



Welcome back to Acumen

Since 2004, Acumen Software has been helping organisations to manage their health & safety workflows. During this time the software has collated data for over 250,000 safety incidents.

Our articles and papers are work in progress and we welcome feedback from all who read - feedback we hope can be included and will enhance what we discover.

At the heart of everything we do is the Acumen Safety Model. This model has five key elements which we believe are important to improving safety:



1. An **Information Model** that allows for the correct information to be created and shared to the right people at the right time.
2. The continuous delivery of **Training & Competencies** for all individuals for safe working and wellbeing.
3. The ability to allow individuals to protect themselves by continuously reinforcing the correct practices through **Self Checks & Risk Assessments**.

4. The delivery of formal workflows and processes for conducting **Inspections and sharing Best Practice**.
5. The organisational processes and workflows to enable **Corrective Action and Learning**.

In analysing the data we have collated, and through the testing of our safety models through the empirical data, we have identified a number of informational blockers which can stop the effective transmission of messages to the required people, at the right time and in the correct format. These information blockers should be read in conjunction with the Acumen Technological Blockers.

Health & Safety management is a social and informational process comprising people artefacts, influences and information. At the heart of the social interactions is the information by which the people utilise, artefacts comprise of and influences can impact. Information which is used to share messages via people to people, to artefacts

Our traditional views of information and communication in business and organisations is based on a set of conceptual models that are linear in the way in which they model and conceptualise information. Data is effectively enriched by people to make information and information is codified to become knowledge.

Data → Information → Knowledge

Many professionals see real-world information sharing as linear and flat - a given assumption being that when we share or give directives on Health & Safety, the organisational processes simply assume the receiving person has fully understood and accepts that information /



directive. Maybe we are lucky enough to ask a few clarification questions to confirm understanding - but is this truly enough to assume our message and associated information contained in that message has been internalised correctly. If not internalised - then it cannot be acted upon correctly.

These linear models do not reflect the reality of social interactions, multiple people and external influences. It does not take into account behavioural, psychological, actions, artefacts and non-verbal communication influences. All of which play a critical role in Health & Safety information management. All these factors must be accommodated in any model we advocate to disambiguate the area of concern.

Our premise starts with a theoretical basis for understanding Health & Safety management:

- Safety as a concept is a social and information based process.
- Information is not a fixed entity - it is a process that is constantly morphing and evolving.
- Health & Safety management involves organisations, people, processes, information, influences and actions.

It is the combination of people, process, messaging, message payloads, the mechanisms of processing interaction and information that we need to focus on to understand the foundations for a better safety conversations. It is the **connected conversation** that we must advocate and understand. In doing so, we need to understand the following critical aspect of information management:

- **People are Multi-Dimensional:** Agents are multi-dimensional, they interact with each other. They interact with objects, processes,

external influences and internal information processing mechanisms.

- **Communication is not Flat:** Communication is not flat, it involves non physical and psychological aspects that effect meaning, transmission and reception of information messages.
- **People are not Isolated Islands:** People are constantly being effected by other people and their competing messages.
- **Information is not Static:** Information is not a static object - it is a constantly changing artefact that is evolving and morphing into new meanings with differing messages and exchanges with other people.
- **Value of Information:** There is an assumption that any information being communicated is valuable to the receiver and will invoke behaviours. For this to occur, information must be timely, accurate, trustworthy, valuable, evocative, digestible, actionable and sharable.
- **Information Fatigue:** Any person can become fatigued with information exchanges - either passively or actively. Information fatigue can lead to the same information being received by different individuals and meaning different things to each person. The agent's information processing mechanisms have become fatigued and do not work appropriately.
- **Information Overload:** Information overload is a common occurrence in the modern mobile computing era. Individuals are constantly bombarded with information from many sources. Health & Safety management must be able to navigate these competing forces to evoke or reinforce the required Health & Safety behaviours. This overload leads to Fatigue!



- **Miss Information + Miss-Trust:** False or misleading information not only leads to miss-understanding and miss-interpretation but eventually leads to a lack of trust in the sender. Even when they transmit correct information, the agent receiving the information may no longer trust the source of said information and as such the message will not invoke behaviours because the level of trust has reduced.
- **Message Overload:** People receive competing information from many sources - linked with information overload, people overload occurs when an person tries to process too much information and as such the information consumed becomes superficial. Meaning, depth and context is lost and the overall informational message becomes meaningless.
- **Lack of Processing Mechanisms:** If the receiving agent does not have the required processing mechanisms they will not be able to understanding the meaning and content of the message - to this end the information processing will fail and any information passed to the agent is worthless.
- **Too Complex:** Complex information may not be understood by the person - there is a mismatch with their ability to process this information - leading to misunderstandings or miss use - ultimately leading to useless information.
- **Missing Information:** As with too complex information, messages that have missing information again lead to miss-information and miss-understanding - eventually creating useless information.

The above barriers are wide ranging and complex. They highlight the true diversity of information processes within the Health & Safety context. This complexity cannot be

underestimated - but if we do not embrace these barriers then we risk Health & Safety imperatives not being actioned, leading to continuous safety issues.

We welcome feedback on our article!

About the Author

Paul Robinson PhD blends his academic track record with 20 years industry experience in technology and safety solutions working for organisations such as the NHS Patient Safety Program, consultation and software services to numerous organisations such as Skanska, Qatar Foundation. ASTAD, Amey, AVOVE, Pitney Bowes, TIME Qatar, Balfour Beatty and many others.