Low-skill jobs appear highly vulnerable to task change

Automation potential

86.7%

COMBINED FOOD PREP AND SERVING WORKERS

86.4%

STOCK CLERKS AND ORDER FILLERS

85.6%

BOOKKEEPING, ACCOUNTING, AND AUDITING CLERKS

84.0%

COOKS, RESTAURANT

Source: Brookings analysis of Emsi data
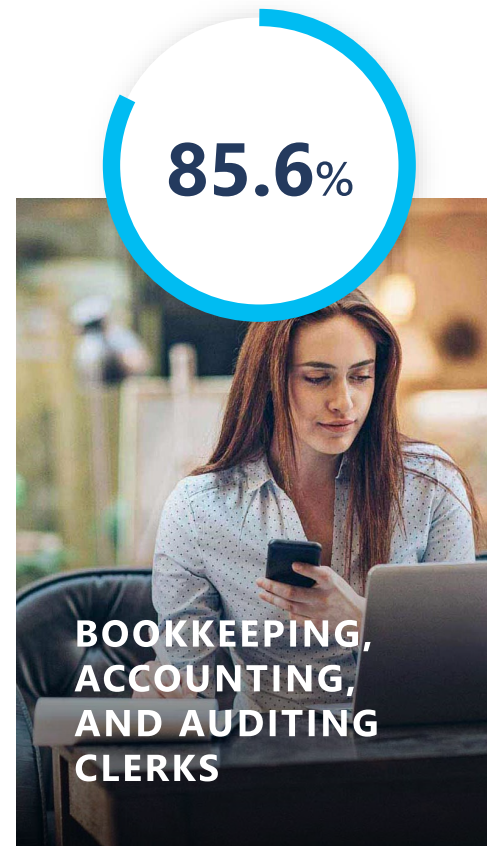
Human-centered + digital occupations growing

Automation potential

23.6%

12.9%

8.2%

14.6%

PERSONAL CARE AIDES

MARKET RESEARCH ANALYSTS, SPECIALISTS

SOFTWARE DEVELOPERS, APPLICATIONS

COMMUNITY HEALTH WORKERS

Skills economy

Most significant workplace trends [2019]

Augmented humanity

Skills economy

Culture of responsibility

Agility
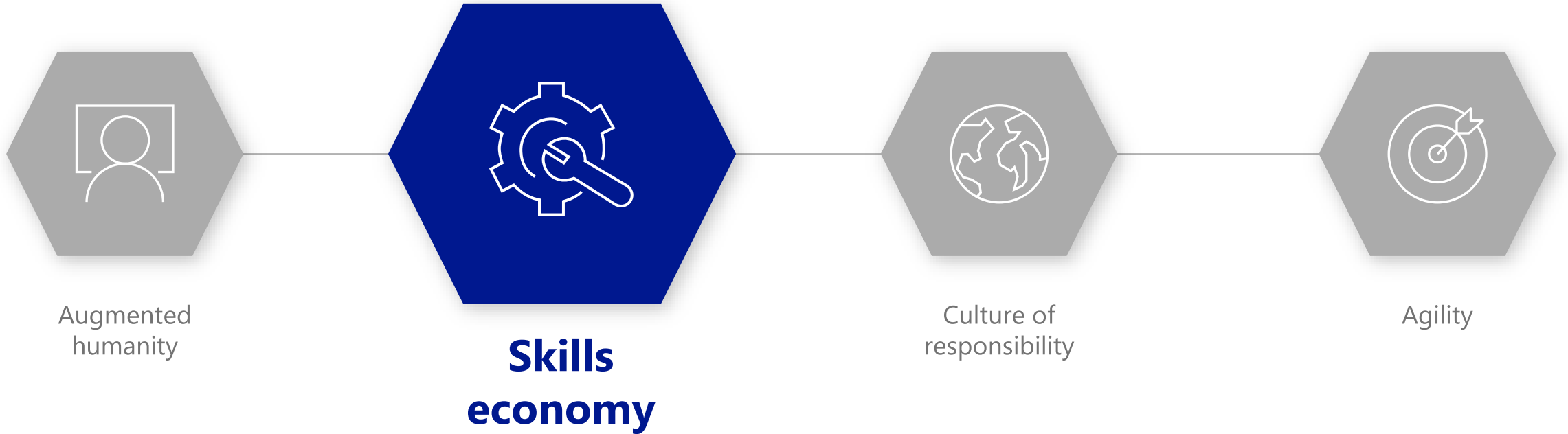
Talent shortage

Map the global skills needed for new jobs, upskill, reskill the workforce, and enable an efficient marketplace

Data insights: Skills economy

Skills economy

62% of executives believe they need to **retrain** or replace **more than a quarter of their workforce** by 2023[1]

27% of total **roles** will be new by 2022 in comparison to 16% in 2018[2]

74% of employees are **ready to learn** new skills or **completely retrain** in order remain employable in the future[3]

42% of **tasks** hours will be performed by machines by 2022 in comparison to 29% in 2018[2]

1 McKinsey Survey: Retraining and reskilling workers in the age of automation
2 World Economic Forum: The Future of Jobs & Skills
3 PwC 2018 Saratoga: Rethinking HR for the future of work
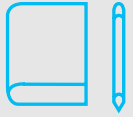
Critical skills for the digital economy

Frictionless Adaptability

Understanding both people + machines

Holistic thinking

Cultural competence

Curious learning

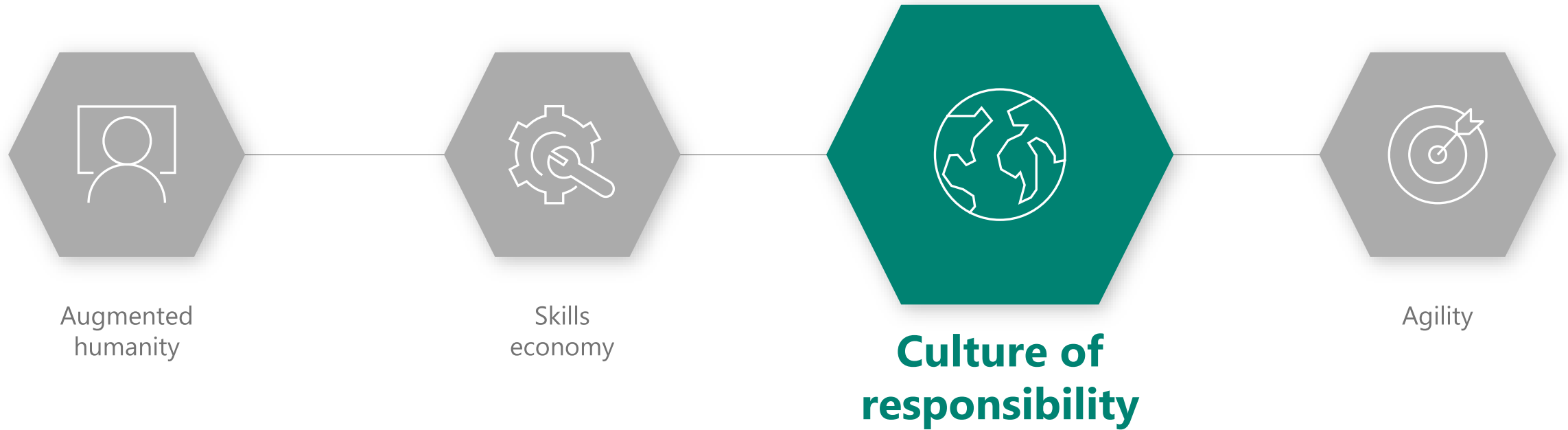**16,000** STUDENTS

200,000 TEACHERS

50,000 WORKERS

12 million YOUNG PEOPLE

Purpose + culture

Most significant workplace trends [2019]

Augmented humanity

Skills economy

Culture of responsibility

Agility

Purpose, culture, and corporate citizenship are expectations for the employee experience

Purpose, culture, and company stance

Data insights: Purpose, culture, and company stance

Culture of responsibility

75% of employees who are thriving say that their company has a strong **sense of purpose** that resonates with their **personal values**[1]

88% of Millennials believe employers should play a **vital role** in addressing issues such as income inequality, hunger and the environment[2]

8x the amount by which **purpose-focused** companies were found to have **outperformed** their S&P 500 peers[3]

1 Mercer: Global Talent Trends 2018
2 Deloitte: 2018 Global Human Capital Trends
3 Boston Consulting Group: Decoding Global Talent

As computers behave more like humans, **whose values will they use?**

A **principled** approach

Fairness

Reliability & Safety

Privacy & Security

Inclusiveness

Transparency

Accountability

An ethical decision framework

Four questions we should always ask

System purpose	Technology capability	Quality and reliability	Sensitive uses
1	**2**	**3**	**4**
Will the technology be used to augment the abilities of individuals and result in a positive impact on people and society? *If no, seek guidance.*	Are the AI technology and people capable of performing the tasks that the AI system should do? *If no, seek guidance.*	Will the technology be effectively designed, operated and maintained by a responsible party? *If no, seek guidance.*	Is the system in a sensitive category which may have a broad impact on people and society? *If yes, seek guidance.*

An ethical decision framework

Sensitive use categories

At Microsoft, we recognize that there are sensitive categories of Artificial Intelligent systems which are involved in making automated decisions and recommendations that may have a broad impact on people and society in the following ways

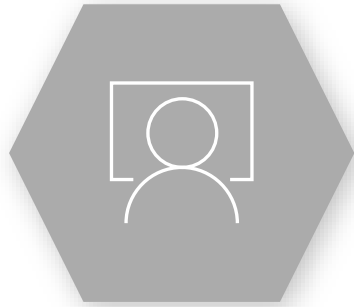**Denial of consequential services**

Risk of harm
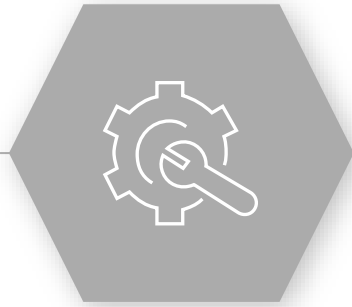
Infringe on human rights

Change agility

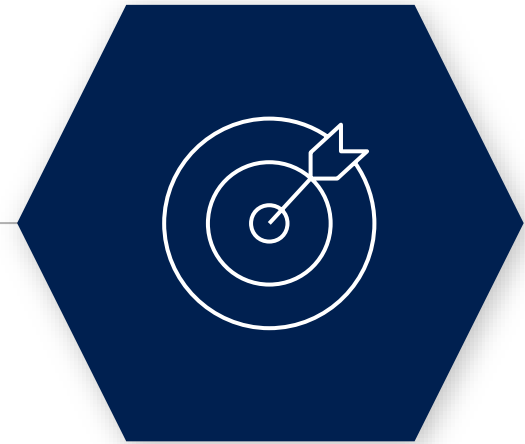# Most significant workplace trends [2019]

Augmented
humanity

Skills
economy

Culture of
responsibility

Agility

Rapid learning and ability
to change as a necessity

**Change
agility**

Data insights: Change agility

Agility

96% of c-suite respondents are planning an **organizational redesign**, focused on productivity[1]

75% of current S&P 500 firms will be **replaced** by new firms over the next 10 years[3]

70% is the percent chance **agile organizations** have of being in the top quartile of organizational health[2]

1.5x is the factor by which agile units are more likely to report **higher performance** than competitors[4]

1 Mercer: Global Talent Trends 2018
2 McKinsey: The Five Trademarks of Agile Organizations
3 Richard Forester, Yale: Lifespan and Number of U.S. Public Companies is Shrinking
4 McKinsey: Agile Compendium

Prof. Veronique Ngyuen, HEC Paris

When technology can empower and divide,
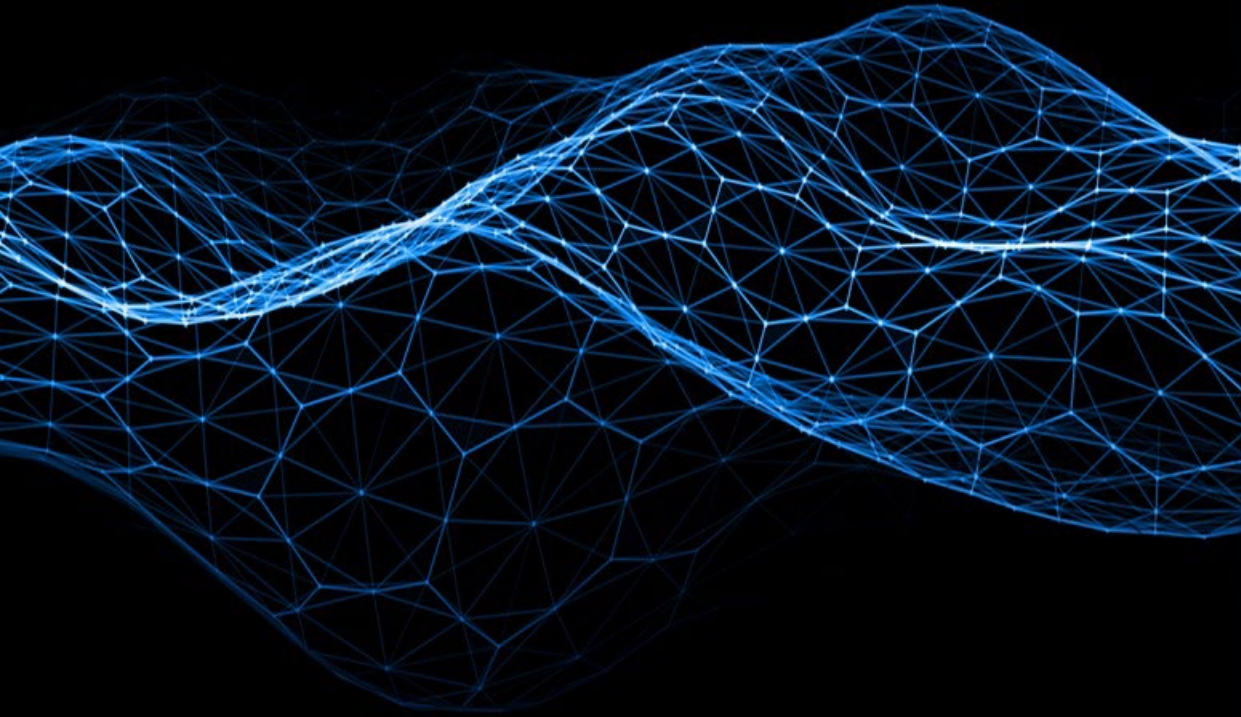what is our **responsibility**?

Help people learn.

Create a culture that will attract + retain talent.

Make your workplace adaptive to change.

"The most profound technologies are those that disappear. They weave themselves into the fabric of everyday life until they are indistinguishable from it."

– Mark Weiser

AI Business School

microsoft.com/ai-business-school