

Federal Foresight Community of Interest Meeting Washington, D.C.

The Use of Foresight Methodologies to Improve Public Policy, Strategy and Decision-Making in a Complex World

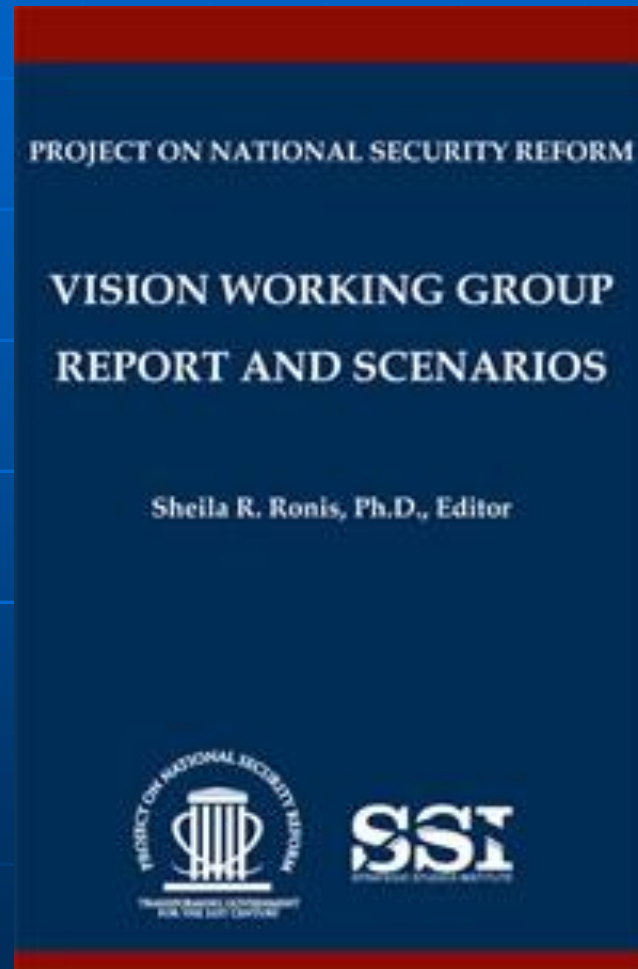
The Center for Complex and Strategic Decisions:
A Proposal for the
U.S. Executive Office of the President of the United States

Remarks By:

Sheila R. Ronis, Ph.D.
Chair and Professor, Department of Management
Director, Center for Complex and Strategic Decisions
Walsh College
Argonne National Laboratory

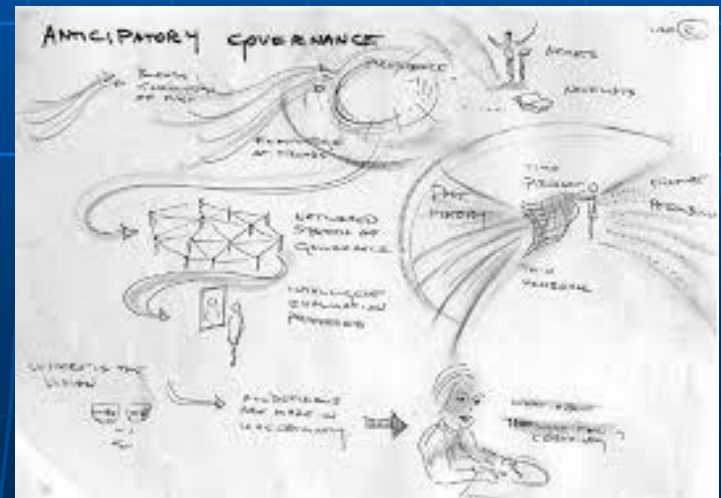
18 November 2015

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The nation needs to support strategic decision-making in an interagency whole-of-government manner at the highest levels for issues of national importance and/or security.



Leon Fuerth, 2009

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The National Security Strategy

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More than twenty-five years ago...

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The United States does not develop whole of government “Grand Strategies.”

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Private Sector Management Tools

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“What mechanisms should the
U.S. government develop?”

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U.S. security is rooted in the successful integration of all elements of national power.

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“What is the basis for re-thinking the national security system?”

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National Security System

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Complex Adaptive System

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- Share information and collaborate horizontally

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- Accommodate unanticipated needs and partnerships

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Complex Adaptive System

- Share information and collaborate horizontally
- Accommodate unanticipated needs and partnerships
- Ensure agility in the face of uncertainty
- Incorporate ad-hoc structures and processes, and
- Maintain a long-term view

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Complex System of Complex Systems

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Predict and Control

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Troubling...

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Trying to explain...

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Complex Systems Cannot be Controlled!

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Center for Complex and Strategic Decisions: A White House Center

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Synthesize all of government “solutions” to complex system issues and problems, and sometimes “all of society.”

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Foresight is a key component of CCSD's Approach...



...A ***visionario*** is a scenario developed using a disciplined foresight process that marries the art of story telling and the science of complexity and systems.

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Five General Questions

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- **Stressors in the scenario?**

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- **How well was the system able to recover?**

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- **Was the system able to anticipate the problems described?**
- **How well was the system able to react?**
- **How well was the system able to recover?**
- **How well does the system function as a whole?**

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Discussion Questions

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1.How will any recommendations function?

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- 1.How will the recommendations function?
- 2.Are there problems or solutions identified that we have not addressed?

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1. How will the recommendations function?
2. Are there problems or solutions identified that we have not addressed?
3. If this future is not desirable, what choices should we be making today to avoid it?

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Vision

The Center for Complex and Strategic Decisions (CCSD) uses the application of advanced systems approaches to ameliorating complex problems and improving policy and strategy decision making.

Mission

CCSD provides this capability through the systems-level integration of foresight, insight and strategic leadership models with high-powered complexity science and decision technologies.

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In Partnership with Argonne National Laboratory

Maneuvering within the complexity of today's world requires strategic thinkers who have the ability to understand non-linear and unintended consequences of their policies and decisions.



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Rigorous Framework

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Near, Mid and Long Term Planning

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Project Format

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The Center context and scope will include:

- Space
- Global
- Regional
- Country
- Domestic
- Cyber-Space

Timelines for Scenarios

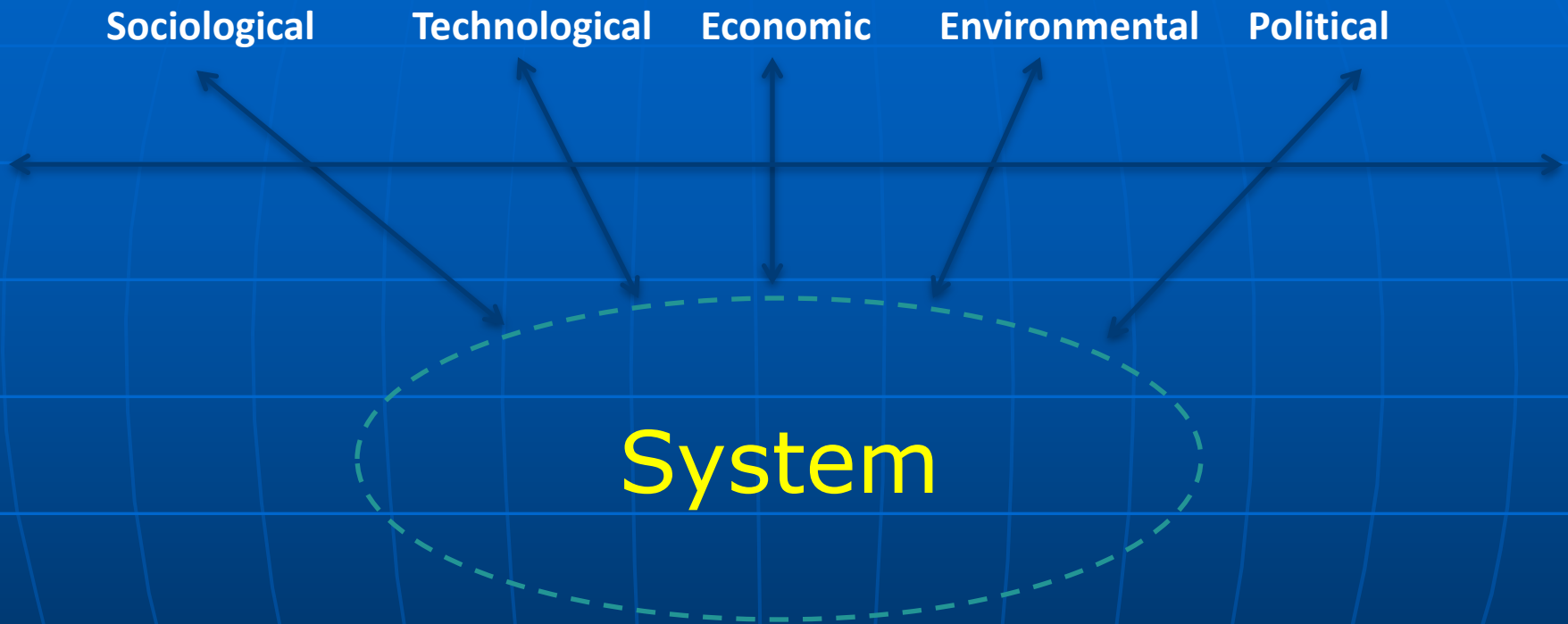
1 year

50+ years

The Globalocalization Spectrum

System Risk

Across the STEEP Variables



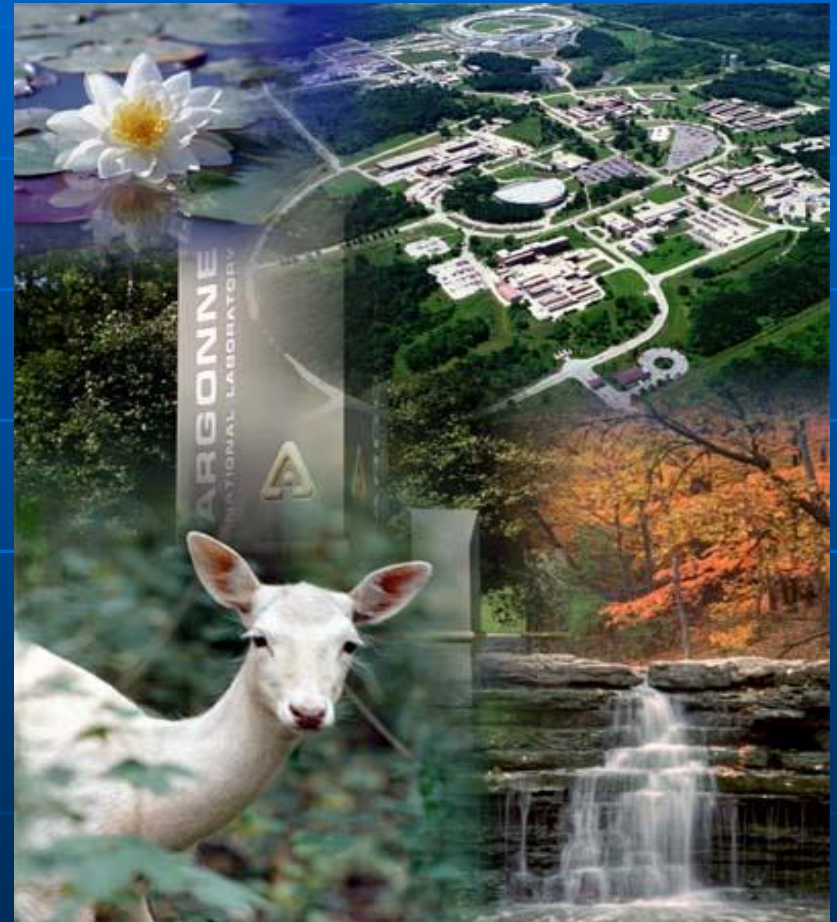
“System Risk” is the aggregation and understanding of the many forms of risk that occur internal and external to the system but which potentially have an impact on the system; the product of the interactions and interdependencies of the various forms of risk, sociological, technological, economic, environmental and political.

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Visioning

Argonne National Laboratory

Working With:
Pamela Sydelko, Director
Systems Science Center



Georgia Tech Aerospace Systems Design Laboratory

Dr. Dimitri Mavris

Flight	From	To	Depart	Arrive
4525	ATL	MEM	8:59PM	9:47PM
2354	MEM	PHL	1:05AM	2:48AM
4852	LAX	MEM	8:47PM	9:11PM

Universidad Rey Juan Carlos Madrid



Government of Finland



TYÖ- JA ELINKEINOMINISTERIÖ
ARBETS- OCH NÄRINGSMINISTERIET
MINISTRY OF EMPLOYMENT AND THE ECONOMY

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Nahalal, Israel



***"Proper management and proper leadership are the secrets
that enable a country to take-off"***

Dr. Joseph Shevel, President

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A Few Examples...

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- Chaired by Sheila Ronis, on November 8-9, 2011, the National Defense University held a symposium entitled “Forging an American Grand Strategy: Securing a Path Through a Complex Future,” at Fort Lesley J. McNair in Washington, DC.
- The need for strategic decision support tools and innovative methodologies to develop foresight were discussed, especially at the level of the President of the United States.
- The topics discussed were relevant to the audiences of the Strategic Studies Institute, and the U.S. Army in general, students, faculty, developers of strategy, and policymakers.



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- Argonne co-hosted the “Energy Security as a Grand Strategy” Conference, held on May 7-8 2012 at the National Defense University (NDU)
- Other partners:
 - National Defense University
 - University of Chicago
 - Securing America’s Future Energy
- Conference explored:
 - Complex and interdependent nature of energy systems
 - Roles of government, industry, S&T
 - Potential next steps toward creating an Energy Security Grand Strategy
 - Energy Scenario



Energy Security as a GRAND STRATEGY

May 7-8, 2012 - National Defense University – Washington D.C.

ENERGY SECURITY IS A WICKED PROBLEM:

- ▶ Difficult to clearly define
- ▶ Highly unstable and interdependent
- ▶ Socially complex with multiple stakeholders
- ▶ Resistant to traditional scientific/rational planning

Join premier strategic thought leaders as they examine energy security as a wicked problem comprised of an interdependent system of systems.

Learn from a distinguished group of panelists as they discuss the key roles of government, industry, and science and technology in addressing energy security issues.

Engage with workshop participants in developing recommendations for solid next steps towards a U.S. Energy Grand Strategy.

KEYNOTE SPEAKERS

Senator Byron Dorgan
Senior Policy Advisor, Arent Fox, and former U.S. Senator from North Dakota

Daniel Poneman
Deputy Secretary of Energy

Steven Koonin
Director of the New York University Center for Urban Science and Progress (CUSP), Former Under Secretary for Science, U.S. Department of Energy

R. James Woolsey
Chairman, Foundation for the Defense of Democracies; Venture Partner, Lux Capital Management; Director of Central Intelligence (1993-95)

Argonne NATIONAL LABORATORY

THE UNIVERSITY OF CHICAGO

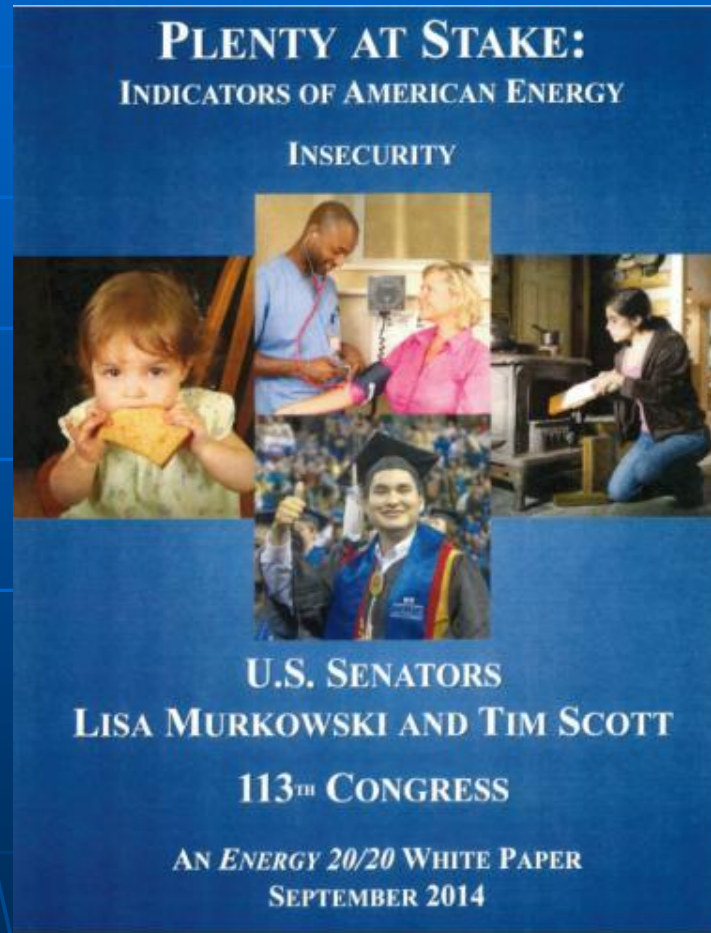
EPIC Energy Policy Institute at Chicago

http://www.anl.gov/eesa/energy_security_conference

National Defense University | Fort Lesley J. McNair | 300 5th Avenue SW, Marshall Hall | Washington, DC 20319-5066

Presented by: The National Defense University | Argonne National Laboratory | Securing America's Future Energy | Energy Policy Institute at Chicago

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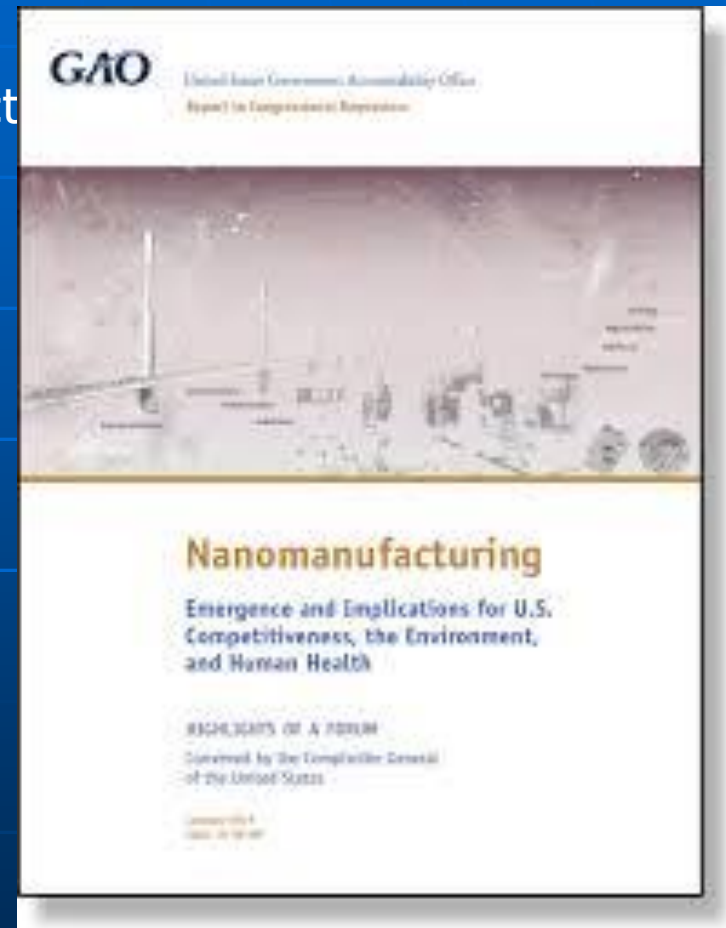
General Accountability Office
Comptroller Forum on Nanomanufacturing
in a Global Context

National Academies of Sciences
GAO Building
Washington, D.C.

“Nano-technology in 2050:
A Scenario”

Sheila R. Ronis, Ph.D.

24 July 2013



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“Israel at 100” A Scenario in 2048

Presented Galilee Institute
Nahalal, Israel
27 June 2013



Sheila R. Ronis, Ph.D. and Richard J. Chasdi, Ph.D.
Center for Complex and Strategic Decisions
Walsh College

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“A Chicago Story”

Urban Security Project:
Chicago Roundtable on Counter-violence

Chicago Council On Global Affairs

Visionario By:
Sheila Ronis, Richard Chasdi and Pam
Sydelko

19 February 2014



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Current Efforts Underway for Delivery in 2015 and Beyond

- Foresight Initiative, National Geo-spatial Intelligence Agency
- U.S. Army War College
- Partnership on foresight effort with TEKES, Ministries, Finland
- Galilee Institute, Nahalal, Israel, joint programs with Walsh College
- Collaboration project with School of International Futures, Cat Tully

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Shaping the Future

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Thank you!

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