

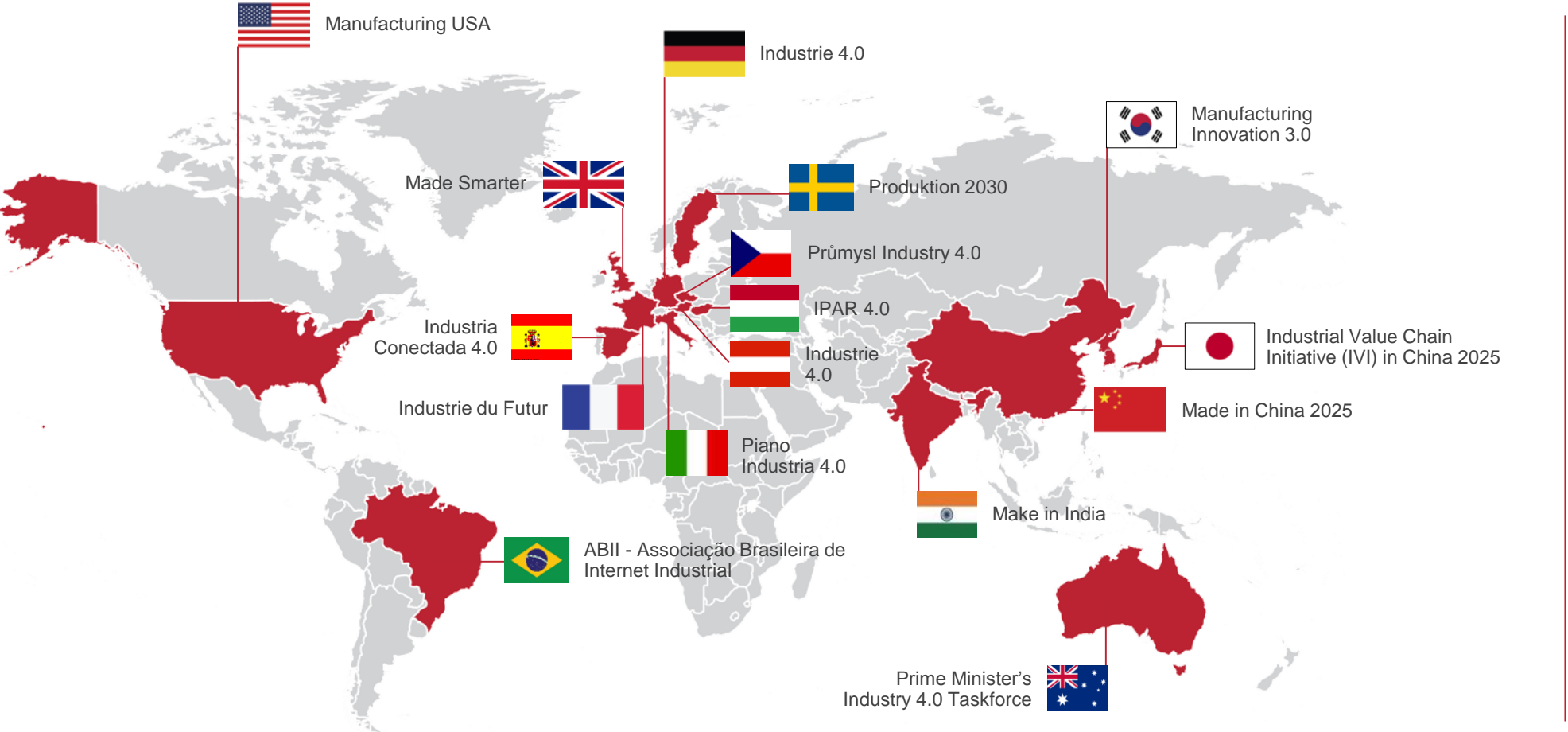
How Countries Are Supporting Manufacturing Digitalization

2018 Global Trade and Innovation Policy Alliance

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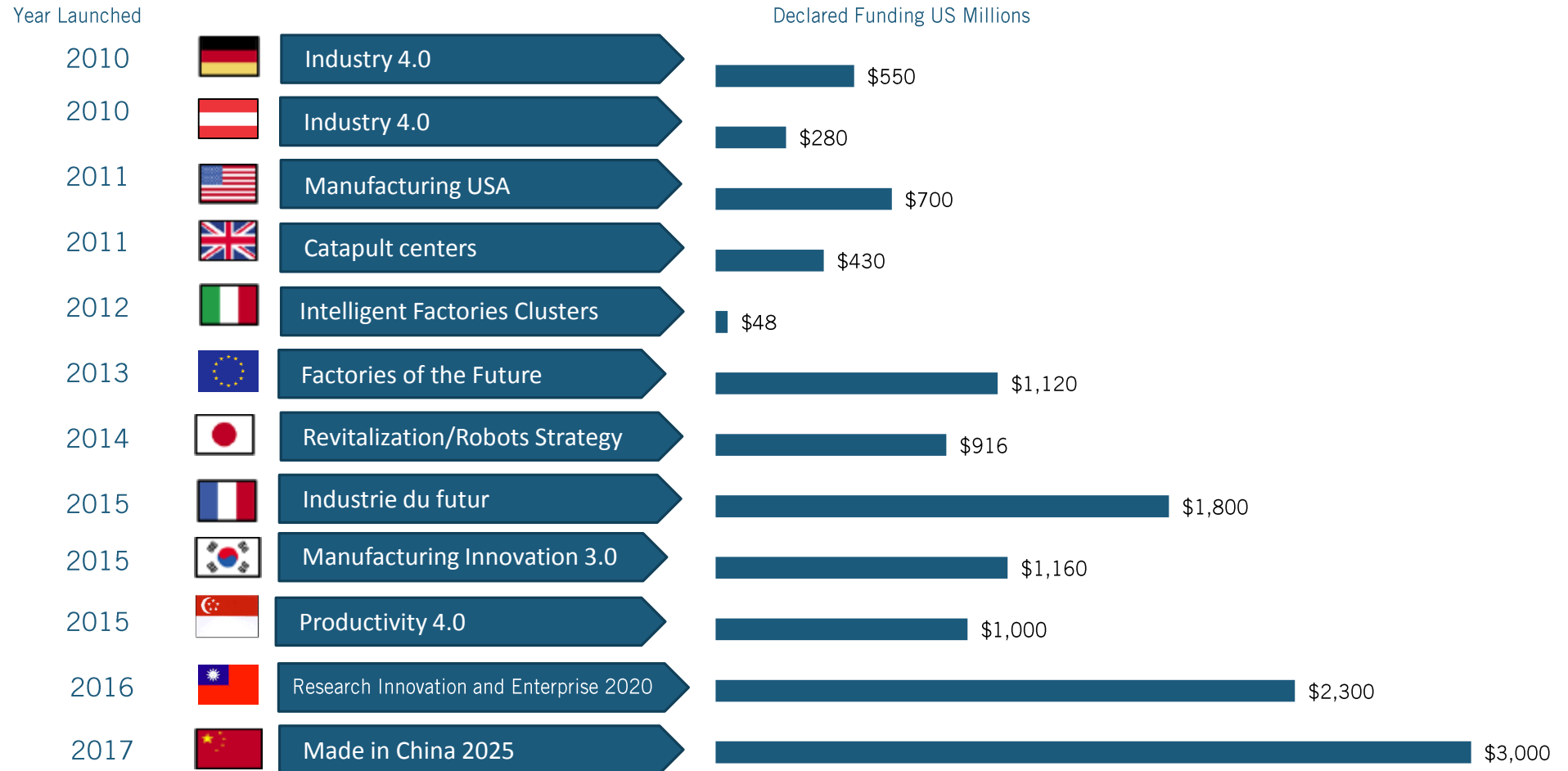
Over 30 Countries Have Introduced “Industry 4.0” Initiatives



-  Netherlands: Smart Industry
-  Belgium: Made Different
-  Portugal: Industria 4.0
-  Denmark: M.A.D.E.
-  Mexico: Industry 4.0 Roadmap
-  Slovakia: Smart Industry
-  Wallonia: Marshall 4.0

Courtesy: Dave Vasko, Rockwell Automation

Investment Levels Are Increasing

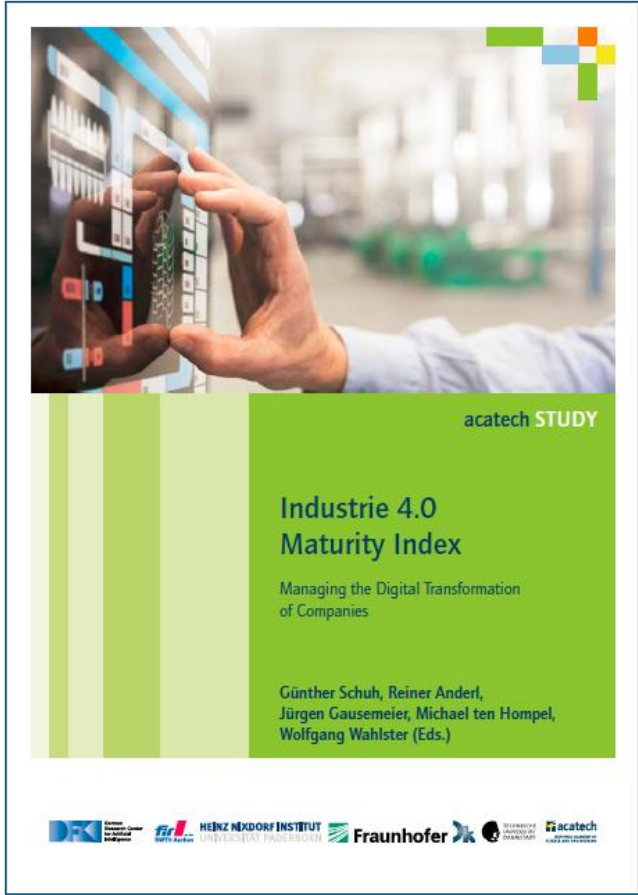
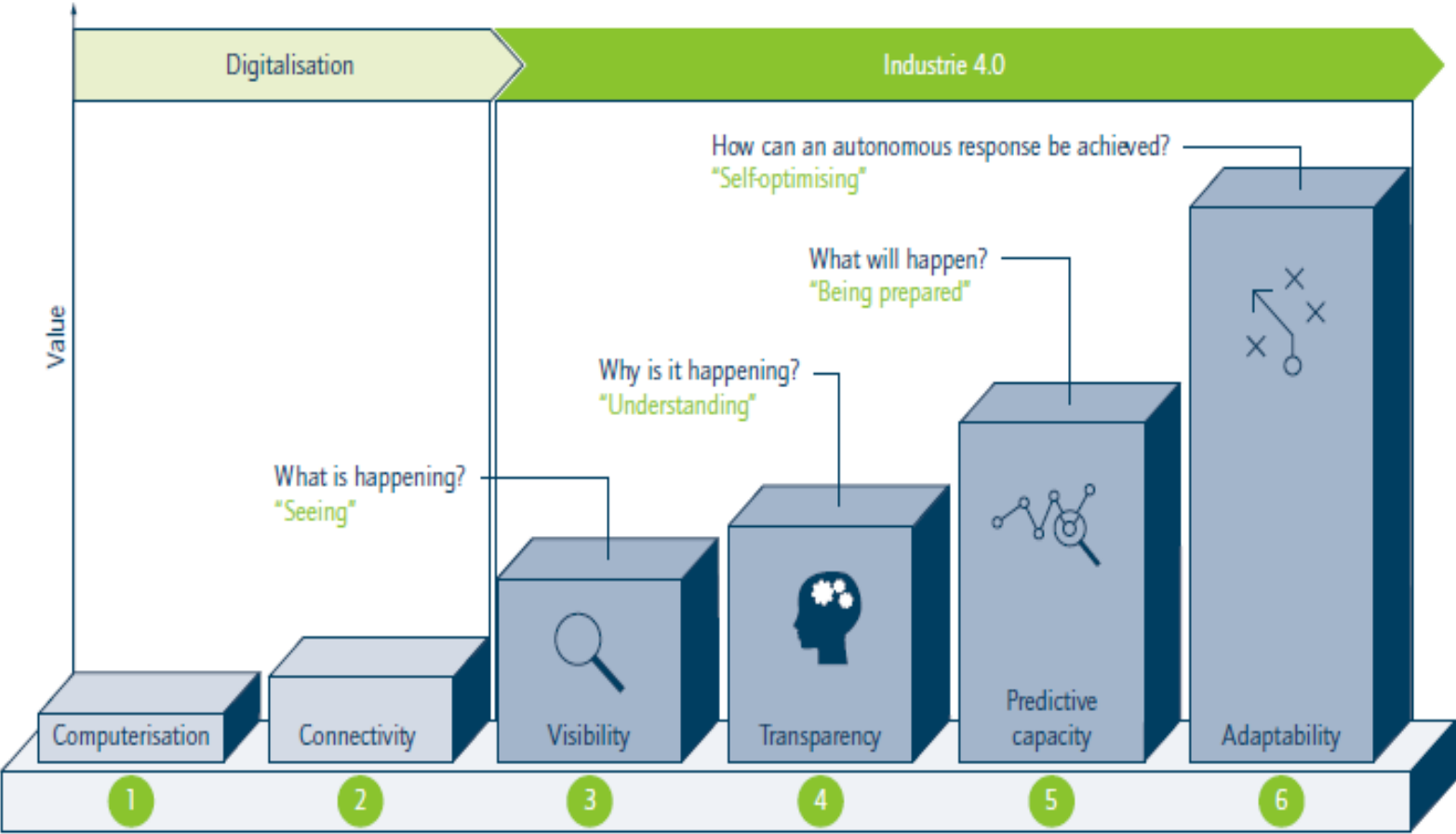


Source: Roland Berger; ITIF Analysis

Policy Recommendations for Countries

- Develop both a “Digital Readiness Assessment Tool” and a “Digital Playbook” that provides “how-to” on-ramp guides/use cases for how Canadian SMEs can begin and pursue their digital transformations.
- Create a dedicated Institute for Manufacturing Digitalization, along the lines of DMDII.
- Create “A National Manufacturing Digitalization Fund.”
- Incentivize OEMs to launch a “digital supply chain integration initiative” that sees 10,000 SMEs IoT-enabled within five years.

Industry 4.0 Maturity Index



Courtesy: Schuh et al., "Industrie 4.0 Maturity Index," (2016) and FIR e. V. at RWTH Aachen University

Support Digital Manufacturing Skills Development

Solutions:

- Expand MOOCs like Tooling U-SME: Provides 500+ online manufacturing technology classes.
- Develop a “Digital Manufacturing and Design Roles” Taxonomy.



Source: Digital Manufacturing and Design Innovation Institute (DMDII) and Manpower Group, “The Digital Workforce Succession in Manufacturing”



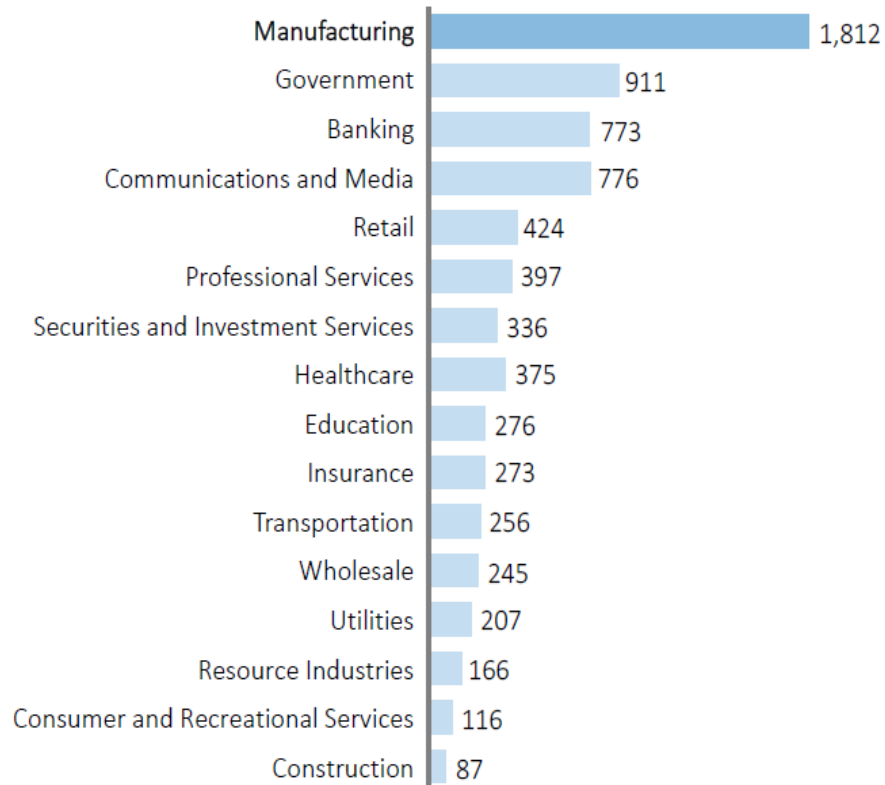
Tax Policy to Support Digital Manufacturing

- ✓ Implement tax credits for enterprise investments in new plant/capital equipment/machinery (e.g., Korea 5% tax credit).
- ✓ Expand R&D tax credit generosity.



Trade Policy to Support Industry 4.0

Annual new data stored by sector
Petabytes

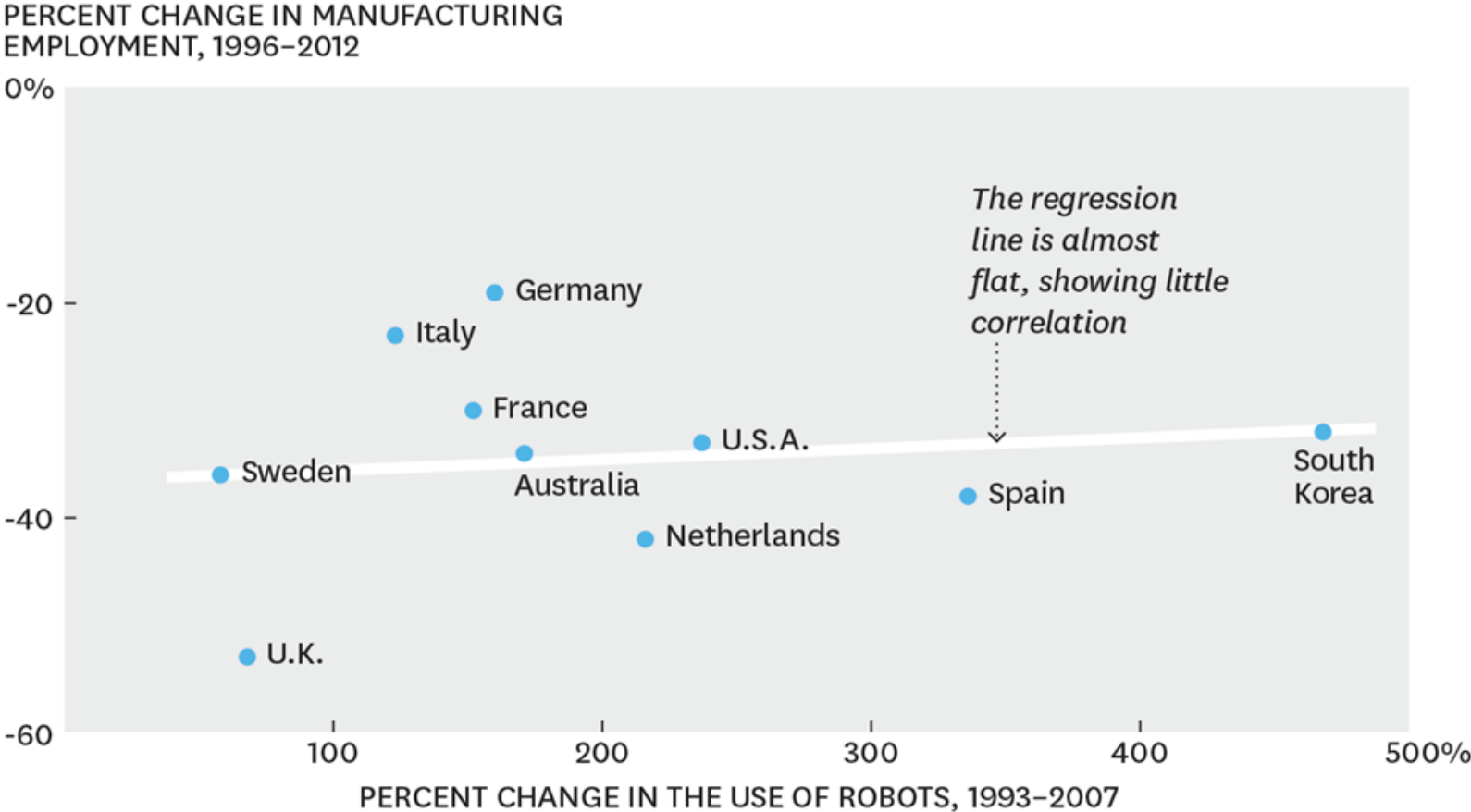


SOURCE: IDC; McKinsey Global Institute analysis 2013

Manufacturing produces more data than any other economic sector.

- ✓ Eschew data localization provisions, including on cloud computing.
- ✓ Support open cross-border data flows in trade agreements.

Don't Fear Job Loss from Digital Manufacturing



Source: George Graetz and Guy Michaels, "Robots at Work"; Muro and Andes, "Robots Seem to Be Improving Productivity, Not Costing Jobs"

Thank You!

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