



SOCIAL PSYCHOLOGY OF RISK

Mapping Risk Maturity and Risk Intelligence

Diagnostics Tools HSE and SPoR iCues

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1.0 Introduction

Risk and safety intelligence is about how people recognize, identify and tackle risk and safety in the workplace. When we think about academic intelligence we think about a person's IQ (eg. Binet's Intelligence Quotient). When we think of intelligence in risk and safety we think of a person and organizations 'iCue'[™]. An iCue is an indicator or cue that helps people and organisations recognize and identify risk? These are the cues that tell us something is not safe?

Just as numeracy and literacy can be diagnosed by an IQ¹, risk intelligence can be evaluated by assessing a persons capability to understand and be sensitive to iCues (indicators of risk and safety).

The following paper documents activities and diagnostics undertaken by the Centre for Leadership and Learning in Risk (CLLR) to evaluate and map individual and organizational iCues. This diagnostic develops in two strands:

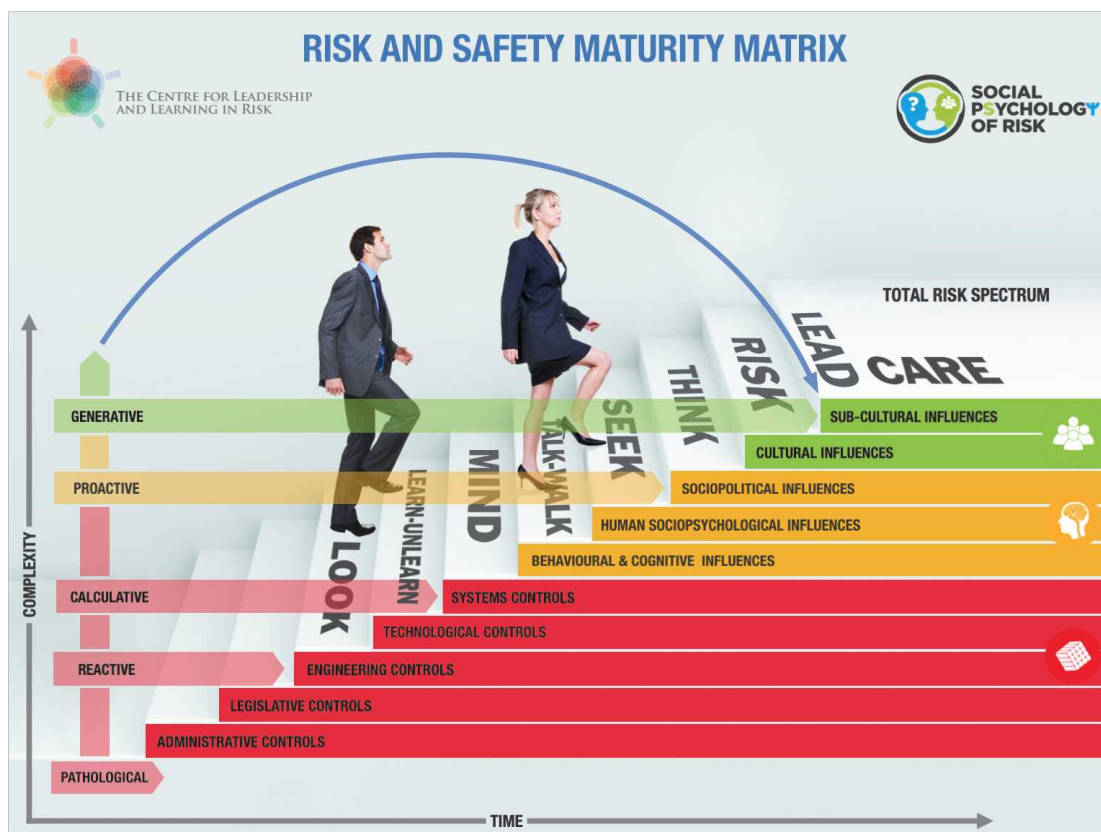
1. Traditional HSE orthodox approaches to risk (Red Foundational Steps) and,
2. Social Psychology of Risk (SPoR) approaches (Amber and Green Steps).

The Centre for Leadership and Learning (CLLR) in Risk understands risk and safety maturity as a moving continuum of learning, enactment and improvement. Developing risk maturity is an animated, enactive and living process, this is represented by the CLLR Risk and Safety Maturity Steps² (Figure One. *CLLR Risk and Safety Maturity*).

Figure One. CLLR Risk and Safety Maturity Model

1 The point also needs to be made that the notion of IQ is constructed according to certain bias of intelligence and has no connection to personhood. Indeed, in any education system the notion of measuring IQ is fundamentally flawed.

2 Whilst the graphic of the model in this paper is static, it needs to be imagined as moving and active like escalators, with people going forwards and backwards continually. You can view the animation here: <https://vimeo.com/377161192>



We can see from the Risk and Safety Maturity Matrix that the red foundational steps concern:

- Administration Controls
- Legislation Controls
- Engineering Controls
- Technological Controls and
- Systems Controls

These are the foundational steps for auditing HSE iCue. These are known as Workspace™ controls³. These five steps of control form the structure for the HSE iCue Audit.

The amber and green steps represent:

- Behavioural and Cognitive influences
- Social-psychological influences
- Sociopolitical influences
- Cultural influences and
- Sub-cultural influences

These are the more advanced steps in determining risk and safety iCue maturity. These are known as Headspace and Groupspace™ Influences.

These five steps form the structure for the SPoR iCue Audit.

The iCue steps are mapped on the left against Hudson's model of cultural maturity in safety. Each step is labeled with words that indicate skills required to advance to a more sophisticated step in iCue maturity.

³ It is of critical importance to note the use of the word 'control' in distinction to the use of the word 'influences' for the more sophisticated and advanced approaches to tackling risk.

HSE iCue Audit Tool

Administration Controls

- Understand and regulate the use of PPE
- Know how to conduct conversations, observations, walk arounds and audits
- Ability to conduct meetings and committees
- Ability to consult
- Understand legal principles and case law
- Ability to undertake knowledge transfer and training basics
- Ability to write HSE reports and present reports verbally
- Ability to supervise HSE enactment on site
- Write and monitor procedures
- Supervise the enactment of procedures
- Ability to assess resources needed for risk control
- Effective time management
- Ability to check equipment and resources needed for HSE
- Understand basics of budgeting and financial administration
- Supervise maintenance of plant and equipment
- Ability to administer first aid
- Ability to monitor HSE activities

Legislation Controls

- Familiarization with the Act, Regulation, Legislation, Codes and Standards
- Skills to find (research) relevant information on Act, Regulation, Legislation, Codes and Standards in HSE
- Create regulatory ownership in the workforce for HSE
- Understand and communicate managerial responsibilities for HSE
- Understand and communicate enterprise risk and suitable controls
- Ability to undertake audits and inspections against Regulation, Codes and Standards
- Understand the principles of evidence against a Regulatory Framework in correlation with enactment
- Understand principles and processes of workers compensation and insurance

Engineering Controls

- Understand the Hierarchy of Control
- Finding practical solutions to problems of risk
- Understand basic principles of prevention
- Understand the basic principles of engineering
- Knowledge on how to identify and control risk and hazards

Technological Controls

- Understand the basics of safety in design
- Understand the working environment and working climate
- Know how to measure performance
- Understand and facilitate needs of materials handling
- Understand the fundamentals of chemical management

Systems Controls

- Identify hazards
- Assess and control risks

- Create a participatory environment of mutual ownership for HSE systems
- Ability to evaluate HSE system effectiveness
- Ability to make HSE systems understandable
- Maintain sustainable HSE systems
- Knowledge of emergency procedures and crisis management
- Ability to identify and manage change
- Ability to investigate incidents and events
- Ability to assess the capability of workers to undertake work safely
- Liaison and understanding of HR, IR and support services

HSE Knowledge Controls

- Ability to research and locate information
- Demonstrated ability to keep up with HSE developments, trends and ideas
- Understand Duty of Care and Due Diligence
- Knowledge of principles of health and well-being
- Ability to disseminate HSE knowledge to the workforce
- Understand policies and the meaning of policy
- Understand principles of risk management
- Understand challenges of equality, literacy, culture, disability and gender issues

SPoR iCue Audit Tool

Behavioural and Cognitive Influences

- Audit by observation, conversation, diagnostics (Note Appendix two MiProfile) and workplace interactions.

Safety Systems (Sensemaking - Weick)

- Grounded Identity Construction (social context)
- Retrospect
- Enactive of Sensible Environments (enactment)
- Social Context
- Ongoing Projects (flow and speed)
- Extracted Cues
- Plausibility

Core Safety Vision (Harm/risk values)

- Identify risk aversion
- Define risk holistically
- Create dialogue about risk
- Monitor Risk vs Safety language
- Challenge safety orthodoxy
- Awareness of safety mantras, myths and sayings
- Understand basics in Semiology and semiotics

Safety Priorities (Safety Judgment)

- Understand fallibility and how mistakes are managed?
- Supervisor and middle management training?
- Ability to discern double speak?
- Sophisticated sense of time management connected to priorities, values and culture

Risk Sensemaking

- Know how to create contagious behaviour
- Know the 'Stickiness Factor'
- Understanding counter intuitiveness
- Understand Cognitive Dissonance
- Know about Infectious actions and Diffusion of Responsibility
- Know how little changes can have big effects (the Law of the Few)
- Cultural change requires "Connectors" (mavens and champions)
- Context is critical (The Power of Context)
- Language is foundational (The Power of Language)
- Environment is fundamental (The Power of Environment)
- Understand the workplace as an organism (ecology)
- Understanding Fundamental Attribution Error
- How to develop a trans-active memory system
- Cultural change requires "Translators" (bridge builders)
- Know how values and language determine behaviour
- Disposition that change is incremental but dramatic

Social-Psychological Influences

Safety Preparedness (Mindfulness - Weick)

- Preoccupation with failure
- Reluctance to simplify interpretations
- Sensitivity to operations

- Commitment to resilience and,
- Deference to expertise

Safety Thinking and Practice (Cognitive Dissonance)

- Ability to identify and manage confusion, mixed messaging?
- Does the leading articulate clarity of purpose and meaning?
- What is the organisation's and leading thesis, narrative (discourse)?
- Do the organization and leaders 'fix' or 'tackle' problems?
- How is vision articulated?
- Is dissent encouraged?

Safety Influences (Psychosocial Triggers)

- Well being
- Trust
- Care
- Learning
- Fatigue
- Work-life balance
- Stress and stressors
- Bullying
- Authoritarianism
- Health initiatives
- Guilt
- Fear
- Negativity
- Scepticism
- Pessimism
- Cynicism
- EAP and support structures
- Nutrition
- Organisational climate

Sociopolitical Influences

Safety Leading (Leadership Values)

- Location and accessibility of offices, managers, leaders
- Knowledge and development of visual and special literacy
- Proximity of safety department to leadership and managers
- Is reporting open and fearlessly encouraged?
- Does the leader or manager want to hear the "bad news"?
- How is bad news encouraged and managed?
- How are followers valued? How strong is the hero myth discourse?
- In what ways does the leadership psychologically "punish" non-conformance?
- Knowledge of political dynamics and the politicization of issues
- Understanding of SPoR diagnostic methodology (Appendix One)

Safety Competence (Commitment)

- Competency focus
- Competency framework
- Training framework?
- Trust in the person and experience
- Good balance on measurement and qualitative values
- Perspective on injury data

- Attribution in statistics
- Checklist dependency
- Forms as tools or ends in themselves
- Value and recognize intuitive (implicit) knowledge

Cultural Influences

Discourse (Cultural language)

- How is risk and safety spoken about?
- How is risk and safety training spoken about?
- Is safety something one endures or is there expectation and positivity?
- Had the induction been designed by a learning expert and presenters trained educators or is it accidental, haphazard and boring?

Culture Cloud

- Ability to understand culture semiotically
- Ability to use cloud descriptors to map culture
- Ability to assess, map and inform Due Diligence

Safety Actions (Risk and Communications)

- Awareness of communications as 'technique'
- Discourse and language at levels (Workspace, Headspace, Groupspace)
- Understand the principles of dialogue
- Presentation skills

Cultural Values Framework

Understand the social psychological (Appendix One and Three) dynamics of:

- Democracy
- Bureaucracy
- Autocracy
- Adhocracy

Safety Learning Capacity (Resilience)

- How is learning prioritized in language?
- Quality of learning in training, inductions and discipline?
- Micro-management?
- Stereotyping
- Male/female relations
- Transparency
- Performance management language
- Critical thinking

Sub-Cultural Influences

Artefacts (Desktop analysis of OHS, policy and procedures documents)

- Dialectic Framework
- Ability to name and tackle competing sub-cultures, worldviews, by-products, praxis, boundaries (semiotics)
- Note use of words, repetition of words and absence of key words in policies and procedures eg. Presence or absence of generalisations, stereotypes, myths, meaningless phrases and words eg. Human error, be careful, be alert, common sense, inferred knowledge, blaming etc
- Messages in posters, wall hangings, photos
- Training room, foyer, walkways, lunch rooms, meeting rooms
- Visual and special literacy

Appendix One. SPoR Diagnostic Methodology

Apart from the testing of implicit knowledge through the Social Psychology of Risk (SPoR) MiProfile Survey (see Appendix Two), a range of observations and assessments can be made to develop a cultural map of **Risk Maturity** and **Risk Intelligence** in an individual and organisation.

The foundation for evaluating risk intelligence is understanding how this is situated in culture. Culture is best defined as:

... value-based interpretations; artifacts; shared experiences; interaction, adaptation, and survival; social customs and social norms; the expressive forms of social and material life; a distinctive 'way of life' of a group or class; historically transmitted ensembles of symbols; 'maps of meanings' that make social life intelligible to its members; systems of knowledge shared by large groups of people; the quotidian, self-interpreted conduct of particular groups and communities; historically shaped forms of consciousness; contradictory forms of 'common sense' that shape public and popular life; everyday activities and patterns of actions; an evolving totality of meanings; a living tradition; socially transmitted patterns of behaviour; meanings alive in institutional life as well as in ordinary behaviour; socially embodied differences and 'performed' at the level of everyday life; the symbolic production of material structures; a conception of the world or worldview; ...

So we can see that the idea of culture is quite complex, because it entails:

1. Common and exclusive language/knowledge (cultural discourse);
2. Accepted terms of reference by a group;
3. Clear identifiers of membership;
4. Common values, attitudes and beliefs;
5. Explicit and implicit symbols;
6. Shared experiences;
7. Social customs and social norms;
8. Historically transmitted ensembles of symbols;
9. 'Maps of meanings' that make social life intelligible to its members.

These are summarised diagrammatically in the following 'culture cloud'.

In the risk and safety industry it is relatively easy to define hazards, these are physical objects that present harm to a person. It requires much more sophistication and intelligence to recognize cues in risk that are social, psychological and cultural⁴.

The Culture Cloud

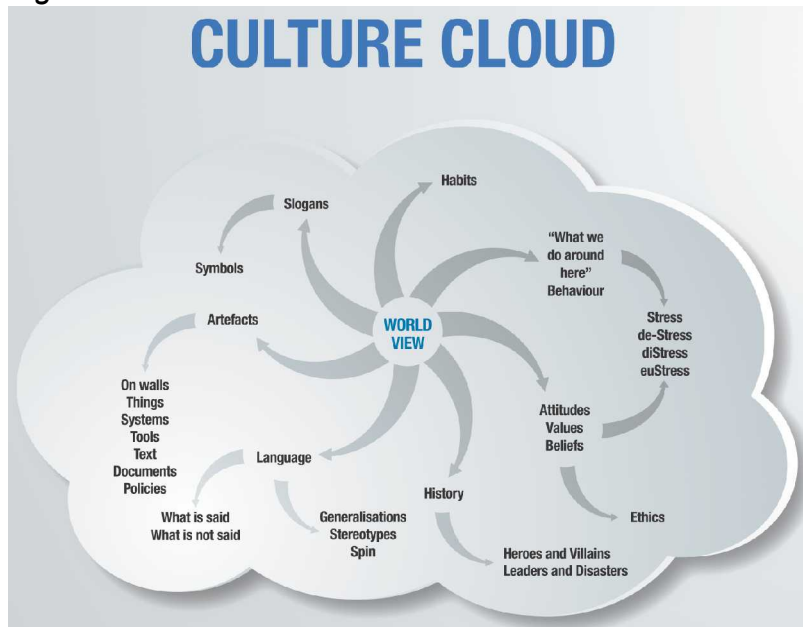
Culture is intangible in many senses and is far more than 'what we do around here'. Culture is most often misunderstood as systems, leadership or behaviours. Such definitions unfortunately warp an understanding of culture

⁴ Dr Long names the three dimensions of focus for risk intelligence as Workspace (physical), Headspace (psychological) and Groupspace (cultural). Cues in risk must be recognized in all three domains before leaders can have a sense of maturity and intelligence in understanding and addressing risk.

and miss critical aspects such as: symbols, discourse, language, spacial & visual literacy and a range of artefacts that are just as influential in determining risk.

In order to help understand culture Dr Long uses the metaphor of a cloud to capture the complexity, visibility, changeability, turbulence and equivocal nature of culture. In many ways we can see culture but cannot touch it or feel powerless to change it. We can even be in it and amongst it but have little effect on it in what we do. The culture cloud moves with weather patterns, trends and pressure. Just like any cloud, the culture cloud is formed by particles to make a whole and has boundaries that are not easy to contained. Sub-cultures form like Sub-clouds and maintain an identity within and around the cloud but are both the same but distinctly different depending on heat and prevailing winds. The culture cloud is represented at *Figure 1. SPoR Culture Cloud*. The cloud metaphor also enables organisations to extract away from hierarchical, physical and binary models of power and influence on risk⁵.

Figure 1. SPoR Culture Cloud



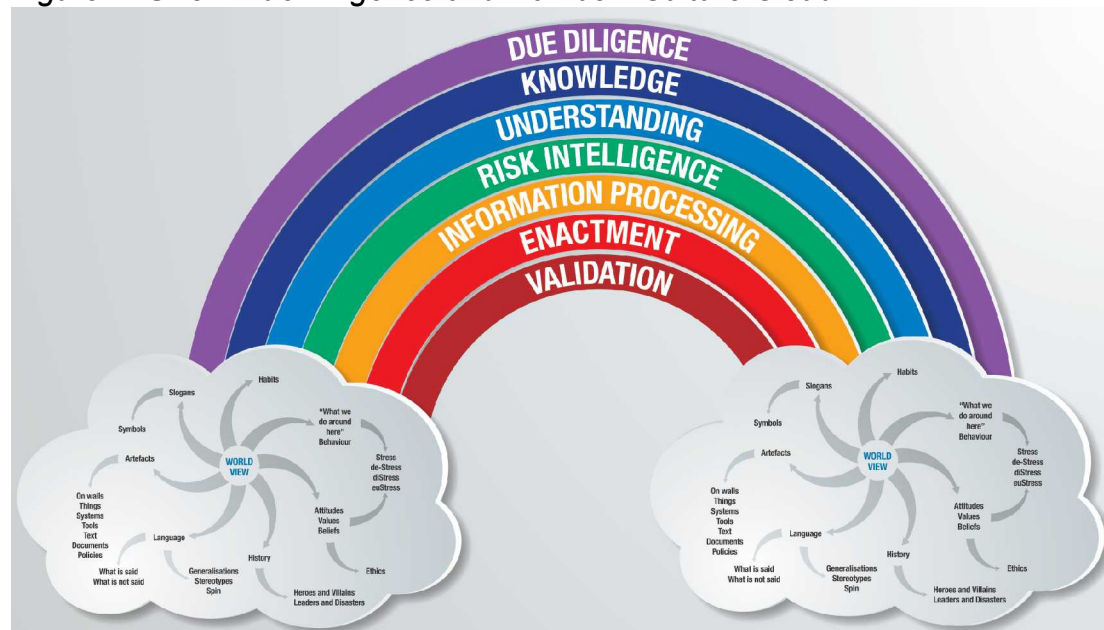
Due Diligence Rainbow and Cloud

It is also important to understand the nature of risk in the life of individuals and organisations and how risk is perceived and managed. For this reason the metaphor of the culture cloud is extended to include the Rainbow metaphor as represented in *Figure 2*. Enactment (due diligence) within culture is situated on the foundations of culture.

All organisational matters such as risk, learning, business, people management, climate, internal integration, external differentiation, organic processes and mechanistic processes are all conditioned by culture. The six primary factors of due diligence are represented in the colours of the rainbow in *Figure 2. SPoR Due Diligence and Rainbow Culture Cloud*. The idea behind the metaphor is to convey both the complexity of due diligence but also the importance of getting cultural foundations right.

⁵ Each element of the cloud can be used as a checklist of sorts to assess if leaders understand cultural iCues in their workplace.

Figure 2. SPoR Due Diligence and Rainbow Culture Cloud



Please Note: It is critical to note that systems, behavior, leadership and procedures are not culture. It is also critical to understand that data collected on injuries or errors are NOT cultural measures.

Mapping Risk Intelligence and Competing Values

One of the best ways to map risk intelligence is through an understanding of competing values within an individual and across an organisation (Cameron and Quinn). All maps vary from location to location and individual to individual according to their level of iCue⁶.

As values compete and are affected by strategy, a range of by-products and trade-offs are created. Understanding these tensions between values, trade-offs and by-products and, understanding how values compete are critical in mapping iCue and understanding how power, values, ideology, personality and social context and to influence decision making.

When SPoR conduct a Risk Intelligence Audit and Assessment (an iCue Diagnostic) and prepare a report a range of collection and reporting tools are used, these are represented at Appendix 2. When SPoR conduct an observational audit, this is undertaken as a complement to the MiProfile Survey so that it can be later used as a cross checking validation.

As part of iCue mapping Dr Long has constructed a Competing Values Framework (CVF) Tool that assists visually in understanding competing values embedded in individuals and organisations. The framework for the Competing Values Framework Tool is represented at Figure 3. *The SPoR Competing Values Framework Tool.*

Figure 3. The SPoR Competing Values Framework Tool.

⁶ In SPoR all iCues can be given a Quantitative and Qualitative score.

A range of cultural and sub-cultural types can be represented on the CVF Tool as demonstrated at Appendix Three. Each quadrant of values in CVF mapping demonstrate the underlying values that compete and explain differences in iCue scores.

Observation Tools

The following serves as a list of observation activities required to develop an iCue map.

Discourse

The first thing one observes is the use of space and place and how power is embedded in worldviews. This is where visual and spacial literacy is needed to detect 'hidden' discourse about power, communication, rank, role and status, relationships and contradictions in discourse. A study of symbology, signs, slogans, mantras and language is critical in understanding unconscious messages, artefacts and framing.

Competing Values Framework

In some ways the dynamics of MiProfile⁷ are used as tools for observation. In the methodology of Cameron and Quinn (Diagnosing and Changing Organisational Culture) four types of approaches to risk are described:

- a) Democratic
- b) Adhocratic
- c) Bureaucratic and,
- d) Autocratic

⁷ The MiProfile audit tool provides Quantitative and Qualitative data that scores and positions individually on a Risk Intelligence (iCue) scale.

These four approaches (and blends between sub-cultures) are determined through tensions between mechanistic processes and organic processes and, internal and external foci. In observation one is looking for tensions between maintenance and integration and positioning and differentiation.

The tensions between all these elements leads to the definition of 16 competing values organizational types illustrated in Figure 3.

Social Psychology

Following observations in visual and spacial literacy a range of social psychological filters are used to explore meaning and purpose in leadership in risk. Social psychology has its focus on some of (but not restricted to) the following human factors:

- Human relationships
- Decision making
- Communication
- Persuasion
- Influence
- Power
- Aggression
- Politics
- Groups
- Prejudice
- Attraction
- Pro and anti-social behavior
- Community
- Helping
- Conformity
- Authority
- Saliency
- Belonging
- Attachment

The capability of discerning these factors at work in people and between people takes quite some practice to observe and listening between words, language and silences.

Language

One of the most important tools for culture evaluation is observation and listening to language – verbal, in systems, policy documents, program descriptors, communications of various forms, previous audits, committee and board reports.

One of the best activities for mapping iCue is to listen to language of ‘double speak’, peer pressure, manipulation, coercion and authority host of other social psychological indicators as listed above.

Language indicative of sub-cultures (worker, supervisor, middle manager or leadership/manager) found in posters, symbols, slogans and workplace myths is also critical.

Individual and Group Informal Interviews

One of the best ways to map iCues is via walks and talks in situ, including head office, site shed and in the field. The format for interview questions is outlined in the MiProfile methodology.

In general the themes and focus of questions focus on:

1. Leadership
 - Leadership Values
 - Attributions
2. Preparedness
 - Mindfulness and managing the unexpected
 - Entertaining doubt
3. Thinking and Practice
 - Evidence of Cognitive Dissonance
 - Anchors and biases
4. Influences
 - Psychosocial Triggers
 - Authoritarian and non-authoritarian views
5. Systems
 - Sensemaking
 - Bureaucracy
6. Vision
 - Espoused values and
 - Theory-in-use
7. Priorities
 - Espoused Judgments
 - Decision making capability
8. Learning Capacity
 - Resilience
 - Learning organisation
9. Competence
 - Commitment
 - Training and education
10. Actions
 - Communications
 - Perceptions of risk
 - Heuristics

Specific questions are not stipulated in this approach rather open questions are the best way to stimulate discussion. The interview is about listening not telling. Some questions may create a sense of dissonance and in so doing generate statements in extremes. If so, this is managed by the interviewer and filtered accordingly.

Digital Reviews

Sometimes site visits and interview walks and talks are best supplemented by digital and video footage. This enables better reflection when off site. When one takes a step away from the heat of the moment then better attention can be given to visual and special clues and indicators (iCues) on site. Many of the visual, spacial and verbal indicators are subtle and difficult to pick up in a brief visit because they operate at an unconscious level.

Appendix Two. Overview of SPoR MiProfile Survey

What is it?

The SPoR MiProfile Diagnostic (iProfile) is much more than just a surveying tool. MiProfile is an experiential learning event, an assessment and evaluation tool and, a frame of reference for strategic thinking and development. What organisations know intuitively about culture, strategy and values is rarely captured, MiProfile measures and maps 'gut knowledge' in organisations.

How does MiProfile do it?

The best way to assess organisational culture, values and beliefs is by capturing the 'gut' (implicit) knowledge of people in the workplace. MiProfile does this by using Keypad technology, the survey is structured in rapid fire statements with only a few seconds to answer, using the Keypad. Each session is orchestrated by Dr Long (developer) and his team who are expert in the technology and supporting methodology. There is no writing, no need to be highly literate and its all anonymous and confidential.



How does it work? Everyone holds a Keypad and responds to survey statements, results are accumulated by the computer and displayed instantly on the screen. This has a strong affect and stimulates conversations which shape progressive responses to statements. All statements are received 'blind', there is no capacity to predict future statements until they are revealed.

What is Delivered?

The MiProfile delivers the following:

1. An MiProfile event for small or large groups.
2. Immediate, open and transparent reflective knowledge of attitudes and values projected in the location of delivery.
3. A unique methodology for investigating culture and organizational attitudes and values.
4. An activity which stimulates learning and conversations 'framed' at key issues in the organisation.
5. A comprehensive report and executive summary (depending on organizational size up to 250 pages) including demographic comparative analysis.
6. Comment and participatory observations by presenters.
7. Recommendations for strategic thinking and planning articulated by Dr Long in the Report and by follow up presentation/workshops.
8. Expert interrogation of the data and event by Dr Long (expert in social and organizational psychology).
9. Ongoing support in change management and learning in the organisation.

How will this benefit me and my organisation?

1. First of all MiProfile is more than just a survey, its an event, process and experiential learning activity. The process is enjoyable and stimulating not like paper-based surveys which are often tedious, MiProfile addresses the problem of survey fatigue.

2. The MiProfile process offers organisations extraordinary insight and **evidence** into implicit beliefs (gut knowledge) held throughout the organisation. The quantitative and qualitative results are then used to drive evidence-based practice.
3. The MiProfile process and results drive targeted analysis and recommendations provided by Dr Robert Long and his team.

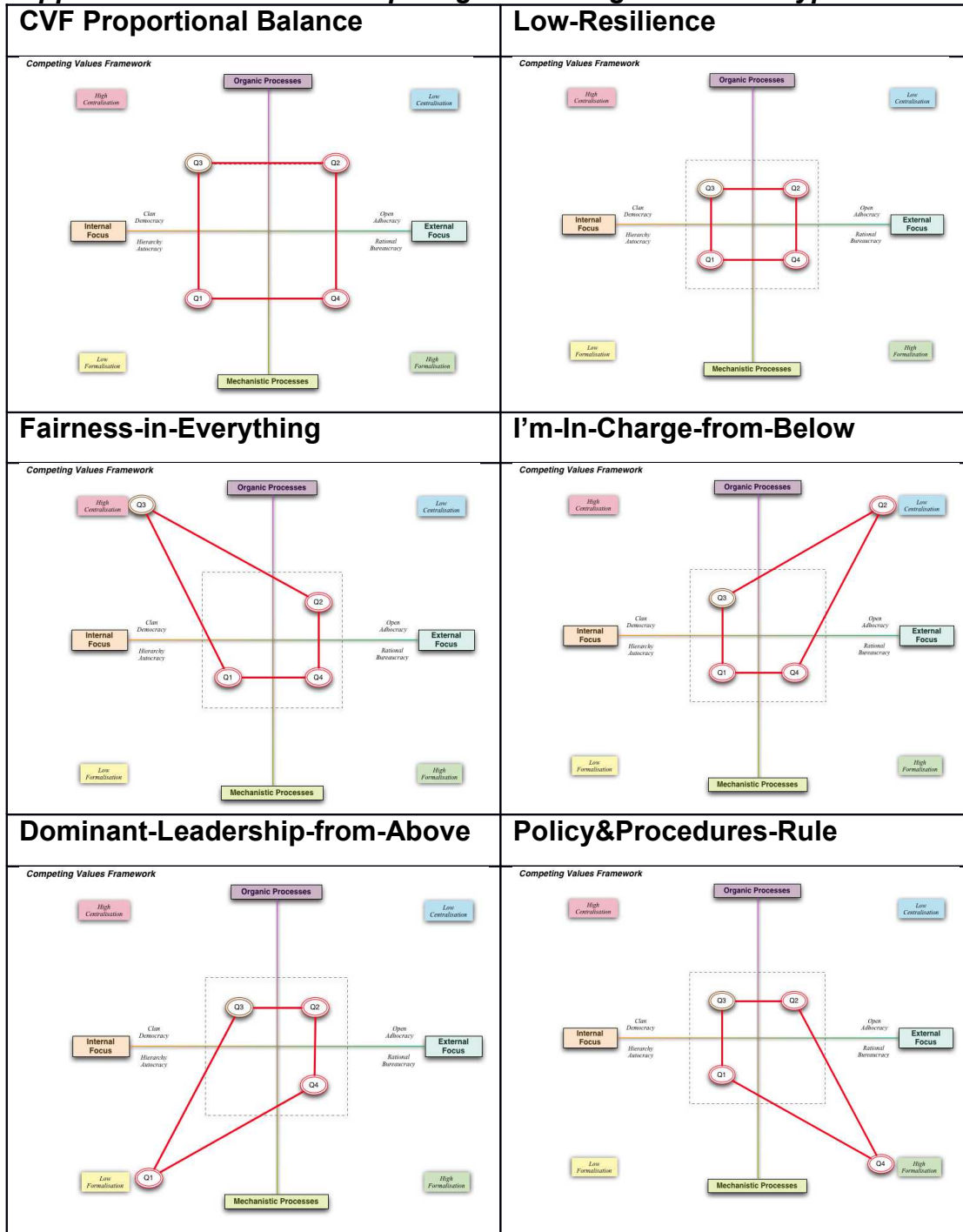
Why Use MiProfile?

1. MiProfile is far more reliable, interactive and educational than conventional data collection processes.
2. An expert team ensure ethical and reliable methods to help construct the experience as well as provide qualitative participant observations.
3. People leave the MiProfile session stimulated and engaged about what has been revealed and transparently projected.
4. The MiProfile Report provides expert analysis of the organisation's culture including recommendations about practical interventions, change management strategies and actions.

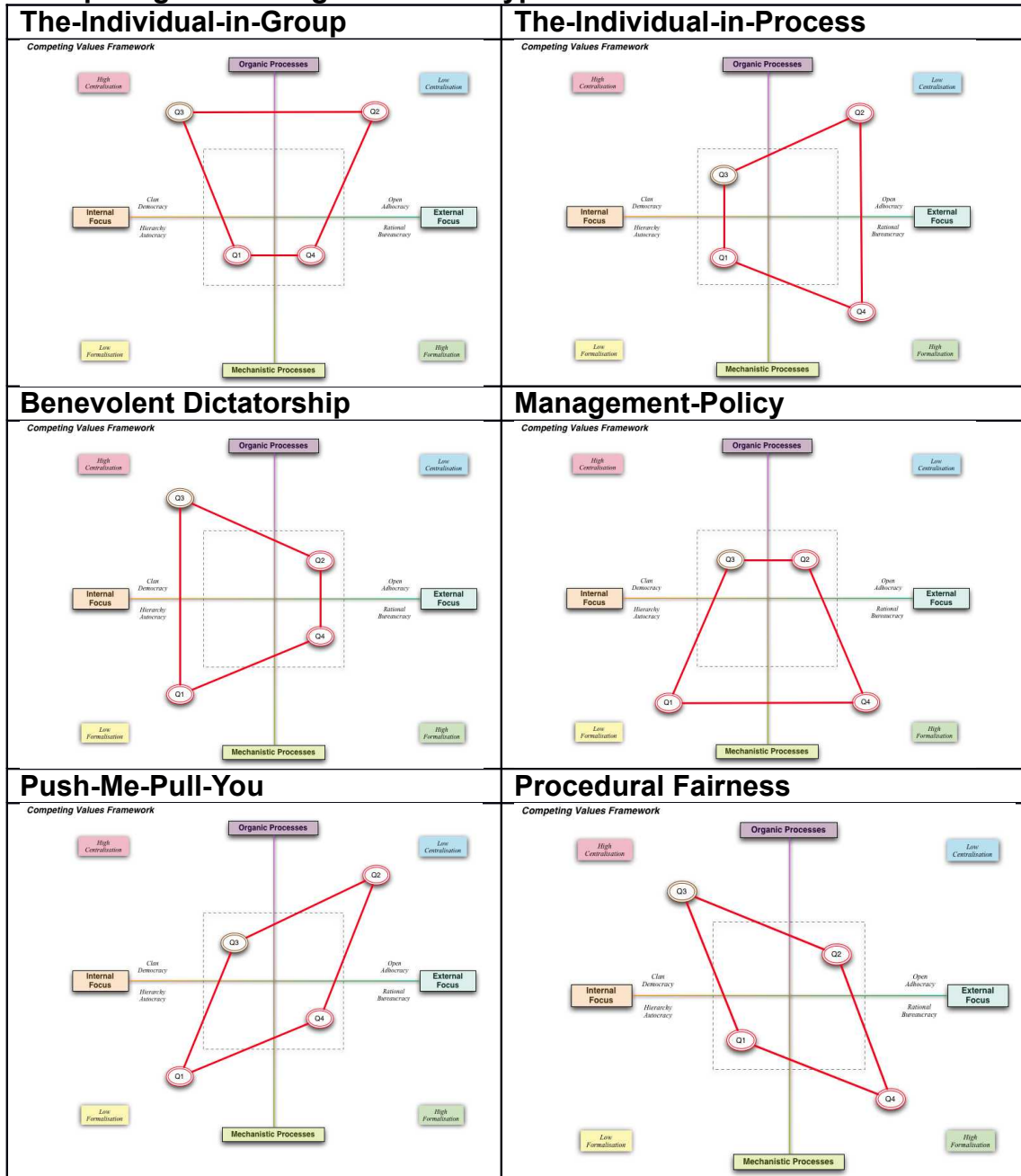


Any Downsides? The survey session is labour intensive and therefore more costly than Internet or paper-based surveys. However, these costs are far outweighed by the benefits of the experience and the insights gathered by the presence of the expert team.

Appendix Three. SPoR Competing Values Organisational Types



Competing Values Organisational Types – Conflict Pairs



Competing Values Organisational Types - Deficits

