2023 STATE OF DESIGN & MAKE

EXECUTIVE SUMMARY

Insights from industry leaders on how digital transformation is driving business resilience, sustainability, and talent management

AUTODESK

ABOUT THIS STUDY

The *State of Design & Make* report is a global, annual study for leaders who design and make places, objects, and experiences. It identifies the most pressing drivers of change that are shaping today's business decisions and helps leaders make informed, strategic decisions about how to prioritize and invest in the future.

The industries that design and make comprise a unique category that connects the digital to the physical. Architecture, engineering, construction, product design, manufacturing, gaming, and filmmaking all require complex human collaboration throughout a digital design process and delivery of a physical result. Executives in these industries share their approaches and points of view on the challenges unique to their organizations and the opportunities they are identifying.

Key areas of focus for this research include: a macro view of the industries; staying resilient and relevant in an ever-changing world; attracting, training, and retaining a skilled workforce; and achieving sustainable outcomes.

Autodesk partnered with **Ipsos**, a leader in global research and insights, to survey and interview 2,565 industry leaders, futurists, and experts in the architecture, engineering, construction, and owners (AECO); design and manufacturing (D&M); and media and entertainment (M&E) industries from countries around the globe.

Survey data has been broken down by global region: Asia-Pacific (APAC), which includes responses from Australia, China, India, Japan, and South Korea; Europe, with responses from France, Germany, Italy, the Netherlands, Sweden, and the United Kingdom; and the Americas, with responses from Canada and the United States.

This report contains key findings from this research, including details at the sector and regional level. In certain instances, responses have been compared by country, but only countries with 200 or more respondents are included in these comparisons: Australia, China, France, Germany, Japan, the United Kingdom, and the United States.

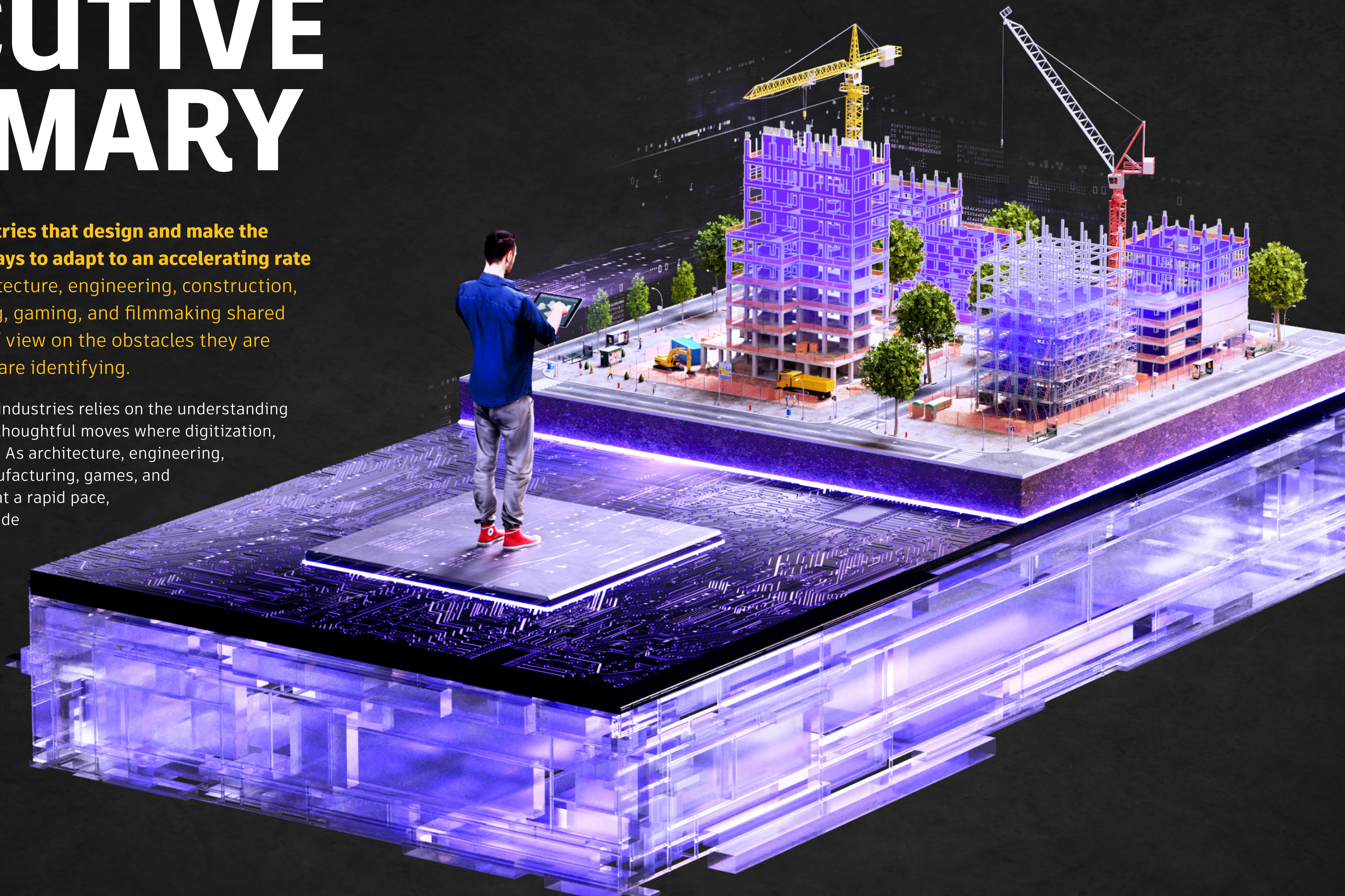
The quantitative data (n= 2,489) was collected between October and December 2022, through a 20-minute online survey. In addition, 76 qualitative interviews with business leaders and futurists were conducted between September and December 2022. In some instances, Autodesk references analysis of its aggregated and anonymized data.

Full report
Click here to access the full *State of Design & Make* report—including all glossary terms and research insights

EXECUTIVE SUMMARY

Leaders and experts in industries that design and make the world are finding powerful ways to adapt to an accelerating rate of change. Executives in architecture, engineering, construction, product design, manufacturing, gaming, and filmmaking shared their approaches and points of view on the obstacles they are facing and opportunities they are identifying.

The future of the design and make industries relies on the understanding and successful implementation of thoughtful moves where digitization, sustainability, and workforce meet. As architecture, engineering, construction, product design, manufacturing, games, and filmmaking continue to transform at a rapid pace, these three drivers of change provide leaders a focus for their attention and investments in the one- to three-year time frame to stay competitive.



Business Resilience Emerges Amid Uncertainty

Most feel prepared

Business leaders and experts* reported that the future global landscape feels more uncertain than it did three years ago. However, most also said that their companies are prepared to respond to this uncertainty.

Adapting to the new normal

Leaders and experts reported making significant changes in response to the challenges of the pandemic. At least half said they changed how their companies worked day-to-day and how they managed their workforce. Remote work was the most significant area of increased investment during the past three years.

Remote work was the most significant area of increased investment during the past three years

Top business objectives

Sixty percent of respondents said that business growth is a top objective for their company, and 55% cited operational efficiency as another top business objective. An analysis of anonymized data from Autodesk customer projects shows that goals tied to business growth include improvements to win rate and design quality, while goals tied to operational efficiency include improvements to workflows and production, project delivery, and facility management.

Digitization drives the future

Seventy-nine percent of respondents said that the future growth of their company will depend on digital tools. Those that are keeping up with the pace of change in their industry are more likely to have plans to increase existing services, offer new services, and potentially expand into new markets.

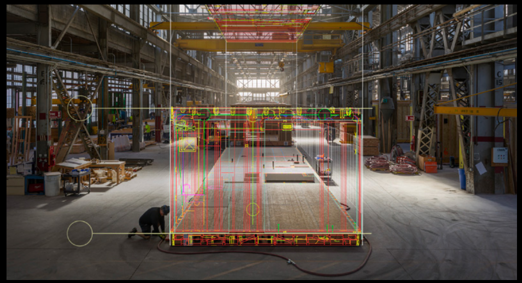
79% of respondents said that the future growth of their company will depend on digital tools

*Leaders: Sixty-nine percent of survey participants are decision makers in their companies. In this report, this group is referred to as "leaders." Job roles for the leaders group include director, industry consultant, president or CEO, senior executive, senior vice president, and vice president.
Experts: The remaining 31% of respondents are referred to as "experts." This group includes managers, senior managers, mid-level employees, and a small number of educators and entry-level employees.

Business Resilience Emerges Amid Uncertainty

Digital transformation is boosting business

Business leaders and experts have experienced several benefits from digital transformation. The top benefits of digital transformation include reduced costs, increased innovation and better ideas, and the ability to launch products and services faster.



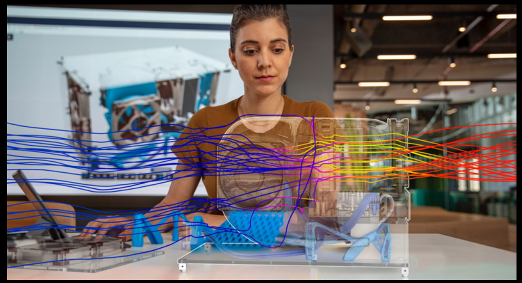
Digital maturity promotes flexibility

Respondents from companies that are more digitally mature* report that they are prepared to handle change at higher rates than those from less digitally mature companies.

Respondents from companies that are more digitally mature report that they are **prepared to handle change** at higher rates than those from less digitally mature companies

M&E leads in digital maturity

Companies in the M&E industry appear to be further along in their digital transformation journey than those in AECO and D&M.



Regional reactions to a shifting landscape

Business leaders and experts from Europe were the most likely to say that the global landscape feels uncertain while those in the Asia-Pacific (APAC) region were the most likely to say that their companies were well-positioned to handle global changes.

Business leaders in the Asia-Pacific region were the most likely to say that their companies were **well-positioned to handle global changes**

*Digital maturity: Respondents were asked how far their companies were in their transformation journeys. Organizations that respondents said are in the "early stage" or "right in the middle" of their digital transformation journeys are considered less digitally mature companies. Those that respondents identified as "approaching the goal" or having "achieved the goal" of digital transformation are considered more digitally mature companies.

Talent Competition Heats Up

Talent leads all challenges

More than any other factor, business leaders and experts across industries identified attracting and retaining talent as a top challenge. Even for respondents who did not cite talent as a top factor, the majority said they have trouble finding skilled employees.

A rapidly changing workforce

Seventy-two percent of respondents said that the workforce has evolved more in the past three years than it had in the previous 25 years. Survey respondents and interviewees mentioned the impact of recent changes such as the rise of remote work, more flexible work styles and hours, increased digitization, and more global operations at many firms.

72%
of respondents said that the workforce has **evolved more in the past three years than it had in the previous 25 years**

The importance of upskilling

More than 90% of respondents agreed that upskilling is important to their companies. Also, more than half said that their companies are hiring employees who lack the skills needed for their positions and plan to train them on the job.

More than half
of respondents said that their companies are hiring employees who lack the skills needed for their positions and plan to train them

Digitally mature companies invest in talent solutions

Leaders and experts at more digitally mature companies were more likely to say their organizations had implemented various talent-related solutions than those at less digitally mature companies. These actions include investing in technology, hiring from a broader geographical area, and implementing new training programs.

Talent Competition Heats Up

Skills of the future

Respondents identified a broad swath of important competencies for the future, including technology skills, collaboration skills, regulatory knowledge, innovation skills, and the capacity and motivation for ongoing learning.

Talent challenges vary by region

Respondents from China were more likely to say they face hurdles in attracting talent, citing challenges related to an aging workforce. By contrast, Australian respondents were less likely to cite an aging workforce or a slowness to adapt to a younger generation.

Respondents from China were more likely to say they face hurdles in **attracting talent**, including challenges related to an **aging workforce**

M&E faces fewer demographic challenges

Respondents from all sectors said that talent is a top challenge, but M&E companies were less likely than those in other industries to say that the workforce is rapidly aging or that their companies have trouble adapting to the needs and desires of a younger generation of workers.

Respondents from M&E were less likely to say their companies have trouble **adapting to the needs** and desires of a **younger generation**

Sustainability Drives Business Value

A broad consensus

Nearly 90% of respondents said that their industry/organization has made changes to improve sustainability.

Sustainability is good for business

Eighty percent of respondents said that improving sustainability practices is a good long-term business decision. More than half also said it is a good short-term decision.

80%

of respondents said that improving sustainability practices is a good long-term business decision

Internal sustainability goals

The majority of business leaders and experts said it is important for their companies to achieve their sustainability goals. However, only 17% strongly agree that they are proud of their company's sustainability initiatives.

US companies lag on action

Sustainability is an area where companies' practices vary significantly based on geography. Most notably, respondents from US companies are more than twice as likely to report that their organizations aren't engaged in any sustainability-related activities compared to the worldwide average.

Respondents from US companies are more than twice as likely to report that their **organizations aren't engaged in any sustainability-related activities** compared to the worldwide average

Sustainability Drives Business Value

Pressure from customers and employees

Respondents reported that companies received pressure to define and meet sustainability goals from several sets of outside forces and internal stakeholders. Customers were the greatest source of this pressure, with more than 80% of respondents saying that customers are influencing their sustainability activities. Respondents also identified employee pressure as a significant influence.

MORE THAN 80%

of respondents said their company's sustainability activities are being influenced by customers

Sustainability focus varies by industry

AECO and D&M companies are more likely to name sustainability as a challenge and more likely to say that sustainability goals are important. More than those from other industries, leaders and experts at D&M companies said their organizations planned to increase their efforts to design products while considering environmental impacts in the next three years. Furthermore, in the past three years, D&M respondents were more likely to have made efforts to decrease waste from production or use recycled materials.

In the next 3 years:

More than those from other industries, leaders and experts at D&M companies said their organizations planned to increase their efforts to design products while considering environmental impacts

ABOUT AUTODESK

Autodesk is changing how the world is designed and made. Its technology spans architecture, engineering, construction, 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.

ABOUT IPSOS

Founded in 1975 in France, Ipsos is one of the largest market research and polling companies globally, operating in 90 markets and employing more than 18,000 people. The organization's research professionals, analysts, and scientists have built unique multi-specialist capabilities that provide true understanding and powerful insights into the actions, opinions, and motivations of citizens, consumers, patients, customers, or employees. Ipsos helps its 5,000 customers move confidently through a rapidly changing world. For more information, visit ipsos.com.