… Acts like a *TransInstitution*

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.

MP Futures Research… so far

1. African Futures Scenarios 2025, and UNDP workshop at the UN (1994)
2. Millennium Project Feasibility Study final report (1995)
3. Global Issues/Strategies four-round Global Lookout (Delphi) study (1996)
4. Lessons of History (1997)
5. Global Opportunities and Strategies Delphi (1997)
6. Definitions of Environmental Security (1997)
7. Futures Research in Decisionmaking (and checklist) (1998-99)
8. Global Normative 2050 Scenario (1998)
9. Environmental Security Threats and Policy Leadership (1998)
10. Current/Potential UN military doctrine on Environmental Security (1999)
11. Six Alternative Year 3000 Scenarios (1999)
12. S&T Issues over the next 25 years (2000)
13. Future Technological Implications for Society and the UN System (2000)
14. Analysis of UN Summit Speeches (2001)
15. Military environmental crimes and the role of the ICC (2001)
16. Management Implications of Future S&T 2025 Issues (2001)
17. New Military Environmental Security Requirements 2010-2015 (2001)
18. Global Goals for the year 2050 (2002)
19. Future S&T Scenarios 2025 (2002)
20. Emerging Environmental Security Issues for Future UN Treaties (2002)
21. Monthly Reports: Emerging Environmental Security Issues (2002-2011)
22. Middle East Peace Scenarios (2002-04)
23. Early Warning System for Kuwait Oil Company (2003-04)
24. Nanotech Military R&D Health/Env Research Prevention Priorities 2004-05)
25. Future Ethical Issues (2004-05)
26. Global Energy Scenarios (2006-07)
27. South Korea SOFI (2006)
28. Future of Learning and Education 2030 (2007)
29. Global Climate Change Situation Room for Gimcheon, South Korea (2007-2008)
30. Conceptual design for global energy collective intelligence (GENIS) (2008)
31. Status of Government Future Strategy Units (2008)
32. RTDelphi for UNESCO World Water Report (2008)
33. WFUNA Human Rights (2008)
34. Decision Criteria Evaluation of Global Environment Facility (2008)
35. South Korea SOFI and South African SOFI (2008)
36. Early Warning System PMO Kuwait (2008-2009)
37. Potential Future Elements of the Next Economic System (2009)
38. UNESCO World Water Scenarios project (2009)
39. Future of Ontologists (2009)
40. Future Hopes and Fears: a Kuwait Perspective (2010-2011)
41. Latin America 2030 Scenarios (2009-2011)
42. Egypt 2020 (2010)
43. Changes to Gender Stereotypes (2011)
44. Azerbaijan SOFI (2011)
45. Future Arts, Media, and Entertainment: Seeds for 2020 (2011)
46. Cooperatives 2030: Factors Impacting Future of Cooperatives and Business (2012)
47. Egypt's national Synergetic Information System (ECISIS) (2013-16)
48. Hidden Hunger: Unhealthy Food Markets in the Developing World (2013)
49. Vulnerable Natural Infrastructure in Urban Coastal Zones (2013)
50. FUTURES Dictionary/Encyclopedia (English and Spanish) (2014)
51. SIMAD and Lone Wolf Terrorism Counter Strategies (2014)
52. Czech Rep., Hungary, Poland, Slovakia, Visegrad Region SOFIs (2014-2015)
53. Water-Energy-Food Nexus in the Context of Climate Change (2015-16)
54. Pre-Detection of Terrorism Strategies RTDelphi, NATO Workshop (2015-17)
55. Future Work/Technology 2050 Global Issues, Scenarios, Workshops (2015-17)

The Millennium Project

Futures Research Methodology

Version 3.0

Editors Jerome C. Glenn and Theodore J. Gordon

With support from the Rockefeller Foundation

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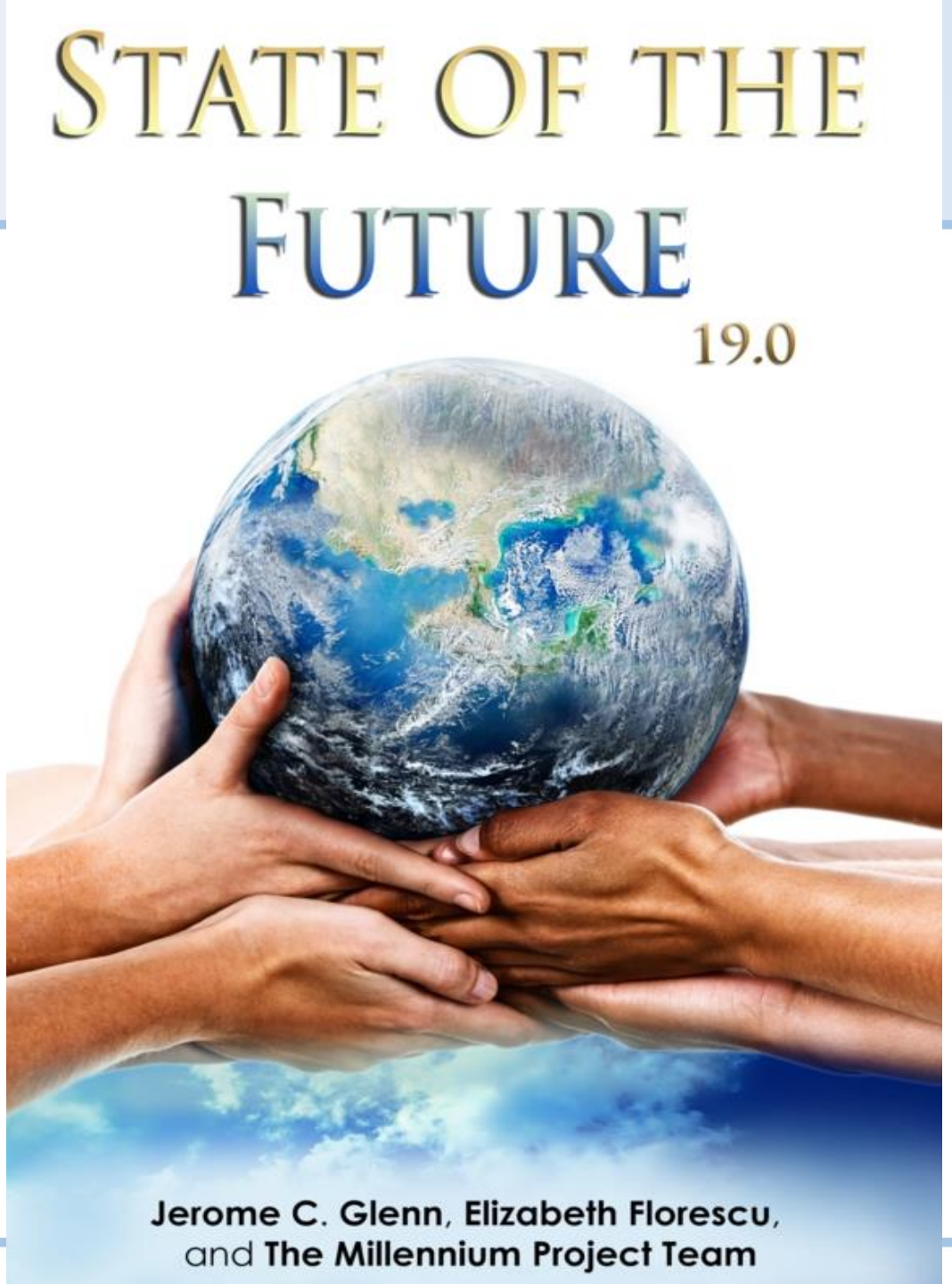
39 Chapters

1,300 pages

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



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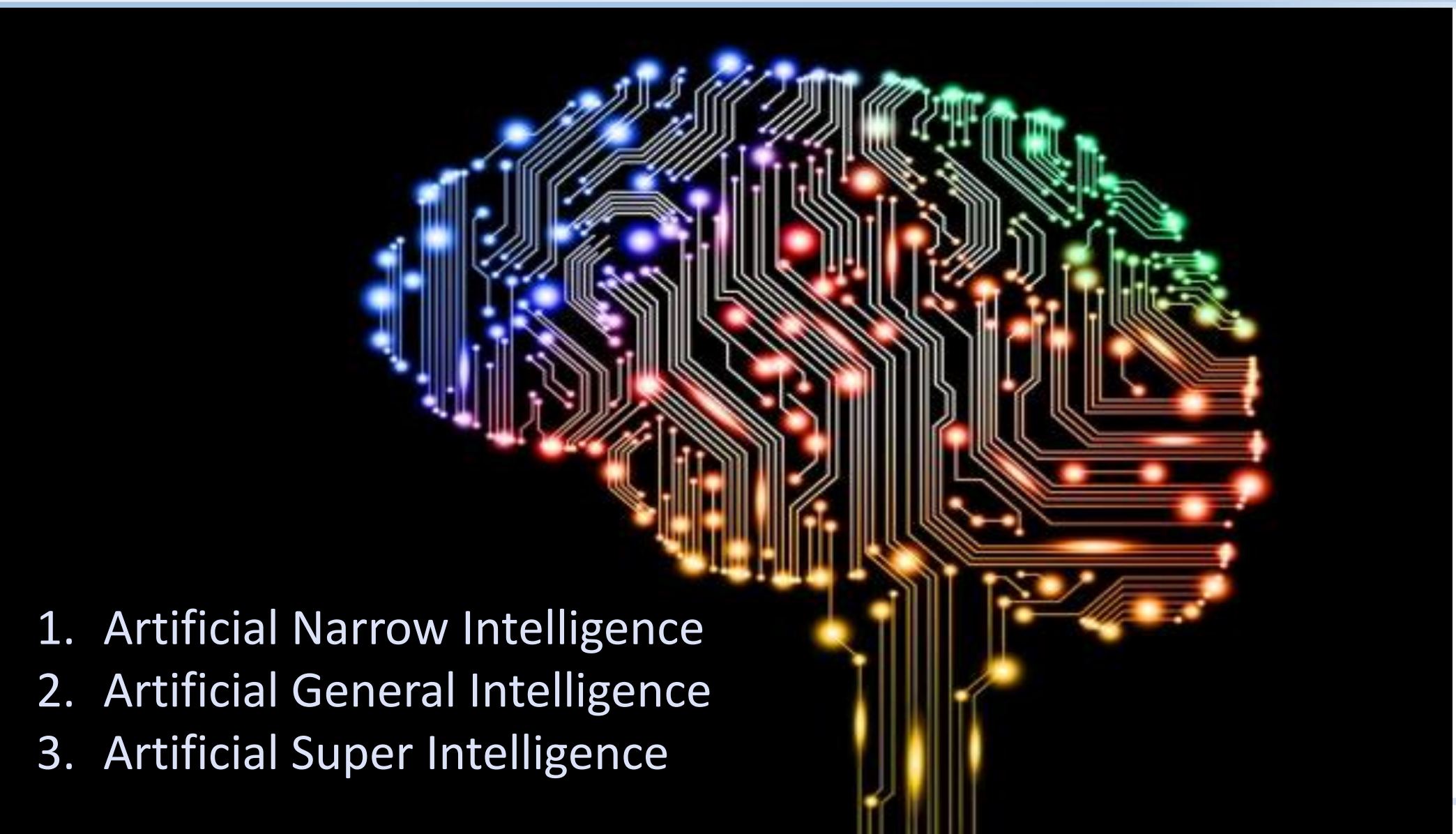
Global Futures Intelligence System https://themp.org

Three Forms of Artificial Intelligence

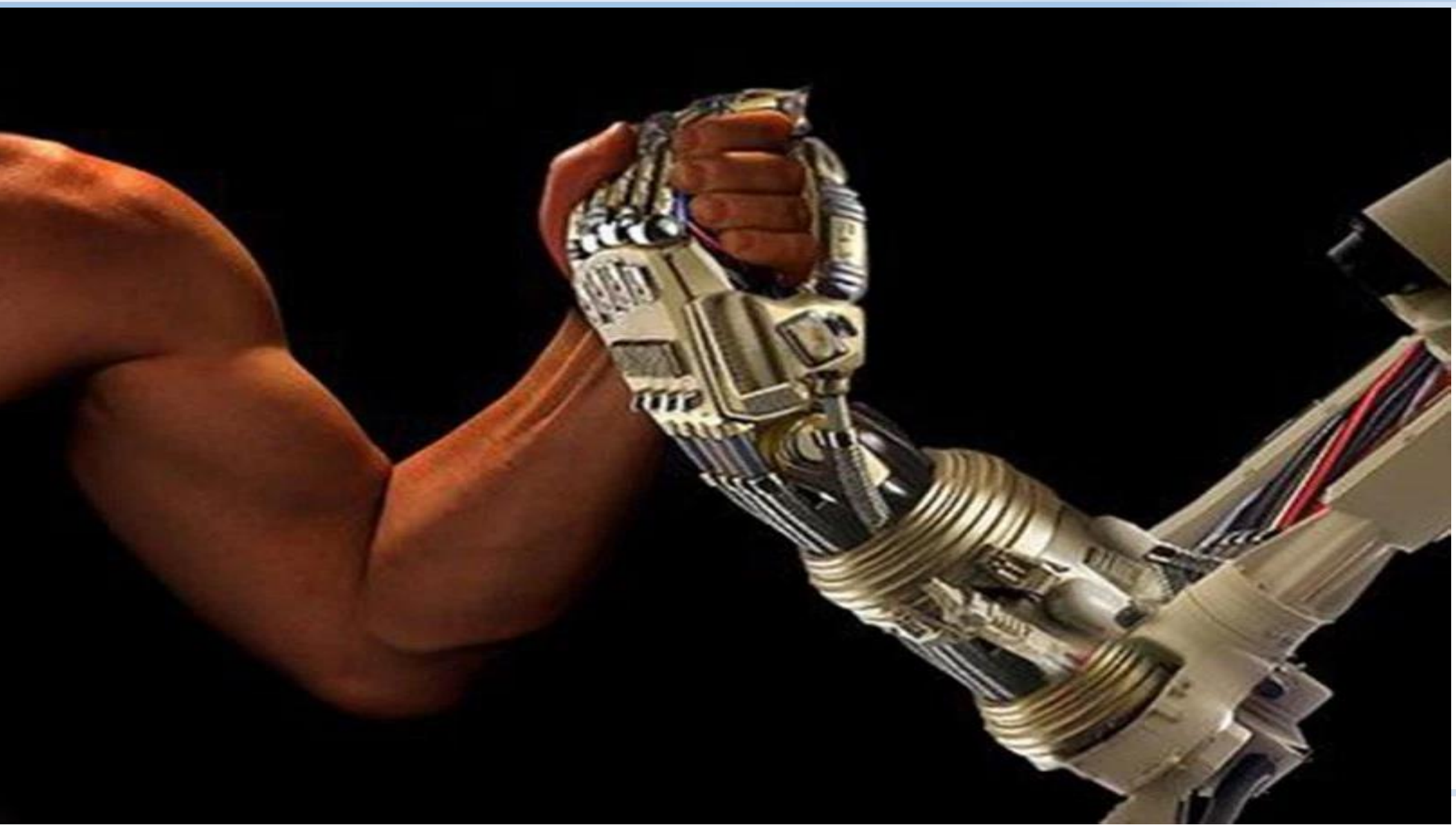


1. Artificial Narrow Intelligence
2. Artificial General Intelligence
3. Artificial Super Intelligence

These three are often lumped together as AI

This confuses the discussion about AI

Completion with AI/Robotics is stupid



Yes, some neo-luddite anti-tech movements are likely,

but they will not succeed.

Human's Augmented or Assisted by AI/Robotics is smart

If you can't beat them, join them:

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

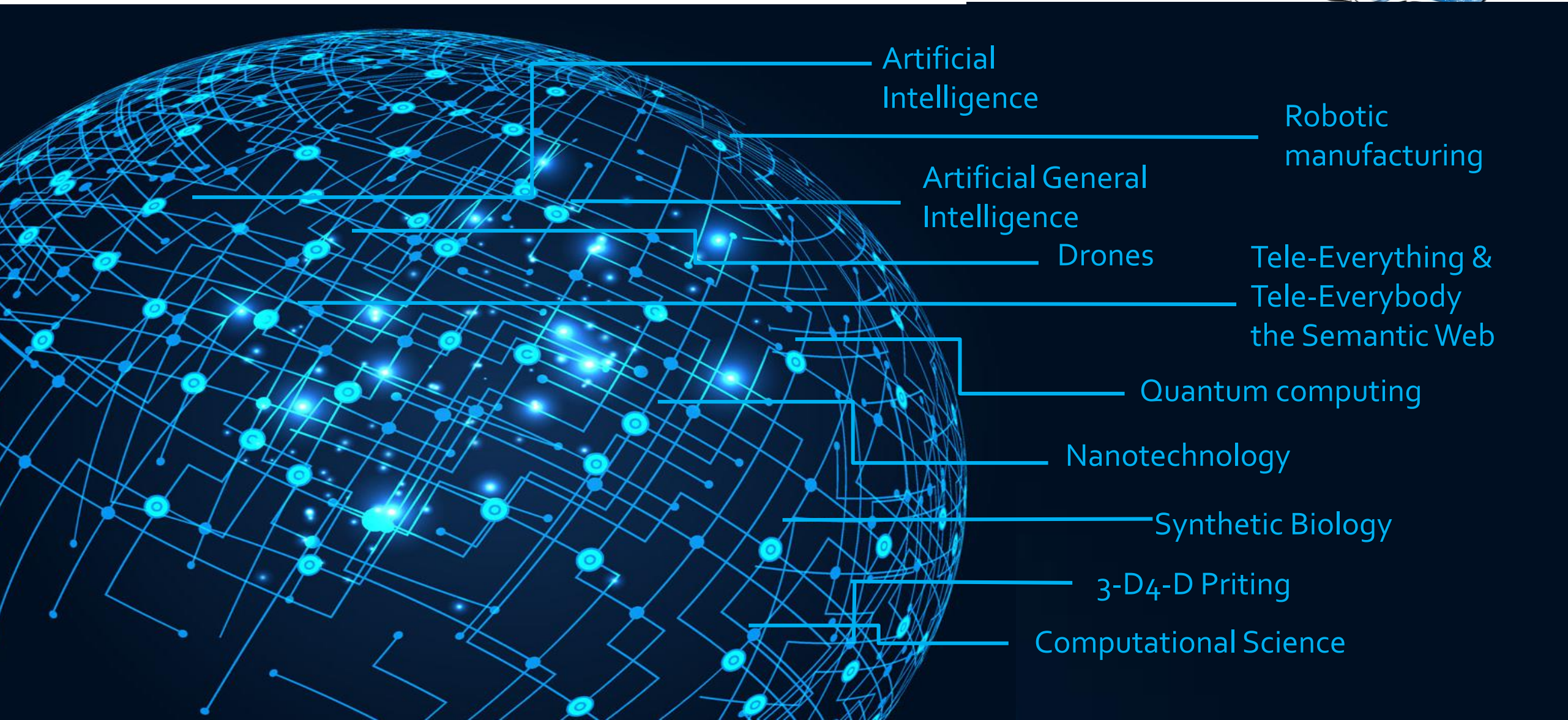
Drones, Driverless Cars (and other autonomous vehicles)

Conscious-Technology

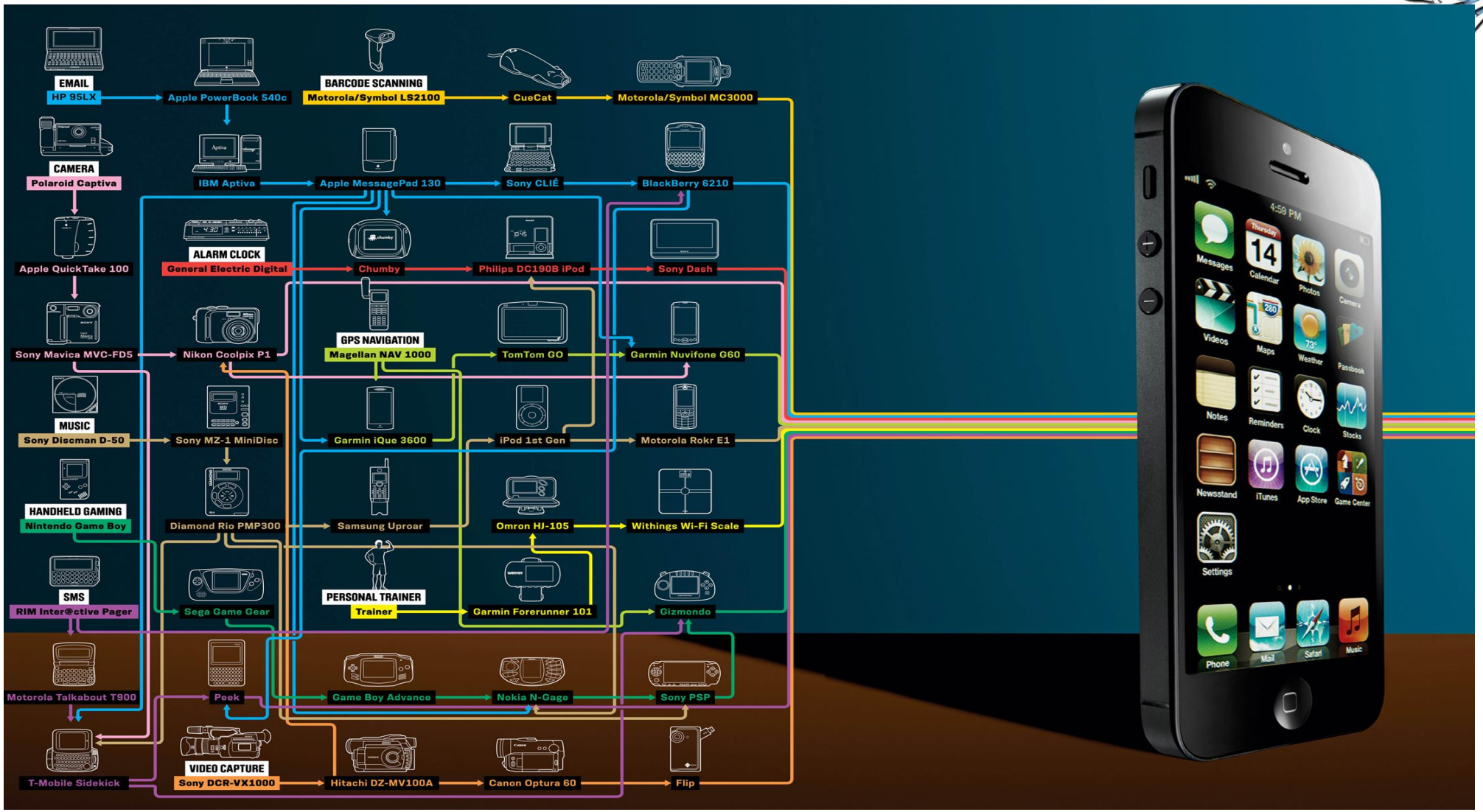
Synergies Among These

Synergies of photovoltaics, robotics, satellites, AI, drones, ICT, and genetic engineering

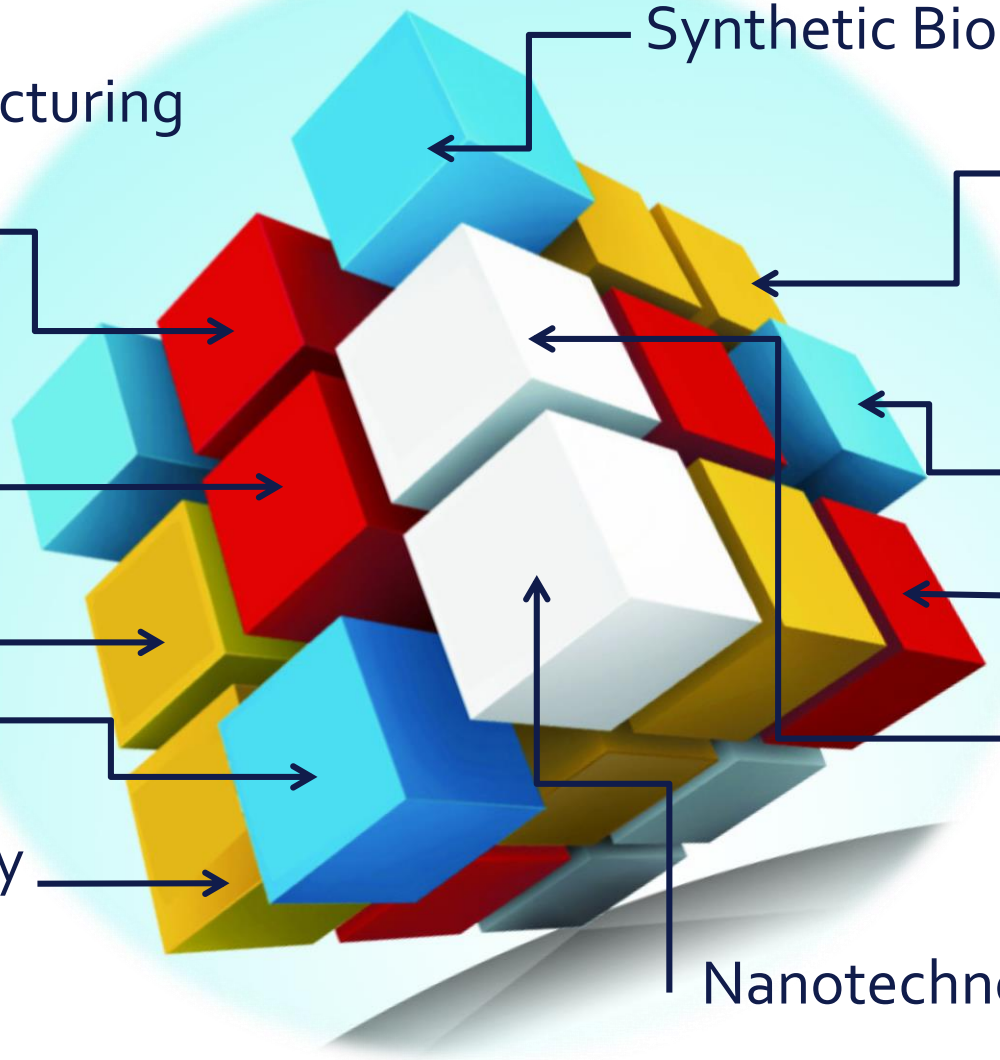
The Old Way of Seeing the Future of Technologies: *Linear and Separate*



Future Way of Seeing Future of Technologies: *Integration and Synergies*



Future Synergies



Robotic manufacturing

Synthetic Biology

Quantum computing

Increasing individual and collective intelligence

Drones

Nanotechnology

Robotic manufacturing

Artificial General Intelligence

3D, 4D Printing

Tele-Everything
Tele-Everybody
the Semantic Web

Augmented Reality
Tele-Presence
Holographics

Nanotechnology

Future Synergies

Robotic manufacturing

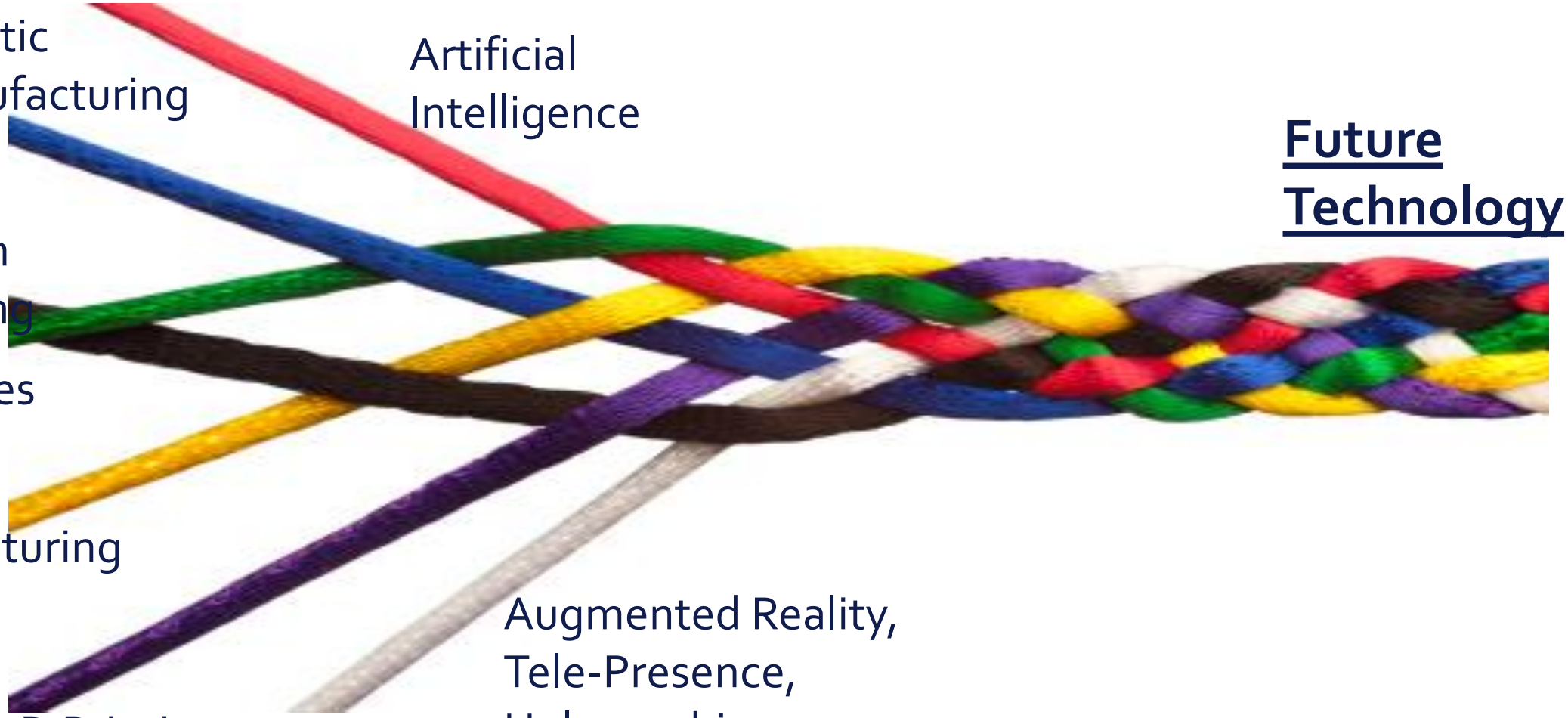
Artificial Intelligence

Quantum computing

Drones

Robotic manufacturing

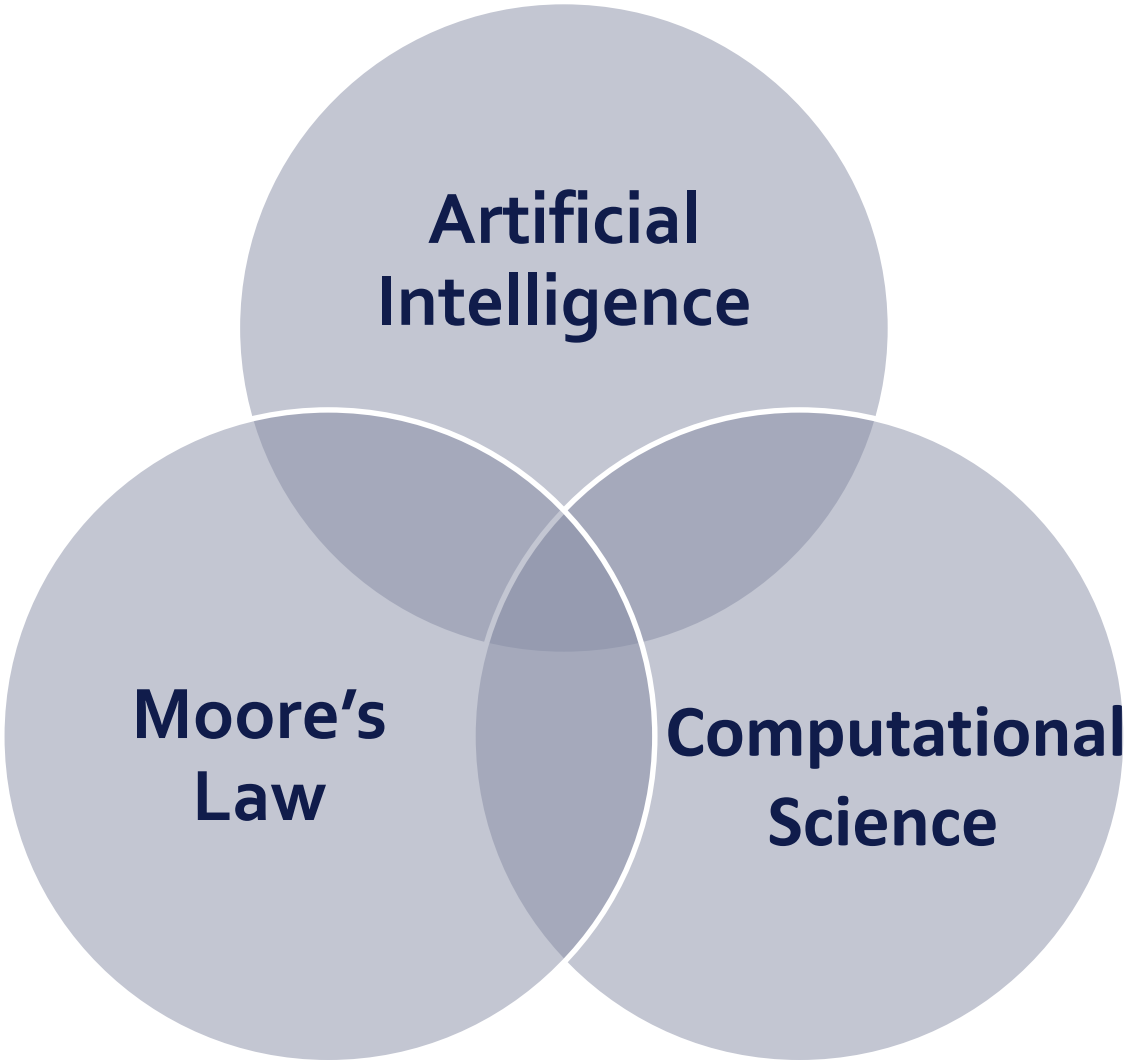
3D, 4D Printing



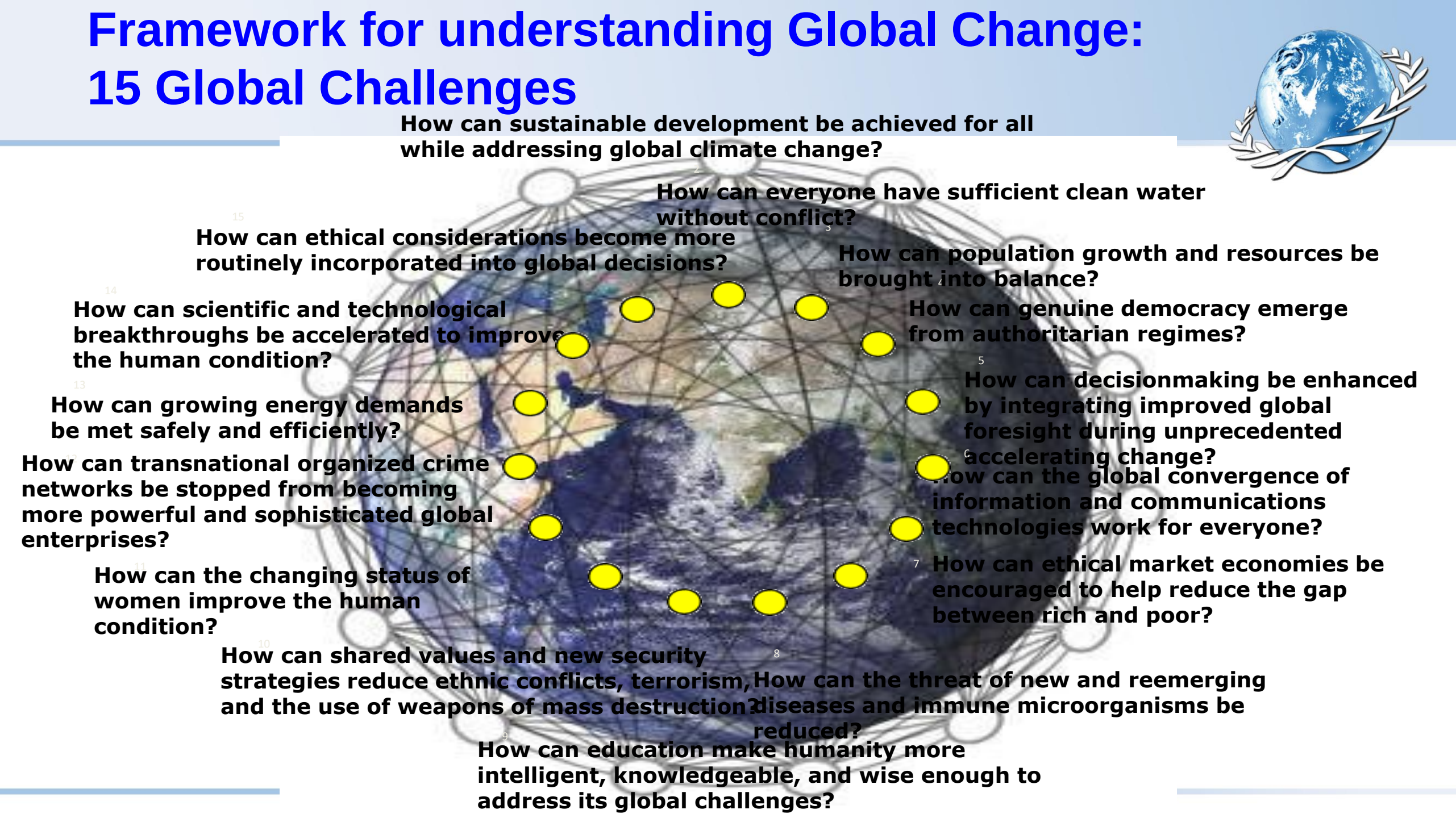
Augmented Reality, Tele-Presence, Holographics

Future Technology

These three together will change the speed new of S&T



Framework for understanding Global Change: 15 Global Challenges



How can sustainable development be achieved for all while addressing global climate change?

How can everyone have sufficient clean water without conflict?

How can ethical considerations become more routinely incorporated into global decisions?

How can population growth and resources be brought into balance?

How can scientific and technological breakthroughs be accelerated to improve the human condition?

How can genuine democracy emerge from authoritarian regimes?

How can growing energy demands be met safely and efficiently?

How can decisionmaking be enhanced by integrating improved global foresight during unprecedented accelerating change?

How can transnational organized crime networks be stopped from becoming more powerful and sophisticated global enterprises?

How can the global convergence of information and communications technologies work for everyone?

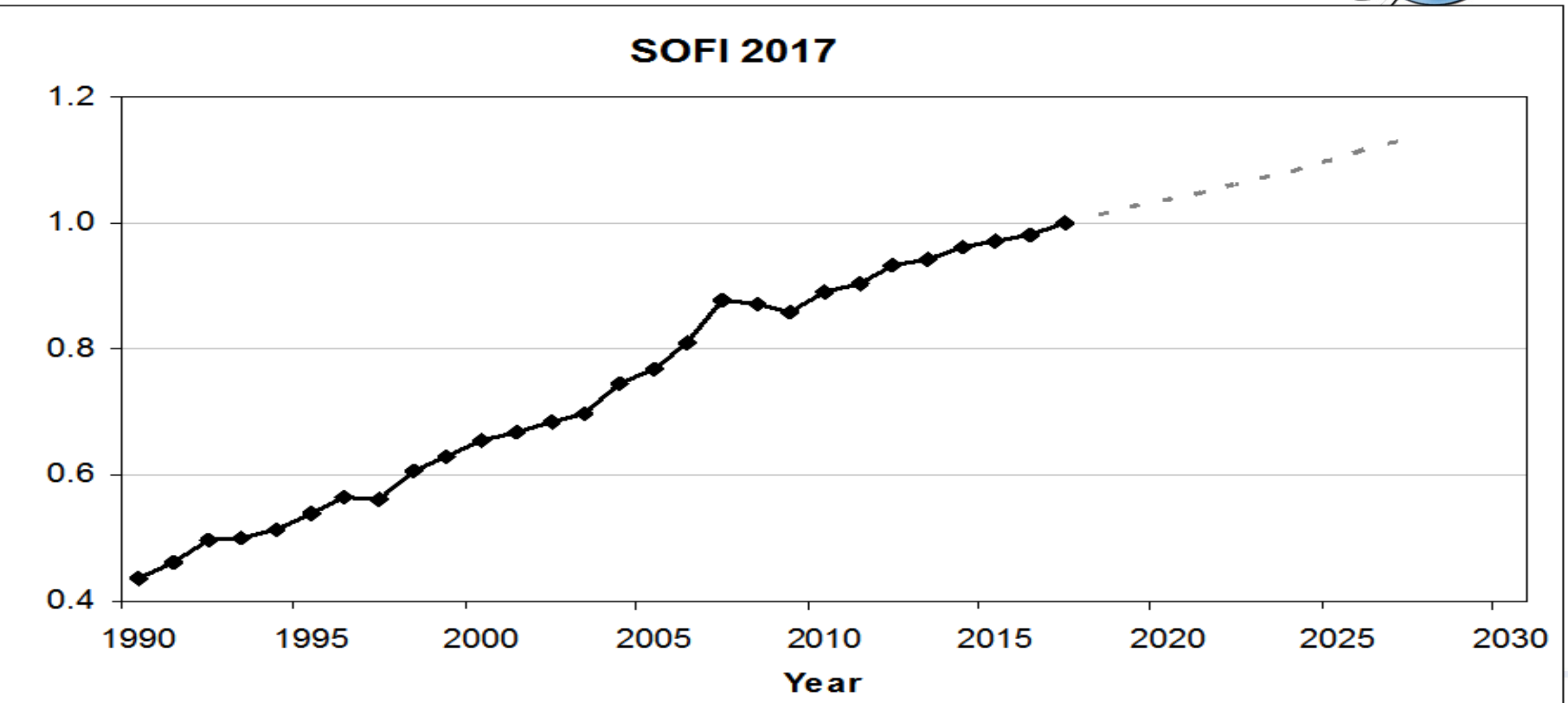
How can the changing status of women improve the human condition?

How can ethical market economies be encouraged to help reduce the gap between rich and poor?

How can shared values and new security strategies reduce ethnic conflicts, terrorism, and the use of weapons of mass destruction?

How can the threat of new and reemerging diseases and immune microorganisms be reduced?

How can education make humanity more intelligent, knowledgeable, and wise enough to address its global challenges?


SOFI 2017
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2025
2030
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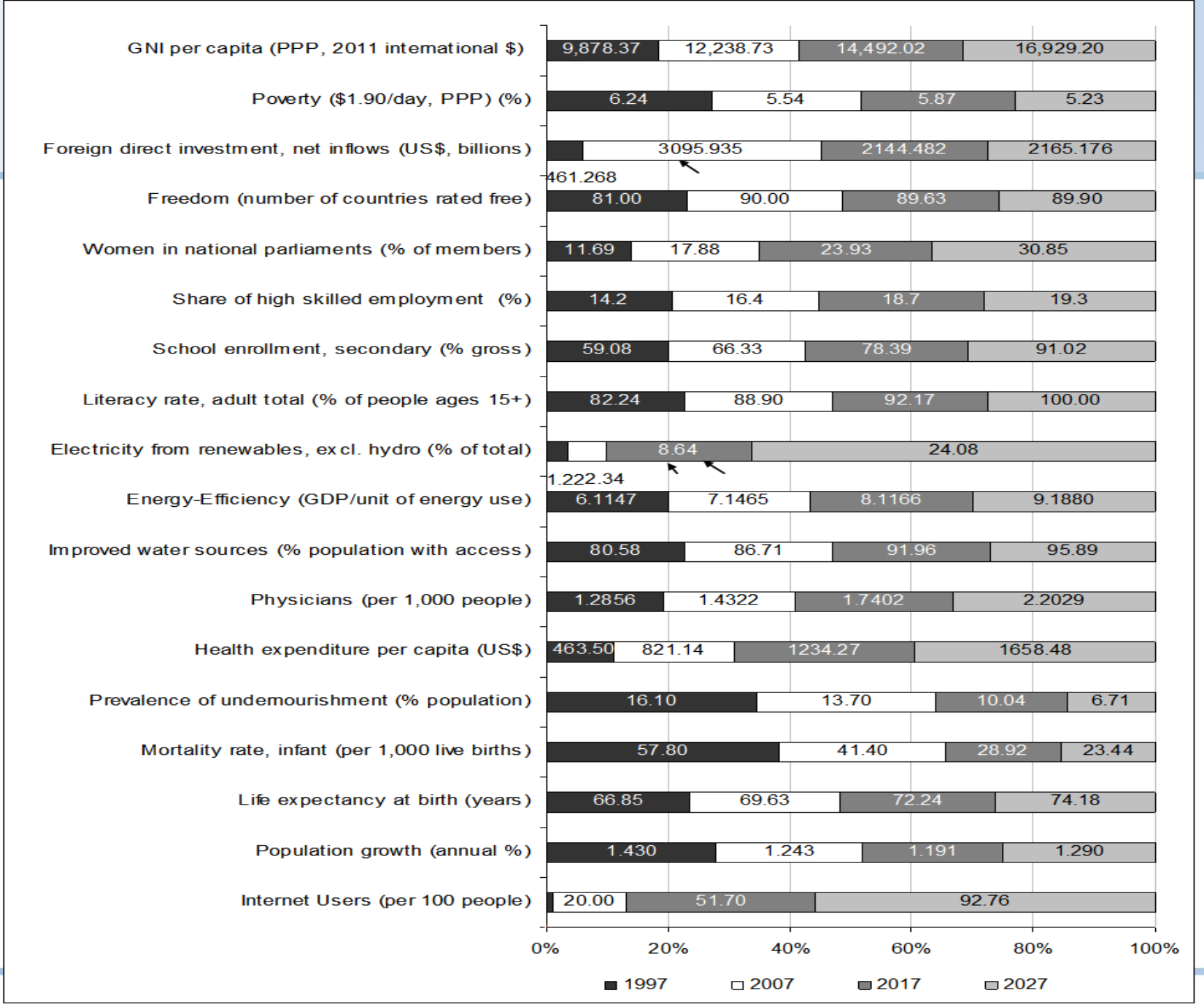
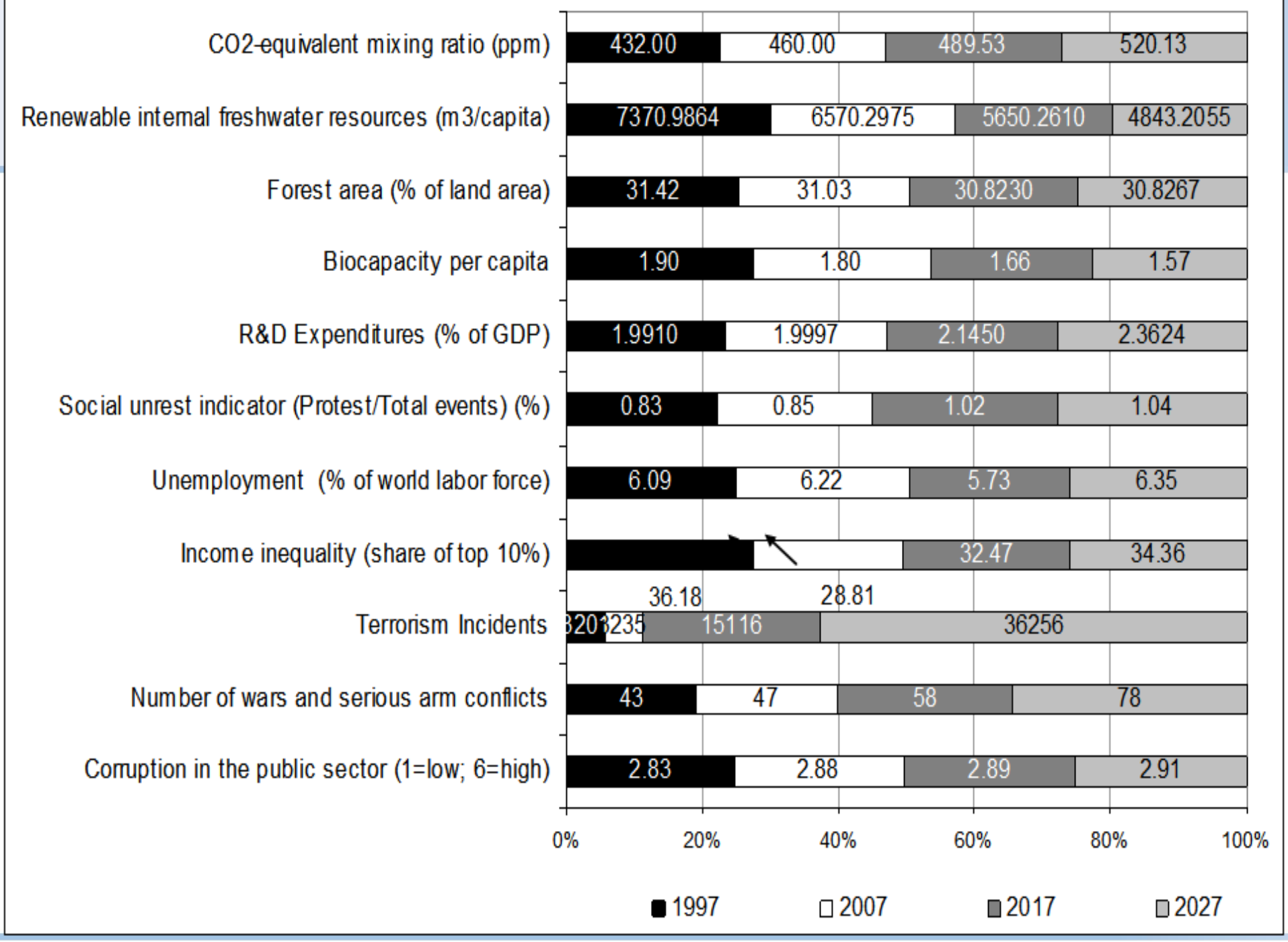


Where are we winning?

Living longer
Healthier lives
Beating poverty
Wealthier
Education
Water resources
Energy efficiency
Child Mortality
Internet Users



Where are we losing

Environment
social unrest
Terrorism
Corruption
Organized crime

Global Integrated Strategy

areas for financial investments

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

Global Work/Technology Scenarios 2050

Each scenario is about 10 pages of detailed cause & effect sequences that illustrate decisions

1. It’s Complicated - A Mixed Bag

2. Political/Economic Turmoil – Future Despair

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

Global Employment Assumptions

Workforce 3 billion 2000; 6 billion 2050

	Scenario 1 Business as Usual	Scenario 2 Political Turmoil	Scenario 3 Self-Actualization
Employed	2 Billion	1 Billion	1 Billion
Self-Employed	2 Billion	1 Billion	3 Billion
Unemployed or in transition	1 Billion	2 Billion	1 Billion
Informal Economy	1 Billion	2 Billion	1 Billion

2050 Scenario 1:

It’s Complicated – A Mixed Bag

A business-as-usual trend projection

Increasing acceleration of change with both intelligence and stupidity

Irregular adoption of advance technology

Major employment growth in Biotech Industries

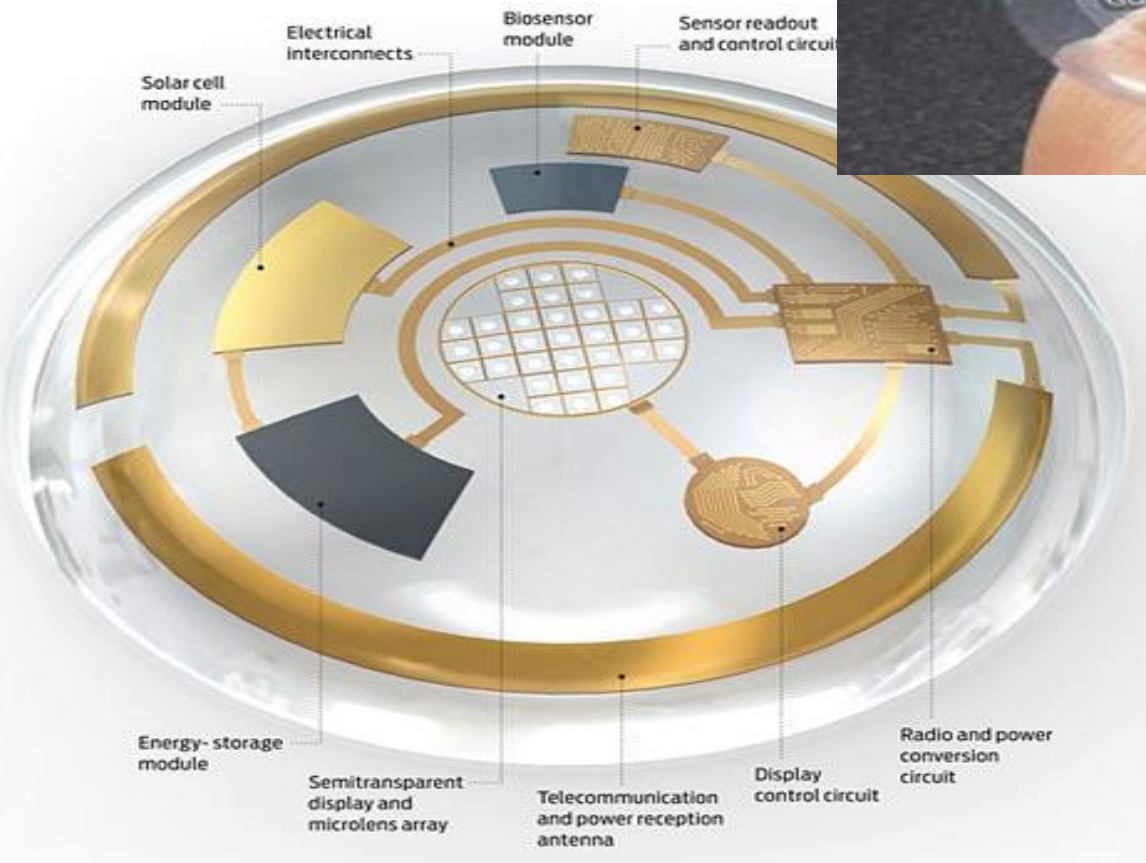
High unemployment where governments did not create long-range strategies

Mixed success on the use of universal basic income.

Giant corporations grow beyond government control, in this government-corporate, virtual-3D, multi-polar world of 2050.

IoT AI Contact Lens – always in Virtual and Augmented Reality connected to the word

Hands-free, phone-free, laptop-free, AI-Human symbiosis



2050 Scenario 2:

Political/Economic Turmoil – Future Despair

Political grid-lock increases social polarization, prevents decisionmaking

Political, economic, environmental migrations increase ethnic conflicts

Governments did not anticipate impacts of artificial **general** intelligence: hence, no strategies to address increasing mass unemployment

Unemployment exploded in the 2030s leads to 2050 in political turmoil

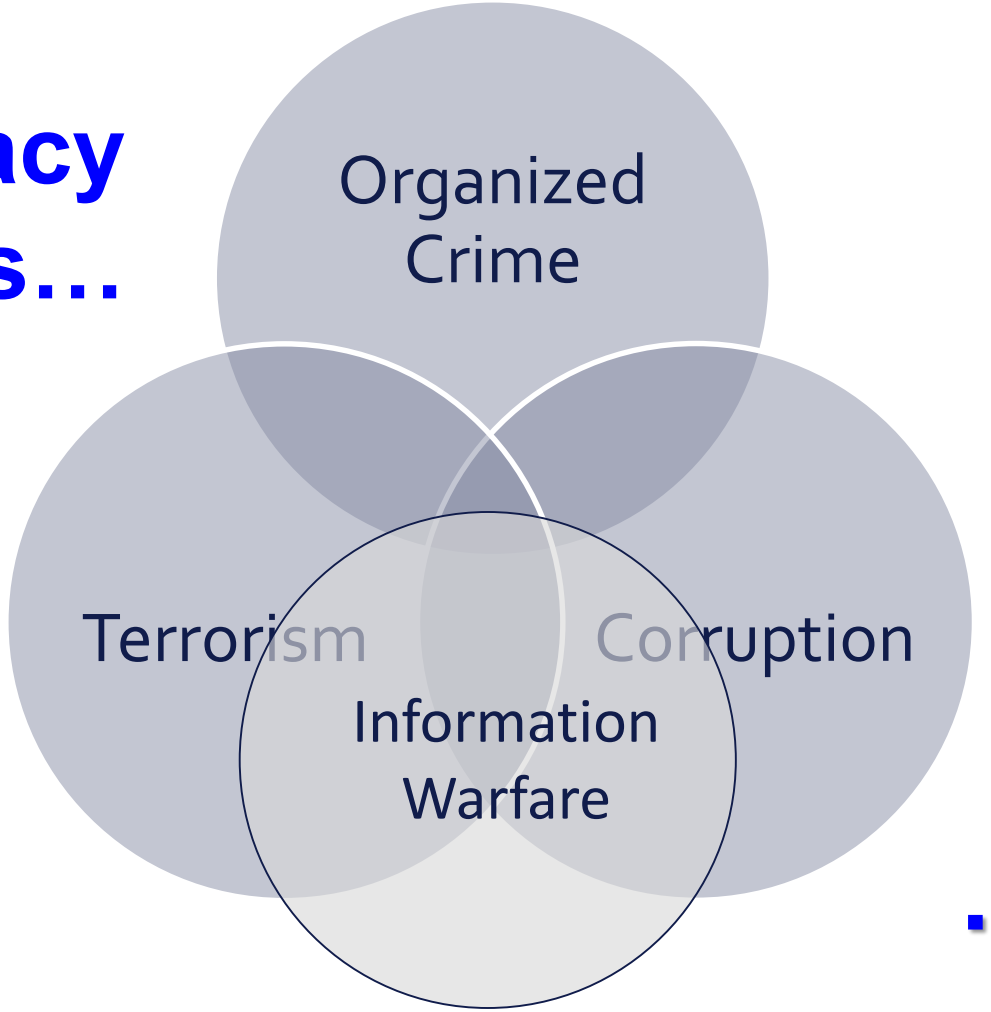
Financial systems cannot support ageing societies, financial crises

World order has deteriorated into a combination of nation-states, mega-corporations, local militias, terrorist groups, and organized crime

Scenario 2 Jobless Migrations

AI Made This Combination Far More Powerful…

…Made Democracy and Free Markets…



…An Illusion

Future Scenario 3:

If Humans Were Free the Self-Actualization Economy

Governments did anticipate the impacts of artificial general intelligence

Conducted extensive research on how to phase in universal basic income systems

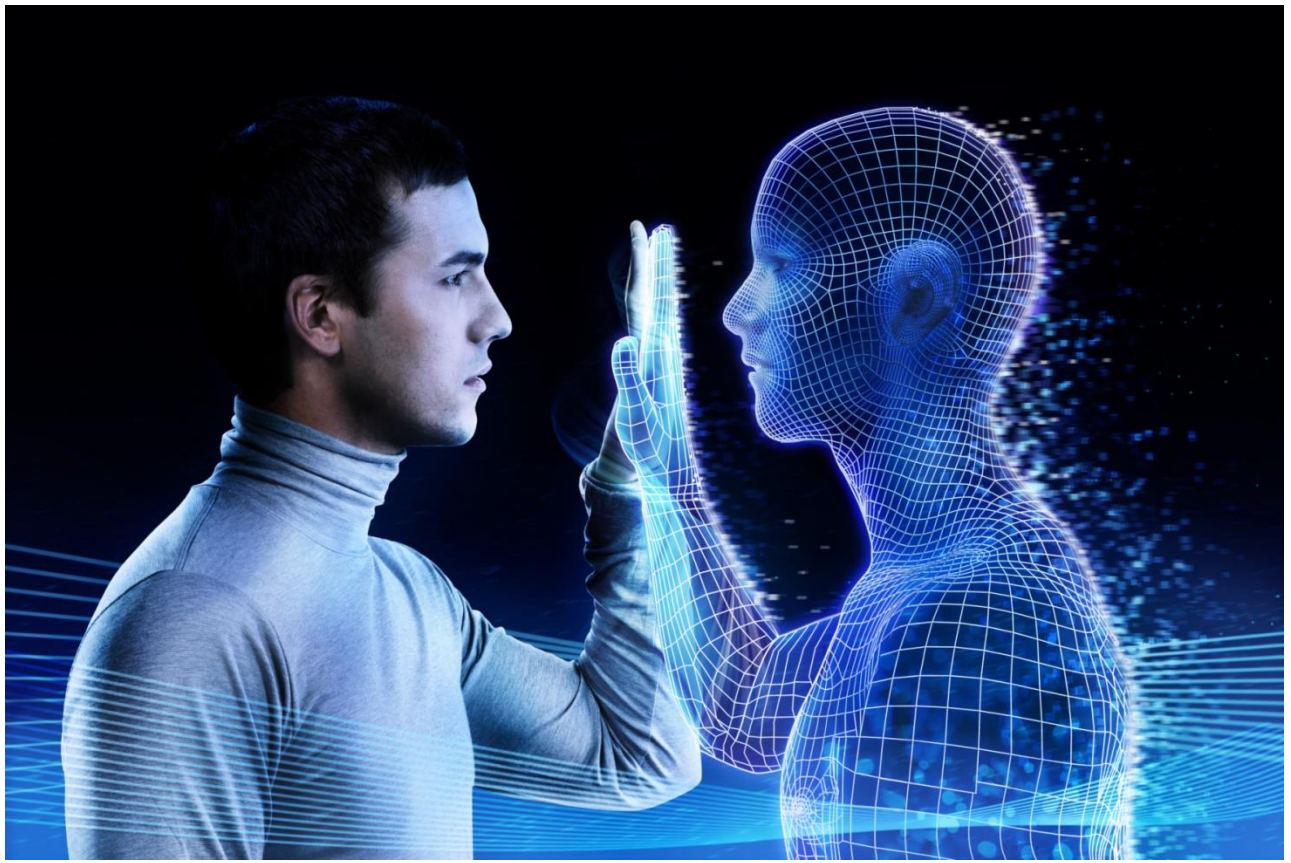
Increasing intelligence becomes a goal of education

Self-employment promoted

Artists, media moguls, and entertainers helped to foster cultural change from an employment culture to a self-actualization economy.

Your Personal AI Avatar searches the web while you sleep…

… then wakes you up in the morning ….with all kinds of interesting things to do, some for income and investments with your firm, and some because they are just fun.

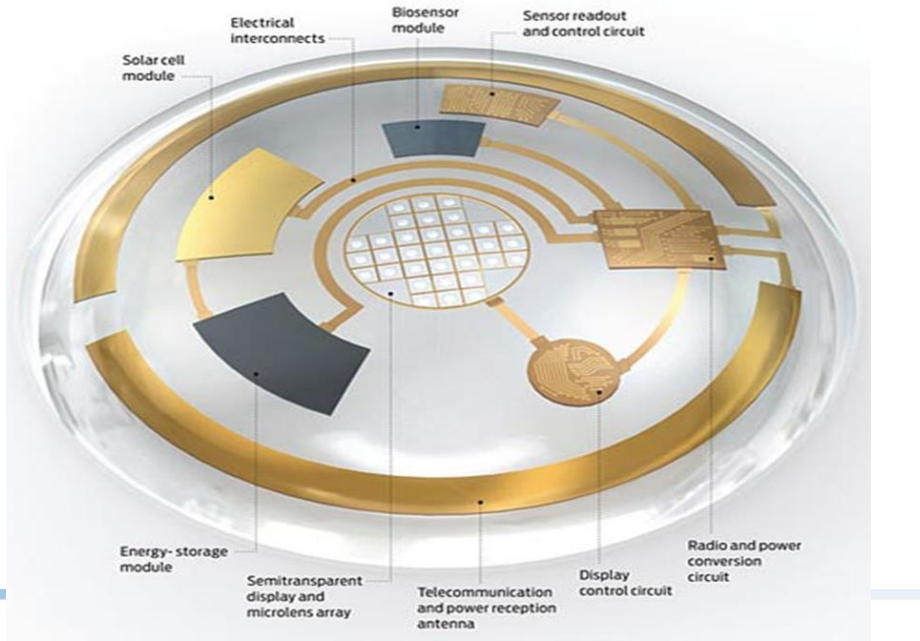


You could give such AI/Avatars to your clients as a benefit of investing with you.

Steve Jobs and Bill Gates 1991

Consider what these two geniuses created!

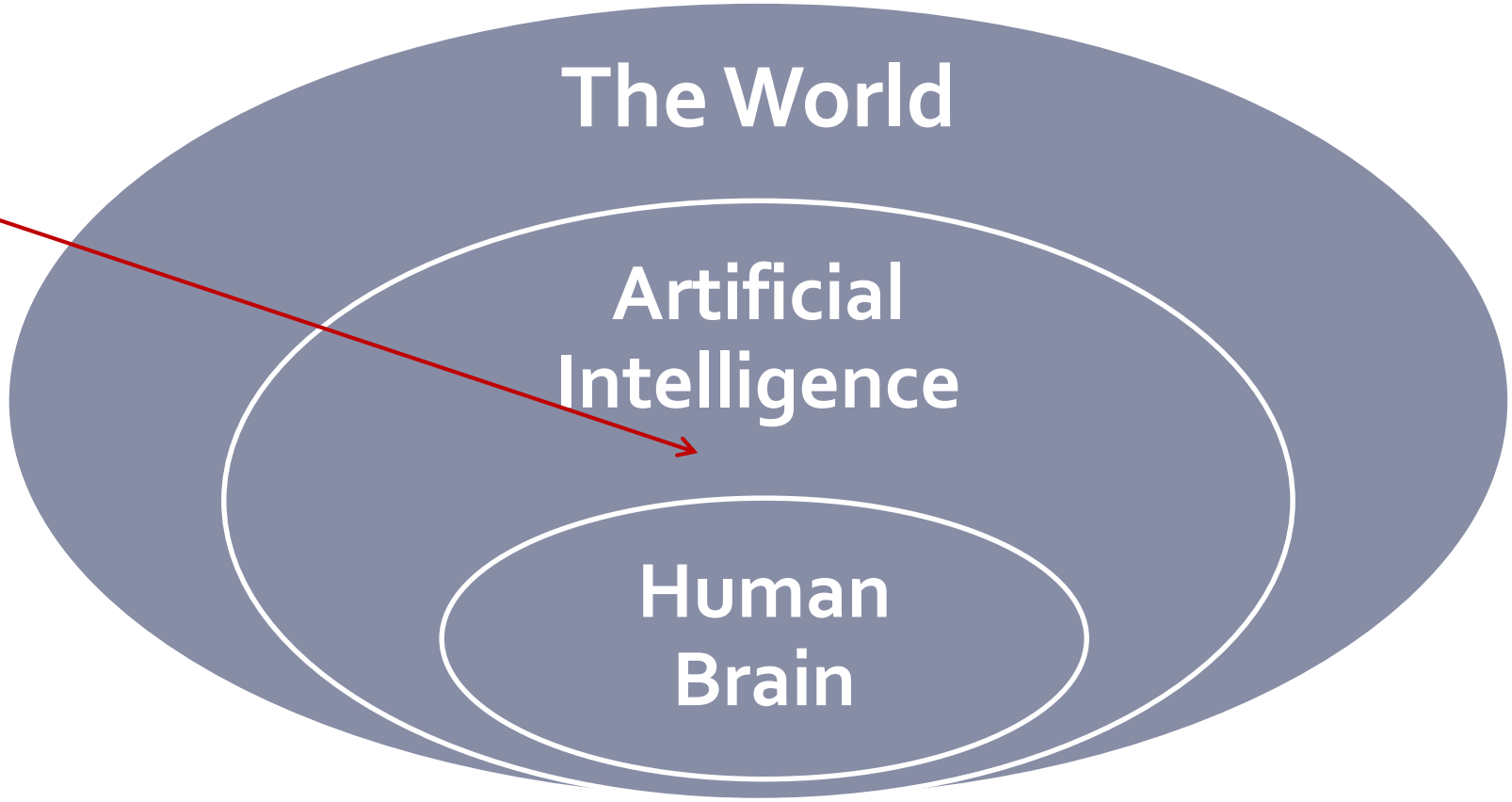
By **2030-2050** millions of people could become augmented geniuses, and what could we create?



Human Augmentation: AI-Brain Interface as a “Neural Lace” (term coined by Elon Musk)

“Neural lace," a mesh of electronics [and photonics] that will allow AI and the brain to work together.

This could help human brains keep up with future enhancements in AI.



Guaranteed income – cash flow projection elements

Income to Government

- License and tax Robots
- Carbon Tax
- Tobin tax – on international financial transfers
- Eliminate tax havens
- Universal minimum corporate tax
- Own percent of corporations
- Tax massive wealth growth like some IT

Lower annual cost of guaranteed income

- Consolidate welfare programs (unemployment payments, etc.) into the guaranteed income
- AI/robotics lowers to cost of living
- Free health and education

Factors to consider

- National service; Minimum annual public work
- Phase in from work to "next" what every post-job/employment will be
- Different incomes in different areas, countries
- Can you both work income and guaranteed income?

For further information

The Millennium Project
+1-202-686-5179
Info@Millennium-Project.org

State of the Future 19.0:

http://www.millennium-project.org/state-of-the-future-version-19-0/

Futures Research Methodology 3.0:

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

Global Futures Intelligence System:

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