

WELCOME

Welcome to the November/December I2S News, where we highlight new additions to the resources on the I2S website (<http://i2s.anu.edu.au>), as well as the latest blog posts published on the Integration and Implementation Insights blog (<http://I2Insights.org>).

A reminder that the Massive Open Online Course (MOOC) on 'Ignorance!' by Mike Smithson and Gabriele Bammer will run in a new expanded (eight week) version starting on 10 January 2017. To register go to <https://www.edx.org/course/ignorance-anux-igno101x-0>.

As the year winds down, we hope you can look back on 2016 with a sense of fulfilment and look forward to 2017 with hope and enthusiasm.

Gabriele Bammer and Peter Deane

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FEATURED TOOLS

Change management toolbox

This toolbox presents more than 120 techniques aimed at achieving change, many of which are useful in a research integration and implementation context. There are three major sections covering personal, team and larger systems change. Some tools are able to be used for more than one type of change.

Personal change tools include those that help people “think outside the box” and those that help people understand their own vision and goal. Examples of these tools are:

- Walt Disney Circle to develop and assess ideas through the roles of dreamer, realist and critic.
- Assessment and change of limiting beliefs to examine the achievability of a goal, especially identifying and exploring limiting beliefs and motivation to change them using a series of structured questions.

Team change tools include those that deal with different perceptions of reality and those that make possible learning within teams. Examples of these tools are:

- Wheel of multiple perspectives to capture the perspectives of each team member about the relevant stakeholders for a problem.
- Art of dividing a pumpkin to deal with the needs of all stakeholders in a way that respects equal rights.
- After action review to make learning conscious and explicit using four questions: What was supposed to happen? What actually happened? What were the positive and negative factors? What have we learned?

Larger systems change tools include those that 1) help understand the core principles and resources at play, 2) identify vision, values and goals, 3) help understand stakeholders, 4) help find leverage for change within a system and 5) work with whole systems. Examples of these tools are:

- Scoping to delineate the systemic context of the problem. This is a nine phase process using 28 provocative questions. See also: <http://i2s.anu.edu.au/resources/scoping-seven-phase-framework>.
- Ralph Stacey’s Agreement and Certainty Matrix to assess which decision making processes should be used based on the degree of agreement on what should be done among the people directly involved and the level of certainty in the information base.
- Stakeholder Analysis to categorise stakeholders in terms of ability to influence process or outcomes, extent of change (of stakeholders) required and change effort required.

- **Reference:**

- Nauheimer, H. (1997). *The change management toolbox. A collection of tools, methods and strategies*. Open access online at: <http://www.change-management-toolbook.com/downloads> and at: <http://www.change-management-toolbook.com/> (this website includes additional more recent tools added by community members).

Stakeholder participation: Participation compass

This online toolkit provides descriptions of a range of methods for stakeholder engagement, listed below. As well as providing a general overview, each method is described using the following categories: participants, cost, approximate time expense, strengths, weaknesses and origin. Videos are provided for some methods. There are also case studies for most methods.

Participation methods

21st Century town meeting	future search
action learning	future workshop
action planning	graphic recording
appreciative inquiry	hackathon
area forums	mediation
citizen advisory groups	mystery shopper
citizen's jury	open space technology
citizen's summits	opinion poll
co-production	participatory appraisal
community appraisal	participatory budgeting
consensus conference	participatory Graphical Information System(GIS)
conversation cafe's	participatory strategic planning
crowd wise	participatory video
crowdsourcing	planning for real
deliberative mapping	pop-up democracy
deliberative polling	positive deviance
deliberative workshops	trade school
delphi survey	user panels
democs	user panels
dialogue	world cafe
distributed dialogue	world wide views
feedback kiosks	written consultations
focus groups	--

Moderation methods

design charrettes	--
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Online tools

blogs	mashups
e-petitions	online consultations
e-panel	online discussion groups
language accessibility tools	wiki
local issues forum	--

Website: <http://participationcompass.org>

Additional tools can be found at: <http://i2s.anu.edu.au/resources/tools>

FEATURED VIDEO

Systems thinking: An introduction by Russell Ackoff

These two videos describe the difference between analysis (study of the parts) and synthesis (understanding of the whole). Analysis provides knowledge; synthesis provides understanding. Describes that all systems are parts of larger systems. Also describes that an essential property of a system is that it cannot be divided into independent parts; that its properties derive from the interaction of its parts.

The automobile and traffic system are used as examples.

The quality of the videos is not high, nevertheless it is an opportunity to hear one of the greats of systems thinking.

Dr. Russell Ackoff on Systems Thinking (a talk given at Pratt and Whitney Rocketdyne, Canoga Park, California, USA, in the early 2000s).

- Part 1: <https://youtu.be/IJxWoZJAD8k>
- Part 2: <https://youtu.be/UdBiXbuD1h4>

LATEST I2INSIGHTS BLOG POSTS

The [I2Insights blog](#) has recently featured posts on:

- 1. Storytelling ethnography as a way of doing transdisciplinary research**
by Jane Palmer <https://i2insights.org/2016/11/29/ethnography-and-transdisciplinarity/>
- 2. Advocate or Honest Broker?**
by Gabriele Bammer <https://i2insights.org/2016/11/22/advocate-or-honest-broker/>
- 3. Learning through modeling**
by Kirsten Kainz <https://i2insights.org/2016/11/17/learning-through-modeling/>

4. **The integrative role of landscape** *by David Brunckhorst, Jamie Trammell and Ian Reeve* <https://i2insights.org/2016/11/15/integrative-role-of-landscape/>
5. **Uncertainty in participatory modeling – what can we learn from management research?** *by Antonie Jetter* <https://i2insights.org/2016/11/10/uncertainty-in-participatory-modeling/>
6. **Collaboration, difference and busyness** *by Gabriele Bammer* <https://i2insights.org/2016/11/08/collaboration-difference-busyness/>
7. **Model complexity – What is the right amount?** *by Pete Loucks* <https://i2insights.org/2016/11/08/collaboration-difference-busyness/>
8. **Four things everyone should know about ignorance** *by Michael Smithson* <https://i2insights.org/2016/11/01/four-things-about-ignorance/>
9. **Problem framing and co-creation** *by Graeme Nicholas* <https://i2insights.org/2016/10/27/problem-framing-and-co-creation/>

FEATURED JOURNAL

Group Decision and Negotiation

Group decision and negotiation processes are "complex and self-organizing involving multiplayer, multicriteria, ill-structured, evolving, dynamic problems. Approaches include (1) computer group decision and negotiation support systems (GDNSS), (2) artificial intelligence and management science, (3) applied game theory, experiment and social choice, and (4) cognitive/behavioral sciences in group decision and negotiation."

"Group decision and negotiation refers to the whole process or flow of activities relevant to group decision and negotiation, not only to the final choice itself, e.g. scanning, communication and information sharing, problem definition (representation) and evolution, alternative generation and social-emotional interaction. Descriptive, normative and design viewpoints are of interest. Thus, Group Decision and Negotiation deals broadly with relation and coordination in group processes. Areas of application include intraorganizational coordination (as in operations management and integrated design, production, finance, marketing and distribution, e.g., as in new products and global coordination), computer supported collaborative work, labor-management negotiations, interorganizational negotiations, (business, government and nonprofits - e.g. joint ventures), international (intercultural) negotiations, environmental negotiations, etc... The journal also covers developments of software for group decision and negotiation."

The journal publishes theoretical and empirical research, and real-world applications and case studies. Although not all of the articles are relevant to I2S, some present useful tools.

The journal is published "in cooperation with the Institute for Operations Research and the Management Sciences and its Section on Group Decision and Negotiation."

- Website: <http://link.springer.com/journal/10726>

Additional journals can be found at: <http://i2s.anu.edu.au/resources/journals>

FEATURED ASSOCIATION AND NETWORK

Society for Decision Making Under Deep Uncertainty (DMDU)

The *Society for Decision Making Under Deep Uncertainty* (DMDU) is "a multi-disciplinary association of professionals working to improve processes, methods, and tools for decision making under deep uncertainty, facilitate their use in practice, and foster effective and responsible decision making in our rapidly changing world... Deep uncertainty exists when parties to a decision do not know, or cannot agree on, the system model that relates action to consequences, the probability distributions to place over the inputs to these models, which consequences to consider and their relative importance. Deep uncertainty often involves decisions that are made over time in dynamic interaction with [a] system".

Goals of the DMDU are:

- "Research: Improve understanding and advance the capabilities of theory, methods, and tools for decision making under deep uncertainty.
- Practice: Help public and private sector organizations make better decisions by encouraging widespread practical application of the knowledge, methods, and tools for decision making under deep uncertainty.
- Education and Training: Provide training and training materials for scholars, practitioners, decision makers, and the public.
- Dissemination: Disseminate knowledge about decision making under deep uncertainty methods and tools, and their applications in practice.
- Career Development: Help members to pursue and develop their careers in decision making under deep uncertainty.
- Community: Provide a community and a professional network where members can share ideas, foster collaboration, benefit from support and feedback, and be inspired and energized through interactions with their peers".

The society provides a blog on the topic of uncertainty and a list of publications that may be of interest to members.

A founding date is not provided.

- **Website:** <http://www.deepuncertainty.org/>

European Implementation Collaborative (EIC)

The *European Implementation Collaborative* (EIC) draws together a "broad range of individual and organisational stakeholders in the field of implementation [and seeks to] build links and exchange learning about implementation science and practice within Europe". More specifically, the EIC "aims to improve the life of children, youth, adults, and families in Europe through effective evidence-informed implementation of evidence-informed human services".

Objectives of the EIC are to:

- "Promote greater awareness and understanding of implementation science and practice within and across European welfare and human service systems.

- Create an infrastructure for cross-European exchange of the 'know what', 'know why', and 'know how' of implementation practice and science.
- Identify and develop a common Europe-specific knowledge base and language on implementation in order to define the specific contextual factors of the European human service delivery systems that encompass implementation work in European countries.
- Link the individuals and groups working in this area in Europe back to the growing global community of implementation science and practice and contribute a European perspective to the wider development of the field."

The EIC provides a set of resources on implementation, facilitates connections between members and implementation organisations generally, and publishes a newsletter.

It was established in 2015.

- **Website:** <http://www.implementation.eu/>
- **Video:** This network was described by Bianca Albers in a plenary session video (her talk starts at the 11.30 minute mark); "Implementation science and practice networks: what they are, how they work" (via GigTV), at the 2016 Australasian Implementation Science conference:
 - <http://webcast.gigtv.com.au/Mediasite/Play/95c1bd5ed4004856a9831598ec4fbd6b1d?catalog=93cb229e-4d45-4d9a-a058-f136471961aa>

Additional professional associations and networks can be found at:
http://i2s.anu.edu.au/resources/associations_networks

FEATURED CONFERENCES

Science of Team Science (SciTS) 2017 Conference: Building the Knowledge Base for Effective Team Science

"Science of Team Science (SciTS) is a rapidly growing cross-disciplinary field of study that aims to build an evidence-base and to develop translational applications to help maximize the efficiency and effectiveness of team-based research".

"The 2017 conference will review the current state of knowledge in the SciTS field, highlight applications for enhancing team science, and discuss future directions for advancing SciTS to improve the global scientific enterprise. Thought leaders in the SciTS field, scientists engaged in team-based research, institutional leaders who promote collaborative research, policymakers, and federal agency representatives will be in attendance."

Abstract submission deadline is March 27, 2017.

The conference will be held in Clearwater Beach, Florida, United States of America on 12-14 June 2017.

- For further details, see:
 - <http://www.scienceofteamspace.org/>

4th Biennial Global Implementation Conference (GIC 2017): Expanding Implementation Perspectives - Engaging Systems

"GIC 2017 focuses on advancements in our understanding of how systems can support evidence implementation, specifically, integrated strategies for working within systems, how best to resolve systemic issues and barriers, system support resources, and policies and regulations for effective implementation. GIC 2017 aims to engage a global audience of about 600 delegates representing over 20 countries with innovative perspectives on the effective application of implementation principles in practice and the role of systems in implementation and sustainability."

The focus of the conference is on the following implementation themes:

- "Systems, Partner, or Community Engagement
- Policy Considerations for Systems-Building
- Use of Tools and Frameworks in Applied Implementation Practice (including system-wide scale up)
- Implementation Research
- Measurement Systems and Rapid Results (e.g., Plan, Do, Study, Act; Continuous Quality Improvement; Developmental Evaluation)
- Regional, National, and Global Collaboration and Large-Scale Networking
- Workforce/Professional Development for Implementation Capacity Building."

The conference will be held in Toronto, Canada, from 20-21 June 2017.

- For further details, see:
 - <http://gic.globalimplementation.org/>

Other Upcoming Conferences

Conferences which have not been listed in previous newsletters are marked [NEW].

Interdisciplinarity, Transdisciplinarity and Action Research Methods

- 12-16 June 2017, Action Research Network of the Americas 2017 Conference, Cartagena, Colombia (<http://www.arnaconnect.org/conferences/2017-arna-conference>)
- [NEW] 11-15 September 2017, International Transdisciplinarity Conference 2017: Transdisciplinary Research and Teaching - Intercultural Endeavours, Luneburg, Germany (<http://www.transdisciplinarity.ch/en/td-net/Konferenzen/ITD-2017.html>)
- 3-7 June 2018, The Academy of Transdisciplinary Learning and Advanced Studies (ATLAS): Being Transdisciplinary, Cluj-Napoca, Romania (<http://www.atlas-conference.org/>)

Systems, Modelling and Simulation

- 11-14 December 2016, Winter Simulation Conference: Simulating Complex Service Systems, Washington D.C., United States of America (<http://meetings2.informs.org/wordpress/wintersim2016/>)
- 13-14 December 2016, 7th French Conference on Complex Systems Design & Management (CSD&M), Paris, France (<http://www.2016.csdm.fr/>)
- 4-7 January 2017, 50th Hawaii International Conference on System Sciences (HICSS 50), Waikoloa, Hawai'i, United States of America (<http://www.hicss.org/>)

- 5-6 January 2017, World Complexity Science Academy VII Conference: Governing Turbulence: Risk and Opportunities in the Complexity Age, Rio de Janeiro, Brazil (<http://www.wcsaglobal.org/call-for-7th-conference/>)
- 20-23 January 2017, 8th International Conference on Computer Modelling and Simulation, Canberra, Australia (<http://www.iccms.org/>)
- 19-22 February 2017, 2nd Asia-Pacific Region System Dynamics Conference: Charting a Path to a Humane and Sustainable Future - Asia's Leadership Role, Singapore (<http://apconference.systemdynamics.org/>)
- 23-26 May 2017, 31st European Conference on Modelling and Simulation (ECMS 2016), Budapest, Hungary (<http://www.scs-europe.net/conf/ecms2017/>)
- [NEW] 6-7 April 2017, Young to OR (Operational Research) 20 Biennial Conference, London, United Kingdom (<http://www.theorsociety.com/Pages/Conferences/YOR20/YOR20.aspx>)
- 23-26 April 2017, Symposium on Theory of Modeling and Simulation, Virginia Beach, Virginia, United States of America (<http://tms-devs.org/>)
- [NEW] 11-12 May 2017, 22nd Coalition Theory Network Workshop, Glasgow, United Kingdom (www.coalitiontheory.net/content/22nd-coalition-theory-network-workshop)
- 30 May - 2 June 2017, 10th Chaotic Modeling and Simulation International Conference (CHAOS), Barcelona, Spain (<http://www.cmsim.org/chaos2017.html>)
- 18-21 June 2017, 12th International Conference on Systems of Systems Engineering (SoSE): Internet of Things as System of System, Waikoloa, Hawaii (<http://2017.sosengineering.org/>)
- 20-24 June 2017, 14th International Conference of Sociocybernetics: Sociocybernetics, innovation and social conflicts, Medellin, Columbia (https://sociocybernetics.wordpress.com/icsc2017_cfp_v1/)
- 9-12 July 2017, 25th Conference on User Modeling, Adaptation and Personalization, Bratislava, Slovakia (<http://www.um.org/umap2017/>)
- 15-20 July 2017, 27th Annual International Council on Systems Engineering (INCOSE) Symposium: Unlocking Innovation through Systems Engineering, Adelaide, Australia (<http://www.incose.org/symp2017/home/when-where>)
- 16-20 July 2017, 35th International Conference of the System Dynamics Society: 60th Anniversary Celebration, Cambridge, Massachusetts, United States of America (<http://conference.systemdynamics.org/>)
- 17-21 July 2017, 21st Conference of the International Federation of Operational Research Societies, Quebec City, Canada (<http://ifors2017.ca/>)
- 7-10 August 2017, Conference of the American Society for Cybernetics: Resilience and Ethics - Implications, Salem, Massachusetts, United States of America (<http://asc-cybernetics.org/2017-2/>)
- [NEW] 12-14 September 2017, Operational Research (OR) 59 Annual Conference, Loughborough, United Kingdom (<http://www.theorsociety.com/Pages/Conferences/OR59/OR59.aspx>)
- [NEW] 17-22 September 2017, Conference on Complex Systems, Cancun, Mexico (<http://ccs17.unam.mx/>)
- [NEW] 3-8 December 2017, 22nd Modelling and Simulation Society of Australia and New Zealand Congress: Managing Cumulative Risks through Model-based Processes, Tasmania, Australia, (<http://www.mssanz.org.au/modsim2017/index.html>)

Team Science and Project Management

- 12-14 June 2017, Science of Team Science 2017 Conference, Clearwater Beach, Florida, United States of America (<http://www.scienceofteamspace.org/>)

- 20-22 July 2017, 11th Annual INGRoup Conference, Saint Louis, Missouri, United States of America (<http://www.ingroup.net/conference.html>)

Uncertainty, Risk and Decision Making

- 11-15 December 2016, Society for Risk Analysis (SRA) Annual Meeting, San Diego, California, United States of America (<http://www.sra.org/events/sra-2016-annual-meeting>)
- [NEW] 19-21 June 2017, Society for Risk Analysis Europe (SRA-E): Resilience and Adaptation in a Risky World, Lisbon, Portugal (<https://sraelisbon2017.wordpress.com/>)
- 20-23 June 2017, Bi-annual International Conference on Naturalistic Decision Making (NDM13), Bath, United Kingdom (http://www.bath.ac.uk/management/news_events/events/naturalistic-decision-making/index.html)
- 8-10 November 2017, 2nd International Conference on Anticipation, London, United Kingdom (http://www.projectanticipation.org/index.php?option=com_content&view=article&id=97&Itemid=612)

Bridging the Gap from Research to Policy and Practice

- 14-15 December 2016, 9th Annual Conference on the Science of Dissemination and Implementation: Mapping the Complexity and Dynamism of the Field, Washington D.C., United States of America (<http://diconference.academyhealth.org/home?navItemNumber=13668>)
- [NEW] 17-18 May 2017, Canadian Knowledge Mobilization Forum, Ottawa/Gatineau Canada (<http://www.knowledgemobilization.net/forum/>)
- 20-21 June 2017, Global Implementation Conference: Expanding Implementation Perspectives - Engaging Systems, Toronto, Canada (<http://gic.globalimplementation.org/>)

Other (including Sustainability Science)

- 6-9 December 2016, 30th Australian and New Zealand Academy of Management (ANZAM) Conference: Under New Management - Innovating for Sustainable and Just Futures, Brisbane, Australia (<http://anzam2016.com/>)
- 8-10 May 2017, 8th Annual National Organization of Research Development Professionals (NORDP) Research Development Conference, Orlando, USA (<http://www.nordp.org/annual-conference>)
- 27 November - 1 December 2017, XXII International Conference of the Society for Human Ecology: Envisioning pathways to just and sustainable futures - Celebrating diversity, pursuing integration, and developing liveable communities, Los Baños, Philippines (<http://societyforhumanecology.org/>)

ABOUT I2S NEWS

The aim of this newsletter is to provide regular (bi-monthly) updates about new resources added to the Integration and Implementation Sciences website (<http://i2s.anu.edu.au/resources>). These resources are useful for researchers interested in Integration and Implementation Sciences (I2S), which underpins the investigation and tackling of complex real world problems, by:

- Synthesizing knowledge from different disciplines and stakeholders,
- Understanding and managing diverse unknowns, and
- Providing integrated research support for policy and practice change.

In general, each issue features tools (concepts and methods), case studies and/or approaches relevant to I2S - either a useful compilation or one or more examples of note. We also provide information about

journals, professional associations & networks, professional development courses and conferences where researchers can learn from others, report their findings and interact with like-minded peers. The newsletter also reports on discussions in the LinkedIn group "Global Network for Research Integration and Implementation": <http://www.linkedin.com/groups/Global-Network-Research-Integration-Implementation-4888295> and new entries on the Integration and Implementation Insights blog: <http://I2Insights.org>.

I2S News is archived at: <http://i2s.anu.edu.au/what-i2s/i2s-publications/i2s-news>.

Useful links:

- I2S website: <http://i2s.anu.edu.au>
- I2S on YouTube: <https://www.youtube.com/user/i2sTalks>
- LinkedIn group "Global Network for Research Integration and Implementation": <http://www.linkedin.com/groups/Global-Network-Research-Integration-Implementation-4888295>
- I2Insights blog: <http://I2Insights.org>

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