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& MAKE

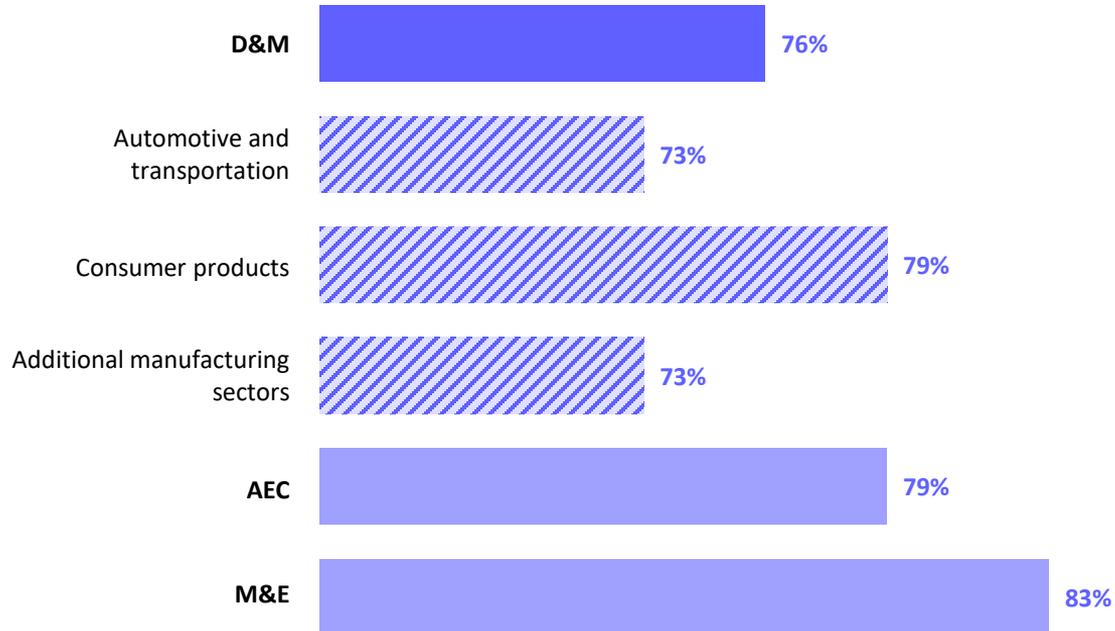


D&M



Digital Tools

Respondents who said that **the future growth of their company will depend on digital tools:**



Performance

Percentage of D&M respondents who identified their company as **top performers**, rating their company's performance in 2021 as "exceptional" or "above average":

48% in D&M

52% in AEC

53% in M&E



Investments

Respondents in **D&M industries** plan to make the following investments over the next three years:

Technology to deliver improved project outcomes:

All D&M



Automotive and transportation



Consumer products



Additional manufacturing sectors



Data management and analytics:

All D&M



Automotive and transportation



Consumer products



Additional manufacturing sectors



Investments

Respondents in **D&M industries** plan to make the following investments over the next three years:

Developing new products and/or services:

All D&M



Automotive and transportation



Consumer products



Additional manufacturing sectors



Product and/or service innovation:

All D&M



Automotive and transportation



Consumer products



Additional manufacturing sectors



Digital maturity*

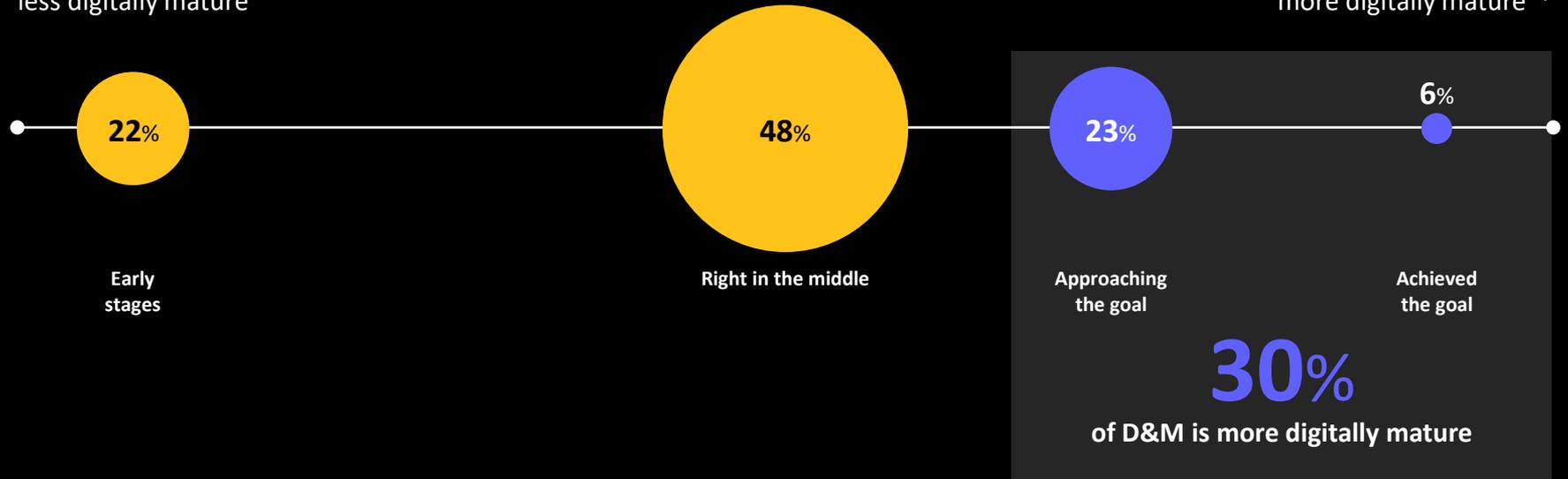
Where **D&M** respondents report their company is in its digital transformation journey:

Less digitally mature

Companies in the early or middle stages of the journey are defined as “less digitally mature”

More digitally mature

Companies approaching or that have already achieved their transformation are defined as “more digitally mature”*



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

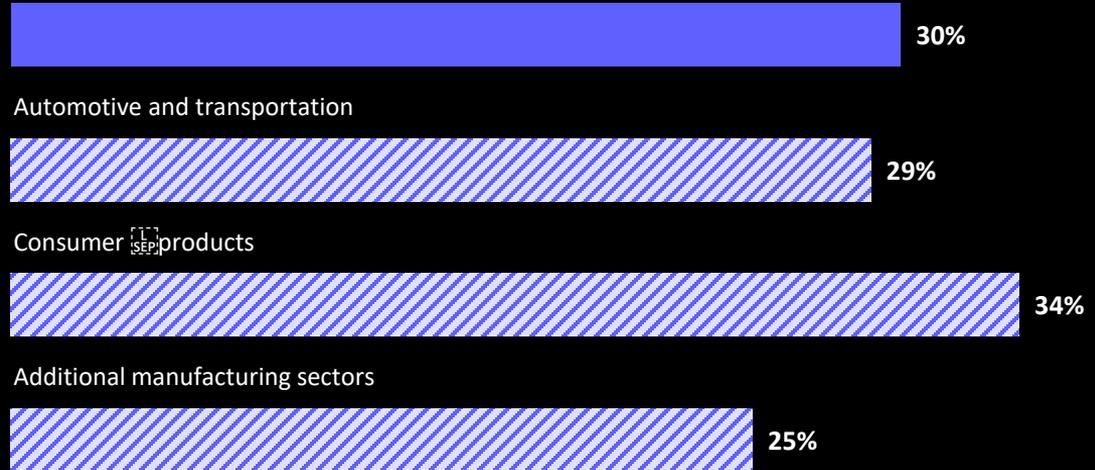
Digital maturity

30%

of respondents from companies in **D&M** reported that their company is “**more digitally mature**,” compared to 38% across all respondents.

This trailed M&E, but was on par with the AEC industries.

All D&M



Benefits of digital transformation

Respondents from D&M said the top benefits of digital transformation are:



Reduced costs



Launch products and services more quickly



Simplify planning and make better business decisions

Among all industries, the top benefits cited were:

1

Reduced costs

2

Increased innovation

3

Ability to launch products more quickly

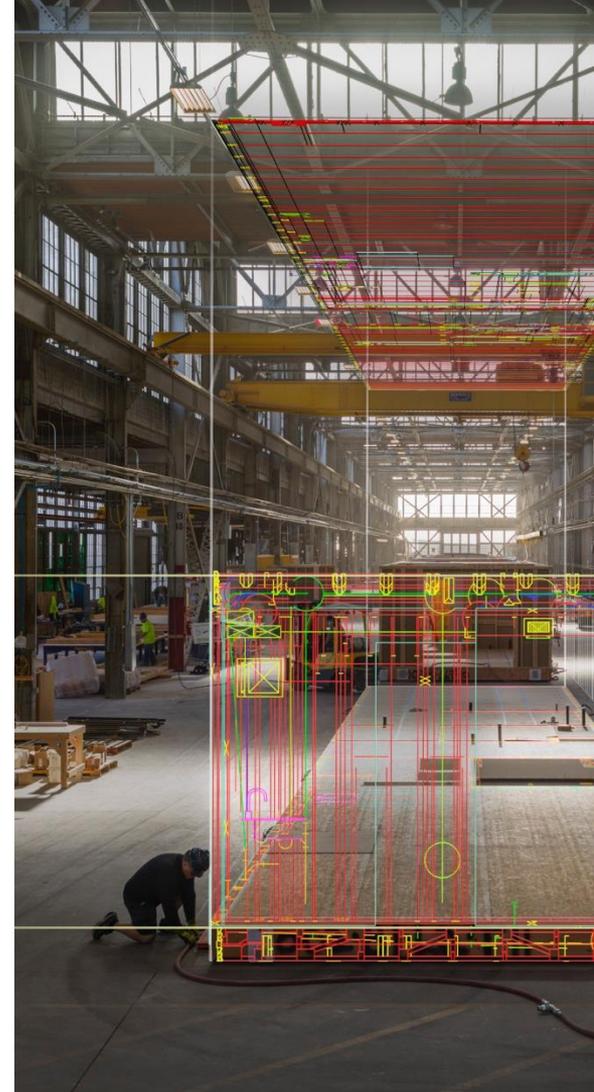
Uncertainty

Percent of respondents who agreed their company is prepared to handle geopolitical changes:

56% in D&M

62% in AEC

60% in M&E



Skills of the future

More than the average across industries, **D&M respondents say the most important technical skills for their company's workforce over the next three years** are:

Innovation and business development



Ability to manage remote teams



Knowledge of—and ability to uncover—new industry trends



Ability to work within a business model that leverages digital transformation



Product formulation



Customer engagement and experience skills



Leveraging data

There are some differences in how much companies are leveraging internal data for collaboration with AI.

Respondents in **D&M** were least likely to say they leverage data for internal collaboration among teams:

All D&M



Automotive and transportation



Consumer products



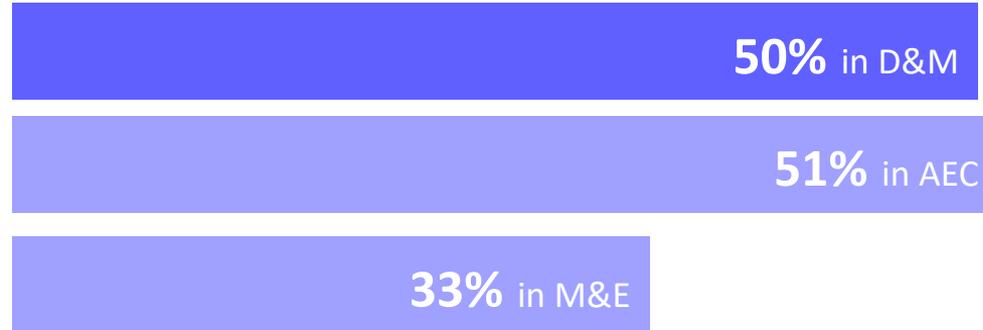
Additional manufacturing sectors



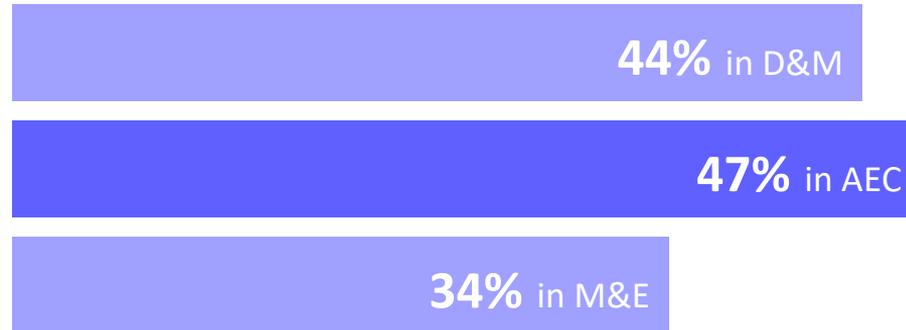
Talent challenges

D&M respondents along with those from AEC were **more likely to say:**

The workforce is rapidly aging:



Company culture is too slow to adapt to the younger generation's needs:



Talent solutions

Respondents who agree in the next three years, their company is **planning to invest more in technology focused training:**

All D&M



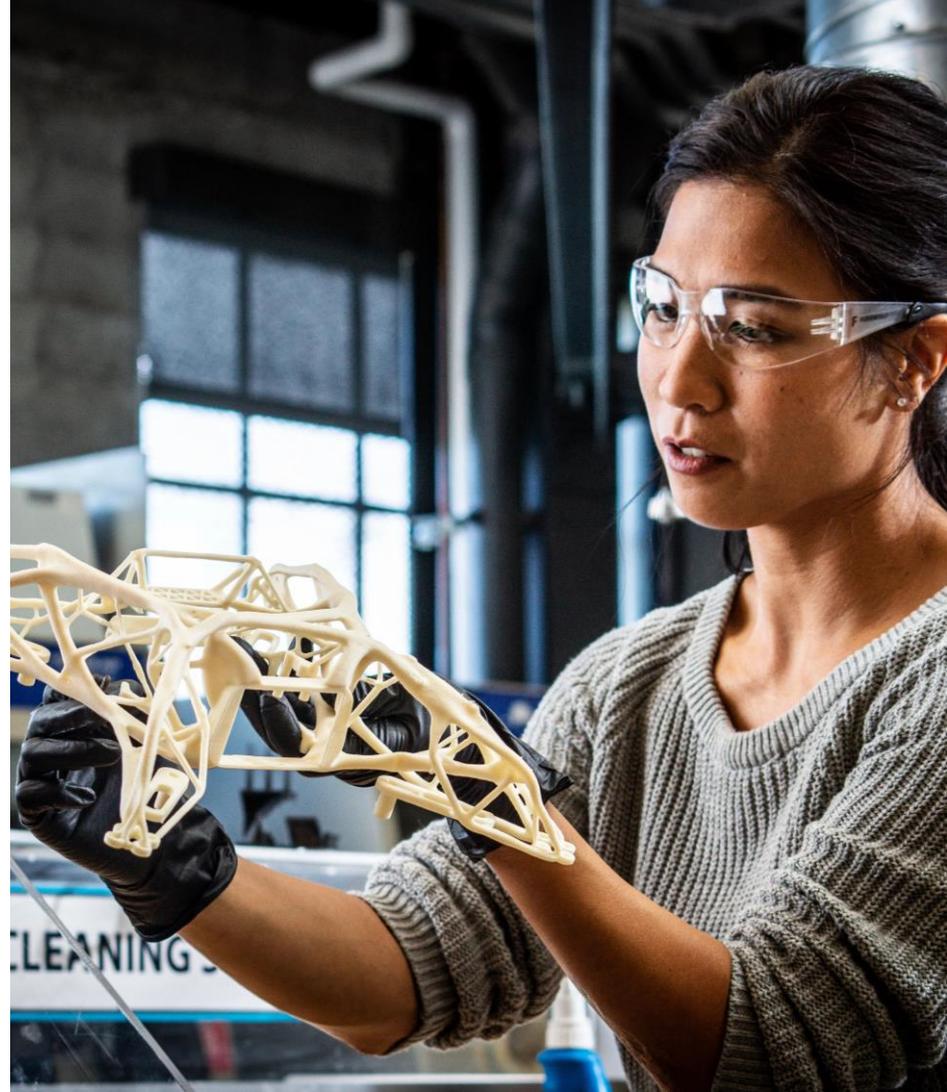
Automotive and transportation



Consumer products



Additional manufacturing sectors



Sustainability in action

According to leaders and experts, **D&M led the way** in some sustainability actions. **These included the portion of respondents whose industry/organization have:**

Decreased waste from production and/or used more recycled materials

41% in D&M

34% in AEC

28% in M&E

Designed **products considering environmental impact**

35% in D&M

32% in AEC

22% in M&E

Developed or invested in **more energy-efficient processes or machines**

33% in D&M

29% in AEC

19% in M&E

Sustainability pressure

When asking how influential different groups are in pressuring their organization to create and meet sustainability goals, respondents said these groups were “very” or “moderately” influential:



	CUSTOMERS	EMPLOYEES	INVESTORS	GOVERNMENT
All D&M	86%	66%	75%	75%
Automotive and transportation	87%	55%	75%	85%
Consumer products	85%	70%	77%	71%
Additional manufacturing sectors	87%	65%	73%	75%



Matteo Barale

Co-chief Executive Officer,
PIX Moving



Technology and customization go hand-in-hand. To do this mass customization and modularity, you need to have a fast way of giving a quote to customers, and you need to do this faster than your competitors. No two products will be the same. **The digital processes are the driving force, allowing us to be personalized and agile.**





Carlos Caminos

Manager, Data Asset
Management, Bridgestone
Americas, Inc.

“

We need to educate upper-level executives and help them define what's realistic. They need to understand: What is a digital twin? What is digital transformation? And we need to be able to speak in business terms about what digitization will help us achieve.

”



Tomoaki Furukawa

Vice President, Chief Digital
Executive, Toshiba Elevator
and Building Systems
Corporation



A focus on digital transformation can help companies lure recent college graduates. **It appeals to them because they're doing new, creative work.**





Charles Cambianica

Design Director, Decathlon
International



It's very important that we look at designers as **people that understand and anticipate users' needs in connection with society's numerous problems, in order to solve them** by design. And realize that we are not simply driven by pure aesthetics and market trends.





JJ Johnson

Chief Operating Officer,
Viewrail



[Our organization has] moved to a four-day work week, implemented unlimited paid time off, and taken steps to ensure that people are able to take maternity and paternity leave—**actions all aimed at improving the employee experience.**





JJ Johnson

Chief Operating Officer,
Viewrail



We believe in the employee, and we believe in creating a space that allows employees to thrive. **We're not bringing in automation to replace the person. We're bringing in automation to replace the position.** That way, we can take the person and find a higher-level opportunity for them. Employees love it because they're not just coming in and mind-numbingly doing the same thing over and over again.





Samantha Snabes

Co-founder & Catalyst,
Re:3D Inc.



Over the next three years, the manufacturing industry needs to **prioritize trade skill development and supply chain diversification**. Widening the supply chain by supporting more raw materials suppliers and regional hubs that fabricate critical components will create more competition in the market, business opportunities, and jobs. It will also ensure that the industry will still be functional if there are supply chain disruptions.





Samantha Snabes

Co-founder & Catalyst,
Re:3D Inc.

“

You need to have that use case that is scalable, where people can leverage resources and data around repeatable opportunities. Encouraging our partners in academia and small business to share data allows us to learn from and explore the possibility of printing with more sustainable and recycled materials. Seeing waste not as garbage, but instead as a resource, is going to continue to be a focus for many groups. And I think we'll see some real upsides in the next year to 10 years that will help recruit others into the conversation.

”



Sean O'Reilly

Global VP HP Sales
& Innovation,
AAF Flanders Inc.



You can never go wrong when you're doing the right thing. For AAF, **the right thing is to offer a product that lasts longer, that uses less energy**, and delivers the performance that improves air quality and ultimately has a positive impact on human health. We must also focus on delivering true value for money in terms of total cost of ownership. Educating the customer is our daily work – there is an old expression, "you buy cheap, you buy twice," which is as true for the air filter industry as it is in many others.





Kunyueh Lin

General Manager, Building
Automation Solution
Business Unit, Delta
Electronics



If we can improve energy efficiency, we can see returns immediately. Our data center consumes a lot of energy, and if we can improve our energy efficiency by even 1%, we'll save a lot of electricity. This is good both for our customers and our planet.





Kunyueh Lin

General Manager, Building
Automation Solution
Business Unit, Delta
Electronics



The organization has changed its planning and management strategies to be as nimble as possible in the face of geopolitical uncertainty. The company now drafts a new 10-year plan each year. Also, Delta Electronics is moving away from centralized management and providing more resources to the regional offices that will lead business growth for the company in the future. Although it is impossible to be ready for everything, Lin noted, companies can position themselves to respond quickly to changing conditions.





Kunyueh Lin

General Manager, Building
Automation Solution
Business Unit, Delta
Electronics



The declining birth rate and a new emphasis on **work-life balance** in mainland China and Taiwan **[are] factors leading to talent shortages.**





Stefan List

Head of Cabin Market
Insights, Airbus



To get the best talent, you need to have an appealing work culture. **Employees want to know that they won't just be completing tasks given to them.** They want to bring their own viewpoints and creativity to their jobs. That's key.





Stefan List

Head of Cabin Market
Insights, Airbus



One of the biggest challenges for sustainable materials is making them work commercially. There are examples in aviation where sustainable products were released too early, and they couldn't stay in the marketplace or keep their competitive advantage. The aircraft cabin is currently responsible for approximately 5 to 10% of an aircraft's CO2 emissions. However, the latest research and technology developments and cabin innovations we are currently working on will contribute to reducing these figures, e.g. by weight reduction or circular materials.





JJ Johnson

Chief Operating Officer,
Viewrail

“

[Our organization has] moved to a four-day work week, implemented unlimited paid time off, and taken steps to ensure that people are able to take maternity and paternity leave—**actions all aimed at improving the employee experience.**

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