

Synergy Forum: Phase 2 concept

concept design – © Joe Ravetz

implementation – Hedtek Ltd

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phase 1 prototype on –

<http://synergy-demo.hedtek.com/>

INTRODUCTION

The Synergy Forum

is a new social technology for joined up thinking. It is designed for discussions on complex problems, using futures and foresight methods, where creative collaboration and 'synergy' is the way forward.

Faced with a challenge or problem, often the first thing we say is - 'let's have a meeting'. But we have all been in many meetings which seem to go round in circles, dominated by a few voices, spinning off at tangents, with key people missing, while time and expertise is wasted. We could do better – and in a world faced with huge challenges, local and global, we need to do better.

The Synergy Forum provides a virtual space for discussion, not to replace the human factor, but to extend it. It helps with foresight, visioning, strategy mapping, policy design, organization change, conflict mediation and others.

At the core is a social media and visualization concept, which helps to understand complex issues, explore opportunities and develop collaborations (i.e. synergies').

When these activities take place across larger areas or wider communities, or try to work on more complex multi-layer challenges, then this kind of active knowledge management is even more essential.



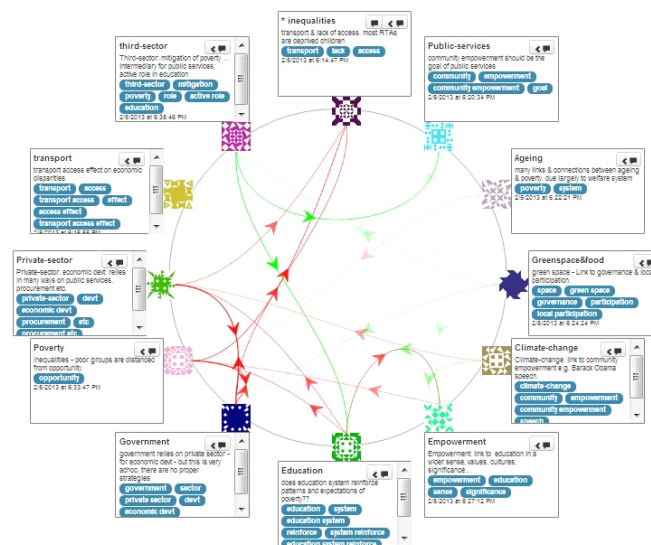
The technology concept works on a ‘folksonomy’ principle (Halpin et al 2007: Lohmann and Diaz, 2012). Rather than any pre-conceived definitions or categories, the combined thinking of a group or network is what gives structure and significance to ideas, problems, questions or propositions. The normal way of posting on a list or blog with semantic tags, is here extended to a landscape with any number of parallel lists, each linked by theme and/or content. The visualization and mapping of this landscape is then arranged around the network formed by the tags and links.

PHASE 1 VERSION

Is a proof of concept prototype, operating but not yet fully secure or functional. Its main aim is to demonstrate potential and test the functions with a pilot user community. This version has been funded by the Engineering & Physical Science Research Council through two programmes, the SUE2 and KTA.

The Synergy Forum Phase 1 creates a round table meeting in virtual space, with the circular image right in the centre. We find that up to 12 people is a practical limit for fully interactive discussion: more than that, then a new table can be started. This doesn’t replace the human factor, but there are added benefits: it tracks agreements and synergies: it’s more inclusive of quieter voices: media of all kinds can be attached: and people can join at different times and places. The system then tracks who is agreeing / disagreeing with whom: or who is in ‘synergy’ (i.e. ‘likeness), on what kind of issues, or which questions or proposals. A Forum is like a larger community of users, and can have any number of Round Tables, each seating up to 12 users. If more want to participate, then new Round Tables can be started.

Figure 1: phase 1 version, typical round table view



PHASE 2 CONCEPT

Context

The world is now full of information management systems. But there is a widening gap between formal and informal kinds of information and/or knowledge. Formal knowledge is like online booking a ticket, where fields have to be filled and the process goes in fixed steps. Informal knowledge can be seen in blog posts, facebook pages or youtube media, where individuals perform or sound off as they wish.

This is all fine, but looking at the Grand Challenges (and lesser ones) we clearly need better ways of making the links. Foresight is one example of attempts to make the links, where the 'science' or 'evidence' is studied in detail, and then debated with the social 'perspectives' or 'values' at length.

The Synergy Forum aims to contribute in this kind of space. Different views and experiences and perspectives can be placed, and patterns of cause-effect or meaning can be built up. The visualization helps to think in whole systems rather than the parts: and helps to see other points of view rather than just promoting one's own.

The end goal of all this is not only to map discussions, but to use the mappings as an essential catalyst for synergistic governance (Ravetz 2012). At present we live in cities which are fragmented, contradictory, social divided, ecologically damaging, economically vulnerable and so on. A synergistic governance will look for synergies and creative collaborations between stakeholders: between social / economic / cultural / ecological factors: and between upstream causes to downstream effects. To do this at present is often very difficult, so we need the best available technologies to help. The Synergy Forum aims to make a contribution.

Main aims and objectives

The main aim of the Synergy Forum 2 program is to design a more flexible system, which can respond better to the flow of ideas and discussion, and respond better to creative thinking on opportunities and actions. There are two main modes – mapping and design:

- a) In the 'mapping' mode (divergent thinking): the focus is on mapping of free flowing discussion: visualization & analysis of a complex issue with multiple layers or sub-topics:
- b) In the 'design' mode (emergent / convergent thinking): with focus on new synergies, creative collaborations, strategy and action planning.

Overall system structure

The system structure concept is here in outline. On the left, primary inputs take place with standard blog post arrangements. Users provide ID, the system is moderated, and the inputs are facilitated.

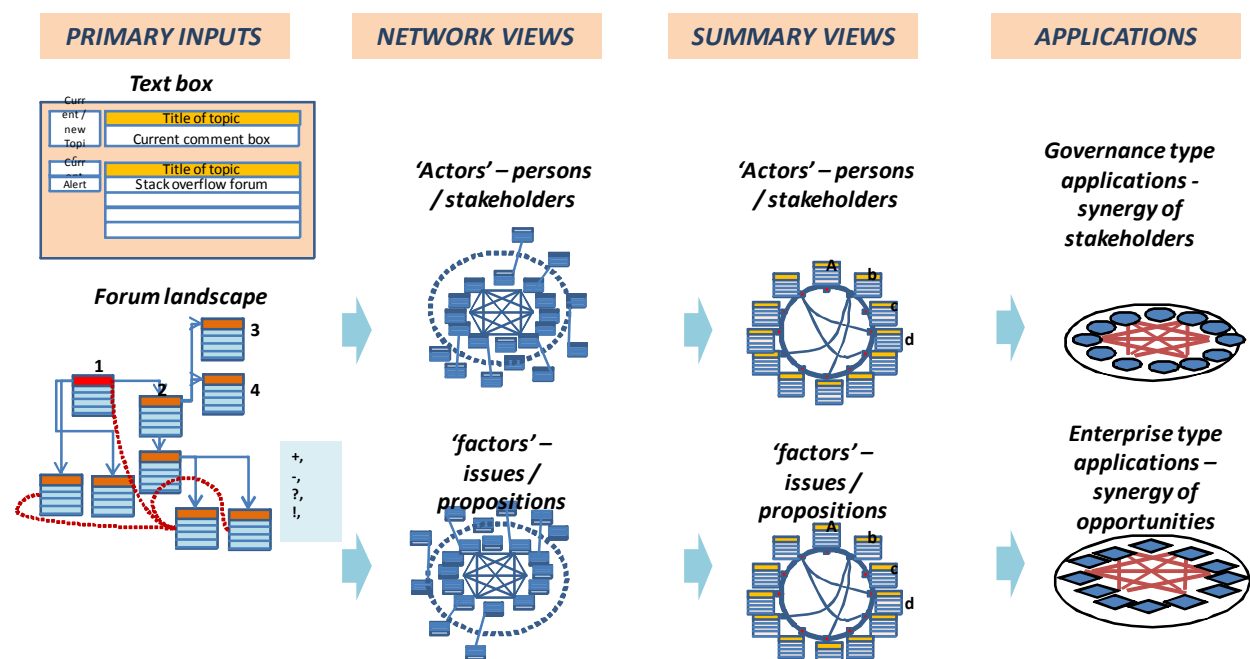
The innovation is where several or more stacks are shown linked in parallel. This reflects the reality of a discussion where different threads or sub-themes are followed by different people at various times.

Then the system converts the multiple stacks to a network view, i.e. where the arrangement is rearranged and visualized as a dynamic network, with a core of strong links and a periphery of weak links. This can work either for ‘actors’ (i.e. persons / stakeholders), or for ‘factors’ (i.e. other issues, themes, problems, propositions etc).

A ‘summary view’ converts the network mapping (which can get complex and messy), into a simple round table arrangement. This is very suitable for actors, who may be sitting around the table in physical space. It also works for ‘factors’ if there are multiple inter-connections between themes, issues, problems etc.

Finally on the right – all this aims towards applications, as above. Governance type applications focus on the ‘synergy of stakeholders’, with a person centred view on potential collaborations, shared learning etc. Enterprise type applications focus more on the ‘synergy of opportunities’, with links to be explored between themes, issues, problems or other kinds of factors.

Figure 2: phase 2 system overview

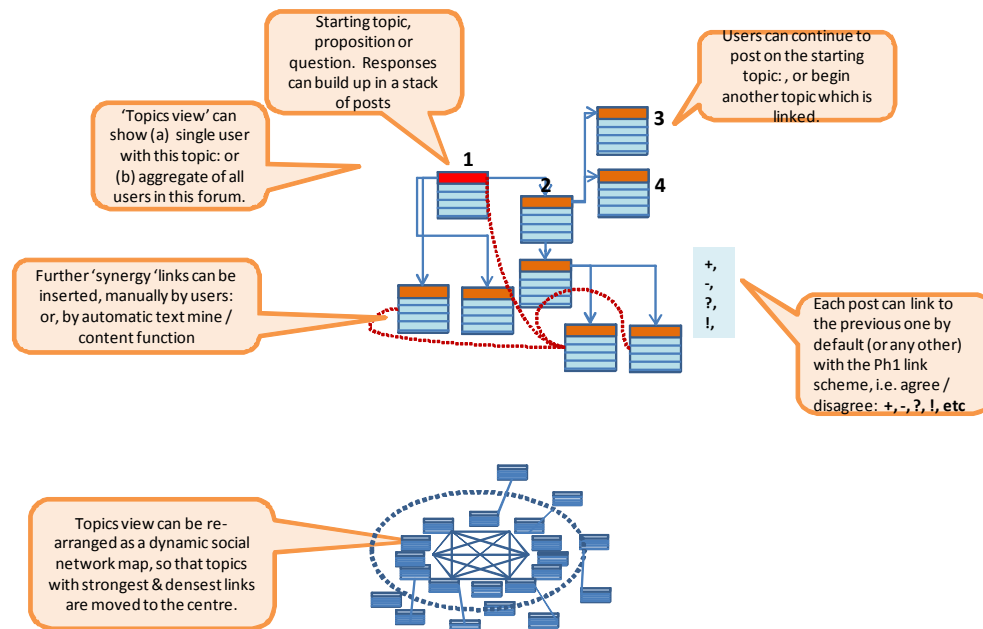


The system in use:

The system input is centred on a ‘discussion landscape’. This uses standard blog post ‘stack overflow’ arrangements, starting with the main topic, i.e. proposition, issue, challenge or question. Then it enables users to branch off with a sub-topic at any points, which starts a parallel thread. Other users can contribute to any sub-topic. Just as users can mark up a flip chart in a live workshop, links of various kinds can be drawn. This will generate further layers of significance and meaning through the course of a discussion.

There is also the possibility for automatic links to be drawn by the system, based on text mining and semantic inter-connections. Research will look at the balance between manual and machine inputs in terms of user interface and functionality

Figure 3: phase 2 system in use



Summary of inputs and outputs

Overall, the system aims to provide a diversity of functions through several channels for input and output. Input channels include:

- Live discussions and workshops: either with expert rapporteur, or with users on laptops
- Virtual users, either in real time, or asynchronous
- Social media inputs

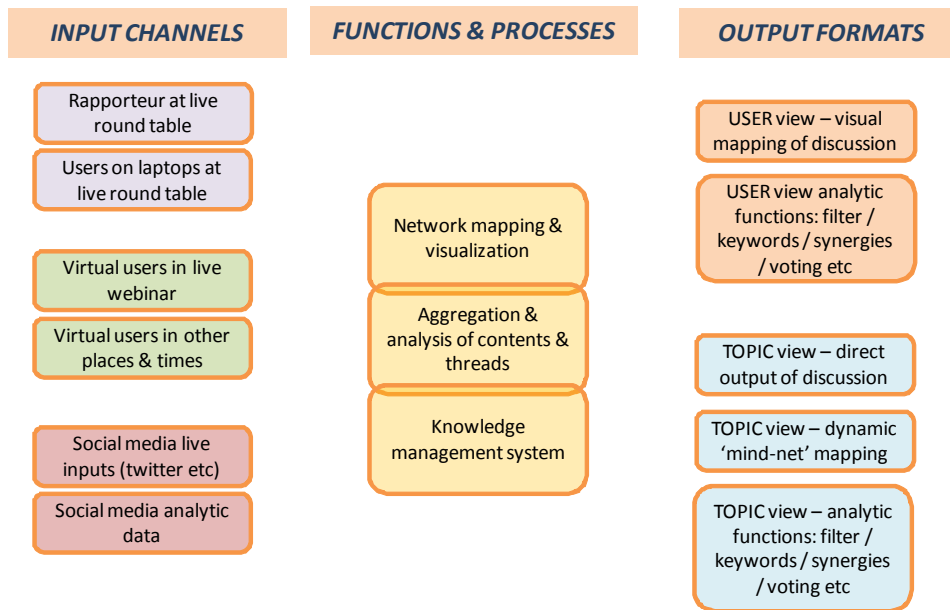
Functions and processes include:

- Network mapping & visualization
- Aggregation & analysis of contents & threads
- Knowledge management system functions

Output formats include:

- USER view – visual mapping of discussion: analytic functions: filter / keywords / synergies / voting etc
- TOPIC view – direct output of discussion : dynamic 'mind-net' mapping: analytic functions: filter / keywords / synergies / voting etc

Figure4: phase 2 inputs & outputs



Research / knowledge management system

In the current research proposal (IN-SYNC) and others in the pipeline, a larger set of Forums is envisaged, working with wider communities on diverse themes and challenges.

One task is to manage the information in a coordinated way so that all inputs and outputs are accessible for viewing and for analysis. A relational database will track each Forum by several category types:

- 'factors' and themes, etc.
- 'actors' and stakeholders, etc.
- Locations and levels, etc.

A second and more challenging task is to manage the analysis and applications (synthesis) of the total information set, in terms of the overall purpose, i.e. to promote synergistic governance. This would look in 2 general directions:

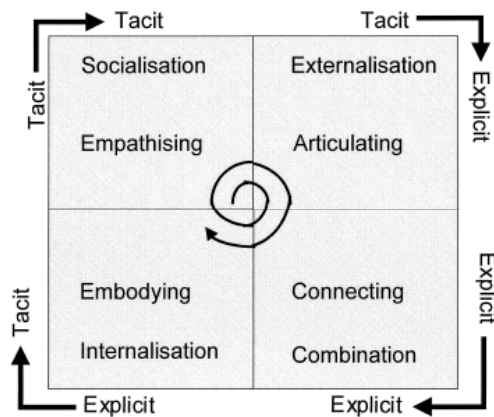
- Analysis functions look for patterns in the synergy networks in actors and/or factors. (e.g. the difference between a 2-way supply / demand interaction, and a multi-way partnership for urban policy). An in-house library builds up a set of common patterns.
- Applications (synthesis) functions look for more generic models.

These generic models are then the building blocks of a synergistic governance agenda. For example one extreme model would be a hierarchical command structure: another would be a horizontal learning community of equals. Each model type can be mobilized through political, economic, social or other types of interaction. The best way to analyse and visualize these models is still to be researched.

Background: social knowledge landscape

Nonaka's approaches to knowledge creation are among the most often cited works on organisational learning (Nonaka and Toyama 2005; Nonaka 1994; Nonaka et al. 2000). He proposes a model of knowledge creation consisting of three interconnected elements: the SECI process, ba and knowledge assets.

Figure 5 . social knowledge mapping: Nonaka's SECI Model



According to Nonaka knowledge is created "through interactions between tacit and explicit knowledge, rather than from tacit or explicit knowledge alone". Nonaka and his collaborators refer to this interaction as "knowledge conversion". They developed a model called SECI composed of four modes of knowledge conversion that is (1) Socialisation; (2) Externalisation; (3) Combination; and (4) Internalisation. The four modes can be summarised as:

- Socialisation is the process of converting new tacit knowledge through shared experiences. Tacit knowledge can be acquired only through shared experience, such as spending time together or living in the same environment;
- Externalisation is the process of articulating tacit knowledge into explicit knowledge. When tacit knowledge is made explicit, knowledge is crystallised, thus allowing it to be shared by others, and it becomes the basis of new knowledge;
- Combination is the process of converting explicit knowledge into more complex and systematic sets of explicit knowledge. Explicit knowledge is collected from inside or outside the organisation and then combined, edited or processed to form new knowledge;
- Internalisation is the process of embodying explicit knowledge into tacit knowledge. Through internalisation, explicit knowledge created is shared throughout an organisation and converted into tacit knowledge by individuals. Internalisation is closely related to 'learning by doing' (ibid).

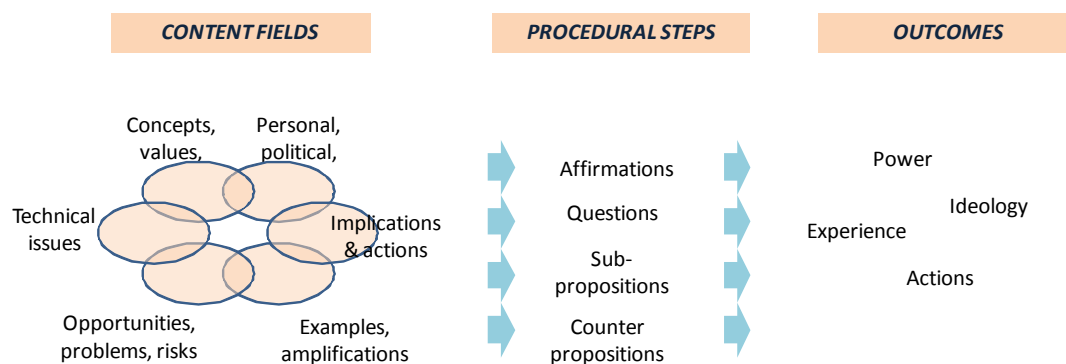
Background: discussion landscape

An alternative view comes generally from the Synergistic approach, and in particular, from first hand experience of the Synergy Forum prototype in operation. With a group of people around a table, in terms of content, rational focused debate or 'deliberation' on a well defined technical issue is actually quite rare:

- More often there is a 'discursive process' with many approaches to questioning the concepts and values, scope and boundaries
- Most frequent is the personal / political perspective, where people do combinations of venting, flirting, performing, reacting, telling jokes and stories, or otherwise reproducing 'socio-cultural spaces'.
- Also there are often long diversions into examples, amplifications, risks.

These all combine and overlap in a process of reproduction and adaptation, through procedural steps which include: affirmations: questions: sub-propositions and counter-propositions. The point of this kind of mapping is to help design a system which doesn't have to impose an artificial structure or ontology – rather it can respond and track the natural flow of discussion. One scheme for structuring this is the de Bono '7 hats'. In this case, the Synergy Forum research program will look at the discursive process in the light of the technology opportunities, and the overall goals of synergistic governance.

Figure 6: social knowledge mapping: discussion landscape



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