Reinventing Technology Assessment
A 21st Century Model

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The Challenge

Science and technology transform our world.

Often the ramifications are not understood until they are well-entrenched.

We style ourselves as living in a “Technological Society” and an “Information Age”
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Yet we lack the information we need to make informed decisions about technology.
Technology Assessment (TA)

Enhances societal understanding of the broad implications of science and technology, and improves decision-making.
Technology Assessment (TA)

- 1972: U.S. opens Office of Technology Assessment (OTA)
- 1995: U.S. Congress shuts down the OTA
- Meanwhile: 18 TA agencies now operate in Europe
- Since 1995: Repeated attempts to re-open U.S. OTA have failed
- 2008: Congress asks Government Accountability Office (GAO) to establish a permanent TA capability.
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• Since 1995: Repeated attempts to re-open U.S. OTA have failed
• 2008: Congress asks Government Accountability Office (GAO) to establish a permanent TA capability.
  – For now GAO anticipates producing studies at less than 1/10th the OTA’s annual rate.
Technology Assessment (TA) has the potential to alter and improve societal outcomes.

In Europe, TA has contributed to:

- Taking steps to adapt to global warming
- Developing strategies to produce green technologies
- Nuanced genetic technology choices (accelerating new pharmaceuticals, while going slow on gene-modified foods)
- Implementing REACH program that economically regulates all manufactured chemicals
New Opportunities & Developments

• New TA practices in Europe, including participatory technology assessment (pTA), which involves citizens

• The Internet makes TA and pTA possible on a more transparent, decentralized, agile, collaborative, and cost-effective basis.

• Transnational collaboration in TA is expanding.

→ TA and pTA are increasingly influential around the world.
The need and opportunities for TA are expanding. 

But the U.S. is lagging.
Beyond OTA-style expert analysis, what’s also needed is TA that...

- Gives a voice to everyday laypeople, who are otherwise omitted in politics of science and technology
- Lets decision-makers know constituents’ informed views
- Stimulates broad societal discussion
- Allows innovators to anticipate public reactions and to alter innovation to reduce costly controversy
- Deepens social and ethical analysis of technology, informing and enriching expert TA

pTA and expert TA complement one another in critical ways.
An Influential pTA Method: Danish Consensus Conferences

Panel of diverse lay participants → Two-weekends of background education → Expert & stakeholder public testimony, Lay panel deliberation → Lay panel writes report, delivers press conference in Danish Parliament Building
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Sample pTA adaptations in the US:

- Boston Consensus Conference on Biomonitoring (2006)
- World Wide Views on Global Warming (2009)
“I think this panel has shown – to some degree of surprise to the scientific community – that the public can really understand the issues, and this panel has moved biomonitoring forward.”

- Professor Thomas Burke, Chairman of the National Research Council Committee on Human Biomonitoring for Environmental Toxicants
World Wide Views on Global Warming (WWViews)

Ambassadors of Sweden, Uganda, China, Chile and India discuss WWViews results, Danish Parliament, Nov. 19, 2009
We need a 21st Century TA Model

• Participation + Expertise
• 21st Century Structure: distributed, agile, collaborative
• Institutionally non-partisan while inviting and integrating diverse value perspectives
• Integrated into government policy-making, into wider societal deliberation, and into technological R&D, dissemination & management
• Continuously innovative in concepts and practices
A TA capability within Congress is valuable but not sufficient.

A TA capability outside Congress can more effectively:

- Conduct and demonstrate pTA
- Innovate in TA and pTA methods
- Conduct TA and pTA on behalf of other clients/agencies, etc.
- Stimulate societal discussion and advance public education
- Flexibly collaborate in transnational TA and pTA projects
An Institutional Network Model

- Nonpartisan Policy Research Organizations
- Science Museums
- Universities
An Institutional Network Model

Direct public interface
Trusted public educators
Innovation in citizen-friendly pedagogy

Policy relevance
Interface with policy-makers
Broad dissemination

Innovation in TA concepts/methods
Research, analysis and evaluation
Training of researchers/practitioners

Nonpartisan Policy Research Organizations
Science Museums
Universities
ECAST = *Expert & Citizen Assessment of Science & Technology network*
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*ECAST will expand to encompass institutions across the nation.*
Founding partners:

- Woodrow Wilson Center (Washington, DC)
- Arizona State University
- Boston Museum of Science
- ScienceCheerleader
- The Loka Institute
As other institutions learn about ECAST, they are expressing support and interest.
Establishing a 21st century TA capability in the U.S.
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...an essential tool to help society make timely, informed decisions about technologies and their broad repercussions
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The time is ripe!

Courtesy Shadow Robot Company, Ltd.
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- E-mail updates about ECAST
- Richard Sclove’s “Reinventing TA” report
- A video of today’s discussion (available after May 7, 2010)

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