Technology Blockers to Safety

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.**

Technology Blockers

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 Information Communications Technology (ICT) blockers which can stop the effective transmission of messages to the required people, at the right time and in the correct format.

The process of creating, sharing & disseminating safety information is a social experience. It is socially constructed and influenced by people's norms, values, cultures and people. There is a continuous impact on people involved in information creation, sharing and usage. Safety information is not a static object - it changes and can be changed from it's original meaning / intent by people along it's lifecycle.

The dynamics of social information must be reflected and accommodated in any communications technology utilised in Health & Safety activity. However, by it's very nature Health & Safety activity is dynamic and social and has a number of critical elements that technology must work within to add value.

Ultimately, the use of technology in Health & Safety activity must help to:

- Suppress the number of health & safety negative events that occur in our workforce.

- Enable a more efficient and effective response to Health & Safety negative events.

- Unlock the information and knowledge contained in the Health & Safety events and work flows.

- Enable the organisation to share best practice in Health & Safety activities thus delivering true 360° learning.

The following pointers provide an insight into the potential technological barriers that must be overcome to ensure ICT is effective in Health & Safety activity:

ICT as an Enabler: ICT capabilities perceived as being a silver bullet to solve all Health & Safety problems is a path that will cause many issues for organisations. Over estimating what ICT can deliver and embedding that over commitment in the organisation will lead to expectations far beyond the capabilities. If the technology then fails to deliver, users will lose faith in it's capabilities.

Lack of Technology Familiarity: Technology use and adoption can be eased by ensuring the end user is familiar` with the technology interface and usability. Health & Safety activities are unique in that they may incorporate regular usage of technology with the end user engaging with technology daily. This ensures they have a familiar use of the technology. However, if the technology is not used on a regular basis the end user is faced with a problem that when an urgent need to use the technology is required, their lack of familiarity will potentially hinder them and their usage. This can have a huge impact if the use of the technology is time critical (such as urgent alerts, notifications or serious incidents).

Differing Approaches: Health & Safety activity can be categorised crudely into Pro-active and Reactive. Pro-active focuses on the prevention and suppression of incidents - ensuing good practice throughout the organisation. Reactive focuses on the reaction to an unexpected Health & Safety event that occurs. Both approaches require technology to adapt and change to meet the requirements of both approaches.

Restrictive Platforms: Technology platforms are built to meet specific requirements of the organisation. At the point of deployment, the professionals deploying the technology only know a finite amount of the future requirements of the business. This is the same for all technology deployments in all organisations. If the technology platform is unable to meet the requirements of the changing business or changing Health & Safety events, then the platform will be redundant. Redundancy of technology will lead to loss of value from said technology and usefulness will be lost.

Miss-match to Information Norms: In the modern mobile era, the general public have created their own technological norms and expectations. No-longer is ICT confined to the office, factory or work station at home. Technology is now pervasive in all forms of life, in many cultures and in many countries. Organisational technology can be very different to the technology used by workers outside the organisation. In fact, many workers now use social media technologies to undertake work activities. This mismatch of information norms creates a conflict for end users - in that they tend to be more comfortable with technology norms that they use in their personal life - therefore neglecting the organisational formal technology. Social media technologies are driving higher expectations in corporate technology usability.

Inability to Support Cultural Change: The COVID-19 pandemic illustrated the need for all organisations to change their culture and practices. Social distancing and restrictive social interactions where the norm for many countries. Cultural change must therefore be supported at all times by technology. The ICT platforms must adapt and change, supporting the cultural change. Health & Safety change can benefit greatly from cultural change - ICT needs to support this continuously.

Lack of Intelligence: Health & Safety activities are inherently complex processes - these processes can be generic or targeted. ICT technology must deliver a degree of intelligence in order to identify areas of concern and focus - supporting the Health & Safety decision makers at all levels of the organisation. Without intelligence, the platform will provide a reduce level of value and support to the organisation.

Rapidity of Technology to Inform: With all serious Health & Safety incidents - the ability to inform people quickly and reliably is paramount for the success of said technology. Without the ability to respond rapidly in a reliable manner, recipients of the messages will eventually lose trust in the platform and stop it's usage.

Steps to Take

In summary, the following steps can be taken to support the adoption of ICT in the management of Health & Safety:

1. **Utilise ICT to deliver an intended Health & Safety Outcome**. Never over estimate the impact of ICT.

2. **Ensure the use the chosen technology is familiar to the user**. Lack of Technology Familiarity will lead to lack of usage.

3. **Ensure that the chosen ICT can deliver proactive and reactive outcomes**. Both approaches require technology to adapt and change to meet the requirements of both approaches.

4. **Ensure the ICT of choice can adapt with the future requirements of the business.** Redundancy of technology will lead to loss of value from said technology and usefulness will be lost.

5. **Ensure ICT matches the information norms**. A mismatch of information norms creates a conflict for end users - in that they tend to be more conformable with technology norms that they use in their personal life - therefore neglecting the organisational formal technology.

6. **Ensure ICT platforms adapt and change, supporting the cultural change**. Health & Safety change can benefit greatly from cultural change - ICT needs to support this at all times.

7. **The ICT platform must be intelligent**. Without intelligence, the platform will provide a reduce level of value and support to the organisation.

8. **Rapidity of Technology to Inform**: Without the ability to respond rapidly in a reliable manner, recipients of the messages will eventually lose trust in the technology and stop using it.

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.