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Global Insights

IT World of Work 2023 Outlook

30 Billion
IOT DEVICES BY 2030

$1.91 Trillion
OR MORE EXPECTED FOR THE VR /
METAVERSE MARKET BY 2030

68%
OF ORGANIZATIONS REPORT MODERATE
TO EXTREME AI SKILLS GAPS

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The IT industry continues to lead changes in the World of Work as cutting-edge technologies mature and organizations seek to scale adoption of their digital transformations. **This ManpowerGroup Global Insights report examines the top seven key global trends driving IT innovation and the impact they will have on the workforce**. Although many include the use of increased automation, skilled talent will continue to be the differentiator as the industry works to continue driving innovation and scaling adoption.

- Which technologies are expected to have the greatest impact on the future of IT?

- What are the potential impacts of these trends on the global IT workforce?

- How will industry leaders find the skilled talent they need to sustain their digital transformation and innovation?

Digital Killed the Analog Star

Organizations are accelerating investments in digital transformation, running advanced simulations to virtualize and dematerialize processes, shortening process outcomes, as well as product and service development lifecycles.

- **Rise of Digital Twins:** 70% of large enterprise C-suite executives are exploring the creation of digital twins – defined as a virtual model of a physical asset, person, or process – and some estimate the market will grow to $48 billion by 2026 – McKinsey

- **The Metaverse is Closer Than You Think:** Metaverse technologies (e.g., augmented reality, virtual reality, workplace collaboration tech) could reach 700 million users and grow to a $1.91 trillion market by 2030 – WEF/Statista

- **SaaS Growth Continues:** Software as a service (SaaS) will continue to grow from $3 trillion today to $10 trillion in 2030 – McKinsey

Workforce Implications:

- **Increased demand for already scarce IT talent and skillsets**

- **Need for continuous upskilling to keep pace with accelerating digital transformation**

- **Reskilling needed so potentially displaced workers can take advantage of emerging opportunities**
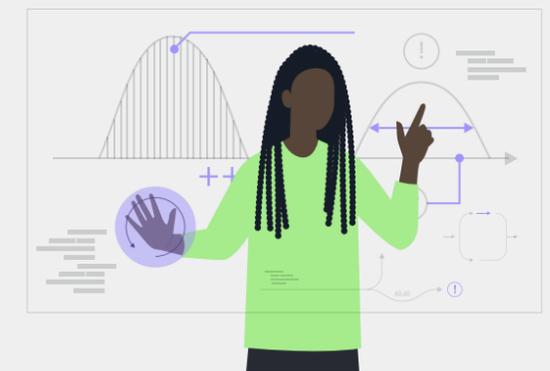
METAVERSE TECHNOLOGIES COULD REACH **700 MILLION USERS** AND GROW TO A **$1.91 TRILLION MARKET BY 2030**

AI Has Entered the Chat

Artificial Intelligence (AI) innovation—including machine learning, deep learning, cognitive computing, natural language processing and computer vision—will accelerate as organizations seek to gain competitive advantage within their industries.
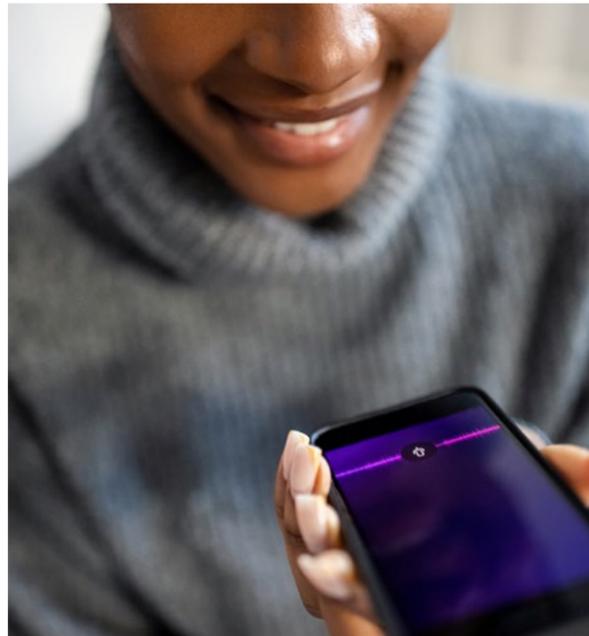

- **AI Adoption is Accelerating:** More than 50% of organizations say they have adopted AI in at least one business unit or function, 2.5x higher than 2017 – McKinsey

- **Big Tech is Doubling Down:** Major investments, such as Microsoft's ~$10 billion stake in ChatGPT, are accelerating adoption

- **Full Impacts Not Yet Fully Understood:** As AI continues to mature and scale it will enable new applications and automation opportunities for an increasing number of tasks exclusively performed by workers today

MAJOR INVESTMENTS, SUCH AS MICROSOFT'S **~$10 BILLION STAKE IN CHATGPT**, ARE ACCELERATING ADOPTION

Workforce Implications:

- **Increased demand for skilled AI roles such as ML engineers, data scientists and natural language planning engineers**

- **Growing use of AI tools in recruiting, performance management, workforce planning, employee engagement, compliance & risk management, career development, and benefits administration**
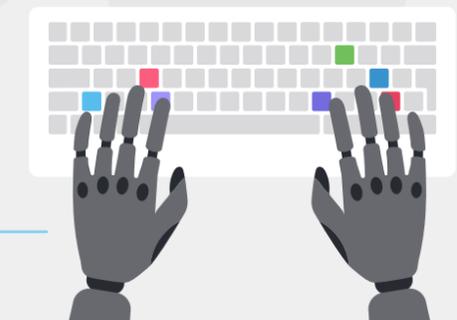
Connected Everything, Everywhere All at Once

The Internet of Things (IoT) will continue to grow. In fact, the number of IoT devices is expected to triple from 8.6 billion in 2019 to nearly 30 billion in 2030. This includes an increasing number of enterprise applications such as smart buildings, condition-based maintenance, smart meters, and medical devices. – Statista

- **A Connection to Greater Personalization:** Consumers seeking personalized experiences are getting more comfortable with the technology and using IoT devices such as smart phones, wearables and connected smart home devices

- **Accelerated by Faster Infrastructure:** The expansion of faster 5G mobile networks will accelerate IoT device capability and performance in both consumer and business sectors

- **Driving Increased Need for Skilled Expertise:** Global IT services for the IoT market will need to scale accordingly, growing at 34% CAGR to $58 billion in 2025 – Gartner
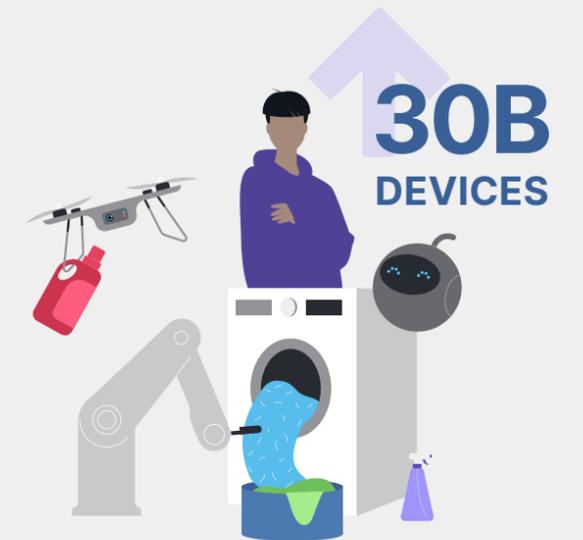
30B DEVICES

THE NUMBER OF **IOT DEVICES** IS EXPECTED TO **TRIPLE FROM 8.6 BILLION** IN 2019 TO NEARLY **30 BILLION** IN 2030
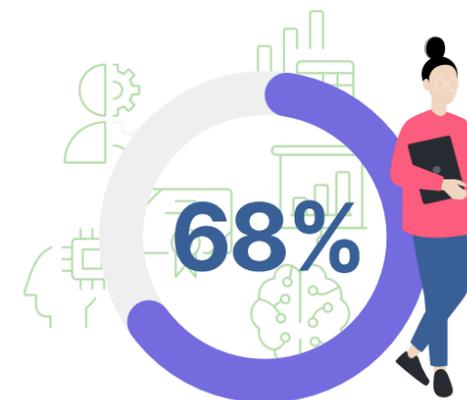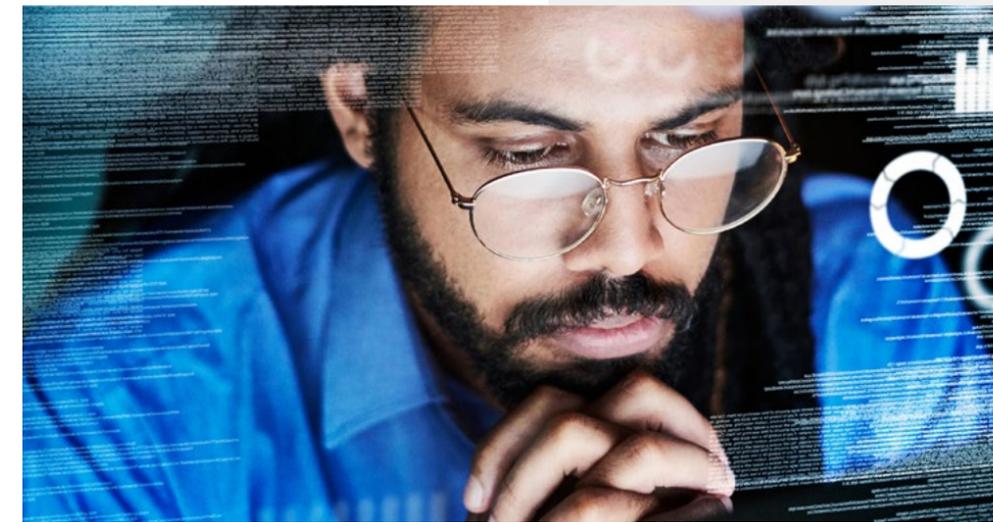
Workforce Implications:

- **Increased demand for solutions architects and related engineering roles**

- **Potential to eliminate some roles through automation**

Software 2-Point Woah

We're entering an era of accelerating software innovation. Adoption of DevOps and Machine Learning Ops simplify and accelerate the process of delivering code and ML models to production, as well as maintaining, updating and monitoring them.

- **A Democratization of Software Development:** Low-code or no-code software development approaches use intuitive graphical tools and embedded functionalities to democratize software development and empower any user to code even with no coding experience. Use of this technology is projected to grow rapidly from 25% in 2020 to more than 70% of software development in 2025 – Gartner

- **Increased Use of Machine Learning:** Bringing the discipline of DevOps to machine learning can help AI adopters scale model development and deployment, but they must also tackle a significant skills gap. In a recent study, 68% of executives surveyed described their organization's skills gap as "moderate-to-extreme" – Deloitte

- **Quality Assurance (QA) Must Scale to Meet Growing Demand:** The software testing market is scaling to meet increased demand and is projected to grow from $40 billion in 2021 to $70 billion by 2030 – Global Market Insights

68%

OF EXECUTIVES DESCRIBED THEIR ORGANIZATION'S SKILLS GAP AS "MODERATE-TO-EXTREME"

Workforce Implications:

- **Increased demand for skilled QA talent**

- **Sustained or increasing demand for DevOps and machine learning skills**

- **Opportunity to upskill/reskill more workers to utilize new low/no-code platforms**

A Forecast of Increasing Clouds

Cloud adoption will continue to grow. However, as the industry matures, developers are seeking alternatives to the three largest providers (Amazon, Microsoft, Google). Consequently, the popularity of private and hybrid cloud services is growing.

- **Advanced Computing Improving Performance:** Edge computing advances will enable companies to capture, monitor, and analyze data locally and close to its source while reducing the amount of data sent to a centralized data hub, increasing speed and significantly reducing latency

- **More Infrastructure Moving to the Cloud:** By 2025, nearly 50% of all accelerated infrastructure for performance-intensive computing (AI, HPC, and BDA) will be cloud based as these systems are increasingly integrated with enterprise software – IDC

- **But Talent Scarcity Persists:** 70% of CIOs say there is a cloud skills gap in the market and this lack of supply is having a severe impact on their business – IDC

Workforce Implications:

- **Sustained demand for talent with experience in AWS, Azure & Google Cloud platforms**

- **Increased demand for talent with ability to leverage alternative and open-source cloud computing infrastructure**

70%

OF CIOS SAY THERE IS A CLOUD SKILLS GAP IN THE MARKET AND THIS LACK OF SUPPLY IS HAVING A SEVERE IMPACT ON THEIR BUSINESS

Fortifying Cyber Fortresses

Recent high-profile cyberattacks and related damages have brought cyber security to the forefront of C-Suite and CIO concerns. As a result, most organizations are seeking to scale up their cyber security capabilities and talent.
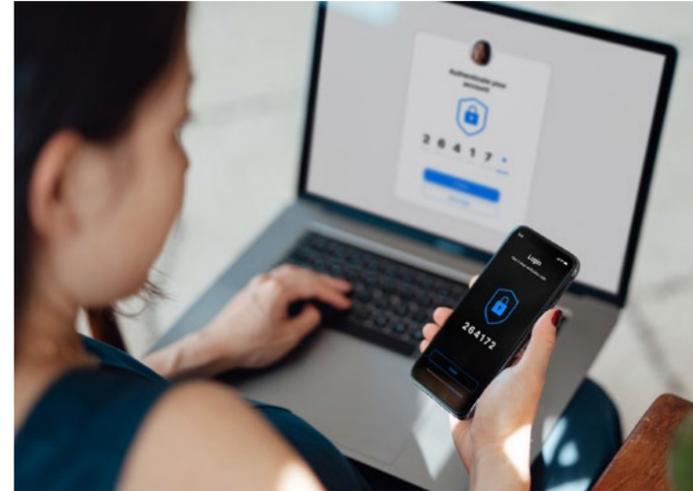
- **Increasing Use of AI:** AI is now used to build cyber defenses, accelerate data analysis, identify anomalies and identify and respond the cyber threats

- **Scaling Zero-Trust:** Zero-trust security, where user access rights are provided to users based on user segmentations and context of accessing the data, is increasing as an approach to cyber security. 73% of organizations are increasing budget allocations for zero-trust technology – Microsoft

- **A Growing Talent Challenge:** The global cyber security workforce gap grew 26% to 3.4 million in 2022. – ISC Cybersecurity Workforce Study Global HR leaders say cyber security is their #1 priority for hiring and closing skills gaps – MEOS Q1 2023
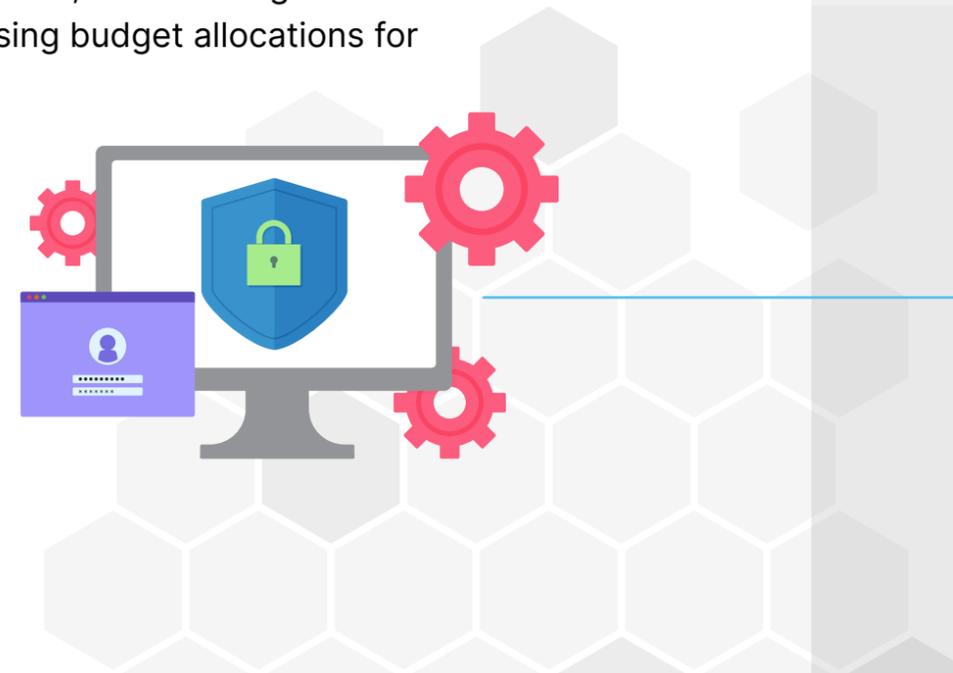
Workforce Implications:

- **Increased demand for scarce cyber security talent**

- **Shortage of skilled talent underscores importance of upskilling, reskilling, and a focus on diversity to grow the supply of skilled candidates**

- **Improved employee training to identify and neutralize cyber security threats**

GLOBAL HR LEADERS SAY **CYBER SECURITY** IS THEIR **#1 PRIORITY** FOR **HIRING** AND **CLOSING SKILLS GAPS**

9

Domo Arigato, Mr. Roboto

As organizations are accelerating digital transformation, they are also looking to automate repetitive processes and find opportunities to create unique value for their customers.

- **Automation Demand Driving Robotics Growth:** The global robotics market will grow from about $25 billion in 2021 to between $160 billion and $260 billion by 2030, with market share for professional services robots hitting up to $170 billion and industrial and logistics robot sales topping off at about $80 billion – BCG

- **Lowering Operational Costs:** By 2024, organizations will lower operational costs by 30% by combining hyperautomation technologies with redesigned operational processes – Gartner

- **Improving Productivity:** The economic impact of robotics process automation will save businesses $55 billion each year by 2025 – UiPath

ORGANIZATIONS WILL LOWER OPERATIONAL COSTS BY 30% BY COMBINING HYPERAUTOMATION TECHNOLOGIES WITH REDESIGNED OPERATIONAL PROCESSES

Workforce Implications:

- **Increased need for upskilling/ reskilling of workers displaced by automation**

- **Higher demand for workers with specialized robotics development and maintenance skills**

30% LOWER
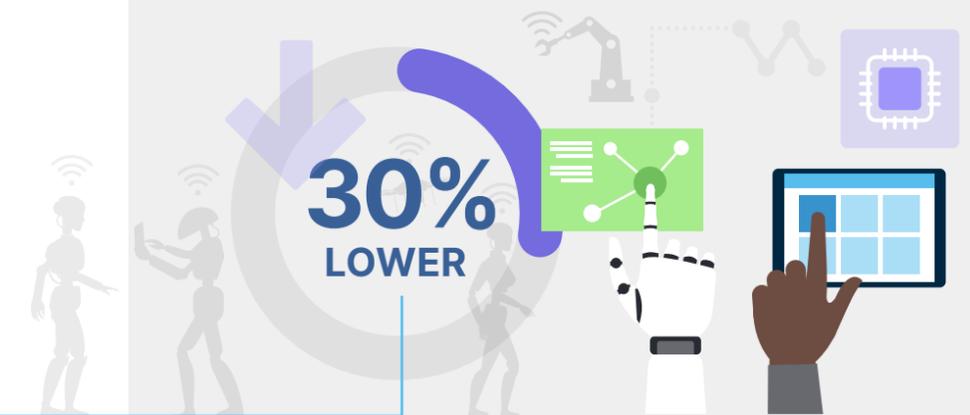
In Conclusion

The convergence of these trends will accelerate the pace of change and
innovation in the IT industry in the coming years. As these disruptive technologies scale,
they will democratize and a growing number of organizations will have access to them.
However, with talent scarcity projected to persist for the foreseeable future,
access to the talent with the vision to fully leverage them will be the differentiator.

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