

# Future Work/Technology National Workshops

and the

# **Federal Foresight Community**

January 26, 2018 Meeting

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The Millennium Project

## **Inevitability of New Economics**



Concentration of wealth is increasing

Income gaps are widening

Employmentless economic growth seems the new norm

Return on Investment in capital and technology is usually better than labor

Future technologies can replace much of human labor

Long-term structural unemployment is a "business as usual" or "surprise free" trend forecast

What can we do about this?

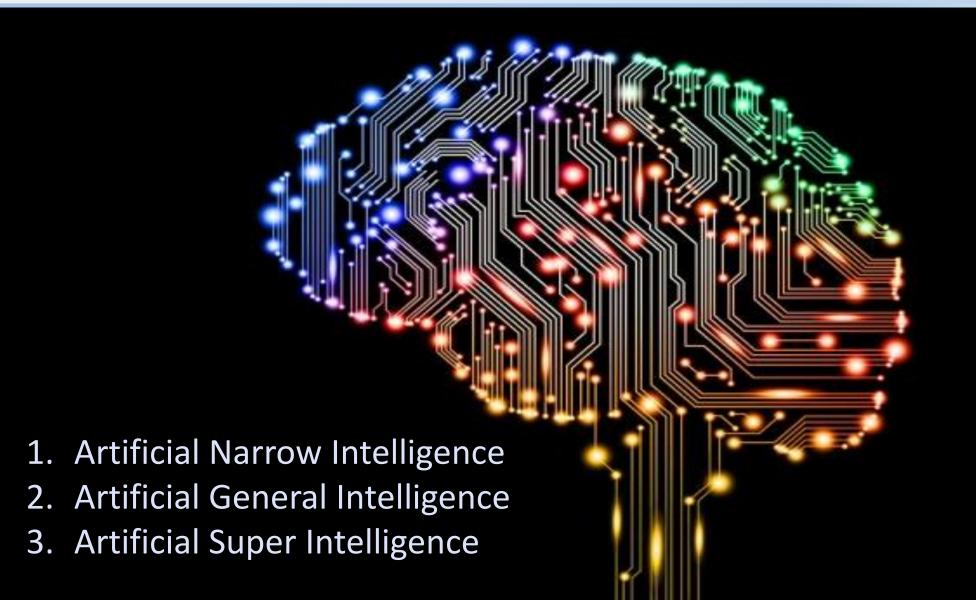
## Future Work/Technology 2050 Study



- 1. Literature and Related Research Review
- 2. Real-Time Delphi
- 3. Three Global Scenario Drafts to 2050
- 4. Separate RTDelphi Feedback on each Scenario
- 5. Final Scenarios, Policy Issues, and Workshop Considerations
- 6. National Workshops to Explore Long-range Strategies
- 7. Collect results of the national planning workshops, analyze & synthesize results
- 8. Final Report for Public Discussion

## Three Forms of Artificial Intelligence





These three are often lumped together as Al

This confuses the discussion about Al

# Next Technologies (NT): Imagine How NT Synergies Will Create New Businesses

Artificial Intelligence

Robotics

Synthetic Biology & Genomics

**Computational Science** 

Cloud & Big Data Analytics

**Artificial & Augmented Reality** 

Nanotechnology (two kinds)

IoT, Tele-Everything & Tele-

Everybody, the Semantic Web

Quantum computing

Tele-Presence, Holographic

Communications

Intelligence augmentation

Collective Intelligence

Blockchain

3D/4D Printing Materials/Biology

Drones, Driverless Cars (and

other autonomous vehicles)

Conscious-Technology

**Synergies Among These** 

# Work/Technology 2050 Global Scenarios

1. It's Complicated - A Mixed Bag

2. Political/Economic Turmoil – Future Despair

3. If Humans Were Free – The Self-Actualizing Economy

# Future Work/Tech 2050 Workshops



Initial workshops	Initial workshops	In planning	Exploratory talks
1. Argentina (two, and series)	11. Italy	Australia	Croatia
2. Bolivia (series)	12. The Netherlands (two)	China	Dubai, UAE
3. Brazil (Sao Paolo)	13. Mexico (two)	Kenya	Egypt
4. Bulgaria	14. Poland	Peru (2030 study first)	Georgia
5. European Foresight Network	15. Spain (two: Basque & Madrid)	Pakistan	India
6. Finland	16. South Korea (two)	Romania	Iran
7. Germany (series)	17. Uruguay (series in progress)	Slovakia	Montenegro
8. Greece	18. Venezuela	South Africa (1/18)	Slovenia
9. Hungary		Spain ( 3 <sup>rd</sup> 12/13)	Turkey
10. Israel (two workshops)		Sri Lanka	United Kingdom
		United States	
		Zambia	

## **Workshop Discussion Groups**



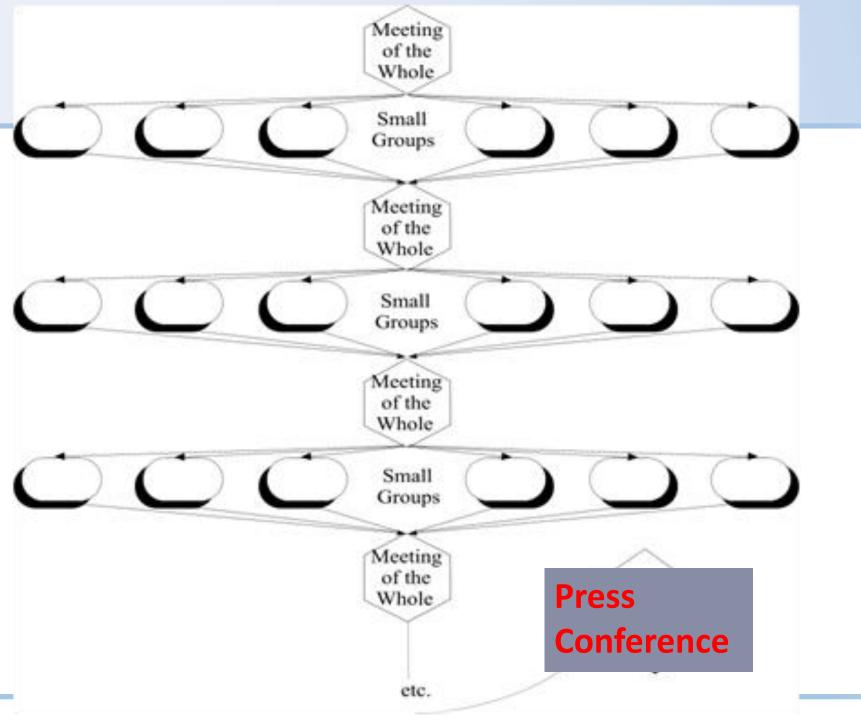
Culture

Education & Learning

Business & Labor

Government

S & T





## Charrette Workshop Process

From the whole to the parts – back and forth – so the parts are consistence with the whole set of strategies

## Some Suggestions from the Workshops



#### 100+ suggestions have been made so far. Here are some:

Make increasing intelligence an objective of education Begin shift from mastering a profession to mastering combinations of skills In parallel to STEM, create self-paced inquiry-based learning for self-actualization Invest in Kickstarter-like crowd sourcing to reduce the concentration of wealth New roles for labor unions – Augment Movement and NT Data base Produce alternative cash flow projections for universal basic income Create public assess global S&T global intelligence system Tax robots, AI, and other next technologies replacing workers Memes in advertisements to help create the cultural transition to self-actualization Invest in technology to augment humans; not replace them



# Invitation to the Federal Foresight Community

to be an organizer of the USA Work/Technology Workshop

### ... Acts like a *TransInstitution*



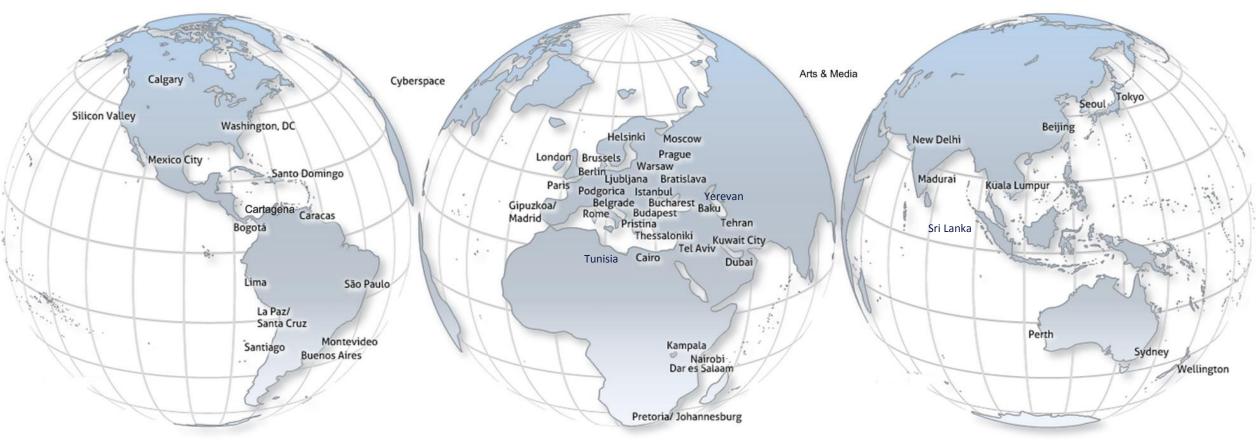


Why?

# 63 Nodes...and two regional networks in Europe and Latin America



are groups of experts and institutions that connect global and local views in:



Nodes identify participants, translate questionnaires and reports, and conduct interviews, special research, workshops, symposiums, and advanced training.



#### The Millennium Project

#### **Futures Research Methodology**

Version 3.0

Editors Jerome C. Glenn and Theodore J. Gordon With support from the Rockefeller Foundation

- 1. Introduction to Futures Research Methodology
- 2. Environmental Scanning
- 3. Text Mining for Technology **Foresight**
- 4. The Delphi Method
- 5. Real-Time Delphi
- 6. The Futures Wheel
- 7. The Futures Polygon
- 8. Trend Impact Analysis
- **Cross-Impact Analysis**
- 10. Wild Cards
- 11. Structural Analysis
- 12. The Systems Perspectives
- 13. Decision Modeling

- 14. Substitution Analysis
- 15. Statistical Modeling
- 16. Technology Sequence **Analysis**
- 17. Morphological Analysis
- 18. Relevance Trees
- 19. Scenarios
- 20. A Toolbox for Scenario Planning
- 21. Interactive Scenarios
- 22. Robust Decisionmaking
- 23. Participatory Methods
- 24. Simulation and Games
- 25. Genius Forecasting, Intuition, and Vision
- 26. Prediction Markets

- 27. Using Vision in Futures
- 28. Normative Forecasting
- 29. S&T Road Mapping
- 30. Field Anomaly Relaxation
- 31. Agent Modeling
- 32. Chaos and Non-Linear **Dynamics**
- 33. Multiple Perspective Concept
- 34. Heuristics Modeling
- 35. Causal Layered Analysis
- 36. Personal Futures
- 37. State of the Future Index
- 38. SOFI Software System
- 39. Integration, Comparisons, and Frontiers of Futures Research Methods

ISBN-978-0-9818941-1-9



39 Chapters

**1,300** pages

Largest collection of Internationally peer-reviewed methods to explore the future ever assembled in one source

### Global Futures Intelligence System

https://themp.org





#### The Millerritum Project - Global Futures System Updates The Millennium Project A global foresight network of roder, information, and software. Functioning as a trick turk ON behalf of humanity, not on behalf of a government, as troop, or an identity,

Created to improve humanity's prospects for building a better future.



#### The 2015-2016 State of the Future



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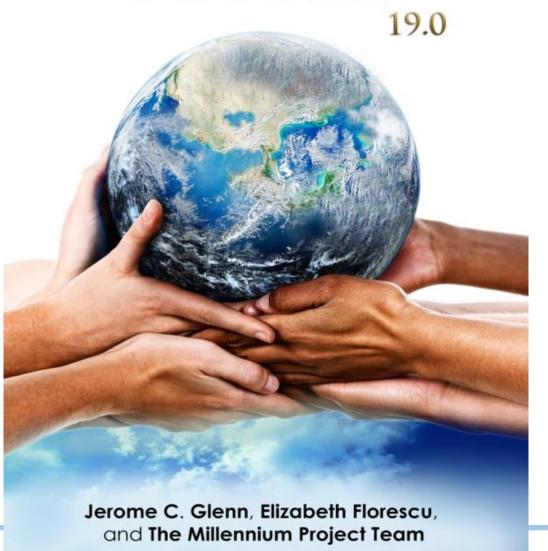
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# STATE OF THE FUTURE



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# For further information



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### State of the Future 19.1:

http://107.22.164.43/millennium/2017SOF.html

## Futures Research Methodology 3.0:

http://millennium-project.org/millennium/FRM-V3.html

## Global Futures Intelligence System:

http://millennium-project.org/millennium/GFIS.html