Agenda for the Future:

Sustainable development and climate change — 1
Clean water — 2
Population and resources — 3
Democratization — 4
Global foresight and decisionmaking — 5
Global convergence of IT — 6
Rich - poor gap — 7
Health issues — 8
Education and learning — 9
Peace and conflict — 10
Status of women — 11
Transnational organized crime — 12
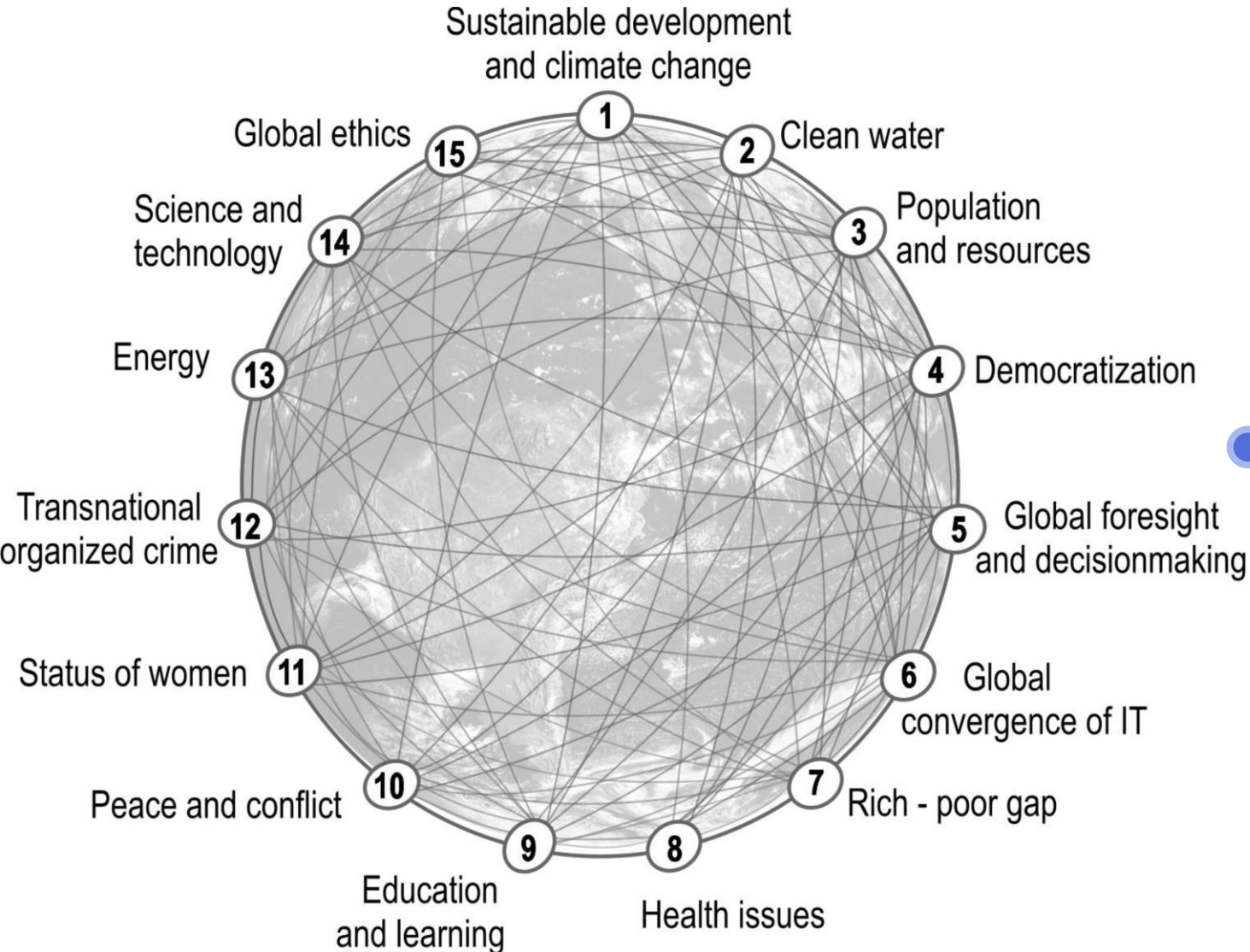Energy — 13
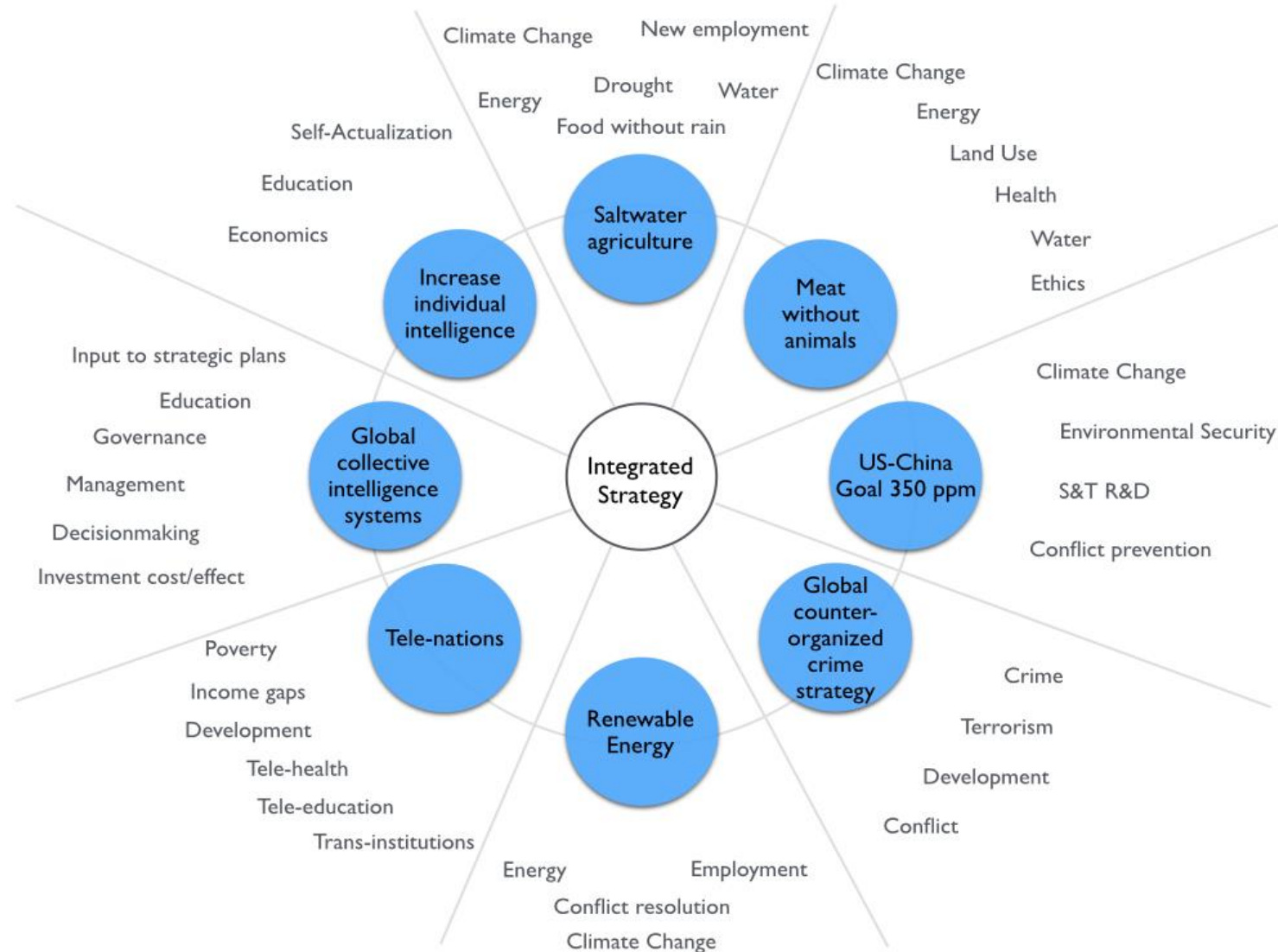Science and technology — 14
Global ethics — 15

15 Global Challenges

Jerome C. Glenn, CEO

The Millennium Project

High Impact Strategies to Address Global Challenges

Where we are winning

Indicator	2000	2010	2020	2030
GNI per capita, PPP (constant 2017 $)	11,111	13,702	16,069	19,787
Poverty ($1.90/day, PPP) (% of total population)	27.8	16.0	7.8	4.7
Women in national parliaments (% of members)	13.9	19.2	25.6	31.7
Life expectancy at birth (years)	67.5	70.6	73.5	76.9
School enrollment, secondary (% gross)	59.9	71.1	79.1	88.2
Literacy rate, adult total (% of people ages 15+)	1.22	84.0	86.7	88.4
Electricity from renewables (% of total)	7.0	7.6	8.7	9.5
Energy-efficiency (GDP/unit of energy use)	7.0	7.6	8.7	9.5
Access to drinking water services (% of population)	61.7	65.8	74.3	80.4
Health expenditure per capita (US$)	463.50	914	1,165	1,315
Prevalence of undernourishment (% population)	14.3	9.4	8.1	7.2
Mortality rate, infant (per 1,000 live births)	52.8	37.0	27.4	17.8
Patent applications, residents (thousands)	823	1,161	2,447	4,094
R&D Expenditures (% of GDP)	1.3	2.0	2.2	2.5
Internet users (per 100 people)	6.7	29.0	62.2	84.6

Where we are losing or change is unclear

Indicator	2000	2010	2020	2030
Freedom (number of countries rated free)	86.00	87.00	82.00	73.88
Wars and serious arm conflicts	38.00	31.00	56.00	48.78
Biocapacity per capita	1.83	1.68	1.56	1.46
CO2-equivalent mixing ratio (ppm)	441	469	504	557
Renewable internal freshwater resources (m3/capita)	7129	6282	5535	4876
Forest area (% of land area)	31.92	31.52	31.16	30.78
Physicians (per 1,000 people)	1.53	1.52	1.68	1.58
Foreign direct investment, net inflows (US$, billions)	1,357	1,394	999	1,879
Unemployment (% of world labor force)	5.77	5.90	6.57	5.62
Income inequality (share of top 10%)	30.32	28.90	29.50	31.42
Terrorism Incidents	2,190	4,870	13,305	15,053
Population growth (annual %)	1.32	1.20	1.02	1.15
CPIA, public sector (1=low; 6=high)	2.87	2.85	2.86	2.88

■ 2000 ■ 2010 ■ 2020 ■ 2030

Some Insights from The Millennium Project

1 ***State of the Future Index*** shows that humanity is winning more than it is losing, but where we are losing is very serious.

2 Humanity has the answers to these problems, but "zero-sum" geopolitical power competitions prevent a global policy process for implementing these solutions.

3 We have to create synergetic relations among countries, corporations, academia, NGOs, and UN systems to address these problems act to achieve opportunities

4 Covid has given the world it's first global "time out" to re-think everything.

5 The pandemic, global warming, and future AI is forcing humanity to develop global policy processes and global governance systems.

Potential Political Transition from Zero-Sum to Synergy

Transition from zero-sum political power to…

Synergies among governments, business, academics, NGOs, and international organizations…

Moving toward a "Self-Actualization Economy" and increasing merger of human consciousness and technology

What should lower column do to those on the row	UN Summit on the Future, Futures Lab, Global Foresight Reports	OECD Government Foresight Community	Parliamentary Committees for the Future	Dubai Initiative Global Future Society
UN Summit on the Future, Futures Lab, Global Foresight Reports	---	Study OECD reports, communicate with government foresight units in preparation for the Summit	Formal notification for their participation in preparation for the Summit	Request think tanks input to their government's preparation
OECD Government Foresight Community	Workshop Gov. foresight Community prep for UN Summit, input and review of UN report drafts, define relationship with UN Lab	---	Define gov- parliament relationships on futures research. Government Foresight Community should encourage their Parliaments to create permanent Com for the Future.	Participate in Dubai Future Forums; recommend issues to be included.
Finland's Initiative on Parliamentary Committees for the Future	Work with their governments and futurists to prepare for the summit; read MP's study on UN Foresight Elements for other preparation suggestions	Establish relations with OECD government Foresight Com. Representatives; Consider legislation OECD research finds important	---	Participate in Dubai Future Forums; recommend issues to be included, identify legislation implications from the Forums and the Global Future Society
Dubai Initiative Global Future Society	Global Future Society reps in Summit planning, report prep, and part of the UN Lab network	Participate in annual GFC conferences.	GFS should encourage their Parliaments to create permanent Com for the Future.	---

Three Forms of Artificial Intelligence
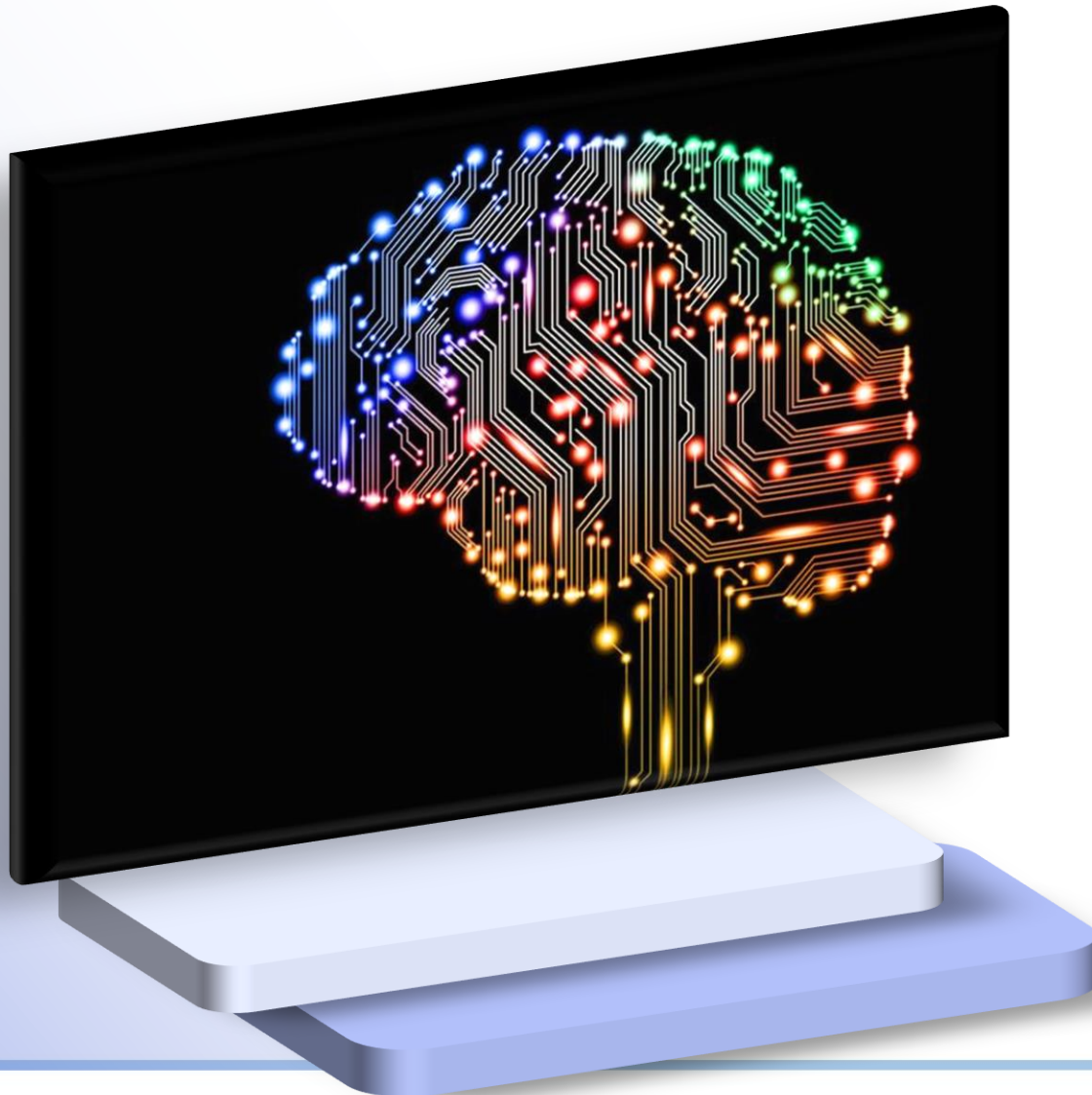
- **Artificial Narrow Intelligence**

- **Artificial General Intelligence**
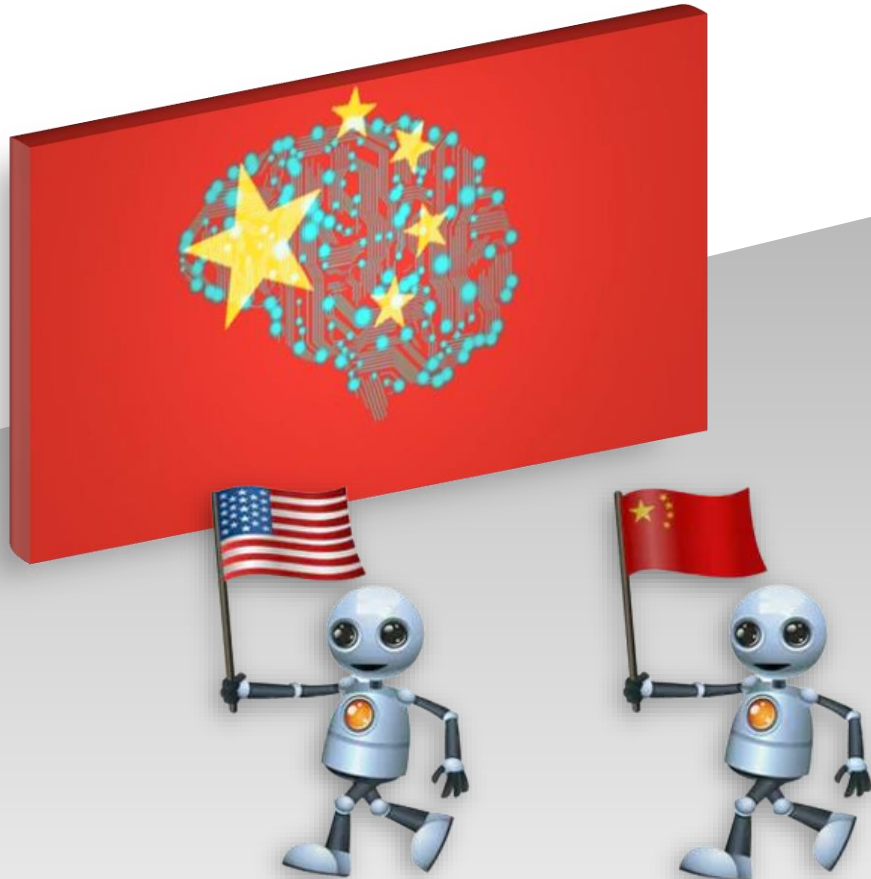
- **Artificial Super Intelligence**

Artificial General Intelligence sets its own goals independent of human awareness and understanding

Who ever leads AI... rules the world - Putin

China Goal: Lead the World in AI by 2030

Human Brain Projects:

USA, EU, China

Artificial Brains:

IBM, Google, Facebook, Baidu,
Microsoft, Alibaba, Apple, Amazon

The Great AGI/Brain Race is on!

Transition from Narrow to General Artificial Intelligence

Let's Avoid This

We may rush into creating AGI without making sure its initial conditions are "right."

- **Examples of some potential "right" initial conditions:**

  - Values agreed to for ANI (ISO, IEEE, OECD) and Asimov's three laws of robotics.

  - Massively complex simulation to test AGI's alignment with values.

  - Ability for humans to check why the AGI is doing something.

  - Ability to distinguish between how we act vs. how we should act.

  - Ability to determine why and how it failed or caused harm.

  - Self-replication with human supervision.

  - Cannot turn off its own off switch.

  - Guard rails to catch unanticipated behavior that triggers evaluation or audit.

  - Able to be continually audited and shut down if it fails the audit.

Humanity needs to think together about the future in an organized and accumulative way
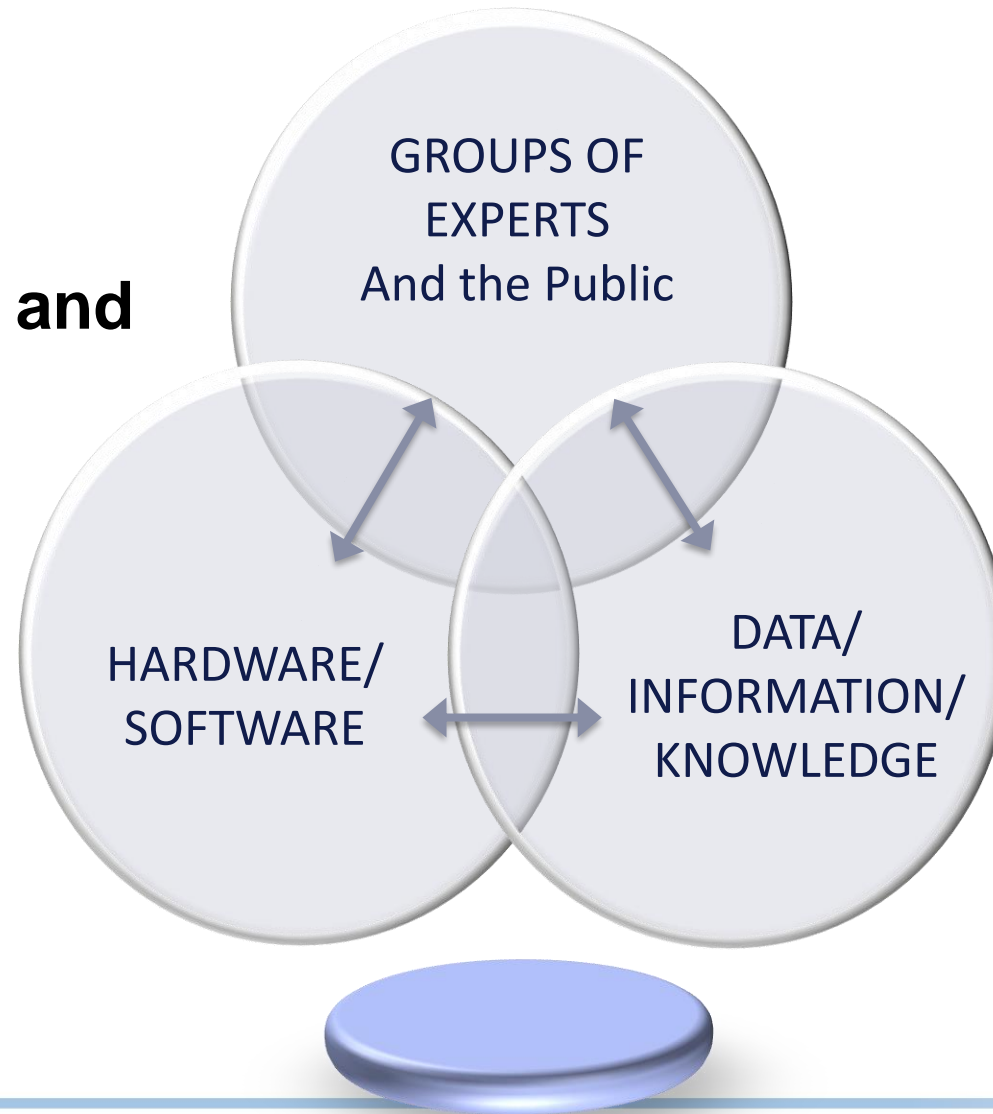
- *The Global Futures Intelligence System*

The UN Futures Lab
may create this with
all Committees
for the Future participating

Improving integration and synergies among...

GROUPS OF EXPERTS
And the Public

HARDWARE/ SOFTWARE

DATA/ INFORMATION/ KNOWLEDGE

Producing Collective Intelligence

We have the Future in our Hands

For More information:

Millennium-Project.org

For further information

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