

A 2027 State of **DESIGN&MAKE** breakout report

Design and manufacturing



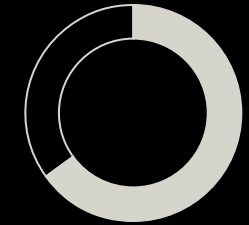
The next era of manufacturing is built on connected intelligence

Manufacturers have long embraced new technologies to improve design, engineering, and production. Today, that digital foundation is enabling the next phase of transformation, as organizations integrate AI into the connected systems, data, and workflows they've spent years building. Rather than treating AI as a stand-alone initiative, manufacturers are making it part of how the business operates.

The data from the 2027 *State of Design & Make* study reflects that shift. Technology, including AI, is now the leading business challenge for 40% of design and manufacturing (D&M) leaders, while concern

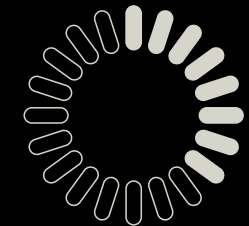
about cost has declined from 35% to 30%. At the same time, nearly two-thirds of organizations report pursuing three or more strategies to advance AI, including workforce training, workflow integration, automation, and technology partnerships. Together, these findings suggest manufacturers are operationalizing AI—moving past the experimentation phase and are now integrating AI into business operations.

This breakout explores how leading manufacturers are building the digital capabilities needed to put AI to work—and what distinguishes the organizations doing it most successfully.



65%

of D&M organizations use three or more strategies to advance AI



40%

say technology, including AI, is their leading business challenge



Manufacturers are integrating AI through training, partnerships, and new workflows

Manufacturers recognize that realizing AI's full value requires more than implementing a new technology. Across D&M, 43% of organizations are investing in AI training, 37% are integrating AI into existing workflows, 36% are expanding automation, and 35% are partnering with technology providers. Overall, 65% report pursuing three or more of these strategies simultaneously, reflecting a coordinated approach to building AI capability across the business.

That pattern is remarkably consistent across manufacturing. While life sciences places slightly greater emphasis on training (54%) and workflow integration (46%), organizations across every manufacturing segment are investing across multiple fronts rather than relying on a single initiative. The findings suggest manufacturers increasingly view AI as an organizational capability—one that depends on people, processes, and technology working together.

D&M leaders invest in skills development to solve AI challenges

Life sciences sees the most potential with AI training, automotive the least

Ranking

1st	2nd	3rd	4th	5th
-----	-----	-----	-----	-----

	D&M	Automotive	Building products	Consumer products	Industrial machinery	Life sciences	Process manufacturing
Investing in AI training and development	43%	36%	42%	37%	49%	54%	50%
Integrating AI into existing workflows	37%	35%	31%	33%	40%	46%	45%
Implementing AI-driven automation	36%	38%	33%	30%	39%	39%	41%
Partnering with AI technology vendors /software providers	35%	33%	33%	30%	40%	46%	36%
Developing in-house AI solutions	31%	25%	31%	33%	32%	36%	32%

Survey question: In the last year, leaders have identified technological advancements including AI as a primary challenge for their company. What strategies have you used to respond to AI? Please select all that apply. Percent selected, multiple responses allowed.

Connected digital capabilities set leading manufacturers apart

Digital maturity in manufacturing is increasingly defined not by individual technologies, but by how effectively organizations connect data, workflows, and systems across the business. While 43% of D&M organizations consider themselves digitally mature, the highest-performing manufacturers distinguish themselves by building integrated operating environments that make new technologies easier to adopt and scale.

D&M **Pacesetters** are the 10% of organizations in our research that lead

simultaneously in maturity, AI adoption, and sustainability. They outperform their peers in both business performance and preparedness for future challenge. Compared with mainstream manufacturers, they are far more likely to report mature data-sharing capabilities (95% vs. 79%), workflow integration (96% vs. 79%), and smart services (98% vs. 71%). They are also more likely to integrate AI into workflows (58% vs. 35%) and invest in AI training (57% vs. 42%), creating integrated operating environments that make new technologies easier to scale across the business.



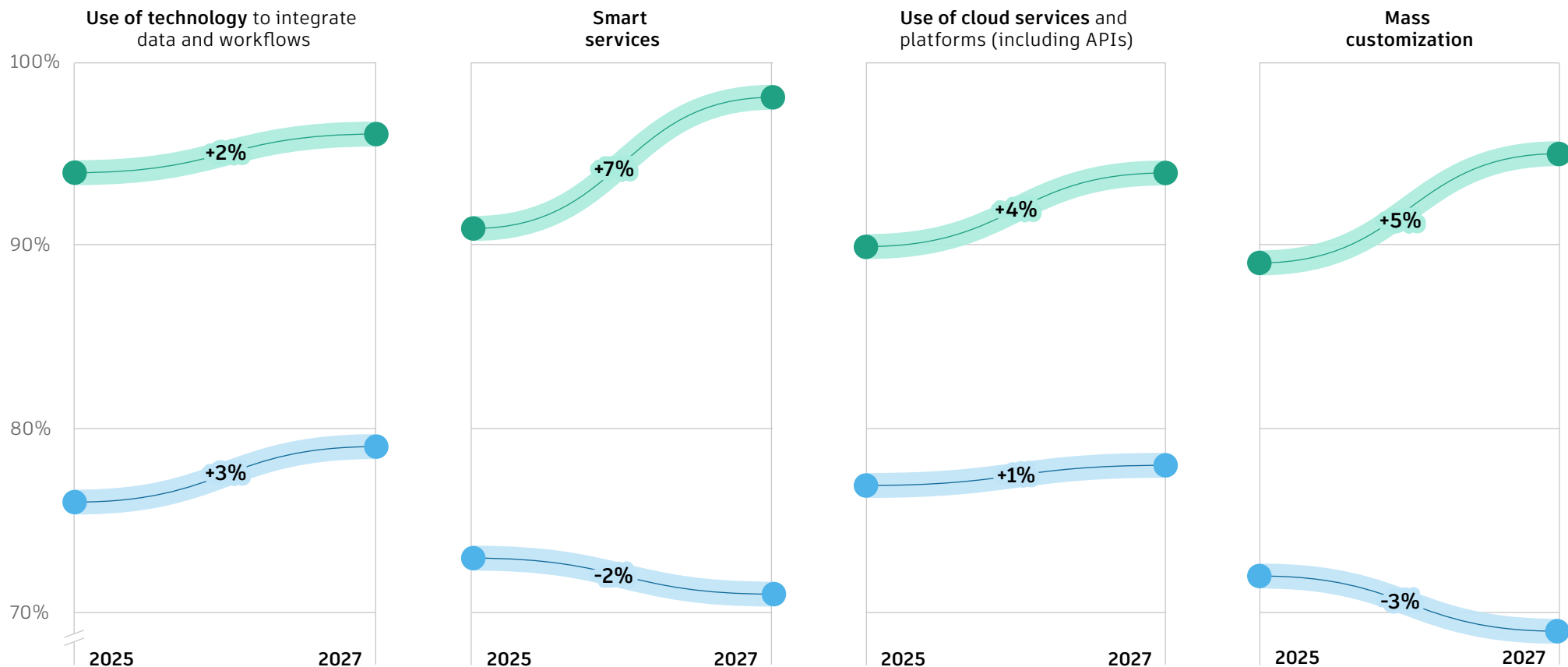
95%

of Pacesetters
report mature
data-sharing
capabilities

vs. **79%**
of mainstream

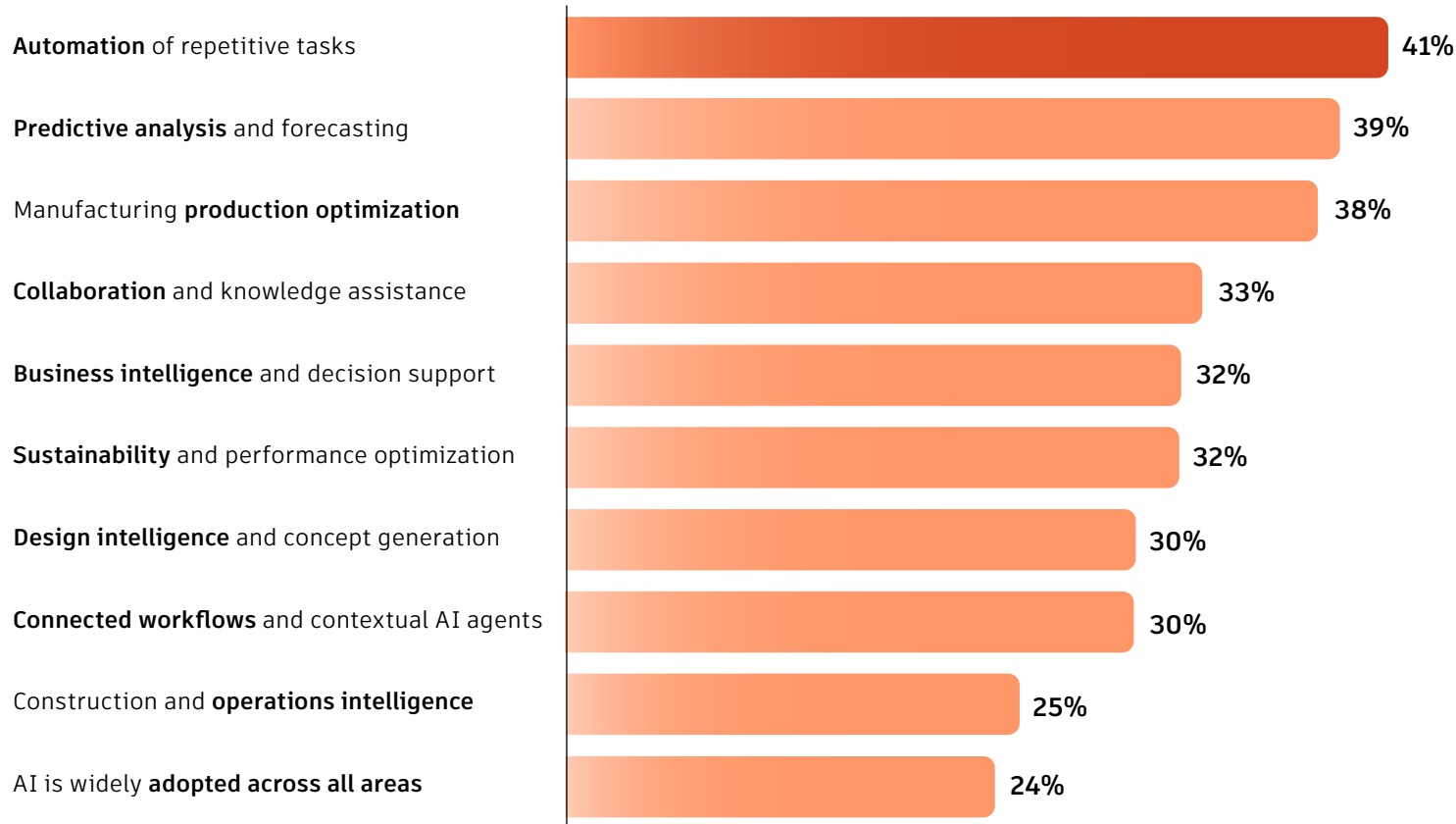
Pacesetters in D&M far outpace mainstream organizations in digital tool usage

● Pacesetters ● Mainstream



Survey question: In your company or organization, how mature are the following? 5-point scale, top two: "average maturity" or "very mature." See the Pacesetter definition on page 5.

D&M leaders are applying AI broadly to drive production efficiency and throughput



Manufacturers are embedding AI throughout the production lifecycle rather than limiting it to a single function. The most common applications include workflow automation (41%), predictive analysis (39%), and manufacturing optimization (38%), reflecting a broad focus on improving operational performance holistically across organizational processes.

The strongest digital foundations make that possible. As manufacturers connect data, workflows, and production systems, AI becomes easier to integrate into everyday operations—helping organizations improve efficiency, optimize complex processes, and support better decisions across design, engineering, and production. Rather than standing apart from existing systems, AI is becoming part of how manufacturers operate.

Survey question: What are the current use cases for artificial intelligence (AI) in your company or organization? Please select all that apply. Percent selected.
Note: Some answer options are shortened for better readability. "Other" and "none of the above" are not shown.

Manufacturers are looking beyond their own industry for what's next

Manufacturers are applying digital capabilities to more than operational efficiency. Across D&M, 66% of leaders say they are exploring new markets, 66% seek inspiration from outside their industry, and 64% are adopting techniques developed in other sectors.

Together, these findings suggest manufacturers increasingly look beyond traditional industry boundaries for ideas and opportunities.



66%

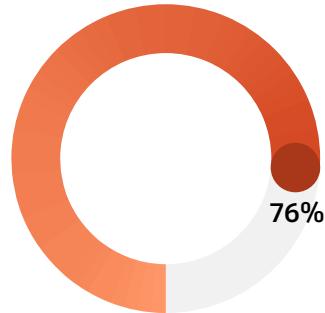
of D&M organizations are
exploring new markets

66%

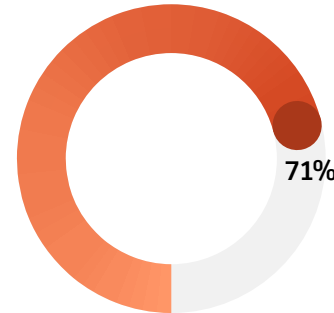
seek inspiration from
outside their industry

66% of D&M leaders are considering entering new markets

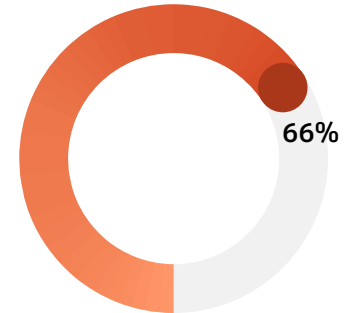
Life sciences and process manufacturing lead the way



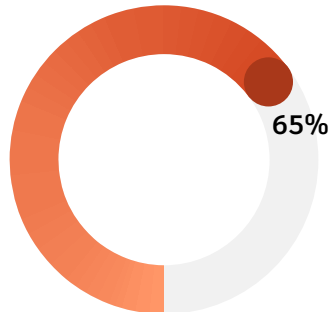
Life sciences manufacturing



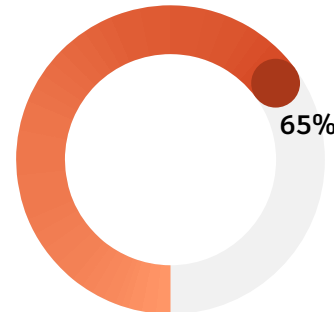
Process manufacturing



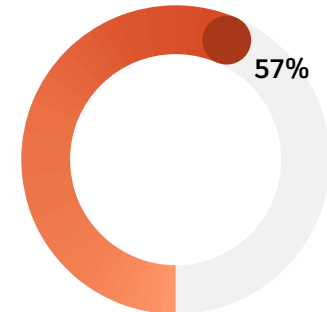
Consumer products



Building products
and fabrication



Industrial
machinery



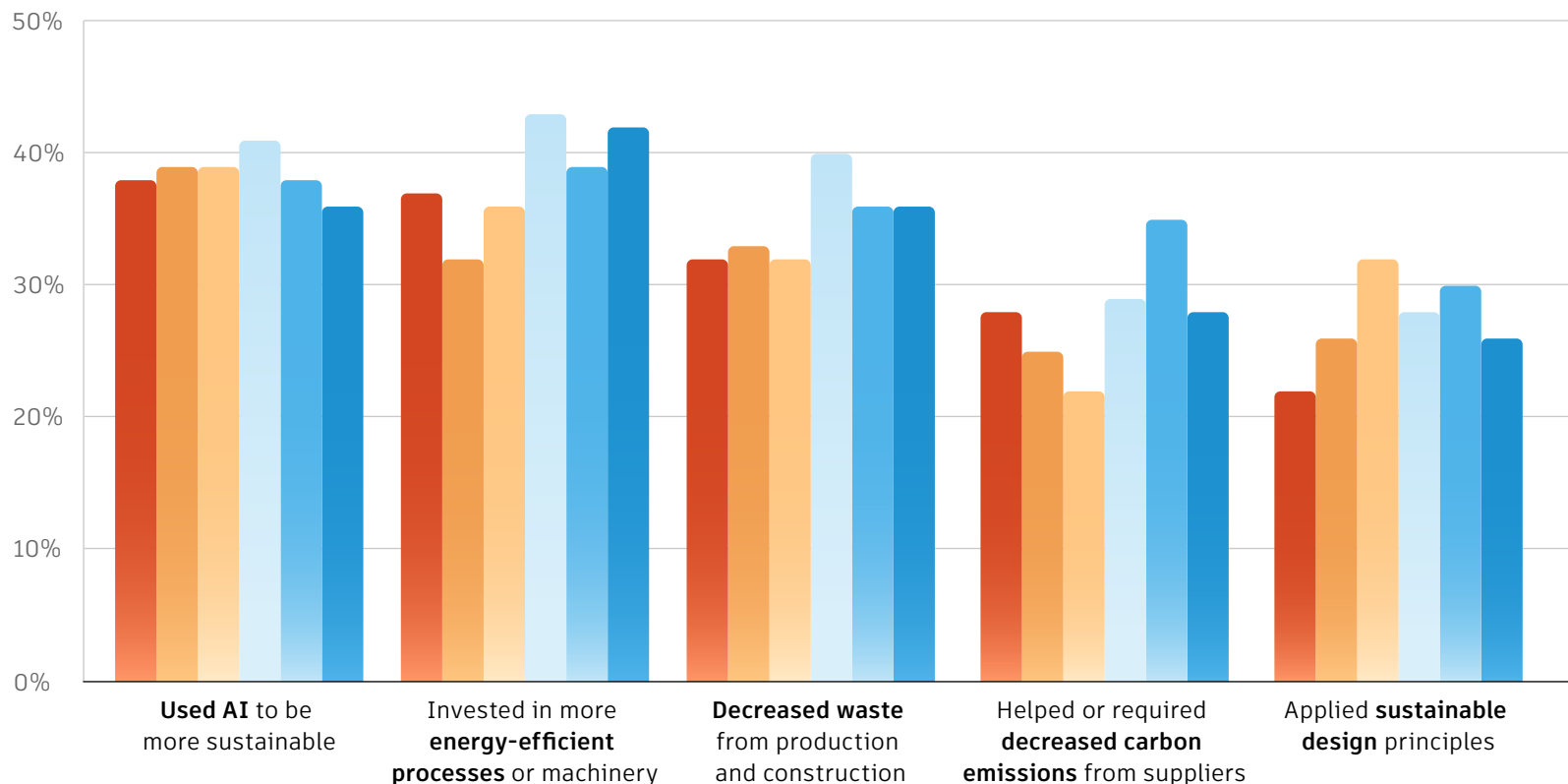
Automotive, mobility,
and other transportation

Survey question: To what extent do you agree or disagree that your company or organization is doing the following to be more resilient? My company is considering entering new markets. 5-point scale. Top two: "somewhat agree" or "strongly agree."

Sustainability strategies vary across D&M sectors

AI is the top sustainability enabler overall

Automotive Building products Consumer products Industrial machinery Life sciences Process manufacturing



While sustainability priorities differ across manufacturing sectors, 38% of organizations report using AI to support their sustainability initiatives. Rather than treating growth, sustainability, and digital transformation as separate priorities, manufacturers are bringing them together to strengthen business performance and create new opportunities.

Survey question: What changes has your company or organization already made to be more sustainable? Please select all that apply. Percent selected, multiple responses allowed.



Conclusion

Manufacturing has long embraced digital technologies to improve how products are designed, engineered, and produced. Today's findings suggest AI is the next step in that evolution—not as a stand-alone technology, but as part of an integrated digital operating model that spans people, processes, data, and production.

The organizations we call Pacesetters demonstrate what that looks like in practice. Throughout this report, they consistently outperformed mainstream organizations by pairing technology investment with connected data, integrated workflows, workforce development, and AI implementation. Rather than treating these

as separate initiatives, they built operating models where each capability reinforced the others—creating stronger business performance, greater resilience, and a foundation for continued innovation.

For manufacturing leaders, the opportunity is not simply to adopt AI. It is to build the digital foundation that allows

AI, digital transformation, sustainability, and new business opportunities to reinforce one another. Organizations that make those investments today will be better positioned to innovate, compete, and grow as manufacturing continues to evolve.

About this analysis

This D&M industry briefing draws on Autodesk's 2027 *State of Design & Make* study, which surveyed 1,895 leaders and experts across manufacturing industries worldwide. The findings presented here highlight patterns specific to the D&M sector and should be interpreted within the context of this industry sample. Pacesetters represent 10% of D&M respondents (n=186), with the remaining 90% classified as mainstream organizations.

Definitions for Pacesetters, digital maturity, AI leaders, and sustainability leaders are consistent with those used in the 2027 State of Design & Make report. 2026 AI Pulse comparisons are cited where trend data is referenced throughout this briefing.

D&M respondent profile

- 21% Consumer products
- 20% Process manufacturing
- 18% Building products
- 16% Automotive
- 13% Industrial machinery
- 8% Life sciences
- 3% Aerospace and defense



**Numbers do not add up to 100% due to rounding.*

About Autodesk

Autodesk is changing how the world is designed and made. Its technology spans architecture, engineering, construction, operations, product design, manufacturing, and media and entertainment, empowering innovators everywhere to solve challenges big and small. From greener buildings to smarter products to more mesmerizing blockbusters, Autodesk software helps customers design and make a better world for all. For more information, visit autodesk.com or follow @autodesk on social media.

Contact Autodesk at state.of.design.and.make@autodesk.com about this research report or to sign up to participate in future research programs.

The information provided in this report is for general informational purposes only and strictly for the convenience of our customers. Autodesk, Inc., does not endorse or warrant the accuracy or completeness of any information, text, graphics, links, or other items contained within the report.

Autodesk, Inc., does not guarantee that you will achieve any specific outcomes or results if you follow any advice in the report.

© 2026 Autodesk, Inc. All rights reserved.