



What you need to jump-start and scale AI
Becoming an AI-fueled organization takes
capacity and skill

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All industries are feeling AI's impact

In the Age of With™, human and machine collaboration is taking organizations to new heights. Adopters across all industry segments are increasingly confident of AI technologies' ability to drive value and advantage. We are entering a new chapter in the adoption of AI technologies where capabilities are advancing, AI application development and implementation is becoming easier, and companies are reaping tangible benefits from AI adoption.

As the early adoption phase ends, the AI market is expected to exceed \$191 billion by 2024, accelerating at a 37% compound annual growth rate.¹ According to Forrester, 70% of AI decision-makers will engage with a provider offering AI solutions in the next year.² Deloitte's own *2020 State of AI in the Enterprise* survey found that 74% of adopters believe AI will be integrated into all enterprise applications within three years.³

Virtually all adopters are using AI to increase efficiency and reduce expenses. Among its benefits, AI is being used to automate processes to enable workers to focus on higher-value tasks, optimize supply chains, use predictive maintenance to reduce downtime, optimize advertising spend, and improve hiring processes. Some organizations are also using it to help them generate revenue by pinpointing products and services for those who need them most.

The opportunities AI delivers are undeniable. Organizations can capitalize on their data and get better insights through the deployment of AI, machine learning, and advanced analytics. These insights lead to faster and better decision-making.

AI application development and implementation is becoming easier, and companies are reaping tangible benefits from AI adoption.



So, why is AI penetration lagging?

Despite its attractiveness, the majority of companies are stuck in the experimentation phase of AI. They have siloed applications and lack expertise to move to the next level. Their focus is on modernizing data.

Less than 15% of organizations are implementing AI at scale. However, they typically have deployed high-impact use cases, defined ROI and established some AI governance.⁴ Currently organizations that can be considered AI-fueled make up less than 1% of adopters. These organizations have adopted AI enterprisewide and are employing insights-driven decision-making.⁵

As AI adoption scales, its dynamic nature creates unique challenges. Among the challenges is the high cost of acquiring skilled talent and other resources. Companies require a broad range of talent for AI initiatives, including researchers, software developers, data scientists, user experience designers, change management experts, project managers, business leaders who can interpret AI results, and subject-matter experts. Fewer than 40% of executives are confident in their employees' ability to select, build, and manage AI solutions, and it's hard to find appropriate talent to bridge this skills gap.⁶

Without the right expertise and tools, venturing into AI can be a very slow and frustrating experience. Furthermore, investment in AI does not stop once models are put into production; they must be continuously monitored and managed. Finally, for organizations just embarking on their AI journey, there are few tailor-made assets that can help kick-start progress.

Current market challenges

There are four main challenges to AI development and operation



Hard-to-find resources

Although applications of AI have grown exponentially over time, there is a dearth of high-quality resources with AI knowledge to hire in the market.



Sluggish AI development

Without the right tools and prior expertise, venturing into AI can be very slow and frustrating for organizations.



Tedious model upkeep

Investment in AI does not stop once models are put into production. They need to be monitored and managed continuously.



Limited access to AI assets

For organizations that are just embarking on their AI journey, there aren't many tailor made assets to help kick-start it.



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Avoid getting stuck on the AI curve

Organizations tend to get stuck in a plethora of disparate pilots as they struggle to scale AI. Disconnected processes, tools, and governance present scaling challenges that bog down efforts to become an AI-centric organization—all while speed is of the essence.

An AI-centric organization is able to move AI out of a few use cases in an R&D setting and into a company philosophy, scaling AI across the entire organization. Such companies discover how AI can be used, and they organize people and processes to get there. They set up systems so models can be reviewed and monitored on an ongoing basis. Ethics governance is implemented, and AI takes its place at the center of new business model innovation and core differentiation in the market.

What an aspiring AI-centric organization needs, first and foremost, is to make sure AI efforts are aligned with business strategy and goals.

What an aspiring AI-centric organization needs, first and foremost, is to make sure AI efforts are aligned with business strategy and goals. Subsequently, both scaling and accelerating AI adoption and penetration requires addressing a number of crucial factors related to in-house resources, such as the:

- Capacity to supplement existing in-house resource pools;
- Capabilities to complement existing and hard-to-find skills and expertise, including people who are experts in data science, ITOps, and user experience, such as data scientists, visualization and domain experts, and engineers skilled in data, machine learning, and cloud;
- Cost-effectiveness of sourcing global talent to fill the gaps;
- Flexibility to expand and contract with talent without putting them on the payroll full-time; and
- Fluidity to engage a variety of skills at different points in the AI journey.

Goals for using AI

Automate a process or function that a human would normally do, such as managing, back-end operations, cloud and IT networks or detecting patterns in video.

Optimize process or function efficiency, including preventing fraud, identifying defective products, finding software code errors, or personalizing advertising placement.

Enhance individuals' ability to accomplish tasks or enable them to do something they typically could not do, including forecasting demand, improving compliance, augmenting threat detection through security analysis, diagnosing a patient, identifying a mechanical system problem, or revealing new customer insights.



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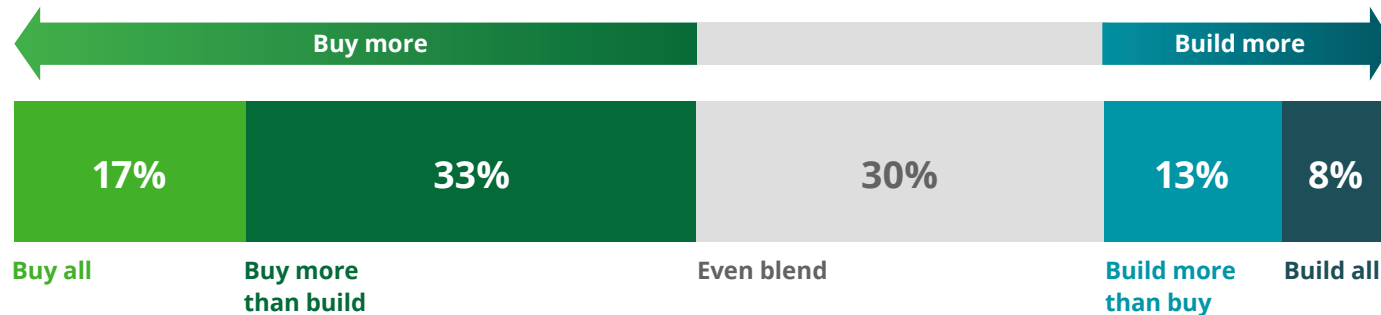
Jump-start industrialized AI

One of the big questions organizations face early in the AI adoption journey is whether to build their own managed AI services internally or bring in outside talent and technology. Many organizations go through a period of internal learning and experimentation before finding out what's necessary; then they typically seek resources from outside the company. In fact, seasoned AI adopters tend to buy capabilities instead of building them.

According to Deloitte's 2020 State of AI in the Enterprise survey, more than 50% of adopters are buying more than they build, and another 30% are employing a balanced blend of buying and building from scratch.⁷ However, building an internal team and infrastructure takes time and a level of expertise that doesn't always exist in an organization.

Seasoned (53%) and skilled (51%) adopters are more likely to buy the AI systems they need than starters (44%)

Adopters tend to buy AI technologies more than they are building them.
Build or buy?



N = 2,737

Source: Deloitte, State of AI in the Enterprise, 3rd Edition.



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Utilizing machine learning operations (MLOps)

It helps to view industrialized AI through the same lens as DevOps. Combining AI with DevOps principles produces MLOps. Like DevOps, MLOps features automated development pipelines, processes, and tools that streamline machine learning model development and operations.

With MLOps, multitalented teams of technologists and machine learning professionals can help organizations operationalize and scale AI quickly. In turn, MLOps can help AI teams promote trust by addressing data management challenges such as accountability and transparency, regulation and compliance, and ethics.

As with DevOps, AI managed services can be acquired from outside the organization, with teams that operate in conjunction with internal teams and serve as an extended arm to help meet AI goals. These complementary teams often have the combination of industry, domain, and AI technology expertise needed to help meet the organization's needs.

Considering AI managed services?

The types of AI managed services engagement models vary, but often, organizations can choose from a menu that runs the gamut from simply paying for time, talent, and materials to paying for desired outcomes and ongoing management.

AI managed services can take the following forms:

- **Capacity augmentation.** With a defined set of skills and scale, the service works as an extension of an organization's teams—supplementing existing resources—for a designated period, usually six months or more.
- **Managed service PODs.** Standardized processes and tools for efficiency offer a defined set of deliverables.
- **Subscription model.** The service provides insights and outputs in predefined areas for a specific duration through proprietary assets.
- **Value-added services.** Assets and resources deliver specialized requirements.



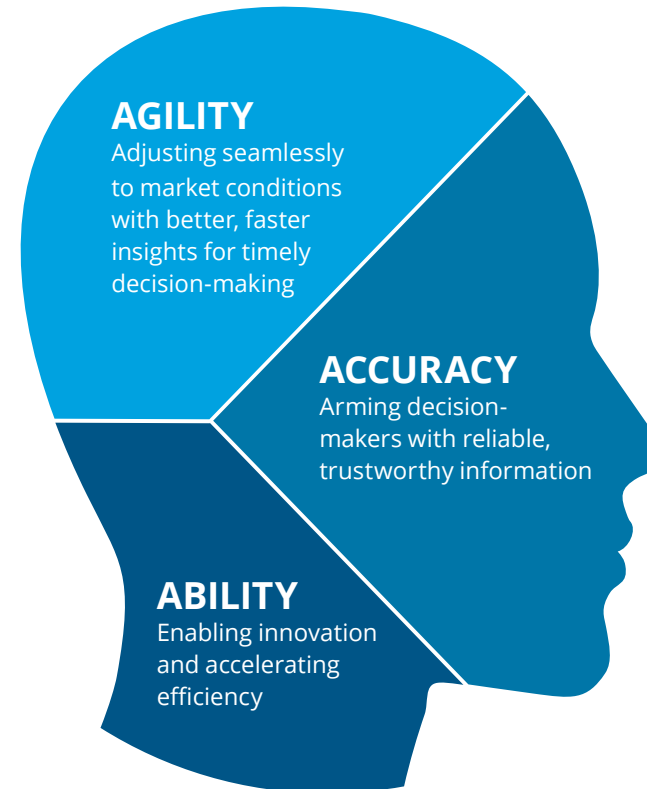
The beauty of engaging AI managed services is that the organization doesn't have to rely on them forever. Once predefined goals are achieved, the work can be transitioned back to internal teams. On the flip side, if special circumstances arise, the organization can again call on AI managed services teams to assist as needed.

Along with this flexibility, the benefits of engaging AI managed services include:

- Helping to maximize return on AI investment
- Assisting in scaling AI penetration and usage across the enterprise.
- Accelerating the AI journey to become an AI-fueled company.
- Helping the organization remain competitive in the marketplace with a more efficient and cost-effective workplace and better customer service response.

The 3 A's of AI.

AI-fueled organizations experience these advantages:



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Be an AI-fueled organization

At the end of the day, organizations that are AI-fueled experience certain advantages that other companies may struggle to achieve as effectively. AI helps companies be more agile in response to market conditions. They can implement a science-based decision-making process informed by deeper insights and push real-time, contextual insights to decision-makers at relevant moments using a machine learning system. The information they base decisions on is far more accurate.

And most importantly, AI gives them the ability to try new and innovative things. It frees up workers to be more creative by improving efficiency and the quality of the process. They aren't constrained by manual labor and can focus on more high-value tasks. Advanced, efficient, and accurate models now support them in tackling large and complex problems, uncovering hidden patterns to identify new opportunities for innovation.

Delivering holistic AI managed services

A global company initially had several different vendors providing data and analytics services. This fragmented approach hampered innovation and new product launches. The company tasked Deloitte to replace these piecemeal solutions with a ReadyAI™ team that assisted in the transition to an agile operating model for greater transparency and efficiency and higher-quality data.

The ReadyAI team developed and leveraged advanced analytics for customer segmentation and data anomaly detection with AI- and machine learning-enabled data integrity checks and pattern analysis. The results included insights that company executives received on their mobile phones in near-real time.

ReadyAI managed services had a profound impact:

- **People power increased efficiency by 25%**, launching new products more quickly than they could before.
- Within six months, the company achieved **4X growth** in the volume of analytic artifacts.
- **Improved customer segmentation**, leading to better product campaign effectiveness.
- Dashboards delivered timely, accurate data to scientists and analysts for insights that led to **more effective decision-making**.

Deloitte's ReadyAI met the company where it was with a full portfolio of resources to help deliver high-level problem-solving and decision-making. The ReadyAI team would turn the operation back over to the company on the ready.



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Conclusion

**Leapfrogging to AI can be difficult.
It's a thoughtful transformation.**

To unlock the full value of AI, companies need to make significant changes to ready their organizations for the deployment of these new technologies. Align your AI and machine learning efforts with your business strategy first and foremost. It changes how people will work. From there, prioritization of use cases becomes far easier, and the success of the overall program will be well-staged. Then, it's all about having a full portfolio of capabilities and skills in AI, whether building the talent teams in-house or adding the capacity from external sources. With the right people, organizations can concentrate on the processes and governance that will fuel their AI transformations.



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Endnotes

1. MarketWatch, "Artificial Intelligence Market Size," August 2018.
2. "The Forrester Wave™: Specialized Insights Service Providers," Q3 2018.
3. Deloitte, State of AI in the Enterprise, 3rd Edition.
4. Ibid.
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