



Collective Intelligence and Online Deliberation Platforms for Citizen Engagement and Social Innovation.

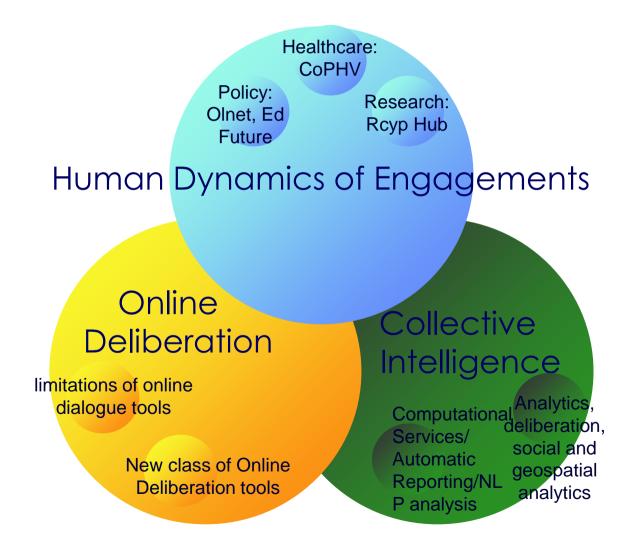
Anna De Liddo

PhD, Research Scientist



Knowledge Media Institute The Open University, Milton Keynes, MK7 6AA, UK

Contested Collective Intelligence (Argumentation-based Collective Intelligence)



Social Media, Community Ideation and Question-Answering is proliferating on the Web



























debategraph



















Setting the Problem

These tools are increasingly used to support online debate and facilitate citizens' engagement in policy and decision-making. These are fundamentally chronological views which offer:

no insight into the logical structure of the ideas, such as the coherence or evidential basis of an argument.

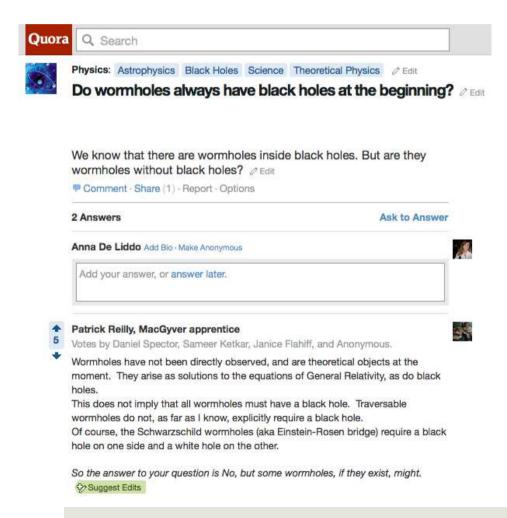


LINK to PETITION:

http://www.change.org/en-GB/petitions/stand-against-russia-s-brutal-crackdown-on-gay-rights-urge-winter-olympics-2014-sponsors-to-condemn-anti-gay-laws

Setting the Problem

No ways to assess the quality of any given idea



LINK to QUORA:

http://www.quora.com/Physics/Do-wormholes-always-have-black-holes-at-the-beginning#answers

Setting the Problem

- No tools to identify were ideas contrast, where people disagree and why
- No mechanisms to identify, contribute and discuss the evidence for an idea

This hampers both:

- quality of users' participation and
- effective assessment of the state of the debate.

A new class of Collective Intelligence and Online Deliberation Platforms

■ That make the structure and status of a dialogue or debate visible

Coming from research on Argumentation and CSAV, these tools make visually explicit users' lines of reasoning and (dis)agreements.

- Deliberatorium
- Debategraph
- Cohere
- □ CoPe it!
- Problem&Proposals
- YourView





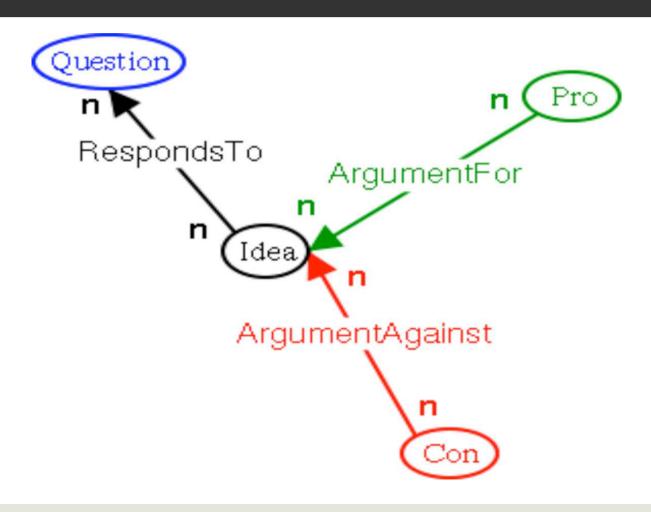




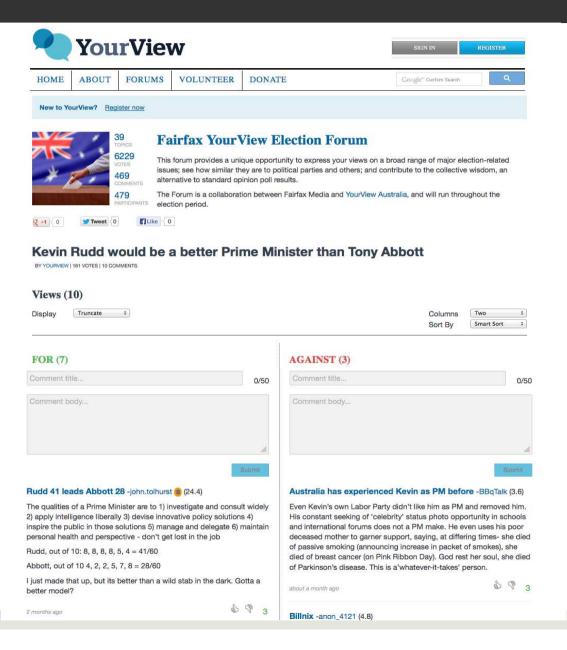




A Common Data Model: IBIS



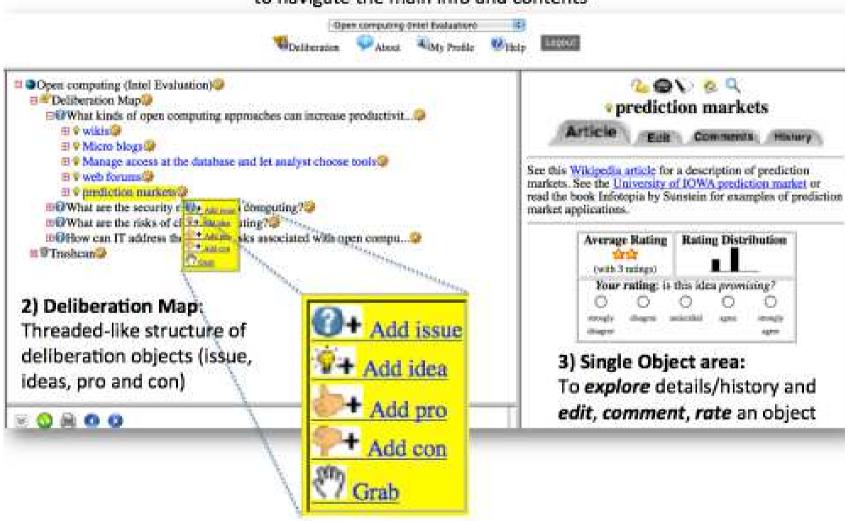
YourView and Problem&Proposal



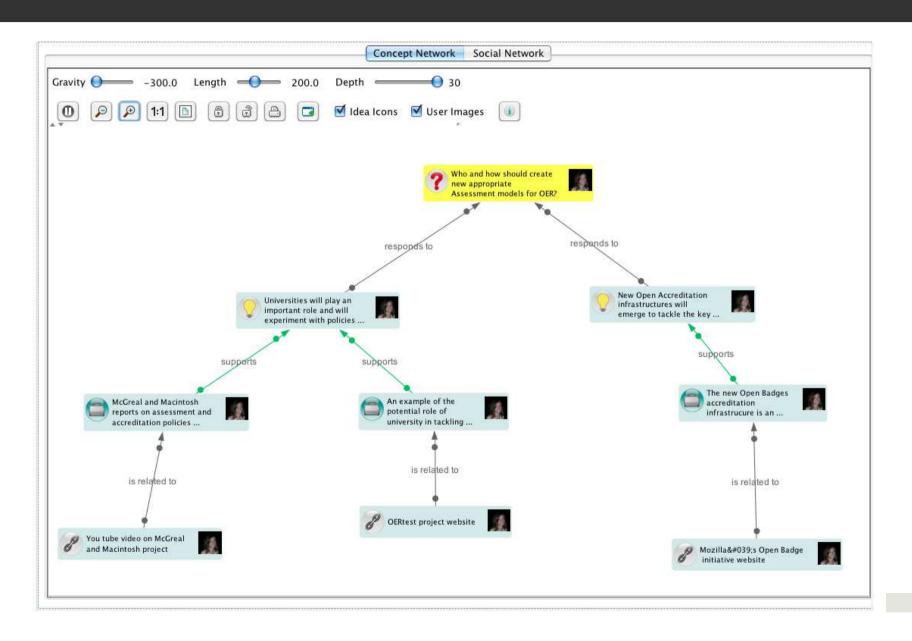
MIT Deliberatorium

1) Menu Bar:

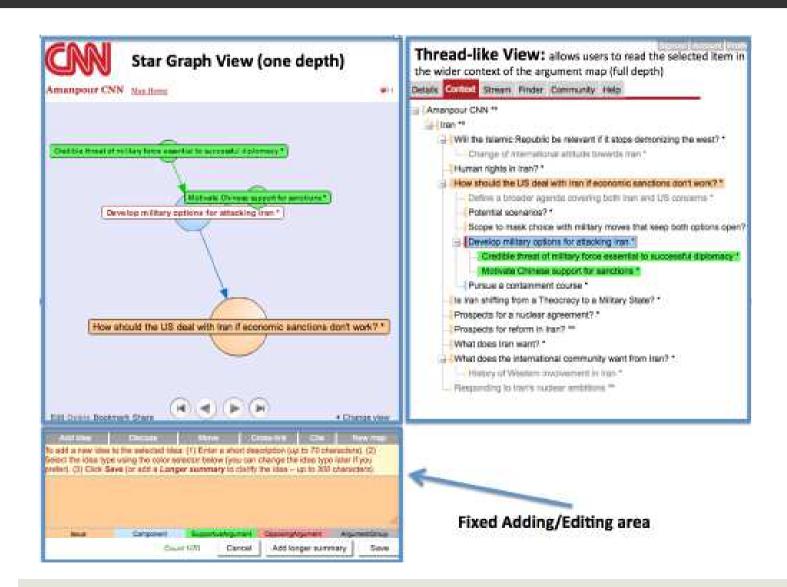
to navigate the main info and contents



Cohere



Debategraph and CoPe_it!



The Evidence Hub

- a tool to pool the community collective intelligence on what is evidence for an idea.
- an infrastructure for debating and building evidencebased knowledge and practice.
- a filter onto other websites a map that **distills** the most important issues, ideas and **evidence from the noise**

Evidence Hub Website:

http://evidence-hub.net/

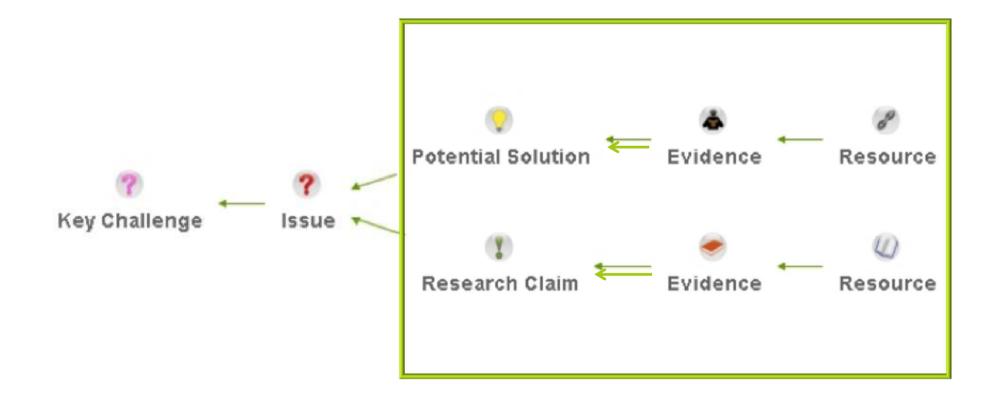
The Discourse elements



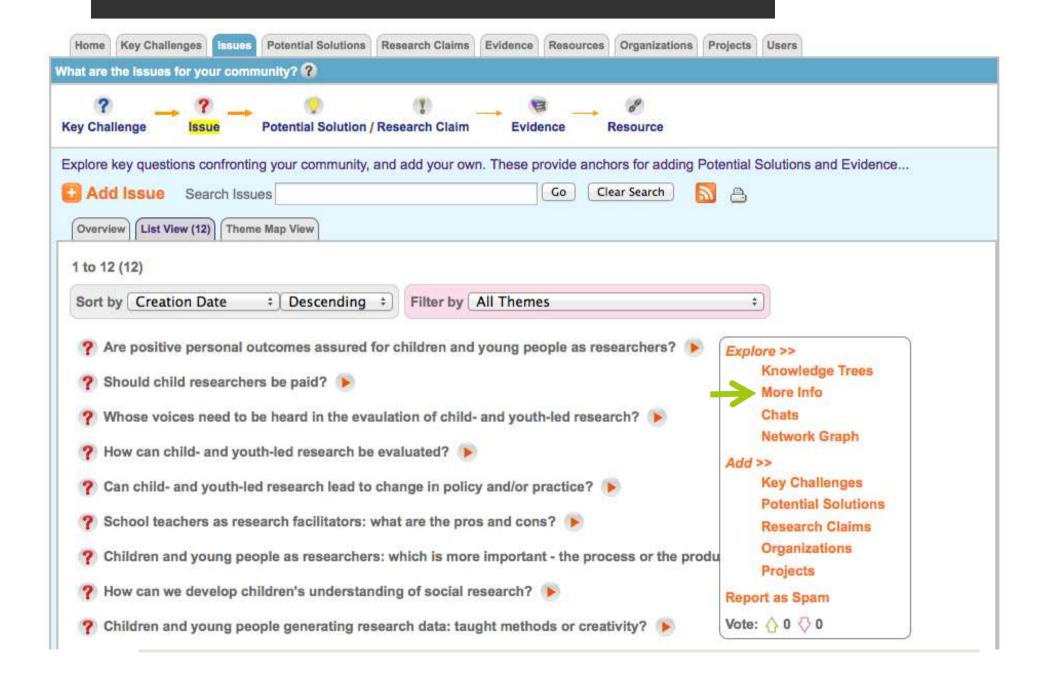
The Discourse elements



The Discourse elements



Building Blocks of a Hub



More Info – Widget View



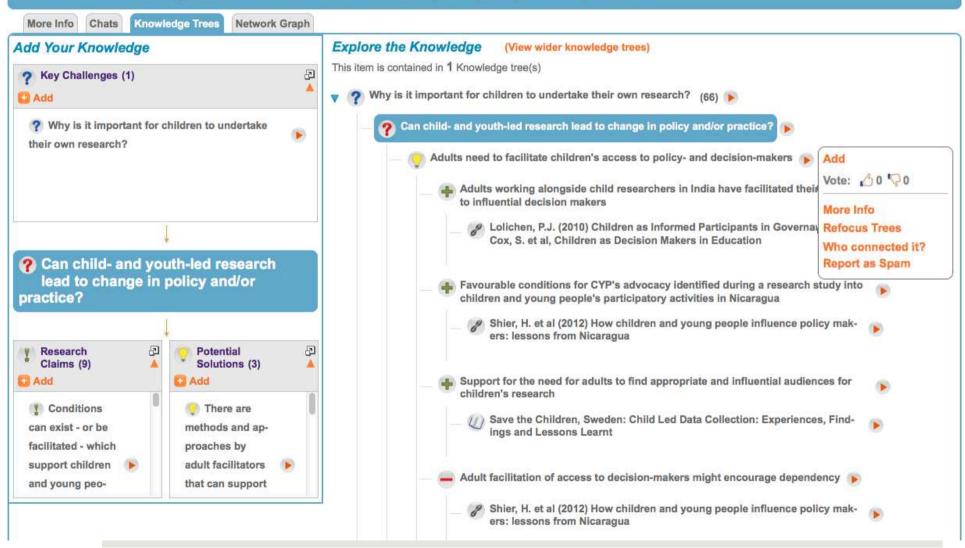
Evidence Hub Website:

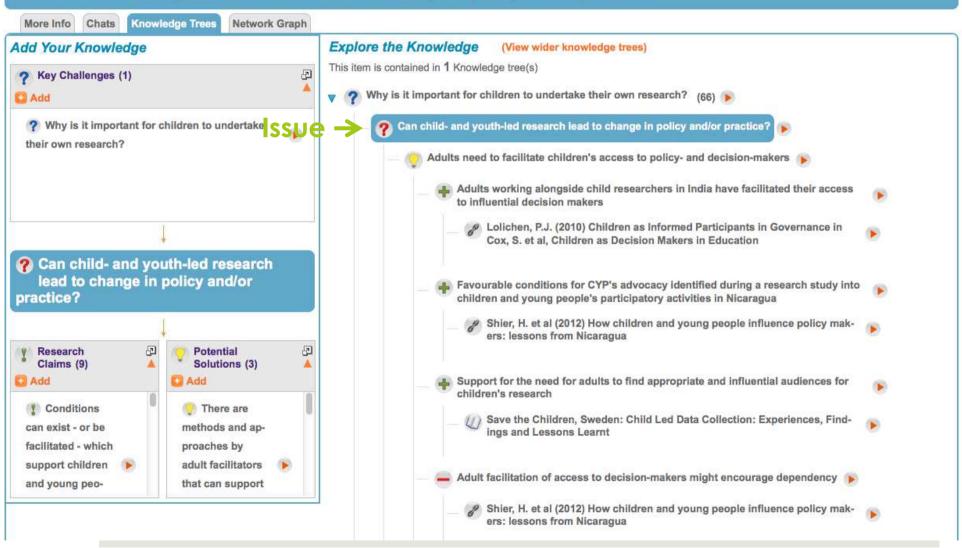
http://evidence-hub.net/

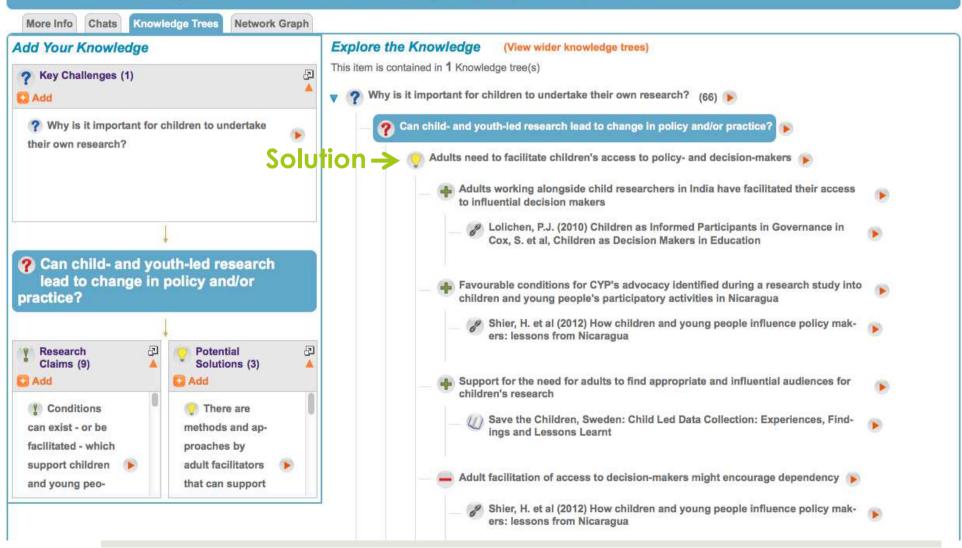
Chat View Informal Conversations

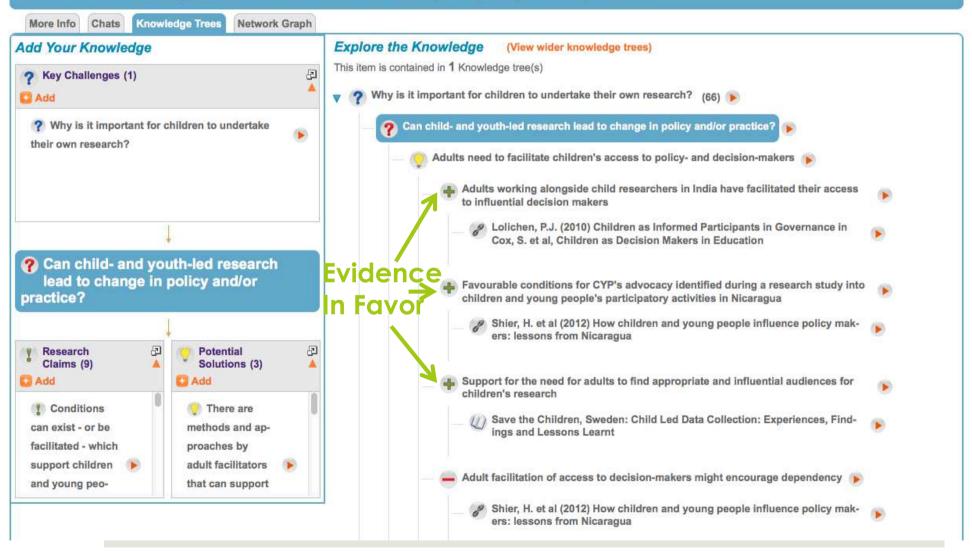
★ ⊜ Half of new mothers being given breastfeeding advice which is not good enough

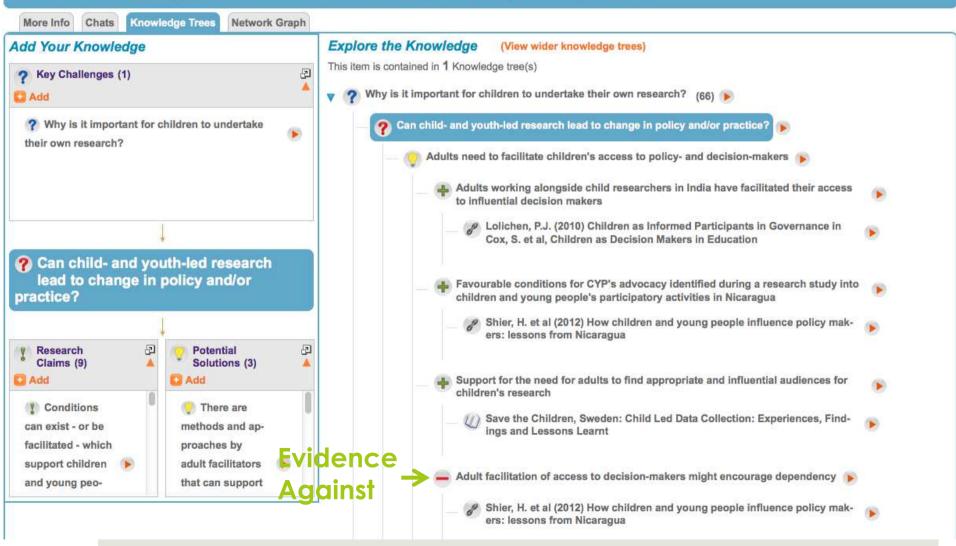






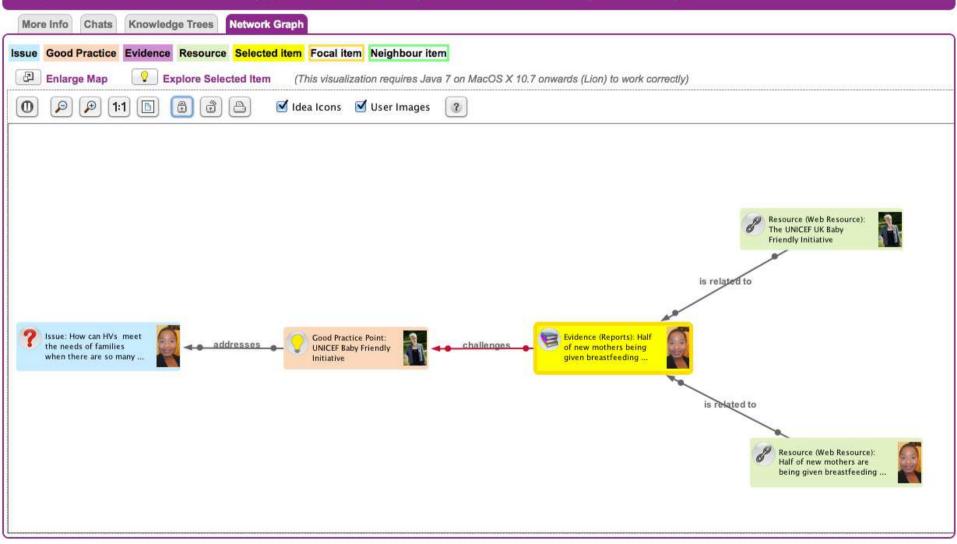




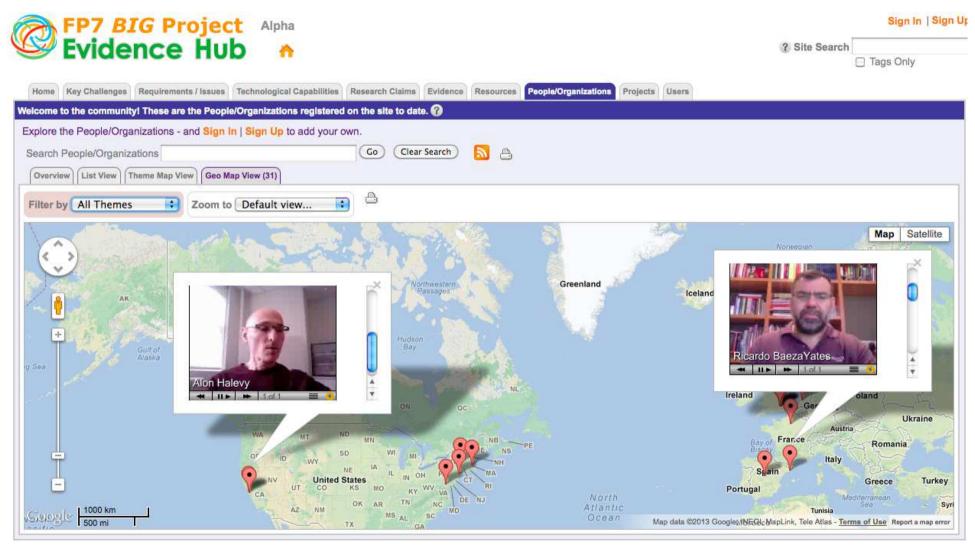


Network graph

♠ ⑤ Half of new mothers being given breastfeeding advice which is not good enough



Geodeliberation



Evidence Hub Website: http://evidence-hub.net/

Discourse Analytics

Compared Thinking activities

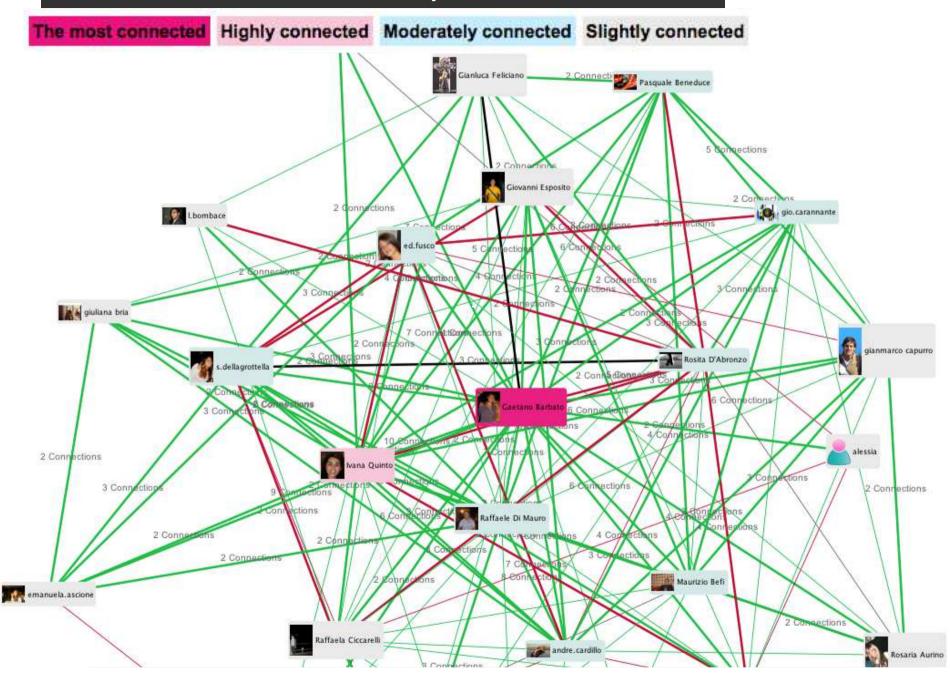


Information Broker

Information Broker



Social Analytics



In Summary: What is a Hub?

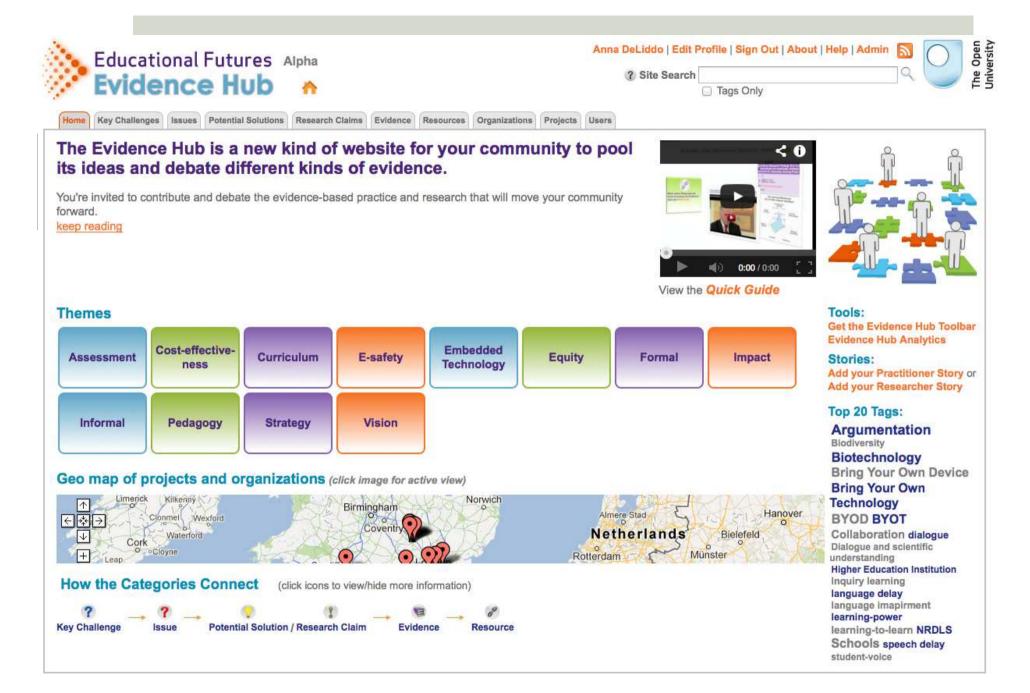
- The Evidence Hub is a **contested collective intelligence tool** for communities to gather and debate evidence for ideas and solutions to specific community issues.
- By aggregating and connecting single contributions the Evidence Hub provides a collective picture of what is the evidence for different ideas
- This collective picture can be explored in form of a simple textual interface (as list of organizations, claims, evidences, issues, resources) or in a more visual way as a knowledge tree, or a network map

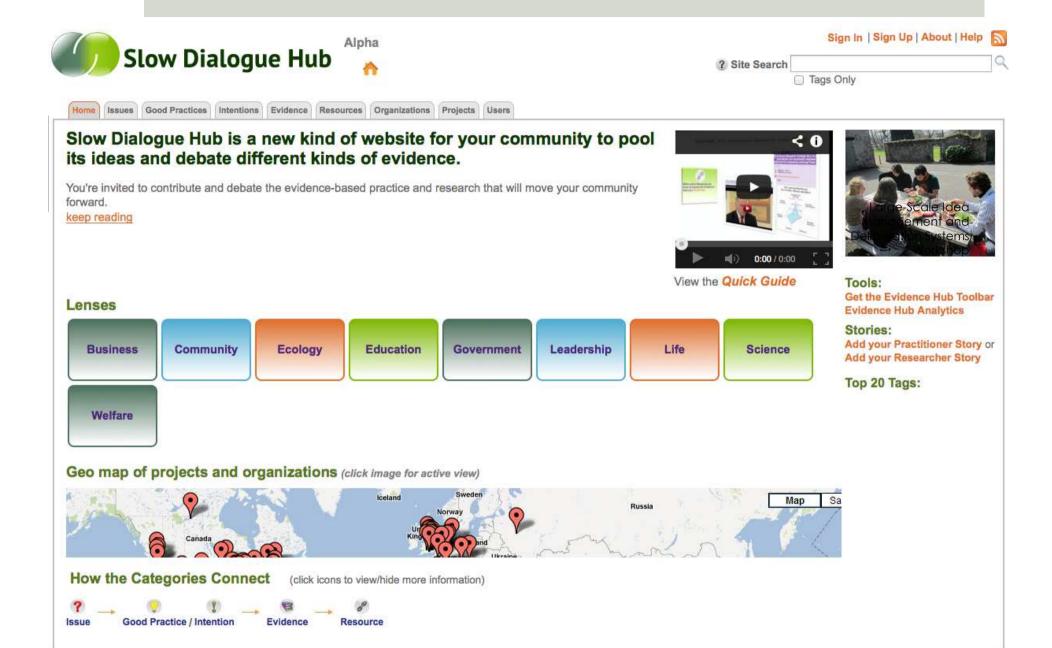
In Summary

- The system also allows users to easily add evidence or present counter-evidence to other people's claims, thus triggering conversations and knowledge sharing between people who tackle similar issues.
- Visual analytics on this network allows grasping the social dynamics that are emerging from the debate (such as who are the key players and who is agreeing/disagreeing with who)
- Analytics on users activities eventually to provide contextual recommendations.

Users Engagement

- □ 14 Hubs communities
- Main Sectors: Healthcare and Education but also, sustainable development and academic research networks
- Contributors from 3-10 small community groups to 100-150 users community for bigger Hubs from grassroots local initiatives to higher national and international policy.
- Form hundreds to thousands user generated content.





1923		200	
2	Site	Searc	h
0.00	Oile	Ocaro	н.

Tags Only



Welcome to the HV Community Of Practice Evidence Hub

The Health Visitors Community of Practice Evidence hub is a **Burdett Trust for Nursing** funded project aimed at empowering the health visiting profession. Designed by the **Knowledge Media Institute** at the **Open University**, the website was formally launched to Health Visitors in October 2012 at the Mile End Hospital in London.

The Online Community of Practice is designed to meet the needs and demand for a reenergised health visiting allowing practitioners to drive innovation, spread best practices and raise the issues that confront the daily challenges of delivering effective health visiting services in the community.

The project has been rolled out to health visitors across London and Hertfordshire with the support of the Centre for Research in Primary and Community Care at the University of Hertfordshire, the Institute of Health Visiting, Hertfordshire Community NHS Trust and Barts NHS Trust to practitioners, practice mentor teachers, student health visitors and health visiting academics.



Watch our introduction movie



keep reading

Topics (click on a Topic and add your ideas)





Top 30 Tags:

Baby Friendly Baby-led weaning

bed sharing bed-sharing bonding breast feeding

breastfeeding

Breastfeeding advice Building Community Capacity

Chimat co sleeping CPCS Domestic Abuse Domestic Violence

Female Genital Mutilation FGM home visits

Infant and toddler feeding

jaundice nutrition obesity parenting programmes

post natal depression practice teachers

refugee families

Relationships in Health Visiting sharing bed with infant Sleep Solihuli

Using laptops in home visits

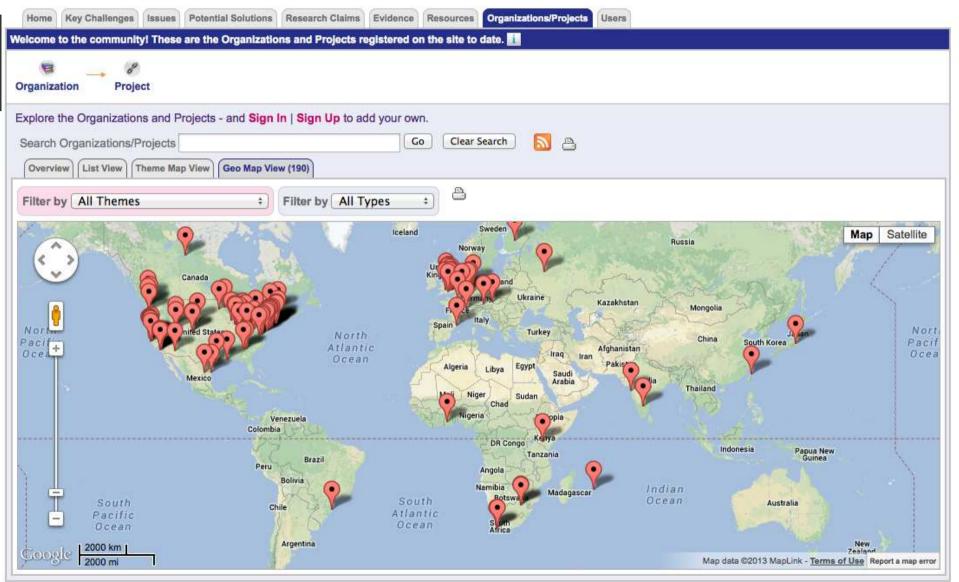
Tools

- Get our Evidence Hub Online Builder Tool
- Use our Quick form to add more than one category at once.



Sign	In	Sign	Up
------	----	------	----

Site Search		
	☐ Tags Only	



Challenges

a pervasive challenge for building CI platforms is balancing a critical tension between

- The need to structure and curate contributions from many people in order to maximise the signal-to-noiseratio and provide more advanced CI services
- versus permitting people to make contributions with very little useful indexing or structure

Challenges

- How to evaluate arguments? automatic (based on argument computation) vs community lead mechanisms (such as voting and reputation systems)
- How to cope with visual complexity (new search interface, focused and structured network searches, collective filtering, identifying argument structures)?
- How do we crowdsource Policy Deliberation? What is the right interface? What is the architecture of Participation?

Future Research: Architecture of Participation

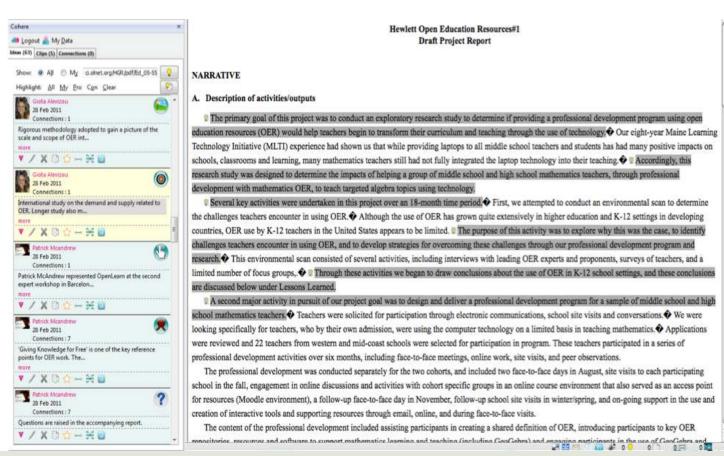
- □ Fragmenting users roles based on users skills and taste Who is good in doing what? How distribute moderation and knowledge distillation tasks on the base of different users profiles?
- Defining a deliberation process to crowdsource low entry contribution: What are the incremental steps of a collaborative deliberation process?

Facilitating content seeding

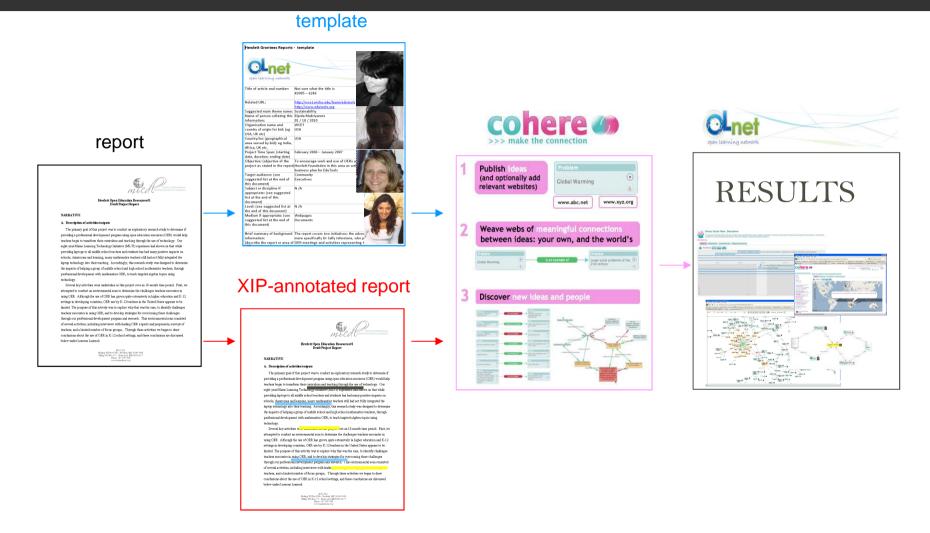
Web Annotation to support seeding

Evidence Hub bookmarklet to allow people to capture evidence by performing annotation of free web resource.

Allows users to highlight and annotate Web resources through an Evidence Hub bookmarklet



Combining Human and Machine Annotation: The Hewlett Grant Reports Project



De Liddo, A., Sándor, Á. and Buckingham Shum, S. (2012) Contested Collective Intelligence: Rationale, Technologies, and a Human-Machine Annotation Study, Computer Supported Cooperative Work (CSCW) Journal: Volume 21, Issue 4 (2012), Page 417-448

Future Research: Analytics and Added Value Services

- **Reporting System:** What is the state of the debate and how can we summarize the main issues, arguments, conflicts, resources etc?
- **Discourse analytics:** What had been said? What do we know and what we need to know?
- □ Geo-Deliberation Analytics: Who are the people close to me who think like me? What are the places where similar ideas to mine have been supported more? What are the places where the solution I proposed would fail, and why?

COLLECTIVE APPLIED INTELLIGENCE AND ANALYTICS FOR SOCIAL INNOVATION OPEN TOOLS VALIDATED IN LARGE-SCALE COMMUNITIES



Objective ICT-2013.5.5 Collective Awareness Platforms for Sustainability and Social Innovation

CATALYST focuses on Contested CI (Sensemaking and Ideation), which recognises the centrality of deliberation, argumentation and public debate. In order to understand and support the dynamics of multilingual social and deliberation networks, the project will look at:

- Human-assisted online tools to inexpensively harvest the vast amount of data and knowledge that develop in social media, and facilitate collective ideation, creativity and citizen engagement;
- Analytics to measure the quality of the collective intelligence dynamics back to the community to make the collaborative process significantly more effective.

CATALYST partners

- Open University
- MIT -Massachusetts Institute of Technology (in affiliation with the Zurich University)
- Imagination for People
- Sigma Orionis
- Euclid Network
- Ashoka
- Collaborating Centre on Sustainable Consumption and Production
- Purpose
- Wikitalia



Kick-off meeting 22-23 Oct 2013, Nice France

Mapping the UK 2015 Election Debate



EPSRC Project: Working with political scientist and media - displaying graphically the argumentative moves of the prime-ministerial candidates during the televised debates to enhance audience comprehension, engagement and confidence

Thanks for you time!

Anna De Liddo

email:

anna.deliddo@open.ac.uk

Home Page: http://kmi.open.ac.uk/people/member/anna-de-liddo

Evidence Hub Website: http://evidence-hub.net/

References

- De Liddo, A. and Buckingham Shum, S. (2013) Improving Online Deliberation with Argument Network Visualization, Workshop: Digital Cities 8 at 6th International Conference on Communities and Technologies, C&T 2013, Munich, Germany
- De Liddo, A. and Buckingham Shum, S. (2013) The Evidence Hub: Harnessing the Collective Intelligence of Communities to Build Evidence-Based Knowledge, Workshop: Large Scale Ideation and Deliberation at 6th International Conference on Communities and Technologies, Munich, Germany
- De Liddo, A., Sándor, Á. and Buckingham Shum, S. (2012) Contested Collective Intelligence: Rationale, Technologies, and a Human-Machine Annotation Study, Computer Supported Cooperative Work (CSCW) Journal: Volume 21, Issue 4 (2012), Page 417-448
- Buckingham Shum, Simon (2008). Cohere: Towards Web 2.0 Argumentation. In: Proc. COMMA'08: 2nd International Conference on Computational Models of Argument, 28-30 May 2008, Toulouse, France. Available at:http://oro.open.ac.uk/10421/
- De Liddo, Anna and Buckingham Shum, Simon (2010). Cohere: A prototype for contested collective intelligence. In: ACM Computer Supported Cooperative Work (CSCW 2010) Workshop: Collective Intelligence In Organizations Toward a Research Agenda, February 6-10, 2010, Savannah, Georgia, USA. Available at: http://oro.open.ac.uk/19554/
- Buckingham Shum, Simon and De Liddo, Anna (2010). Collective intelligence for OER sustainability. In: OpenED2010: Seventh Annual Open Education Conference, 2-4 Nov 2010, Barcelona, Spain. Available at: http://oro.open.ac.uk/23352/
- Buckingham Shum, Simon (2007). Hypermedia Discourse: Contesting networks of ideas and arguments. In: Priss, U.; Polovina, S. and Hill, R. eds. Conceptual Structures: Knowledge Architectures for Smart Applications. Berlin: Springer, pp. 29–44.