

Using Cognitive Edge methods for knowledge creation and collective sense-making

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Snapshot (Quick Learning)



Cognitive Edge (previously Cynefin) is an international network of researchers, consultants and practitioners who apply Open Source methods developed by Prof Dave Snowden. These methods integrate knowledge and insights from a range of disciplines, including Complexity Science, Naturalistic Decision Making, Social Complexity, Anthropology and Cognitive Psychology. The methods discussed in this document are bottom-up, emergent and collaborative; and has proven to be extremely effective for knowledge sharing and extraction as well as innovative solutioning.

In the described project instances, multiple parallel workshop processes were run simultaneously, and many different, but complementary outputs were produced over a two-day interactive workshop. This process is completely scalable, in Australia it was run with several hundred participants, in South Africa with 30.

The power of the Cognitive Edge methodology and approach comes from

- The use of narrative as a key component of collecting and understanding knowledge in context
- Sense making and meaning being socially constructed by those involved in and impacted by, the issue under consideration
- Allowing multiple perspectives to be visible and recognised
- Valuing dissent without requiring attribution of blame
- Providing perspectives and frameworks that enable people to take action in addressing complex issues
- Complimenting and working in conjunction with existing normative tools and processes, and
- Consultants and facilitators facilitating process but not being involved in content in the initial stages

Cognitive Edge methods are highly adaptable and can be used in a multitude of diverse contexts. The case studies discussed in this article primarily cover short narrative enquiry interventions aimed at understanding complex issues, culminating in open-space type sense-making and strategic solutioning workshops. Applications are diverse, ranging from innovation and strategic planning, new product development to knowledge mapping and cultural change interventions.

From an Organisational Development (OD) point of view, these techniques are also extremely valuable, especially because it views the organisation as a complex entity that needs to be respected and treated as such. In contrast to many quantitative OD techniques, the Cognitive

Edge methods do not claim to be able to exactly measure pre-defined organisational constructs in order to make predictions or diagnoses. It allows (and thereby empowers) the system to diagnose and treat itself. It moves participants' thinking away from "problem", "quantity" and "certitude" towards "mystery", "quality" and "assurance". This allows the system to explore its own imagination and to see new possibilities for the future.

Keywords: disruptive, emergence, complex facilitation, knowledge management, innovation

Context (Where & What)



Objectives differ according to context, but measurable outcomes of these processes include comprehensive sets of cultural indicators, knowledge objects (comprising both codified and experiential knowledge artefacts), and large volumes of tangible suggestions to address complex issues. Another key objective of these processes is to increase the levels of interaction and dialogue between key stakeholders whether internal to an organisation or external, thereby establishing new social networks, or increasing the cohesiveness of existing social networks.

This methodology can be used as a short term workshop based intervention e.g. strategic planning or as the culmination of a longer term pre-hypothesis research project to understand a complex problem. It has been used successfully for conflict resolution, and ensures that the voices of all stakeholders are heard.

The actual workshop is usually conducted over one or two days, with the number of participants varying between 12 and 300 (the ideal number of participants is usually around 36). In some circumstances, a number of identical workshops can be conducted, with the data integrated for a final activity. The critical variables for participation and effective outcomes is a shared context, and diversity of perspectives,

Preparation (The Checklist)



Although not a pre-requisite (as the methodology is open source) it is strongly recommended that the facilitator attends a Cognitive Edge accreditation training course before applying any of these methods. A further recommendation is to be mentored through the first couple of workshops i.e. to observe how experienced Cognitive Edge facilitators run these workshops before facilitating one yourself. The approach to facilitation of complex processes differs markedly from traditional facilitation techniques, and these differences need to be understood. For example, ambiguous instructions are intentional, not assisting participants to find the 'right' answers fundamental, and any interventions into group process happen at a system, not individual level. Due to the highly disruptive nature of this methodology, a capable facilitator is a critical success factor in the process.

Participants need not do any preparation prior to the session – typically we find that the less prepared they are (and the less they know about the session and the process) the better. A detailed invitation is therefore not necessary. Agendas only indicate timing of breaks etc, but no detail is supplied as to the process and specific activities.

If emergent cultural indicators are required as output of the workshop, it is beneficial to collect the narrative material that serves as input to the process in advance. This will allow the facilitator to prepare the anecdotes, print them out on A4 sheets and prepare a story wall in the workshop space (cover an entire wall with printed anecdotes). Workshop participants usually find these walls irresistible, and simply reading through about the real experiences of others has a tremendous impact on them.

An adequate number experienced and well briefed facilitators must be arranged to run the session. The number of facilitators depends on the number of participants, smaller groups (12 and less may require only 1 facilitator), larger groups (more than 36) may require more than 3. A guideline would be to have a 1 facilitator for every 12 participants. Not all facilitators have to be equally experienced though – 3 strong facilitators with a couple of ‘assistants’ should easily be capable of successfully guiding the workshop. Given the emergent nature of the process, facilitators must be adaptable, and prepared to quickly modify processes.

Facilitators and assistants should be well briefed and reach agreement before the workshop as to how the workshop outputs will be ‘marked’ between steps. It is important to know for example which wall which data item originated from, which hexies belonged to the same clusters etc. Usually we assign a number to each group and a letter to each cluster – all hexies are then marked accordingly with a ball point pen between activities. Timelines need to be marked so as to indicate their order.

A skilled cartoonist – although this requirement is often ignored, it adds tremendous value to the process. In addition to bringing an element of novelty that keeps the participants engaged, visual representation adds a deeper dimension to the outputs that has significant value to the interpreters of the output. Cartoons also aid communication efforts after the workshop (e.g. to communicate a newly formulated strategy to staff who didn’t attend the workshop), as images can convey complex meaning in a simple fashion, and people relate to cartoons differently than to text or Powerpoint presentations.

Toolkit (The Essentials)



For the workshop the following are required:

- A large open workshop venue with ample open wall space which you are allowed to paper. It is best if the venue is off-site to ensure minimal distraction of participants by operational crises and other activities such as email etc.
- The workshop venue should be set up banquet style i.e. participants seated around round tables (between 6 and 10 per table)
- Large sheets of paper to cover the walls in the workshop venue (unprinted newsprint or flip chart paper that come in rolls work well for this purpose)
- Hexagonal post-it notes (hexies) in at least 6 different colors (if not available, square notes can be used, but it is not recommended as it has a detrimental effect on clustering as people tend to think in categories when presented with square notes – also, the clusters require a lot more wall space when squares are used)
- Fine tipped permanent markers to write on the hexies – it is important that the text written on the hexies is visible from a distance of about 2m away to aid the clustering exercises.
- Flip charts (1 for each table)

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- A high resolution digital camera to capture workshop outputs after each step e.g. to document clusters before they are broken up and taken off the walls.
 - During the process participants need to come up with various actions or suggestions. In order to facilitate this process at least 200 A5 action forms need to be prepared (it works well if 3 or 4 different paper colors are used for this). These forms typically have the following headings: Activity (which activity produced this action); what? (describe the action); Who can do it (i.e. ourselves, our direct management, the executive); By When (estimated timeframe); How can success be measured?
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Making it Happen (The Approach & the Action)



Overview

The main premise of these workshops is to facilitate multiple concurrent streams, each busy with a different (and sometimes unrelated) task. Most of these streams use anecdotal narrative material as input. The larger group is typically broken into smaller sub-groups, either in a random fashion or according to role, level etc. It also works well to allow smaller groups to self-form according to interest in a specific topic that will be discussed at a specific table. The composition of the group working together is also constantly changing. The intent is to ensure that multiple possibilities and opportunities are created, with the convergence into preferred positions or actions being deferred as long as possible.

Initially the entire group is given one instruction (although they may be given different topics) to be complete in the smaller groups. Once they've settled into this activity, various people are taken from their respective groups and tasked with another (often unrelated) activity performed on the walls. An effective way of doing this is to ask the groups to nominate one or two people to participate in a new task. These new groups remain busy with their tasks for a short time; they're then sent back to the tables and asked to send two other nominees back to their wall. In this way, 3 or more tasks can be completed simultaneously.

Because of the emergent and disruptive nature of some of the methods we employ, it is very difficult for participants to influence the outcome to their benefit. Complex facilitation and disruption reduces opportunities for dominant personalities to influence the results. The social construction aspect of the process makes it difficult for those engaged to deny the results and at the same time, difficult for executives to challenge, as these results were created by the environment itself, not by an external consultant or expert.

When facilitating such a workshop, emergence is encouraged and premature convergence discouraged through disruption and very vague instructions. Many participants find the process uncomfortable, especially those preferring highly structured workshop environments with fixed agendas and predictable results. It is not unusual for some participants not to return to the 2nd day of the workshop, but fortunately they are in the minority. Most participants find the process highly engaging and different, and once they manage to overcome their discomfort, they are usually energised at the end of the workshop.

The process is highly adaptable, and any of a multitude of components can be used in the different work streams. There are no recipes and no one best way of conducting such a workshop, so it will therefore probably be most effective to discuss some of the process components we've combined in the past and present the detail of an actual workshop under real cases, rather than attempting to explain the various options. Once the guiding principles are understood, facilitators can customise the process and plan their own workshops according to the context and need.

Possible process components

1. Anecdote circles

This component can be included in the actual workshop, but we find that is most beneficial to conduct these sessions well before the workshop in order to have the narrative outputs transcribed.

During these informal facilitated sessions, participants are stimulated to share real experiences (their own, or someone else's) that pertains to the issue under investigation. An example of a probing question we could use to stimulate experiences around job satisfaction or culture would be: If you run into a very good friend of yours and they tell you they've been offered a job in your company similar to your own, what experiences would you share with them to encourage him to join, and what experiences would you share to discourage him to join? This is very different from normal survey questions where the hypothesis of the researcher is already contained in the questions, and therefore the results typically indicate only what the researcher thought to find.

The anecdotes collected in this fashion is transcribed (verbatim), printed out and pasted on one wall of the workshop venue walls. At various times throughout the 2 day workshop, groups will be asked to review the anecdotes and find various elements in them. We will discuss this in more detail later.

One point to note here – when transcribing and editing the anecdotal material, be sure to retain the authenticity of the stories i.e. don't correct grammar, remove 'uhm's' etc. The 'messier' the stories, the more obvious their authenticity and therefore the more trust worthy they are to participants. The only editing we do is to remove names and identifying word patterns, and to remove chatter and unsubstantiated opinions from the transcribed text.

2. Identifying knowledge disclosure points and ASHEN

ASHEN

Over the last couple of years, Knowledge Management theory has focussed on the differences between tacit and explicit knowledge. To our mind, this is a gross over simplification, as Knowledge in itself is a complex phenomenon that transcends such simple classification. (Dave Snowden, 2000)

Knowledge is also highly contextual; we only know what we know in the context of needing to know it. In order to provide this context, we make use of Knowledge Disclosure Points (KDPs) (Snowden 1998a) which comprise decisions, judgments, problem resolution and learning. They are the points at which we use or create knowledge. People find it easier to remember using knowledge than to answer the question "*What do you know*". A more meaningful question would be: "*When you made that decision, what knowledge did you use?*"

It is at this point where the ASHEN framework is utilised to provide a more complete picture of the applied knowledge, provide a language to make sense of what we find, and provide a mechanism to move directly to action. ASHEN is a mnemonic term that represents the following:

Artefacts: all the existing codified information (or explicit knowledge) currently held in the organisation. Examples include: processes, documents and databases; essentially every constructed knowledge object that exists external to a person.

Skills: In this context, a skill is something that I can tangibly measure whether someone has it or not. For example, you can either create a Word document, or you can't. Skills can be taught, whether through study, or by on-the-job training.

Heuristics: Guidelines of rules of thumb. We use heuristics to make decisions when we don't necessarily have all the facts we need. In people with deep expertise in certain areas these heuristics manifest as 'gut feel' reactions.

Experience: Experience is largely self explanatory, although it is worthwhile to note that experience may be collective, rather than individual which makes it difficult for organisations to manage.

Natural talent: By definition a natural talent is a special ability or gift that makes someone better at doing something than most other people. It cannot be managed, but we can improve our ability to identify and nurture it.

Therefore by asking the ASHEN question in the context of a KDP meaningful answers can be obtained e.g. *When you made that decision, what **artefacts** did you use, or would you like to have had? What **skills** did you have or need and how are they acquired? What **heuristics** do you use to make such decisions quickly, what is the range of their applicability? What **experience** do you have and what experience do the people you respect in this field have? What **natural talent** is necessary? How exclusive is it? Who else has it?* (Snowden, 2000). Once we've obtained these insights it is relatively easy to move to action, i.e. how can we protect key artefacts or obtain ones we're missing? How can we make sure our people have the necessary skills?

In the workshop groups are asked to read through the narrative material on the wall and are tasked to find Knowledge Disclosure Points (KDP's). Each identified KDP is written on a hexagonal post-it note (hexie) and pasted on an assigned wall. The group is then tasked to cluster these according to likeness and to identify the ASHEN elements associated with each KDP cluster e.g. when you make these type of decisions, what Artefacts, Skills, Heuristics, Experience, Natural talent do you use. These elements are written onto different colored hexies, pasted around the KDP clusters, and later clustered for likeness themselves.

The groups are then tasked to come up with specific actions based on the ASHEN outputs e.g. How do we address skill/artefact gaps? How do we gain the necessary experience etc? These actions are captured on action sheets and pasted on another dedicated wall.

3. Decision information flow map

This process stimulates the group to identify all the decisions that they make, or are aware that other people make related to the field of study. These are produced by brainstorming, challenges, reviews of narrative material etc, and once complete are clustered and grouped.

Once this is complete, for each decision point cluster three things are identified: (i) information currently used; (ii) information that, if it was available, would improve the decision; (iii) how the decision is communicated. Finally "information in" is matched to "information out" between the various decision clusters.

The DIFM is produced bottom up and once complete provides the following:

- The basic input needed for an improvement plan to create mechanisms for gathering and making available the information needed
- Contrasting the bottom up "this is how it is" map with the process map of the organisation "this is how it should be", the differences can often explain failure in, or inefficient operations planning improved information flow to improve decision effectiveness

4. Emergent cultural indicators

Participants are tasked to look for characters in the stories, to copy them onto hexies and paste them on a dedicated wall. Others are similarly tasked to look for behaviours or beliefs and others for topics. A different color hexie is used for each of these, and a specific wall is assigned to each. Once enough items have been identified for each of the walls (characters, behaviors and topics) participants are told to start clustering these according to likeness. Throughout this process participants are continually disrupted, they are sent to join groups busy with other tasks and send back volunteers etc. There is therefore no cohesion in the groups working on this task.

New participants check the clusters and change them where necessary. Once they are satisfied with the clusters, they are asked a perspective question e.g. on the character wall we'd ask: "If you were this character cluster's best friend or worst enemy, how would you describe it i.t.o. character traits". These are written down on hexagons with a contrasting colour and placed around the cluster. Once they've exhausted the attributes they can think of, participants are sent back to their respective groups and once again asked to send fresh participants to these walls. The attributes generated by the first group are marked (to indicate which cluster they were assigned to), removed from the wall and scattered on another wall. Each new group of participants repeated this process, until the facilitator feels that enough attributes have been generated for each of the 3 walls.

The attributes are clustered and named, and these named clusters represent emergent Archetypes, Themes and Values that represent the culture of the group that created them.

See Figure 1 for a graphical representation of the process

Figure 1

Figure 2 shows an example of an archetype. In this case what is particularly interesting is the high correlation of this archetype to the client character cluster. This seems to indicate that people in this environment expect their clients to act like this before even engaging with them, and therefore treat them accordingly. This has high negative implications for customer service in this organisation.

Figure 2

5. Ritual dissent

The entire group is given one task, to be completed in table format, e.g. each table is told to construct a story utilising anecdotes on the story wall. Each group is told to nominate a spokesperson (with a robust personality who doesn't bear a grudge!). After a limited period of time, the spokespersons rotate to another group to present their outputs. This group is instructed to simply listen while the spokesperson presents, they are not allowed to ask questions or comment. The spokespersons are then asked to turn their chairs around and sit with their backs to the group. The groups are tasked to be as critical as possible about what was presented to them, the spokesperson is only allowed to listen and take notes, they are not allowed to comment, ask questions or defend. The spokespersons return to their groups and share the other group's comments. Each group then has the opportunity to re-work their outputs before the process is repeated.

This process of presenting and critiquing is called Ritual Dissent. It introduces dissent in a ritualised and non-threatening fashion and is a good way to prevent the group from converging on a solution (in this case a story) too quickly. It serves as a challenge and encourages divergence and creative thinking. This method can be used very effectively during strategic planning sessions as well as while designing business cases etc as it ensures robustness in the produced output.

6. Future backwards

The future backwards is a group timeline based technique that breaks entrained thinking patterns and provides insight into the current top-of-mind issues, aspirations and fears that are present within a group.

Once again the groups work on walls (not tables). The first step is to brainstorm their current reality around a specific topic e.g. in terms of knowledge sharing in your environment, what is currently working well, what is not working well etc. These ideas are written onto hexies (one color) and placed in one big cluster (Today) on the wall. Throughout the process it is important to emphasize that it is not necessary for groups to gain consensus. Every group member's view is valid, and therefore should be captured and placed on the wall.

Once they've completed the Today cluster, the groups are tasked to build a real timeline (using different color hexies) made up of key events that they feel led to the current state. The key here is that they have to work backwards, i.e. start with the most recent event and work backwards into the past. Participants often find this difficult, but this is a necessary step as working backwards starts breaking their entrained patterns of thinking.

After completing the timeline, they're asked to build a second cluster below Today that represents to them the worst scenario they can possibly imagine (Doomsday or Hell). They use a different colored hexie for this cluster. Once complete they're tasked to come up with a fictional timeline (once again working backwards) of made up of fictional events that caused Doomsday to occur. This fictional timeline must intersect with the actual timeline at one of the real events and can contain an accident (event no-one had any control over).

Once complete, they group is similarly tasked to create a Heaven or Golden Age cluster above Today, once again with a fictional path back to the real timeline.

Once the groups have completed the exercise, they are given a short break. During this time, the facilitators mark the outputs according to which group they belong to. The hexies are then removed from the walls, combined and re-distributed to 4 different walls (today on one, the actual timeline on another and one each for heaven and hell).

Participants are divided into 4 combined groups and tasked to cluster the hexies for likeness on each of the walls. These clusters are named, and represent themes that were present in multiple group outputs. Typically themes in today represent top of mind issues, themes in heaven represent aspirations and themes in hell represent fears.

A final step would be to engage a cartoonist to sit with the various groups and create a visual representation of what heaven, hell and today would look like, based on the emerged themes.

7. The Cynefin framework

The Cynefin framework is a sense-making framework with two ordered and two un-ordered domains, all four of which are considered valid in context. There is also the domain of disorder in the centre which is used where there is no agreement about the nature of the system or issue. A system may have different aspects present in more than one domain.

Groups map their issues onto the Cynefin framework using hexies. This provides a basis for agreed action and decision making. It ensures that the appropriate intervention strategy is chosen for the particular issue or system under consideration.

1. Ordered domains:

- Context free – can learn from other organisations/situations and apply lessons directly
- Most traditional management planning and analysis tools assume order – and are appropriate for these domains

(a) Simple Order

In this domain, relationships between cause and effect are self evident, and therefore it is possible to define **best practice**. Simple order may be a result of social convention or legislation rather than some pre-given norm; for example which side of the road we drive on.

Decision making process: *Sense Categorise Respond*

Problem solving: identification of the rules, procedures, that needs to be changed.

Implementation through direct command from the centre; no variations are tolerated; domain of best practice.

(b) Complicated Order

While there are repeatable relationships between cause and effect for issues/systems in this domain, they require analysis and research to uncover good practice. This is the domain of systems dynamics, scenario planning and comprises the bulk of standard management consultancy techniques and management science research.

Decision making process: *Sense Analyse Respond*

Problem solving: agree which group of experts will be tasked with determining the best approaches. Domain of good practice – usually more than one way of achieving desired outcomes so as long as experts agree can become part of embedded practice. Some element of judgement is needed.

2. Un-ordered domains

- In these domains we are not able to manage the whole system - therefore we need to intervene in the ordered elements of an unordered system (the things that people agree can and should be changed)
- Un-ordered domains are contextual – options must emerge from a specific situation – not copied
- Critical importance of social construction

(a) Complex Un-order

For issues and systems in this domain, the relationship between cause and effect is only ever understood in retrospect, making this a domain of probes and pattern management. Narrative techniques are powerful tools to use to make sense of the system, as they convey complex knowledge in context. There are multiple outcomes or options that are possible and preferred options emerge in response to probes and multiple experiments.

Decision making process: *Probe Sense Respond (explore)*

Problem solving: domain of emergent practice; contextually specific; design probes/experiments to test what will make a difference; those that are successful are moved to ordered domains and embed (exploit), those that aren't are disrupted.

(b) Chaotic Un-order

The level of turbulence experienced in chaotic situations results from a lack of any perceivable relationships between cause and effect except at a very micro level. With no precedent, and no way of identifying patterns or opportunities for probes, the only available option is to act to stabilise the situation and move the issue close to the boundary of another domain.

Decision Making Process: *Act sense respond*

Problem solving: domain of novel practice if crisis is managed effectively... and an innovation team 'shadows' the crisis team to capture ideas. Action is the only way forward – either attempt order through edict (moving to simple domain) or immediately try multiple probes to shift to complex domain.

Additional information on these and other components are available on the Cognitive Edge web site (<http://www.cognitive-edge.com>)

Results & Next Steps (The Follow-Up)



What differentiates the outcomes of these workshops from other techniques is that in addition to tangible outputs such as knowledge artefacts and decision information flow maps, cultural indicators are also produced from pre-gathered narrative. Archetypes, themes and values are extracted from gathered stories through an emergent process. Future Backwards has current top-of-mind issues, aspirations, fears as output. These two techniques are excellent diagnostic tools, and because of their emergent nature aren't open to gaming. The Future Backwards also has as an output actual timelines with key events and turning points that led to the current state and that inform collective and individual decision making (corporate memory). Often we forget what we know until context reminds us, and these timelines offer an excellent device for further knowledge disclosure, as the events provide context for people to recollect and share their knowledge.

During these events participants are tasked to define possible solutions for issues that were identified during the workshops. In all cases the number of suggestions, as well as the quality and level of practicality of these suggestions were much higher than those from more traditional planning workshops. Due to the bottom-up and emergent nature of the process, participants have a sense of ownership of the outcomes and buy-in is therefore more likely.

Another key benefit of the bottom-up narrative approach is the natural resonance it creates within many different cultural groupings. In contexts where cultural diversity often inhibits communication and knowledge flow, we found that narrative and story provided a translation mechanism between western and indigenous cultures. The process is also non-threatening, everyone has a voice, and the facilitator does not get involved in a 'leadership' role.

Indirect questions and narrative disclosure proved to be remarkably effective at preventing camouflage behavior amongst participants. Using anecdote circles to gather narrative material proved to be a very effective mechanism for the extraction of knowledge, even items that would be considered highly sensitive. The depth of knowledge gathered in a very short time span was astounding.

The cultural indicators (archetypes, themes and values) that emerge from the process contain within them a rich and powerful potential for organisational transformation. Work teams throughout the organisation can, for instance, have follow-up workshops around these metaphors. The power of making sense of one's reality in terms of metaphors, allows not only for much deeper insight, but also for creative and imaginative visions of new futures that were previously hidden to the group. Allowing this metaphoric re-envisioning process to unfold can lead to results and decisions that the expert-consultant would never have been able to imagine.

Real Cases (As it has Happened)



1. South African Government Agency

This workshop was the culmination of a bigger project conducted in a government agency in South Africa. The objective of the project was to understand experiential knowledge and how knowledge sharing could be enabled between newer employees and experienced 'experts' in a highly pressurised environment. Another objective was to investigate the feasibility and benefits of using narrative as a vehicle for knowledge transfer. See figure 3.

The workshop ran over 2 days and what was especially significant was the level of engagement of all the participants. Although we lost a couple of participants at the end of day 1, those that remained all contributed 100%, unlike other traditional workshops where a small group of people ends up doing the bulk of the work.

Prof. Snowden was the lead facilitator at this workshop, with Sonja Blignaut and Jean Cooper as co-facilitators. Internal staff members were trained and assisted in the process when required.

Figure 3

Prior to the workshop, several anecdote circles were held with approximately 10 participants in each. Participants were stimulated to share real experiences (their own, or someone else's) that pertained to their jobs and specifically times when experiential knowledge (manifested as gut-feel) were utilised.

The anecdotes collected in this fashion was transcribed (verbatim), printed out and pasted on one wall of the workshop venue walls so that it was entirely covered with A4 anecdote sheets. What is interesting to note is how much of an attraction the story wall was to the participants. Throughout the 2 days, whenever they had spare time or during breaks, there were always people at the wall, reading the stories and many conversations were happening around these stories. This in itself had a tremendous impact on the workshop participants.

Workshop specifics:

The walls of the workshop facility were effectively used to display the stories, record, build, and cluster various emergent properties during the multiple exercises. Figure 4 shows diagram of the facility illustrates the outputs produced. At the end of the workshop, these combined work displayed on the walls made a powerful impact that conveyed the value received far more effectively than a documented report.

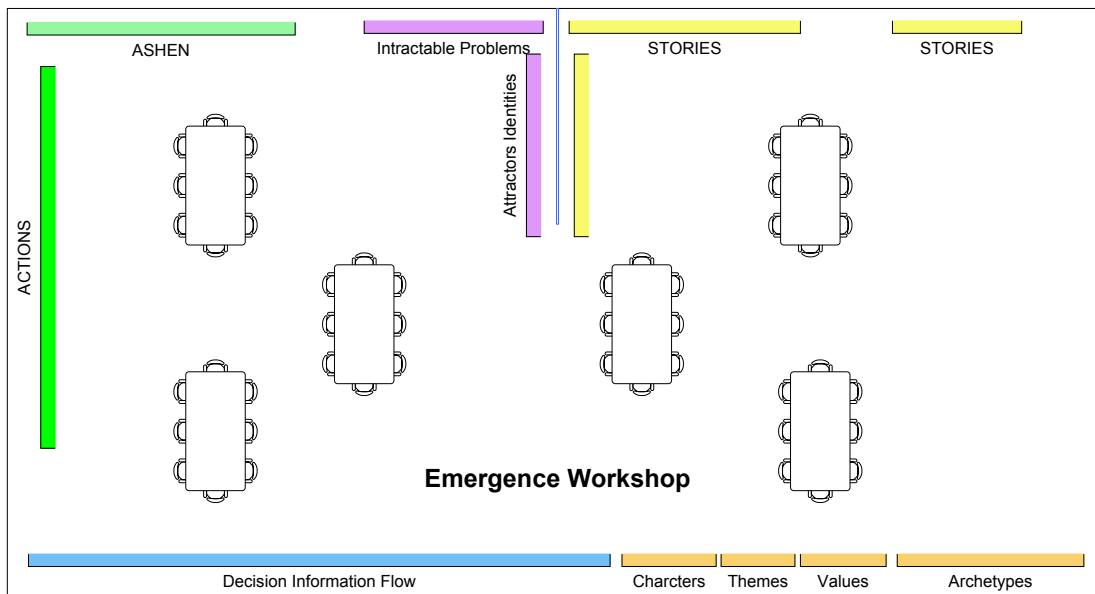


Figure 4

On the first day the participants were asked to (in their table groupings which were randomly selected) come up with knowledge items they frequently use during their day to day activities. All the participants found this to be a difficult exercise (this was intentional), and it brought home one of the key rules of Knowledge Management – it is very difficult to ‘know what you know’ without proper context.

Prof. Snowden then introduced and explained the ASHEN Knowledge framework. Up to this stage of the workshop, all the groups were focussed on the same tasks. After explaining ASHEN, the group was split into 3 concurrent streams, groups were allowed to self-organise around the activities they wished to work on:

Group 1 – Knowledge disclosure points and ASHEN:

One group of participants was sent to the story wall to review the anecdotes and use them to provide the needed context for knowledge disclosure. Participants were tasked to identify Knowledge Disclosure Points (KDP’s)

Later during the day, this group was split into 3 sub-groupings (one group looking at Artefacts and Skills, another at Experience and Natural Talent, and the last one at Heuristics), adding more ASHEN elements and clustering them for likeness. After clustering, they were asked to identify specific **actions** that could enhance knowledge transfer in their environment, based on the ASHEN clusters e.g. How can the agency go about acquiring new artefacts or better utilise existing artefacts? Which training interventions and strategies can be put in place to ensure people have the necessary skills to perform their job roles? What strategies can be put in place to allow people to gain the necessary experience? How can the company better identify and nurture natural talent? It was emphasized to the groups that these actions should have **tangible and measurable** outcomes, and that they had to focus on actions that could reasonably be done by them or their managers. The reason for this was to keep them from platitudes, ‘they should’ actions aimed at the executive, and to get them to think about things they could take responsibility for and that could lead to positive change in the environment.

Group 2 – Decision Information Flow Map (DIFM):

The second group started working on a Decision Information Flow Map (DIFM).

Producing the DIFM is an involved process that kept this group busy for most part of the 2 days. The DIFM map was produced within the workshop, but the comparison with formal process was left for post workshop processing.

Group 3 – Emergent Cultural Indicators:

6 to 8 of the participants who initially joined either of the other two walls were asked to form this 3rd group after about 15 mins spent at the previous walls. We allow them to become engaged in the other tasks, so that they feel that the initial task is the main task, and that they feel that is more important. We do this to make sure that they don't over analyse and spend too much time thinking about what they are doing while participating in this third task, as this is where the emergent cultural indicators are produced.

The initial group of 8 participants continued with the task for a while, looking for characters, topics and behaviours in the stories and starting the clustering. They were sent back to their tables and asked to send back other group members. This new group continued with the task. This process repeated until the process neared its end and Dave asked for volunteers (who hadn't been involved in this task yet), who would form the final group of participants at these walls and would continue to work with the cartoonist.

Towards the end of day 2 the group was tasked to look at all these outputs, record their interpretations of the outcomes (what does it mean to them that these archetypes, themes and values are present in the environment) and to select one or more stories that they feel are relevant to their interpretation.

While the three groups were busy with their main activities (as described above) they were interrupted at various times to participate in sub-activities such as constructing teaching stories from the actual anecdotes, selecting stories on the wall they felt were most surprising, most inspiring and most typical etc. (here the entire group participates in the same activity, in table group format)

At the end of the workshop, the outputs included:

- A complete Decision Information Flow Map
- A knowledge map (ASHEN) and associated actions
- Emergent cultural indicators (Archetypes, Themes and Values)
- Constructed Stories
- More than 100 practical actions and suggestions

Participant reaction

- “I think this process has given me a much broader view and understanding of what other member's challenges are within the organisation”
- “By sharing experiences during this workshop, I've realised that sharing experiences with colleagues at the workplace can be beneficial”
- “This is an eye opener and very interesting workshop which teaches a person a lot of knowledge”

- “An excellent 2-day seminar with a very unique approach. One worth talking about and not just another consultant trying to fix what is broken but rather we (employees) telling what is broken and how to fix it”

2. South African banking client

A division of a large financial institution was about to embark on a new strategic planning process and wanted to understand the current perception of their employees. Multiple Future Backwards processes were run, and the combined themes were drawn by a cartoonist. These cartoons were widely used in the subsequent communications around the new strategy. Figure 5 shows an example of the cartoon that was created to describe the heaven state:

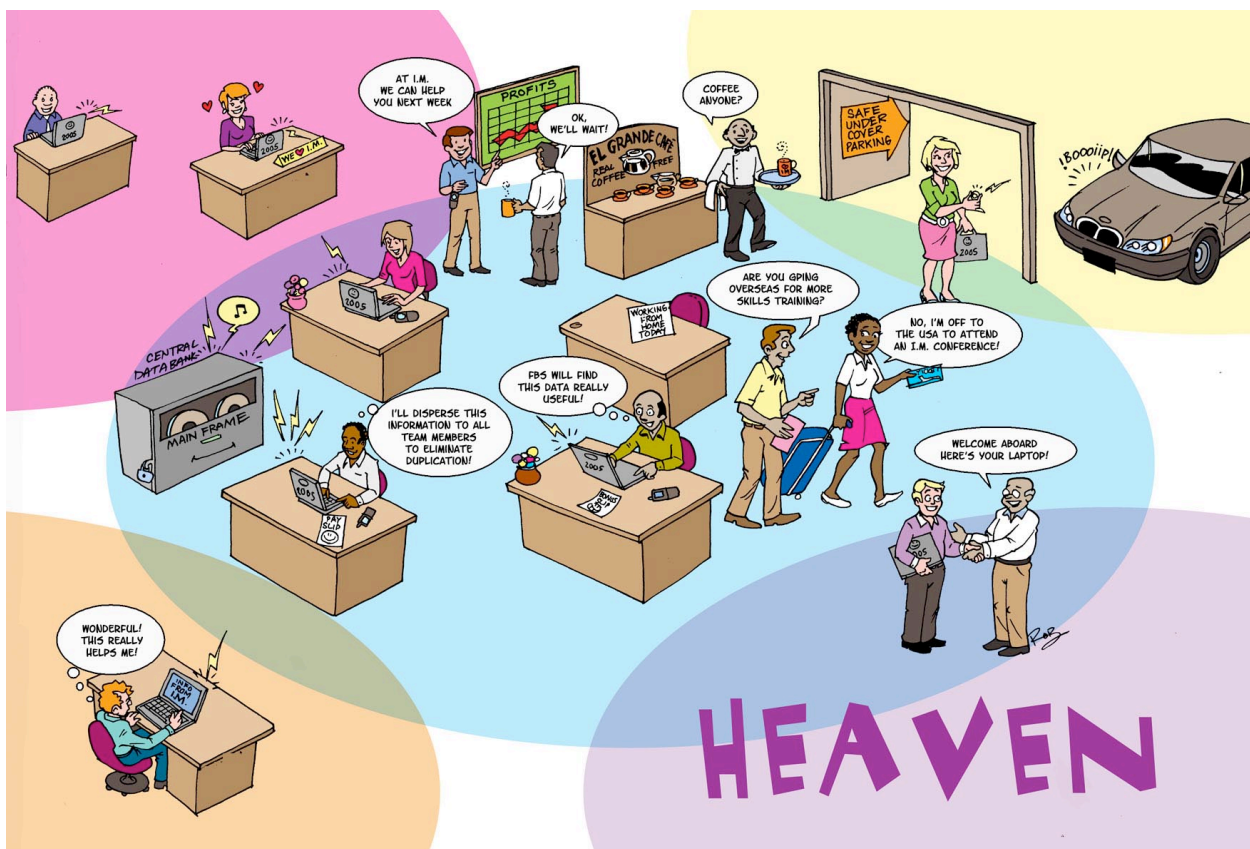


Figure 5

3. A state based education and training department in Australia

This department conducts an annual leadership forum. A recently appointed Chief Executive wished to explore the current culture as they prepared for major change resulting from new Government directions and initiatives.

What was done:

- The Cognitive Edge data base ‘Sensemaker’ was used to capture stories from all staff in the Department (see the Cognitive Edge website for further information)

- Three Cognitive Edge facilitators were supported by 20 internal ‘boundary riders’, who were introduced to the tools and processes the day before the Forum. This group assisted in distributing resources, identifying process problems and other issues
- The forum was held in a basketball stadium, involving around 300 people; the mezzanine was used to distil meaning from the stories as well as providing a ‘whole of system’ view for facilitators to monitor
- The activities undertaken were
 - Future Backwards – a process that is an alternative to scenario planning. By Initially undertaking this in stakeholder groups at a ‘Big Picture’ level, differences in perspective become visible
 - Future backwards – at a strategic issue level. Participants were invited to choose which issue to work on and therefore work groups were self-selecting
 - Mapping of the issues on the Cynefin Framework, providing the basis for developing recommendations based on the decision rules that underpin the framework
 - Development of recommendations for action (some 70 recommendations in the four domains of the framework were developed for 6 complex strategic issues)
 - Ritual dissent – was used to test the robustness of proposals by peers
 - In parallel, distillation of values, themes and archetypes from the stories in stakeholder groups

Outcomes:

In addition to the specific recommendations, other outcomes were...

- The capacity to examine different stakeholder perspectives
- The transfer of capability – all participants are able to use the tools and processes in their own workplace (feedback has been received that some have done this)
- For each of the stakeholder groups, an understanding was gained through the Future backwards process of
 - Corporate memory
 - Aspirations
 - Fears
- Endorsement of the process by the minority indigenous representatives, in their own words “This is the first time we have felt able to participate equally in any department activity”
- An understanding of current critical cultural issues (from the stories that had been collected)

Tips & Tricks (To-Do)



- ☑ Always make sure that the sponsor understands that the process is emergent, that neither you nor they can control or influence the outcomes
- ☑ If using the Cynefin framework, use the ‘butterfly stamping’ exercise (see web site) so that people become familiar with the framework before applying it to their own data

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- ☑ Have a number of ‘back up’ activities that can be introduced if necessary
 - ☑ If collecting stories to use, make sure that people telling the stories know how the material will be used
 - ☑ When conducting an anecdote circle, try to find as informal a venue as possible – avoid conference rooms
 - ☑ Always make sure to mark hexies as to which wall and if applicable which cluster they belong to before removing them
 - ☑ Take pictures of outputs before removing them off the walls
-

Potholes (Not-to-Do)



- ☒ Try to avoid mixing levels of seniority in groups as less senior group members will often not feel free to contribute
 - ☒ Diversity should be maximised, but always ensure that there is enough shared context between group members – don’t put completely unrelated people in the same group
 - ☒ Don’t tell participants what the process will entail in advance
 - ☒ Facilitators should never get involved in the content or give examples as this will put their own perspective on the results and dilute the authentic voice of the people
 - ☒ Don’t become anxious if the group seems confused. Trust the process.
 - ☒ Don’t agree to predetermined outcomes no matter what a client might request or expect
 - ☒ Don’t leave dysfunctional groups operating – intervene by introducing additional activities for ‘those who have contributed the most so far...’ (as determined by the groups themselves)
 - ☒ Do not edit published narrative material in any way, except to remove identifying names
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Author Biographies



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Sonja is an experienced business consultant with many years strategic consulting experience in large corporate organisations. Around 3 years ago, she found her niche when she was introduced to Dave Snowden's Cognitive Edge methodology whilst employed by IBM Business Consulting Services.

She has since focused her career on the application of complexity-based methods on seemingly intractable business issues such as Culture change, Customer Experience and Innovation. She has completed many successful projects, both locally and international and has been appointed as the only approved Cognitive Edge accreditation provider in South Africa. She has delivered accreditation-training courses to (among others) the global Knowledge & Learning division of IBM in Atlanta.

Sonja is a director of Dialogue, a small consulting firm in South Africa and is also involved with the Centre for Complexity Studies affiliated to the Potchefstroom Business School, University of North West in South Africa.