

The 4th Industrial Revolution: Political Economy Overview

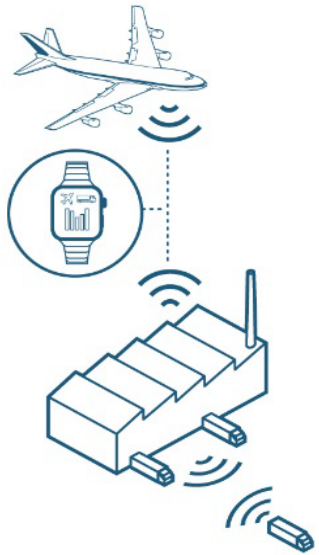
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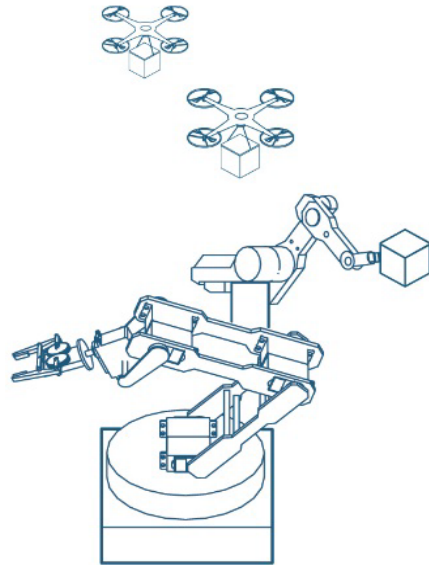
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The New “CAS Wave”

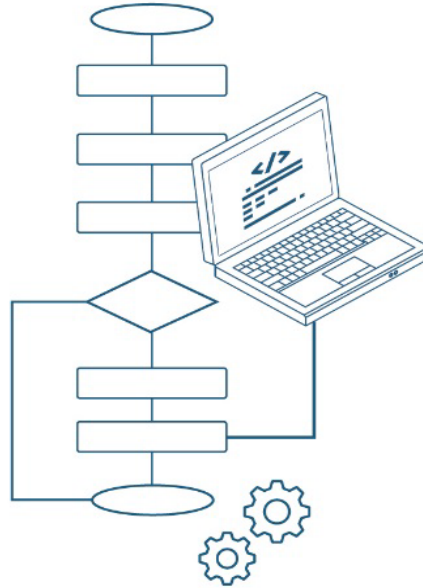
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AUTOMATED



SMART



How 4IR is Framed

- The Magnitude and Pace of Technological Change is Unprecedented
- The Power of the Technology is Immense
- Corporations are Unscrupulous

The Magnitude and Pace of Tech Change is Unprecedented

- Compared to the Industrial Revolution, “change is happening 10 times faster and at 300 times the scale, or roughly 3,000 times the impact.”
McKinsey Global Institute
- These technologies “will affect the very essence of our human experience.” Klaus Schwab
- “What is occurring now is...bigger, deeper, and more important than the industrial revolution.”
Alvin Toffler, 1970



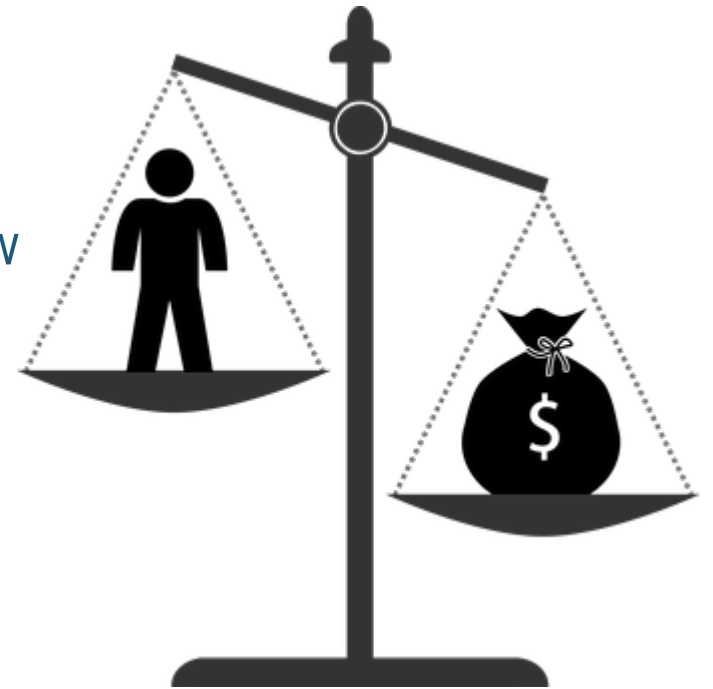
The Power of the Technology is Immense

- AI will produce “economic miracles and technological awesomeness, with nobody there to benefit...like a Disneyland without children.” Nick Bostrom
- Elon Musk tells us that AI will consign humans to gorilla-like enclaves



Unscrupulous Corporations and Uncontrolled Markets

- “These powerful and productive technologies, rather than freeing humanity, will instead facilitate a further concentration of wealth, fomenting vast new waves of technological unemployment, casting an inescapable surveillance net around the globe, while unleashing a new generation of autonomous superweapons.” John Markoff
- World Economic Forum lists 9 ethical issues with AI, including inequality, bias, and surveillance
- “Automation is excessive.” Banerjee and Duflo



How Do Nations Approach 4IR?

- Precautionary
- Mercantilist
- Laissez Faire
- “Innovationist”

Precautionary 4IR

- **Focus:** Risk and downsides of the technology
- **Policies:** Regulation and antitrust
- **Narrative:** “We need regulation for responsible technologies which will boost innovation”
- **Politics:** Creates space for incumbent interests to obtain protection, including against foreign companies
- **Result:** Reduced innovation, deployment, and competitiveness



Mercantilist 4IR

- **Focus:** Advancing national champions
- **Policies:** Subsidies, appropriated IP, and other unfair trade and economic policies
- **Narrative:** “We must lead in 4IR”
- **Politics:** Companies follow state
- **Result:** Reduced innovation and slower 4IR deployment in other nations



Laissez Faire 4IR

- **Focus:** Let the market work
- **Policies:** Neutral tax policies, limited regulation, strong IP rights, support for basic research and skills
- **Narrative:** “We don’t pick winners”
- **Politics:** Limited role for government
- **Result:** Private sector has freedom, but limited public goods and incentives reduce innovation



Innovationist 4IR

- **Focus:** Maximize innovation
- **Policies:** Explicit tech promotion policies
- **Narrative:** “4IR is critical and we need public-private partnerships”
- **Politics:** A capable state with public-private engagement and limited civil society involvement
- **Result:** Maximum innovation and adoption



Thank You!

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