployed, AI can be used to better control and use resources, to maximize the use of talent and infrastructure, to forecast, plan, and mitigate, and, most importantly, to innovate for customer service and product delivery.

The leaders in this space have already embarked on their AI-enabled journeys and are embracing the benefits that come from having the right teams and computational technologies in place to drive innovation. They are also focused on where their AI is delivered from: Many have made up-front investments to roll out AI on premises and at the edge, citing decreased network costs, better performance, and other cost efficiencies. These companies have gone through the process of scaling AI and are now using it strategically across the business.

Many medium-sized businesses, however, are only now establishing what role AI will play. These organizations will find that the requirement to deploy AI become more pressing as leaders in the market continue to develop new capabilities aimed at improving customer success and driving business efficiency. They will also feel pressure when their own organization struggles to keep on top of the changing economic climate.

## **II. Leaders Versus Laggards**

AI adoption is not just about technologies — it is about people and processes. AI leaders recognize this. Many medium-sized businesses start off by considering a handful of small projects, focusing on the simulation of individual business scenarios and opportunities. They quickly develop the in-house skills and computational power that enable them to leverage AI benefits across their business. These companies have progressed from using AI to automate tasks and drive operational efficiencies to using AI for more transformational needs. These include better service for customers and making product lines more “sticky,” better delivery across the supply chain, and analysis of exposure to risks.

Content analytics is one area in which medium-sized businesses are excelling in the United States today. About 35% of the medium-sized businesses that have deployed AI at scale are using AI to track user behavior online and better engage with customers across virtual environments. It is easy to see how, in an increasingly online world, this benefits these businesses.

To deliver these services, these organizations have carefully fine-tuned their compute environments to become capable of high-performance requirements. Figures from IDC’s AI InfrastructureView 2021 survey show that AI leaders are almost twice as likely to adopt single-layer models (43% have today) for machine learning for better scalability, and many are already migrating from using technology with embedded high-performance graphics processing units (GPUs) to more energy-efficient field programmable gate arrays (FPGA) that enable AI inferencing at scale.

These companies have also developed strategic on-premises strategies for housing core systems for advanced analytics at the edge, with a focus on placing not only AI data collection points but also workloads closer to where data is collected

or where it needs to be processed and stored. This helps companies benefit in the longer term from **decreased network costs** and **better performance**. Best of all, today's AI leaders are seeing **cost efficiencies** across the AI infrastructure stack, having carried out up-front investments and building repeatable processes across their business. This **frees up budgets and allows more time to focus on innovative use cases for AI** as opposed to driving operational efficiency to "keep the lights on."

### III. Building a Case for AI

A third of AI leaders have already developed mature enterprise-wide strategies that display a level of consistency in terms of data readiness, governance, skills management, and technology. The alignment of these strategies to business goals — as well as the benefits seen from past project success — makes it easier for these organizations to gain budgetary buy-in for future projects.

According to AI InfrastructureView 2021, the benefits of AI mean that only 44% of AI leaders said they suffer a lack of executive buy-in for new AI projects compared with 52% of those just starting out. A much smaller number of leaders (33% compared with 71% of those only just evaluating AI) said their budgetary considerations are marred by failed investments in past projects. While gaining C-level buy-in to new projects is easier once you are a mature adopter of AI, leaders also tend to have a lower overall AI spend. Many leaders are future proofing investments by using the latest technologies that enable high-performance computing (HPC)-like and edge functionality and deploying flexible, pay-as-you-go consumption-based models for on-premises services where possible, adding layers of agility and scalability and enabling projects to take on budgetary consideration as required. The gains can be seen as the projects progress through their lifecycle. AI leaders among medium-sized businesses are more likely to spend less on their compute and storage infrastructure than the laggards that still face up-front commitments.

Human capital underpins leaders' success with AI. These companies have had time to build up data scientist and developer teams that are savvy with the use of AI solutions and that can influence business and buyer behavior. In many medium-sized businesses, these experts are also tasked with educating lines of business, which themselves then become AI experts, adding to the diversity of the talent pool.

### IV. Benefits of Deploying at Scale

- » **Increased return on investment**, with benefits realized across multiple areas, if not across all the business
- » Increased education and training on an internal skill set that includes IT and line of business that can **drive innovation** across the business (and better retention of these skills through role satisfaction)
- » Ability to roll out **new services quickly** with **minimal infrastructure investment** as the business requires
- » The biggest advantage: **A more competitive business with the ability to forecast risk** (such as macroeconomic impacts on supply chain or demand) and customer behavior (online buying trends or customer profiles) while at the same time reducing costs through introduction of better efficiencies (IT automation or business automation)

## V. Considerations

### Future Proof Investments

Medium-sized organizations that are only now assessing AI-acceleration-optimized infrastructure need to act fast. Current economic challenges are driving AI adoption across all vertical markets — and it isn't only enterprises with larger in-house IT teams that are benefiting. To maintain a competitive edge, medium-sized businesses need to understand what AI technologies are available to them today and what their AI requirements will be in the future and invest with long-term scalable deployments in mind.

### Think Agile

New AI strategies do not need to be based in the public cloud — in fact, most AI deployments will be maintained on premises. New deployment models are offering consumption-based pricing and agile/stackable infrastructure models that can reduce time to market while growing in line with an organization's needs. They can also deliver better performance depending on an organization's core-to-edge requirements and allow for increased control over cost.

### Develop Skills

A current shortage of skills might be one of the largest challenges for those evaluating AI technologies today. There are a range of specialist vendor and service provider solutions that can enable the same AI benefits as first movers if the right approach to vendor selection and management is deployed.

## VI. Conclusion

Companies that are not already deploying AI at scale can benefit from hindsight. Leaders in the medium-sized business market in the United States have paved the way for slower movers, offering valuable insight into the requirements that lie ahead. Today's evaluators also have the benefit of access to a range of new solutions designed to provide best-fit scalable AI technologies — not all leaders had access to this when they started out!

The barriers to entry do become lower following first adoption and as AI use becomes more widely spread across the business. C-level, line-of-business, and IT buy-in tends to grow alongside benefits, especially for medium-sized businesses looking to take their organizations to the next, intelligence-driven level.

Those that have already embarked on their AI-enabled journeys are embracing the benefits that come from having the right teams and computational technologies in place to drive innovation.

## About the Analyst



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Penny Madsen is a senior research director for IDC's BuyerView, a portfolio of primary research products that provide insights into end user use and adoption of AI, cloud, edge and related infrastructure platform technologies and services. Her research covers trends, investments and purchase decisions, helping leading vendors and infrastructure providers develop strategies for future customer deployment scenarios.

## MESSAGE FROM THE SPONSOR

AI users clearly see many great benefits thanks to AI technology. However, it is not too late for those who have not yet 'jumped on the bandwagon.'

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