The Emerging Economy 2030:
Some initial explorations

Public Service Foresight Network
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THE HORIZONS FORESIGHT METHOD

The Horizons Foresight Method is a rigorous and systematic approach that allows us to test assumptions against a range of plausible futures and identify policy challenges and opportunities.

- Identify the issue or problem of interest
- Consider the larger system(s) shaping the issue
- Prepare a simple domain diagram of what is “in” or “out” as a guide. Allow it to evolve over the study.

- Identify “current assumptions” buried in public dialogue and policy documents
- Identify key trends people assume are true
- Summarize key assumptions as a description of the expected future.

- Scan for weak signals of potentially disruptive changes
- Conduct interviews and facilitate dialogue to understand the system and develop insights

- Identify key elements or nodes in the system
- Describe key relationships
- Use a system map to identify where change could occur and direct further scanning for weak signals as needed

- Use insights from scanning to identify change drivers shaping the system
- Do influence maps to see 2nd to 5th order consequences

- Develop scenarios to explore a range of futures
- Identify potential challenges and discontinuities
- Test robustness of current assumptions and strategies

- Explore policy challenges and opportunities
- Identify credible assumptions and robust strategies
- Identify key uncertainties, surprises and emerging issues
- Better understand how the system or issue could evolve
A new global digital infrastructure is emerging...

Global Digital Infrastructure
Enables digital global value chains

- Fast, powerful data analytics, sensors & the Internet of Things
- Artificial intelligence automates tasks uniquely done by people
- Robots in society automate and support physical services (e.g. cars, trucks, farms)
- Virtual telepresence allows physical presence around the world
- Frictionless commerce cuts out “middlemen” (e.g. blockchain)
- New production technologies decentralize manufacturing (e.g. 3-D printing, robots, synbio)
... that could transform global economic, labour, energy, and governance systems...

More virtual workers around the world (using online platforms to perform tasks in the value chain on an as-needed basis)

Global Digital Infrastructure (and digital global value chains)

Leaner virtual corporations (manage rapid prototyping, develop AI and analytics, manage platform evolution and virtual workers)

Rise of autonomous corporations (AI platforms that require minimal human oversight)

Service economy becomes more global and digital (both low and high skilled jobs affected)

Manufacturing becomes more local but connected to global digital value chains

Natural resources demands shift and production becomes more manufactured and decentralized (e.g. synbio)
... Into a digitally intermediated mesh economy (DIME)...

Design database

Design/data hub

Designers

Tasking site

3D printers

Flexible assembly robots

Manufacturer

Customer

Personal AI

Pricing AI

Logistics AI

3D print shop AI

3D printers

Assembly robot

Automated delivery

Logistics

Shipping
Many economic sectors decline or transform. Period of turbulence and opportunity.

As a result of new technologies, a growing portion of the economy is shaped by zero marginal cost.

A wide variety of goods and services become cheap or free, increasing consumer welfare.

A period of near-zero GDP growth due to potentially falling prices, wages, and profits.

Need to support adaptation and innovation that best advance consumer welfare.

Digital trade becomes truly free. Taxation and other instruments may be less effective in the emerging digital era.

What is changing?

What are the emerging challenges/opportunities?

What is driving change?

- Evolving digital technologies
- Decentralized Autonomous Organizations
- Virtual workers on digital platforms
- Collaborative economy

DIGITAL DISRUPTION DRIVES GLOBAL ECONOMIC CHANGE
VIRTUAL WORK COULD TRANSFORM GLOBAL LABOUR MARKETS

What is driving change?

- Job unbundling
- Automation
- Evolving digital technologies
- Collaborative economy

What is changing?

As automation erodes traditional jobs, billions of skilled workers move into the global digital services market, accelerating the expansion of global virtual work.

What are the emerging challenges/opportunities?

- Global convergence of wages in a growing number of occupations
- Increase in non-standard and insecure work
- Challenge to social safety nets, tax revenues, social cohesion
- Potential backlash from those left behind or moving at different speeds
### SCENARIOS 2030

<table>
<thead>
<tr>
<th>DOMAINS</th>
<th>Muddling Through</th>
<th>Slow Decline</th>
<th>Gradual Improvement</th>
<th>Transformation</th>
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<tbody>
<tr>
<td>Economy</td>
<td>Half the economy is digital. Expanding use of artificial intelligence and robotics leaves many firms uncompetitive and unprepared.</td>
<td>Successful firms deliver digital services globally with new technologies and fewer workers. Many firms fold in a long period of falling prices and deflation.</td>
<td>Virtual corporations manage digital value chains that allow workers to be anywhere.</td>
<td>Standard of living disconnects from wages as new technologies provide free and higher value goods at zero marginal cost.</td>
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<tr>
<td>Energy</td>
<td>Vested interests resist change as cheaper renewable energy challenges the fossil fuel-based status quo.</td>
<td>Many energy firms fold in face of falling demand and low prices. Fossil fuels loose ground to cheaper renewables.</td>
<td>Significant transition to renewables underway but uneven across the globe.</td>
<td>Renewables dominate the energy mix. Significant fossil fuel reserves left unexploited as price approaches zero.</td>
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<td>Geopolitics</td>
<td>West vs. Asia. Asia builds effective regional economic institutions.</td>
<td>More fragmented international system. US is fiscally challenged and leadership is more narrowly targeted.</td>
<td>Growing cooperation to address cross-boundary issues (e.g. digital work conditions, minimum wage).</td>
<td>Technologies allow growing subsidiarity and a more integrated international governance system.</td>
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...all of which could create a range of plausible futures...
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QUESTIONS?