

The Future of Work

A technological viewpoint



Prof. Alexiei Dingli

47% of jobs will vanish in the next 25 years, say Oxford University researchers

"No government is prepared," *The Economist* reports.

PHILIP PERRY 24 December, 2016



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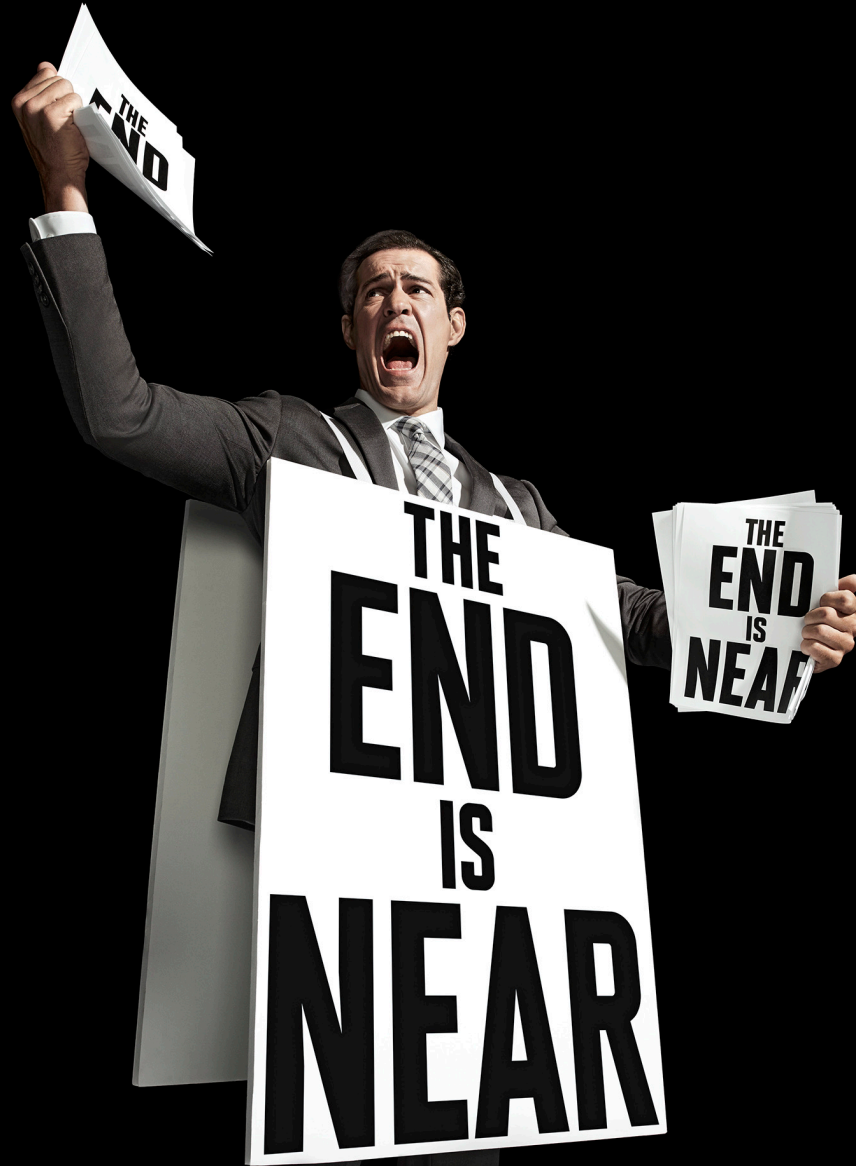
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Ten million British jobs could be gone in 15 years. No one knows what happens next

John Harris



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Robot automation will 'take 800 million jobs by 2030' - report

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A.I. Expert Says Automation Could Replace 40% of Jobs in 15 Years

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AI and Robotics to Create 60 Million More Jobs Than They Eliminate by 2022: WEF Study



BY SHOSHANNA DELVENTHAL | Updated Sep 17, 2018

While machines are on pace to perform more tasks than humans in the workplace by 2025, [artificial intelligence \(AI\)](#) will still add more jobs than it will take away over the next five years, according to a World Economic Forum report released on Monday.

NEAR!

B. Rich HEDGEYE





We must make this Europe's Digital Decade.

There are three areas we need to focus; first data, second technology in particular AI, and third infrastructure.

State of the Union, 2020

Impact on Jobs?

85 million

Jobs displaced by machines

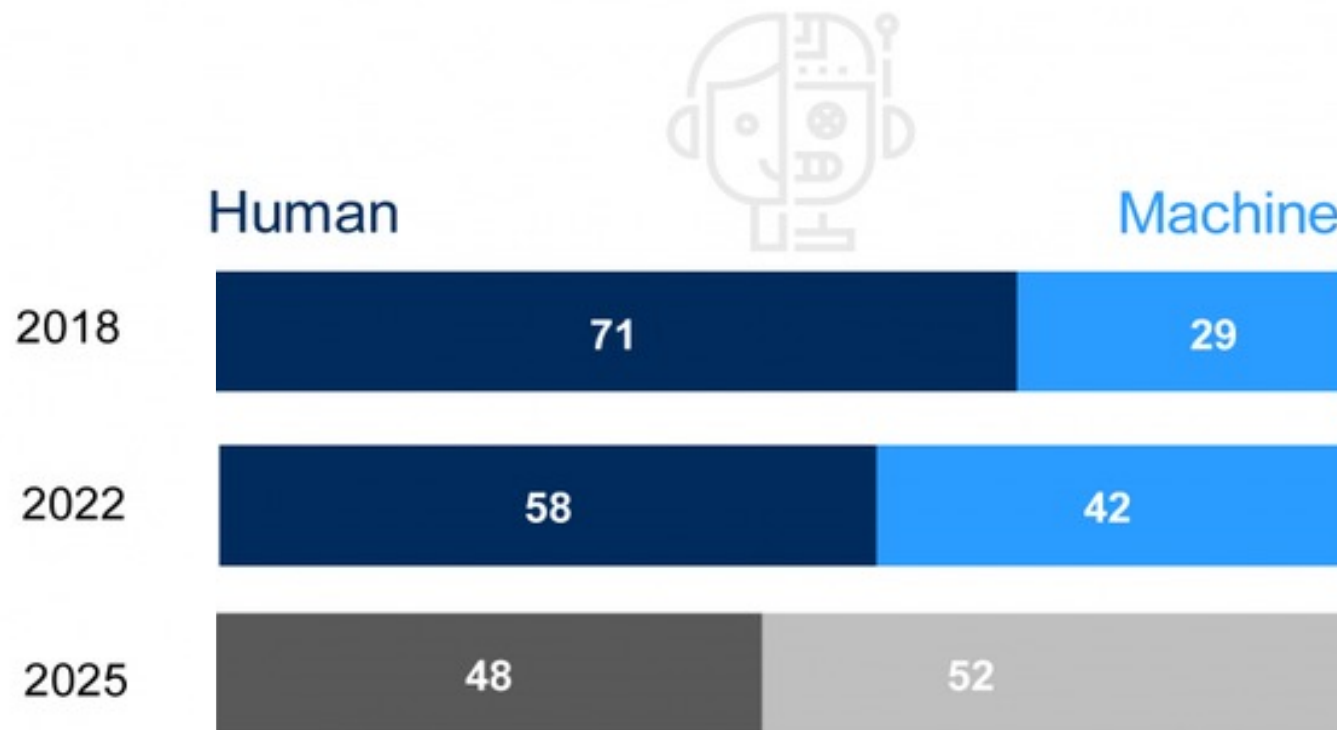
97 million

New roles which will
emerge thanks to machines

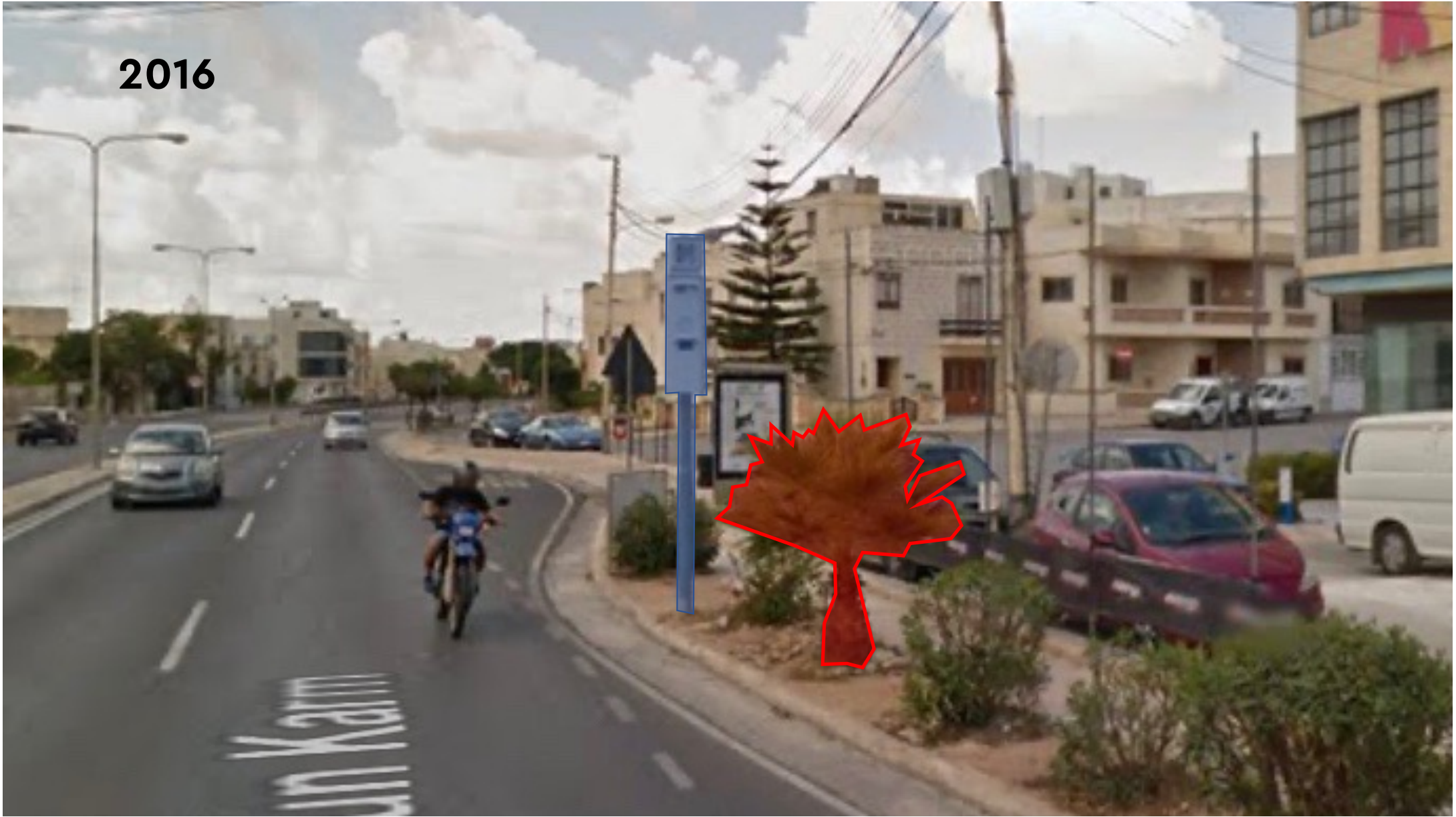
* Source - World Economic Forum, The Future of Jobs Report 2020

Rate of automation

Division of labour as share of hours spent (%)



2016



2020



Artificial

Extremely fast

Handles huge amounts of data

Much more accurate

Ideal for repetitive tasks

Reduces human errors

Intelligence

Initial capital investment

Might displace jobs

AI expertise is rare

Some applications better
done by humans

Applications of AI

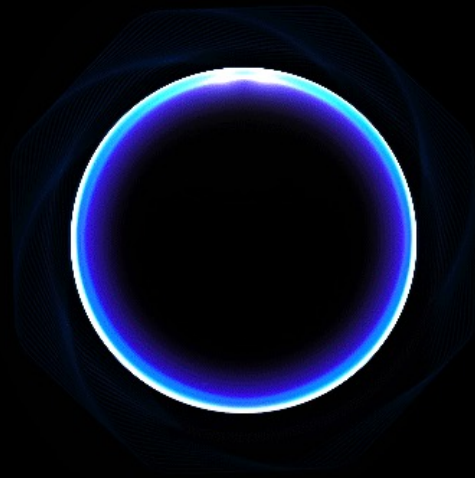
Email Spam Filter

Mobilephone assistant

Map Navigation

Document Correction

Automation (Robotic cleaners, Autopilot, etc.)



Fraud Prevention
(Shopping, Bank, etc.)

Recommender Systems
(Shopping, Job Matching etc.)

Internet Search

Social Networking Sites

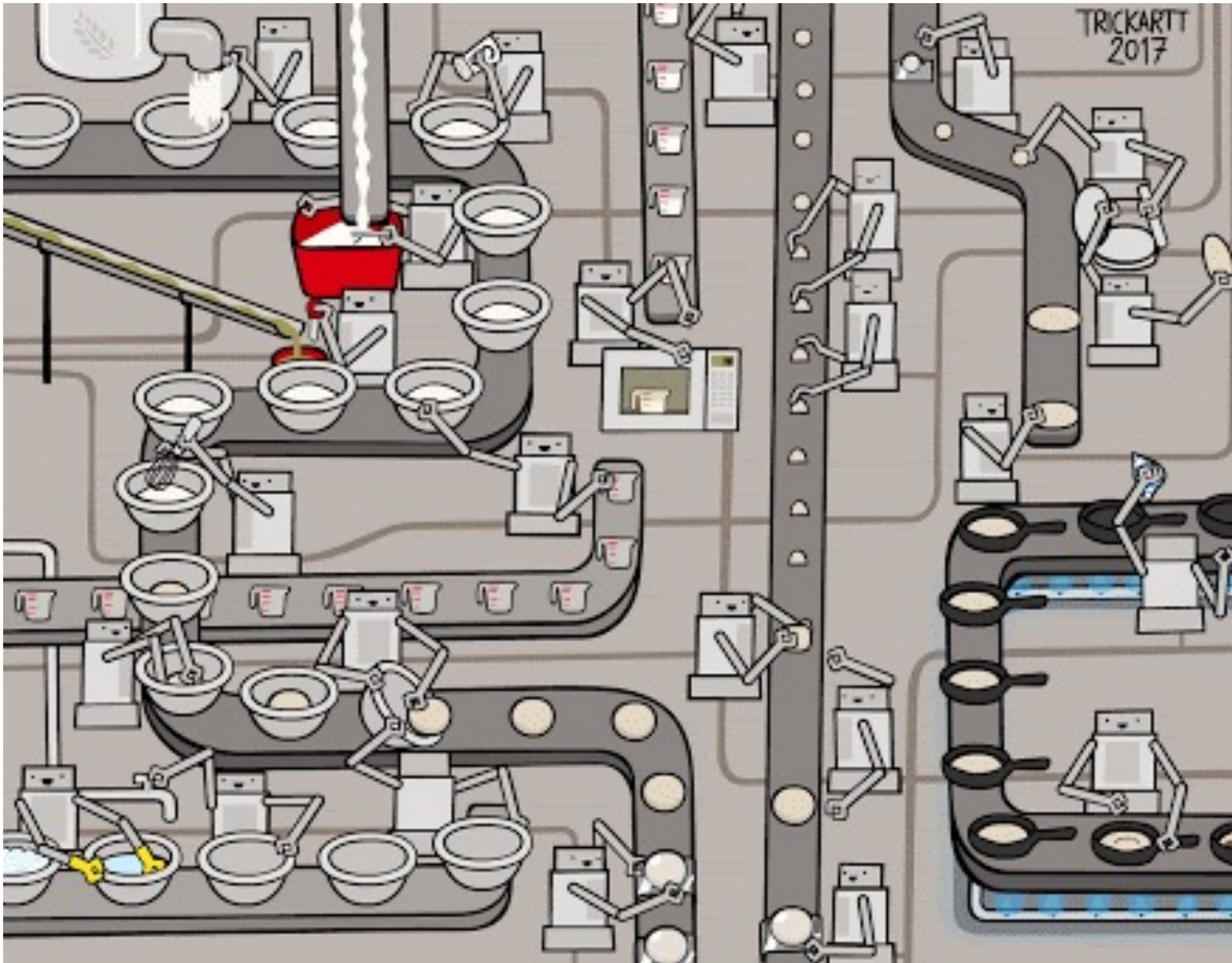
Hype Cycle for Emerging Technologies, 2020



gartner.com/SmarterWithGartner

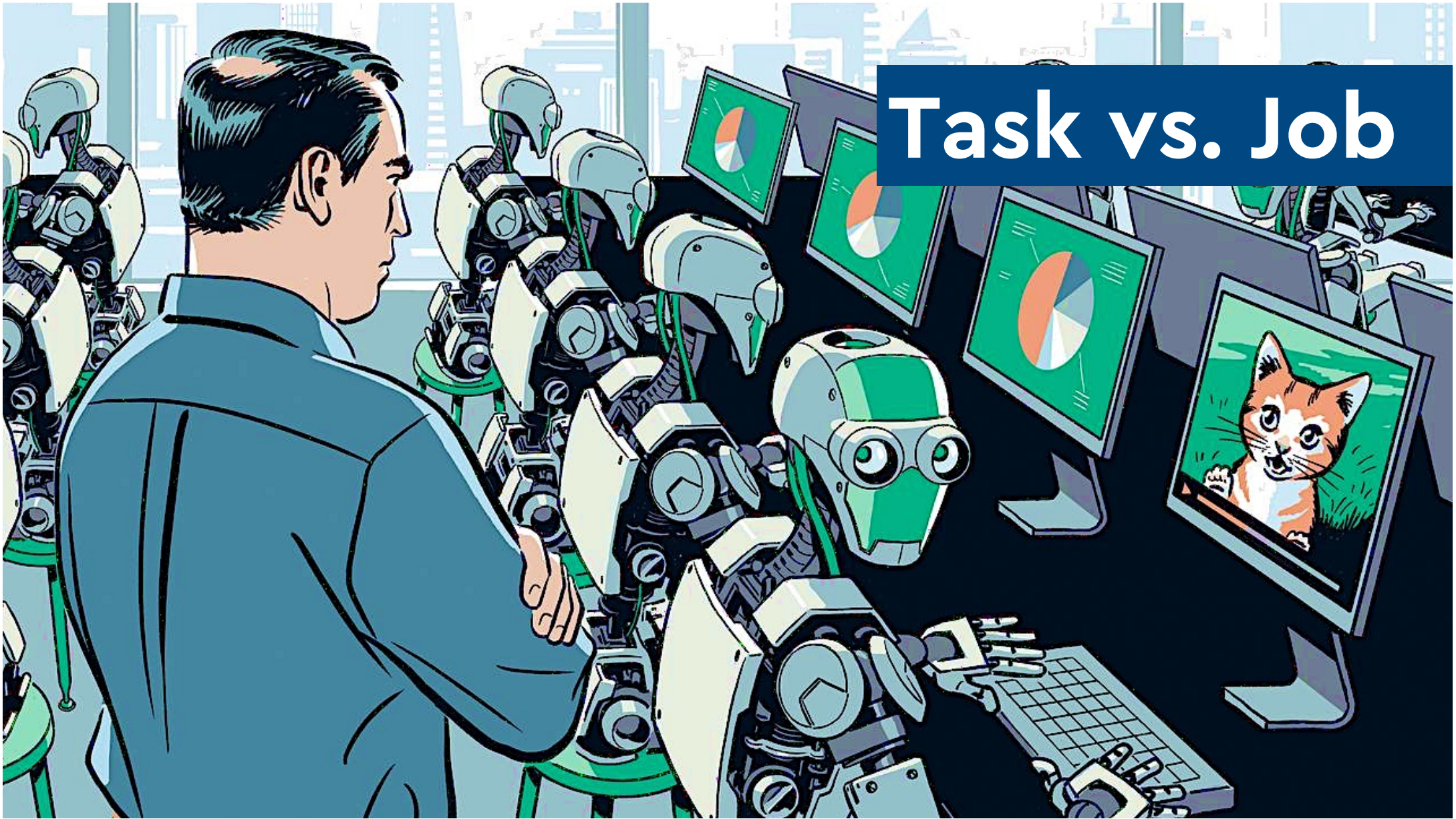
Source: Gartner
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**What
are the
implications
for the
workforce?**

Task vs. Job





1. Some jobs will not be affected



2. Some jobs will become obsolete



3. New jobs will be created



4. Most jobs will be augmented with AI

Top 20 job roles in increasing and decreasing demand across industries

1. Data Analysts and Scientists
2. AI and Machine Learning Specialists
3. Big Data Specialists
4. Digital Marketing and Strategy Specialists
5. Process Automation Specialists
6. Business Development Professionals
7. Digital Transformation Specialists
8. Information Security Analysts
9. Software and Applications Developers
10. Internet of Things Specialists
11. Project Managers
12. Business Services and Administration Managers
13. Database and Network Professionals
14. Robotics Engineers
15. Strategic Advisors
16. Management and Organization Analysts
17. FinTech Engineers
18. Mechanics and Machinery Repairers
19. Organizational Development Specialists
20. Risk Management Specialists

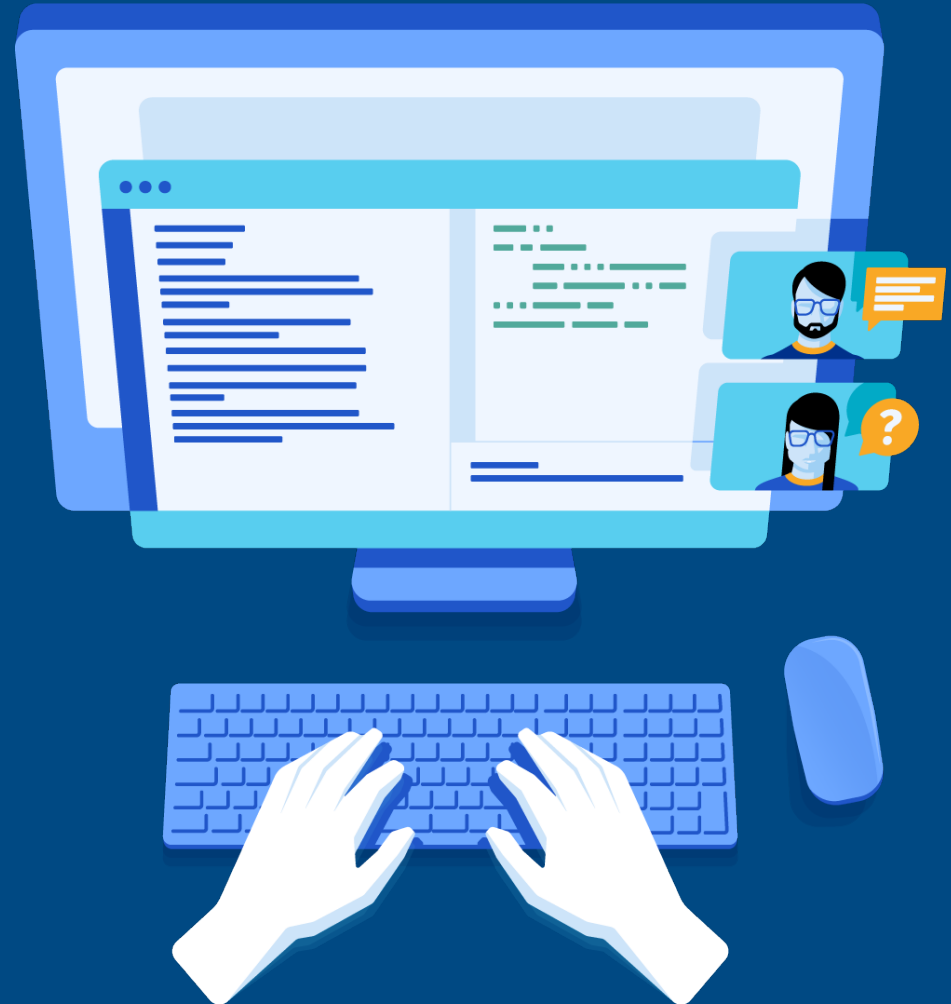


1. Data Entry Clerks
2. Administrative and Executive Secretaries
3. Accounting, Bookkeeping and Payroll Clerks
4. Accountants and Auditors
5. Assembly and Factory Workers
6. Business Services and Administration Managers
7. Client Information and Customer Service Workers
8. General and Operations Managers
9. Mechanics and Machinery Repairers
10. Material-Recording and Stock-Keeping Clerks
11. Financial Analysts
12. Postal Service Clerks
13. Sales Rep., Wholesale and Manuf., Tech. and Sci.Products
14. Relationship Managers
15. Bank Tellers and Related Clerks
16. Door-To-Door Sales, News and Street Vendors
17. Electronics and Telecoms Installers and Repairers
18. Human Resources Specialists
19. Training and Development Specialists
20. Construction Laborers

*Source Future of Jobs Survey 2020, World Economic Forum

Top Skills 2025

1. Analytical thinking and innovation
2. Active learning and learning strategies
3. Complex problem-solving
4. Critical thinking and analysis
5. Creativity, Originality and initiative
6. Leadership and social influence
7. Technology use, monitoring and control
8. Technology design and programming
9. Resilience, stress tolerance and flexibility
10. Reasoning, problem-solving and ideation



*Source Future of Jobs Survey 2020, World Economic Forum

"The future of work has already arrived for a large majority of the online white-collar workforce. 84% of employers are set to rapidly digitalize working processes, including a significant expansion of remote work—with the potential to move 44% of their workforce to operate remotely."

- World Economic Forum, The Future of Jobs Report 2020

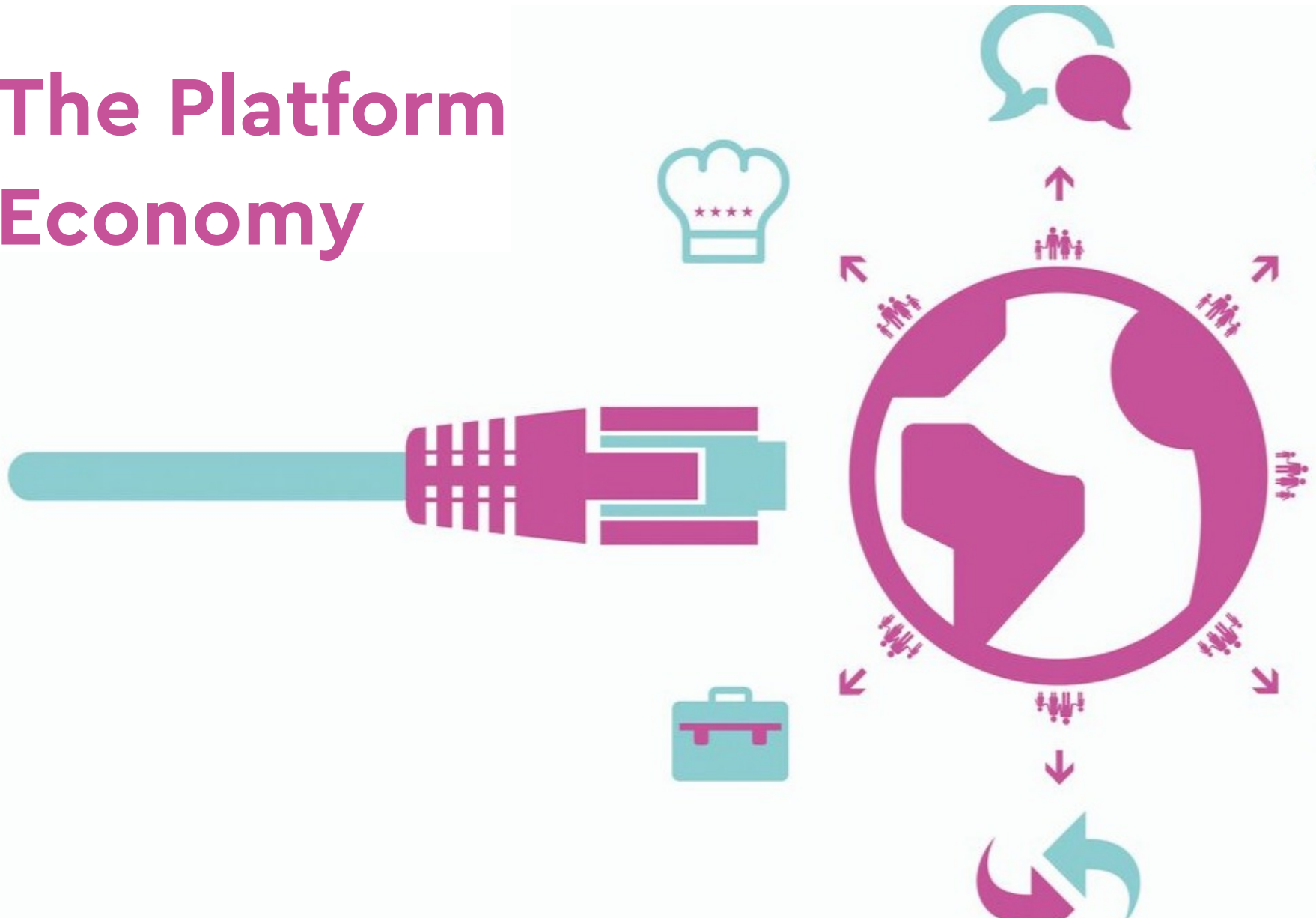


The Gig Economy





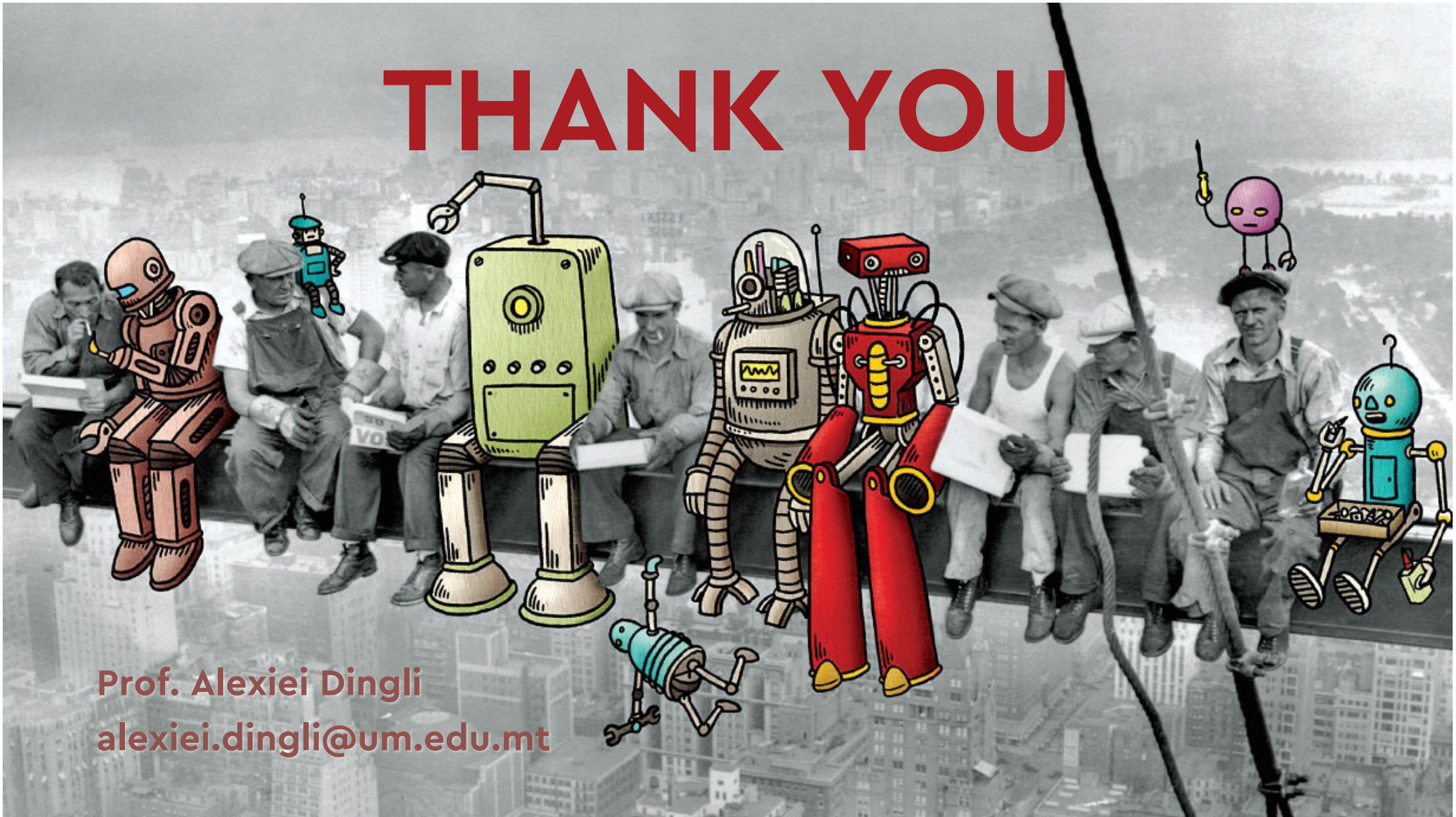
The Platform Economy



Digital Nomads



THANK YOU



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