Weak signals with Jerome Glenn

#fsightfriday @ennakointi @sitrafund
Weak Signals

and the

Global Futures Intelligence System

for SITRA

Jerome C. Glenn, CEO
The Millennium Project
June 11, 2018
Some related but different terms to Weak Signals

• Weak signals **indicate the possibility** of a new trend, development, event, condition, issue (individual use of synthetic biology indicates future-possible SIMAD)

• Low probability high impact event (9/11, extra terrestrial intelligence contact)

• Wild Cards/Black Swan – low predictability, but not necessarily high impact

• Weak Signals can indicate the approach of a Wild Card (as above: individuals using synthetic bio leads to SIMAD)
Some Ways to identify Weak Signals

1. Find the most innovative people, who seem to be ahead of most people and listen to them, sign up for the social media, listserv, etc.

2. Find out what or whom they monitor

3. Delphi, crowd sourcing, brainstorming (what the best and worst possible?) and social media AI drawing on marketing automation platforms (MAPs), Social media management (SMM)

4. RSS Aggregator – many sources to one location then searched (GFIS)

5. Science Fiction can tell you what to look for – Her: now Little Ice In China

6. What do people think is important, who think differently than you, In US Tea Party (assisted by infowarfare, led to the Trump election).

7. Nesbitt used local newspapers to find what was not yet in national media

8. Historical analogies: weak signals in the past can help us find signals in present.
Some Ways to Process Weak Signals

- Use of the Futures Wheel to anticipate first, second, and tertiary consequences (used in groups or as an individual)
- Cross-impact several of the weak signals (after insights from Futures Wheels) to see future possibilities that could be weak signals as well
- Ranking by impact; on whom/what, and time to impact
- Ted Gordon’s If/Then data base possible future events/headlines
- Test scenario completeness or strength of strategy
General Conceptual Example: MP Early Warning System for PMO Kuwait

Press Releases, RSS Feeds, Newsletters, Journals

Google alerts, Websites

Expert Groups & Gov Ministries

Conferences, Seminars

Key Persons Tracking

SCANNING

Analysis & Synthesis

Individual Scanner ↔ Staff ↔ Management & Expert Groups

EWS Collective Intelligence

Prime Minister Strategy Unit Senior Staff

Feedback & New Requirements

Decisions Ministerial coordination Future Oriented understanding and learning
The Millennium Project

A global foresight network of nodes, information, and software.

Functioning as a think tank on behalf of humanity, not on behalf of a government, an issue, or an ideology. Created to improve humanity’s prospects for building a better future.
Definition of Collective Intelligence

It is an emergent property from the integration & synergies among
- data/info/knowledge
- software/hardware
- experts and others with insight that continually learns from feedback to produce just in time intelligence for better decisions than these elements acting alone.
General concept of Collective Intelligence

Improving integration and synergies among...

GROUPS OF EXPERTS
And the Public

HARDWARE/ SOFTWARE

DATA/ INFORMATION/ KNOWLEDGE

Producing Collective Intelligence
General Steps to create a Collective Intelligence System

What are the key challenges, issues, opportunities?
Who are the most knowledgeable reviewers for each?
For each Challenge, what are the best news sources, computer models, etc. that can feed new scanning items and weak signals into the CIS
Create Situation Chart for each Challenge: What is, What ought, and ways to address the gap
One example of work flow:

Short-term Memory

News sources
Internet Sources

Long-term Memory

Scanning Items

Intelligence

Situation Chart:
What is; What ought
How to address the gap

Short and Long-overviews

Feedback on Overviews, Situation Charts, Scanning items, and News Sources to constantly change.
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Created to improve humanity's prospects for building a better future.
Menu for each Challenge

1. **News items** (automatic news feeds – searchable)
2. **Scanning** (annotated, rated information)
3. **Situation Chart**: Current Situation; Desired Situation; and Policies
4. **Report** (detailed text)
5. **On-going Real-Time Delphi** questionnaires to collect expert judgments
6. **Public comments**
7. **Discussion groups**
8. **Computer models** (mathematical and rules-based), and conceptual models
9. **Resources**: websites, books, papers, videos
10. **Updates** – all edits
11. **Digests** – Recent scans, edits, discussions
Challenge 1: Sustainable Development and Climate Change

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

**Situation**
- Atmospheric CO2 400 ppm
- Greenhouse Gas Emissions
- Country Emission Pledges
- Ocean Acidity 30% Increase since Industrial Revolution
- Fossil Fuel Subsidies
- Arctic Ice Levels
- Global Temperature
- Current Forecasts

**Desired Situation**
- Reduction in Atmospheric Carbon Dioxide Levels
- Adherence to pledged reduction targets
- Change in Perception

**Policies To Address The Gap**
- US-China 10-year Goal with NASA-like program to achieve it
- Carbon Tax
- Cap and Trade
- Communication by the media
- Equal Rights for Women Worldwide
- Green Growth Technologies To Address The Gap
- Adaptation To Address The Forecasts
Gather Expert Opinion with Dialogue

Details on the issue

<table>
<thead>
<tr>
<th>Seriousness and trends</th>
<th>Root causes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Which dimensions of these problems are becoming more serious?</strong></td>
<td><strong>What are the most important root causes?</strong></td>
</tr>
<tr>
<td>Please use the slider for rating: decreasing (far left) to not really a problem (middle) to central cause (far right).</td>
<td>Please rate the causes below and add others. (5=the essential cause, 4=very significant, 3=one among many, 2=not too significant, 1=not a cause at all).</td>
</tr>
<tr>
<td>Increasing size and density of coastal population</td>
<td>Increasing size and density of coastal population</td>
</tr>
<tr>
<td>Taking dramatically</td>
<td>4 (49)</td>
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<tr>
<td>Over-exploitation of coastal biodiversity</td>
<td>Over-exploitation of coastal biodiversity</td>
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<tr>
<td>Increasing dramatically</td>
<td>5 (50)</td>
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<tr>
<td>Undervaluation of ecosystem services</td>
<td>Undervaluation of ecosystem services</td>
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<tr>
<td>Increasing dramatically</td>
<td>5 (50)</td>
</tr>
<tr>
<td>Loss of mangrove forests</td>
<td>Loss of mangrove forests</td>
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<tr>
<td>Increasing moderately</td>
<td>4 (48)</td>
</tr>
<tr>
<td>Loss of coral reefs</td>
<td>Loss of coral reefs</td>
</tr>
<tr>
<td>Increasing dramatically</td>
<td>4 (48)</td>
</tr>
<tr>
<td>Rising sea levels, erosion, and other consequences of climate change</td>
<td>Rising sea levels, erosion, and other consequences of climate change</td>
</tr>
<tr>
<td>Increasing dramatically</td>
<td>4 (48)</td>
</tr>
<tr>
<td>Pollution of coastal areas (e.g., garbage, oil, hazardous wastes)</td>
<td>Pollution of coastal areas (e.g., garbage, oil, hazardous wastes)</td>
</tr>
<tr>
<td>Increasing dramatically</td>
<td>5 (47)</td>
</tr>
<tr>
<td>Lack of early warning and resilience systems</td>
<td>Lack of early warning and resilience systems</td>
</tr>
<tr>
<td>Staying the same</td>
<td>3 (50)</td>
</tr>
<tr>
<td>Under-investment in natural ecosystems</td>
<td>Under-investment in natural ecosystems</td>
</tr>
<tr>
<td></td>
<td>5 (47)</td>
</tr>
</tbody>
</table>

Reasons

- General ratification and enforcement of international regulations such as the Law of the Sea (UNCLOS) and the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and
- Discussion
  - We have to encourage people to protect coastal ecosystems, we can save ecosystems by trial things for example, do not throw garbage to the sea.
  - Education: in place the right personnel in government Minist or Department. Where first degree is the highest qualification, 95% of government staff, they cannot respond to innovative ideas as those who have spent 10 to 15 years on research on such subjects after Masters or PhD. This is why many governments engage in more propaganda without doing anything tangible.
Collective Intelligence System

• Helps keep track and anticipate change
• Unite functions, foresight, strategy, investments, and operations
• Provide a common platform for a “Whole-of-organization” response to future challenges
• Identify organization’s future opportunities
• Invite experts and creative people to participate in building a “brain” for the future of the organization
… Acts like a *TransInstitution*

The Millennium Project

- Universities
- UN Organizations
- Corporations
- Governments
- NGOs and Foundations
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.
<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>African Futures Scenarios 2025, and UNDP workshop at the UN</td>
<td>1994</td>
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<td>2.</td>
<td>Millennium Project Feasibility Study final report</td>
<td>1995</td>
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<td>4.</td>
<td>Lessons of History</td>
<td>1997</td>
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<td>5.</td>
<td>Global Opportunities and Strategies Delphi</td>
<td>1997</td>
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<td>7.</td>
<td>Futures Research in Decisionmaking (and checklist)</td>
<td>1998-99</td>
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<tr>
<td>10.</td>
<td>Current/Potential UN military doctrine on Environmental Security</td>
<td>1999</td>
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<tr>
<td>11.</td>
<td>Six Alternative Year 3000 Scenarios</td>
<td>1999</td>
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<tr>
<td>12.</td>
<td>S&amp;T Issues over the next 25 years</td>
<td>2000</td>
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<td>13.</td>
<td>Future Technological Implications for Society and the UN System</td>
<td>2000</td>
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<td>14.</td>
<td>Analysis of UN Summit Speeches</td>
<td>2001</td>
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<td>15.</td>
<td>Military environmental crimes and the role of the ICC</td>
<td>2001</td>
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<td>18.</td>
<td>Global Goals for the year 2050</td>
<td>2002</td>
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<td>19.</td>
<td>Future S&amp;T Scenarios 2025</td>
<td>2002</td>
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<td>22.</td>
<td>Middle East Peace Scenarios</td>
<td>2002-04</td>
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<td>23.</td>
<td>Early Warning System for Kuwait Oil Company</td>
<td>2003-04</td>
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<td>25.</td>
<td>Future Ethical Issues (2004-05)</td>
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<td>27.</td>
<td>South Korea SOFI</td>
<td>2006</td>
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<td>28.</td>
<td>Future of Learning and Education 2030</td>
<td>2007</td>
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<td>29.</td>
<td>Global Climate Change Situation Room for Gimcheon, South Korea</td>
<td>2007-08</td>
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<td>30.</td>
<td>Conceptual design for global energy collective intelligence (GENIS)</td>
<td>2008</td>
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<td>33.</td>
<td>WFUNA Human Rights</td>
<td>2008</td>
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<td>34.</td>
<td>Decision Criteria Evaluation of Global Environment Facility</td>
<td>2008</td>
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<td>35.</td>
<td>South Korea SOFI and South African SOFI</td>
<td>2008</td>
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<td>36.</td>
<td>Early Warning System PMO Kuwait</td>
<td>2008-09</td>
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<td>37.</td>
<td>Potential Future Elements of the Next Economic System</td>
<td>2009</td>
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<td>38.</td>
<td>UNESCO World Water Scenarios project</td>
<td>2009</td>
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<td>39.</td>
<td>Future of Ontologists</td>
<td>2009</td>
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<td>40.</td>
<td>Future Hopes and Fears: a Kuwait Perspective</td>
<td>2010-2011</td>
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<td>41.</td>
<td>Latin America 2030 Scenarios</td>
<td>2009-2011</td>
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<td>42.</td>
<td>Egypt 2020</td>
<td>2010</td>
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<td>43.</td>
<td>Changes to Gender Stereotypes</td>
<td>2011</td>
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<td>44.</td>
<td>Azerbaijan SOFI</td>
<td>2011</td>
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<td>47.</td>
<td>Egypt's national Synergetic Information System (ECISIS)</td>
<td>2013-16</td>
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<td>49.</td>
<td>Vulnerable Natural Infrastructure in Urban Coastal Zones</td>
<td>2013</td>
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<td>50.</td>
<td>FUTURES Dictionary/Encyclopedia (English and Spanish)</td>
<td>2014</td>
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<td>51.</td>
<td>SIMAD and Lone Wolf Terrorism Counter Strategies</td>
<td>2014</td>
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<tr>
<td>52.</td>
<td>Czech Rep., Hungary, Poland, Slovakia, Visegrad Region SOFIs</td>
<td>2014-2015</td>
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<tr>
<td>53.</td>
<td>Water-Energy-Food Nexus in the Context of Climate Change</td>
<td>2015-16</td>
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<tr>
<td>54.</td>
<td>Pre-Detection of Terrorism Strategies RTDelphi, NATO Workshop</td>
<td>2015-17</td>
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<tr>
<td>55.</td>
<td>Future Work/Technology 2050 Global Issues, Scenarios, Workshops</td>
<td>2015-17</td>
</tr>
</tbody>
</table>
Current and Previous Sponsors/Clients:

- AGAHI Pakistan (2016-18)
- Amana Institute, São Paulo, Brazil (2004)
- Applied Materials, Santa Clara, California (2002–09)
- Argentina Ministry of Agriculture (2012)
- Azerbaijan State Economic University (2009-2016)
- City of Gimcheon (via UN Future Forum, So. Korea) (2009–10)
- Deloitte & Touche LLP, Cleveland, Ohio (1998–09)
- The Diwan of His Highness the Amir of Kuwait (2010–11)
- Environmental Law Institute (2017)
- The Hershey Company (2008–09)
- Kuwait Oil Company (via Dar Almashora (2003–04))
- Kuwait Petroleum Corp. (via Dar Almashora for Consulting) (2005–06)
- Monsanto Company, St. Louis, Missouri (1996–98)
- Montenegro Ministry of Science and Technology (2012)
- Motorola Corporation, Schaumburg, Illinois (1997)
- NATO, Brussels, Belgium (2016)
- Pioneer Hi-Bred International, West Des Moines, Iowa (1997)
- Rockefeller Foundation (2008–11; 2013)
- Shell International (Royal Dutch Shell Petroleum Company), London, UK (1997)
- Universiti Sains Malaysia (2011)
- U.S. Army Environmental Policy Institute, Arlington, Virginia (1996–2011)
- U.S. Department of Defense, Off of the Secretary
- Woodrow Wilson International Center for Scholars (Foresight and Governance) (2002)
- World Bank (via World Perspectives, Inc. 2008 and GEF Evaluation Office 2012)
- In-kind Sponsors:
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  - George Washington University
  - Harvard University
  - The Smithsonian Institution
  - World Future Society
  - UNESCO
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Future Terrorism and Deterrence
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37 Different Methods
1,300 pages

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

Interpreting weak signals
ANY USEFUL IDEA ABOUT THE FUTURES SHOULD APPEAR TO BE RIDICULOUS

Jim Dator
“We are entering an era where complexity, chaos and contradictions will become the dominant themes; and uncertainty and ignorance will increase drastically”

**Weak signal:**
Sign of an emerging issue or the first symptom of change

*Hiltunen 2010: Weak signals in organizational futures learning*
Signal and its interpretation

Modified from
Ilmola 2014: Increasing Flexibility by Environment Scanning of the Early Signs of Change in the Complex Environment
Ansoff 1984: Implanting strategic management
Instructions

1. Select a signal
   – You can use the one suggested in the template, or a signal that came to your mind during the talk and discussion

2. Think about the signal
   – What is it about?
   – What does it tell about possible futures?
   – What would happen if the things it describes became mainstream or normal?

3. Write a short story about a person from the future
   – Name, age
   – One daily activity
   – Include the things the signal describes in some way

4. Share your story with the person sitting next to you and discuss
   – What kind of commonalities or tensions are there between the stories?
   – What new ideas emerge from the futures the stories depict?
Pet cloning

Barbra Streisand had her (now dead) dog named Samantha cloned — not once, but into two (living) dogs. Viagen Pets out of Texas charges about $50,000 per cloned animal.

Source: BigThink

Instructions

What is this signal about? What would happen if the things it describes became mainstream?

Write a short story about one moment in the everyday life of a person from the future. It can be about eating, travel, living, working etc. Include the signal above in the story in some way.

When ready, share your story with the person sitting next to you.
REFLECTION

What thoughts emerged from the discussion?
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