A PRACTICAL GUIDE TO BECOMING A "HIGH RELIABILITY ORGANISATION"

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This document is written as a guideline for companies wishing to implement HRO ideas. It can also serve as the basis a presentation and/or small group discussion about HRO principles.

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Preamble

High Reliability Organisations are organisations alert to "bad news", or warning signs that things may be about to go seriously wrong. This guideline describes in detail a "bad news" reporting system designed to identify and respond to these warning signs before it is too late.

Companies that fully implement this guideline will generate a heightened awareness of risk among their employees, including their managers, with a consequent reduction in death and serious injury.

Becoming an HRO is not just a matter of introducing new procedures. The key is a commitment from the top of the organisation - preferably the Board - to make it happen. That will require the CEO, or perhaps an appropriate executive who answers to the CEO, to accept accountability for implementing the guideline. Successful implementation will also require additional resources, both to make the reporting system work, and to respond to problems identified in reports. Without these commitments, the guideline has little chance of success. Companies should not embark on this journey unless they are willing to make these commitments.

What is a High Reliability Organisation?

Some organisations operating highly hazardous technologies do so with far fewer accidents than might be expected. Examples include air traffic control, the US nuclear navy and some nuclear power stations. Researchers have called them high reliability organisations (HROs)[1].

The striking thing about HROs is that they are pre-occupied with the possibility of failure. To use a now well-known expression, they exhibit "chronic unease"[2] about how well they have their major hazards under control. They recognize that prior to every major accident there were warning signs of what was to come, which, had they been attended to, would have prevented the accident from occurring. This is true for every major accident that has been studied systematically.

A contrary view has gained ground in recent years, namely, that some accidents are "black swans". According to this view, just as black swans were unknown to Europeans before they visited the west coast of Australia, so too, some accidents have causes that were unknown and unknowable at the time. The fact is, however, that the Aboriginal people of Western Australia have always been well aware of the existence of black swans. Similarly, the evidence from major accident inquiries is that the knowledge required to prevent the accident existed somewhere in the system. The problem was that it was not available to those with the power to act on it. Properly interpreted, the black swan metaphor supports the idea that all accidents are preventable, if only we ask the right people.

Researchers have described HROs as *mindful* organisations, constantly aware of the possibility of failure. They seek out localized and small-scale failures and generalize from them. "They act as if there is no such thing as a localized failure and suspect instead that the causal chains that produced the failure are long and wind deep inside the system". "Mindfulness involves interpretative work directed as weak signals"[3].

Consider this description of the US nuclear sub marine organisation – probably the most celebrated of all HROs .

> "One of the most amazing elements of the Nuclear Submarine culture is its self-enforced refusal to sweep problems under the rug. For decades the submarine culture has recognized the criticality of squeezing out every ounce of lessons learned from imperfect performance."[4]

Mindfulness is not just a characteristic of organisations. It is also a characteristic of their leaders. Mindful leaders are very aware that their systems may not be working as well as

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[1] Hopkins A "Defining high reliability organisations", chapter1 in Hopkins A (ed) *Learning from High Reliability Organisation*s (CCH Sydney, 2009)

[2] https://www.youtube.com/watch?reload=9&v=I5ORFsf3QpQ

[3] Weick K, K Sutcliffe and D Obstfeld (1999), "Organising for high reliability: processes of collective mindfulness", *Research in Organisational Behaviour*, vol 21, pp81-123

[4] Digeronimo M & Koonce B, *Extreme Operational Excellence: Applying the US Nuclear submarine Culture to Your Organizsation,* Outskirts 2016, pi

intended, nor as well as they are being told by their subordinates. They are suspicious of a steady stream of good news and are forever probing for the bad news that they know lies beneath the surface. Mindful leaders therefore conduct regular walk-arounds, talking to employees on site, seeking the view from the frontline. They know there is no point telling people that safety is the top priority. That is likely to be seen as no more than a slogan. Instead they approach workers with a degree of humility - humble inquiry[5] - seeking to learn from them what is going wrong and what the organisation could do better[6].

Encouraging bad news

It is not enough to set up a bad news reporting system and wait for people to report. Bad news is generally not welcome at higher levels in large organisations. Indeed, it may be actively discouraged. Leaders sometimes seek to empower their employees by telling them: "don't bring me your problems; bring me your solutions". Unfortunately, this means that if the employee has no solution, the problem will remain unreported. Leaders inspired by the HRO philosophy are aware of this. For them, bad news is good news, because it means their communication systems are working to move the bad news up the hierarchy to the point where something can be done about it before it is too late.

I sat in the office of such a leader one day while she was talking on the phone to a lower level manager who had provided her with a report that presented only good news. "Thank you for the good news", she said. "But where is the bad news? I want you to rewrite your report to include the bad news." The organisation in question had a policy of "challenging the green and embracing the red". This slogan refers in the first instance to traffic light score cards of risk indicators. Generally speaking, senior management wants to see an array of greens with as few reds as possible. Many senior managers accept that green is green, without question and press their subordinates to convert the red to green as soon as possible. Often there are ways of doing this that have nothing to do with reducing the risk - managing the measure rather than the risk. Mindful leaders recognise this. They embrace the red as a learning opportunity. And they challenge the green by asking for the evidence on which that classification was based. "Challenge the green and embrace the red" also has the more metaphorical meaning of questioning the good news and welcoming the bad. The manager I was visiting was implementing this slogan in a very effective way.

To encourage the reporting of bad news, organisations must *celebrate* particularly significant reports. There is a famous case in the literature[7] where a seaman on an aircraft carrier thought he might have left a tool on the deck. Foreign objects on a runway are very dangerous. Accordingly, the seaman reported the loss of the tool to the commanding officer of the carrier.

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[5] Schein, E, 2013, *Humble Inquiry: The Gentle Art of Asking Instead of Telling*, Berrett-Koehler Publishers, San Francisco.

[6] For a more extensive discussion see Hopkins A, *Disastrous Decisions: The Human and Organisational Causes of the Gulf of Mexico Blowout* (CCH, Sydney, 2012), Chapter 9, "Management walk-arounds".

[7] Weick K, K Sutcliffe and D Obstfeld (1999), "Organising for high reliability: processes of collective mindfulness", *Research in Organisational Behaviour*, vol 21, pp81-123.

There were aircraft in the sky at the time that had to be diverted to a shore base. The tool was found, and the aircraft brought back on board. The whole episode involved a substantial disruption to the activities of the aircraft carrier. The next day the commander summoned the crew to the deck and held a ceremony in which he congratulated the seaman for having made the report.

This kind of recognition can also involve financial rewards. The leader in whose office I sat had introduced an incentive system to encourage the reporting of bad news. She had instituted an award, named after a man in her organisation who had saved someone's life by his alertness to a hazard. The award had various levels, the highest being diamond, which was worth $1000. The day I visited her she made a diamond award to an operator who had recognised that an alarm level had been changed on a piece of equipment, without going through the proper management of change process. He had written an email about this to his manager, who in turn had passed it up the line. The senior manager I was visiting had made more than a hundred awards for this kind of reporting in a period of less than 12 months.

Examples of reportable bad news

Here are some examples of bad news that HROs like to see reported:

*   Procedures and rules that are not appropriate, or are too complex to follow.
*   Procedures that are routinely violated or ignored.
*   Pressure to get the work done quickly, resulting in errors.
*   Fatigue influencing the quality of the work
*   Critical controls not working as intended.
*   Hazards that are not adequately controlled.
*   Undesirable consequences of the reward system used by the company.
*   Leaders unintentionally giving a message that production is more important than safety.
*   Communication failures.
*   Equipment in substandard condition.
*   Equipment that was supposed to be isolated but turned out to be live.
*   Near misses
*   Inexplicable occurrences - anomalies.

This list is far from complete. But it gives an indication of the breath of bad news that might be reported through this system.

The last item deserves special mention. Major accidents are often preceded by anomalies - things that are not right, but which have no obvious explanation and, apparently, no undesirable consequence. Too often, anomalies are ignored, until it is too late. One of the vital features of a bad news reporting system is that it can highlight anomalies and ensure that they are responded to in time.

A bad news reporting system – air traffic control

Australia's air traffic control organisation, Airservices Australia, operates a bad news reporting that is the basis for the model to be described shortly. It also operates a separate "incident" reporting system that is used to capture incidents that by law must be reported. The question such a system raises is: is this a compulsorily reportable incident or not. If the answer is no, then the matter is not reported. That is completely contrary to the idea of a bad news reporting system which encourages people to be sensitive to all kinds of warning signs which are far too varied to be specifiable beforehand. Accordingly, Airservices set up a second reporting system (called an event report system) to capture the bad news that did not constitute a reportable incident.

It has a rapid and effective system for responding to all reports from around the country - both incidents and events. They are sent each day to head office where they are carefully examined. The most significant are compiled into an operations report. The corporate safety manager studies this report closely and presents it each morning to an executive briefing attended by the CEO. This group decides what follow up may be necessary[8].

HROs such as Airservices often have specialist units whose job it is to make sense of the reports being received, and to risk assess them, not according to some formalized process, but on the basis of deep experience that enables the assessor to identify their full significance[9]. All of this presupposes a level of resourcing that is seldom seen in non-HROs.

An example of a bad news report at Air Services Australia and how it was handled

A report was made by a controller following a midnight to dawn shift (the doggo shift). The report noted: "traffic levels and complexity on doggo approaching unsafe capacity" and went on to provide details. The sector concerned was traversed by international aircraft destined to arrive at capital cities in south eastern Australia at daybreak, and traffic congestion in the sector was greatest around 4am. The work was complex because aircraft were not following fixed routes but were being allowed to follow flexible tracks, to take advantage of tail winds. The sector was managed by three controllers, in accordance with minimum staff guidelines, but at about 4am one of the controllers, who had been unwell, declared himself unfit for work and left for home. There was apparently no possibility of rostering additional staff at such short

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[8] Hopkins A "Identifying and responding to warnings", chapter3 in Hopkins A (ed) *Learning from High Reliability Organisation*s (CCH Sydney, 2009)

[9]Macrae C, *Close Calls: Managing Risk and Resilience in Airline Flight Safety* (Palgrave, Basingstoke, 2014)

notice and this left two controllers to carry an exceptionally heavy work load, which they did without a break, until traffic began to ease some time after 5am.

The report of this incident was filed at 5.30am and was identified in head office in Canberra as a matter of concern, requiring follow-up. Accordingly, an investigation was carried out, resulting in a 24-page review document. The investigation canvassed in some detail the way in which flex tracks had increased the workload and recommended that controllers should be able to modify flex tracks and fix aircraft in particular tracks where overload was becoming a problem, for whatever reason.

There are several things about this report and the response to it that are worthy of note. First, the report concerns overload of front-line workers. Fatigue and job overload are frequently identified as contributory factors in accident investigations in many industries and are clearly matters worthy of report. However, there are few organisations where an experience of job overload would be deemed an appropriate matter to enter into an electronic reporting system. Second, the period of overload passed without mishap, yet controllers recognized that the situation was unsafe and therefore reportable. This demonstrated a high level of risk awareness. Third, the report did not just disappear into a data base. Head office identified it as a matter of high priority and resources were devoted to investigating it and exploring possible mitigation strategies.

Principles for
a bad news reporting system

A model bad news reporting system will be elaborated here as a set of principles[10]. The more faithfully companies implement these principles, the better the results will be.

Principle 1. The reporting technology must be as user friendly as possible.

Existing reporting systems often constrain reporters to fit their reports into a pre-determined framework and to do additional work such as classifying and risk assessing or assigning some kind of priority to the matter being reported. This is a disincentive to reporting. Classification and risk assessment should be the responsibility of people receiving the reports, not those making the reports. Furthermore, reports often have to be lodged via a company portal that can be intimidating to reporters.

The most user-friendly system is reporting via a mobile device such as an ipad or a smart phone. It is easy these days to create an app that can be downloaded onto such a device which can then be activated by the push of a button. If a company does not have the necessary expertise in-house, there are plenty of consultants who can help.

The app would enable reporters to make a report in free text with no attempt to categorise the matter or risk assess it. They could upload photos as appropriate and even make suggestions for what should be done. The reporter would need to be identified, but he or she might choose to report on behalf of a work crew. The physical location and organisational unit would also need to be identified. And that's it – press a button and off goes the report. In many organisations, supervisors are equipped with tablets and many workers are likely to have their own personal smart phones which could be used in this way. For those that do not wish to use their own smart phones they could access the bad news reporting system from workplace computers or by asking a supervisor to make a bad news report on their behalf. These access issues would need to be carefully worked out in advance.

Principle 2 Reports should be routed automatically to particular people

Bad news reports should go to the immediate supervisor (if it is not the supervisor reporting), as part of the normal communication between employees and supervisors. At the same time, they should be routed one or two levels up, to a site manager, who should monitor what is

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[10] Hopkins A (2019), *Organising for Safety: How Structure Creates Culture*. (CCH: Sydney), Chapter 11

going on and take further action in relation to selected matters that may be beyond the capacity of a supervisor to deal with. As well, all reports should go to a corporate centre for analysis and for transmission upwards where a corporate response is desirable. This is an essential step in the process to ensure that matters that cannot be dealt with at lower levels rise to the top of the organisation where something can be done. A strong central risk function is obviously vital if this is to be done effectively. This function should be headed by a chief risk officer, or VP for HSE, who can take particular matters to the executive committee for consideration, especially if there are major financial implications. It is likely, for example that reports about critical control failures may highlight the need for higher order controls (eg engineering controls, as oppose to administrative procedures or PPE) which could be considerably more expensive. Figure 1 shows these flows of information upwards. It depicts only the essential elements of the communication network just described. Additional lines of communication could be added, either formally or informally, depending on circumstances.
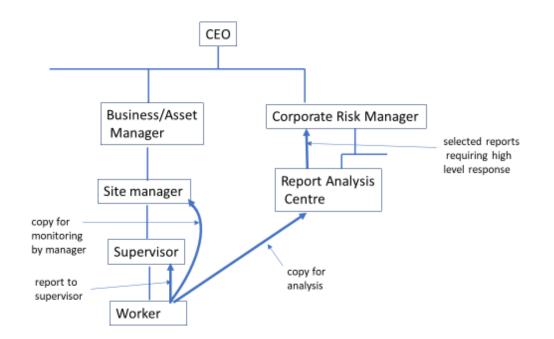

Figure 1: Pathways for bad news reports

Principle 3 All reports should be individually responded to.

It would be the responsibility of the supervisor or line manager one or two steps up to respond to each and every report received, not just to acknowledge it, but also to indicate what, if anything, will be done about it, and why. Getting a personal response to a report assures the reporter that the report is being taken seriously and is likely to encourage continued reporting. The response would go not only to the person making the report, but also to higher level people, both in the business unit concerned and in the corporate centre. See figure 2. This whole process of responding to reports would need to be monitored to ensure that it was occurring as intended. The corporate HSE function, or risk function, should be tasked with making this work.

Reporters would need to be invited to respond via the same route if they felt that their reports had disappeared without trace or that the response had been insufficient.
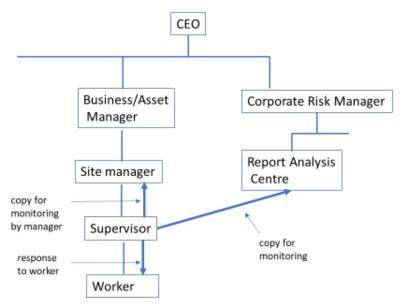

Figure 2: Pathways for supervisor response

Principle 4 Encourage "helpful" reports.

A reporting system like this may be initially swamped with reports that are quite trivial from a corporate point of view, such as grass that needs cutting or potholes that need filling. While these reports need to be responded to respectfully, they are not necessarily warnings that danger lies ahead. They are not the kinds of reports that will assist in preventing fatalities, or worse, catastrophic events. Once the system is in operation people need to be encouraged to focus on bad news in relation to fatality or catastrophic risks. This requires a process of acknowledging and celebrating the most "helpful" report in some organisational unit – say a site - for some reporting period -say a month. Determining the most helpful report will require decision makers to turn their minds to the kinds of events that the bad news report may have prevented. The decision might be made by a committee, but it must be the site manager who makes the announcement, to reinforce its importance. In addition to this recognition, there should also be a financial reward. The most helpful report of the month at each site could receive a prize of at least $1,000.

Each month, site winners automatically enter a company-wide competition for the most useful report. The winner should be determined by the CEO, although again he or she may make use of a small advisory group. The prize in this case should be a considerable amount of money. The CEO should announce the result, together with the reasons for the decision, on a blog. Depending on the company structure, it may be appropriate to have intermediate levels of competition, for example at the business unit level.

The process just described "steers" the reporting system in the required direction. It encourages people to focus on the most significant fatality risks, without any need to enumerate these risks

beforehand. This will also help to reduce the number of less significant reports, because over time, reporters will understand what is being rewarded and what is not.

A reporting system like this will fail if there are no or not enough reports. It may be necessary in the first month or two to set a quota whereby each site manager must solicit some minimum number of reports from subordinates.

Principle 5. Use local circumstances to steer the system, but not too prescriptively.

A bad news reporting system can be steered in different directions depending on the particular needs of the company or industry. One possibility is to direct the system towards the identification of critical control failures. This could be done by announcing beforehand that reports about critical control failures will be regarded as particularly helpful. However, companies will need to be careful that the scope does not become overly narrow; it is important not to stifle reporting initiatives that lie outside what is of current concern.

Principle 6. Encourage courageous reporting

It should be obvious that some very useful reports may reflect badly on reporters or may make trouble between them and their workmates or supervisors. To report in these circumstances takes courage. (Recall the seaman on the aircraft carrier who reported he had lost a tool.) From time to time it may be appropriate at either the site level and/or the corporate level to give special recognition to courageous reports of this nature.

To assist in encouraging courageous reporting it will be necessary to grant immunity from disciplinary action to any person who makes a report, and to any person about whom a report is made. In other words, **the reporting system must be a no blame system**. There must be no question of applying "just culture" principles in this context, as this would most certainly inhibit the reporting of mistakes and violations. In some cases, a report may indicate the need for refresher training, but this must be seen as corrective, not disciplinary.

One result of a no blame reporting system is that people who fear that their actions could give rise to disciplinary action might get in first and report their actions into the system. If that happens, it must be accepted; that is a price that must be paid to make the system work.

There may be some exceptions to this principle of immunity. Reports about the criminal behaviour of others, for example, theft or assault, should not result in automatic immunity for the person committing the criminal behavior, but any such exemptions from the immunity principle must be clearly specified beforehand. If there is any possibility that reports might result in discipline, this will very likely stifle reporting.

One implication of this approach needs to be highlighted. Some companies have life-saving rules (or golden rules, etc), the violation of which is supposed to result automatically in a disciplinary response. If violations of life saving rules are to be reported, all concerned must be exempted from discipline. Of course, there may be other consequences, such as coaching. Companies need to be very clear that the principle of immunity takes precedence when reports

are about violations of life saving rules. Again, these are matters that will need to be carefully considered in particular contexts.

Principle 7. Contractors working on site must be encouraged to participate in the client company's reporting system.

At many sites, the workforce is partly or largely made up of contractors, working for a labour hire or contractor company. It is vital that these people be encouraged to contribute to the client's bad news reporting system in the same way that any regular employee may do. The value of the system will be entirely undermined if they do not. Such reports will be in addition to any reporting option available through the employing firm. There are often considerable obstacles to such reporting, which can and must be overcome. It may take courage for a contract worker to report into the client's system and this may be a situation in which it is appropriate to make awards for courageous reporting.

Principle 8. There should be no reporting targets

What is the optimum number of reports? The aim of this system is to get enough reports to help manage risk more effectively, but not so many reports that it becomes impossible to respond to each one individually.

That means there can be no targets, no rates, and no trending of data. Aggregate statistics in this situation are largely meaningless. This is also true for near miss reporting which is a particular category of bad news reporting.

The system described here prioritises quality of reports over quantity of reports. This avoids the problem of so many reporting systems that specify numerical targets; the predictable result of such systems is large numbers of low-quality reports.

Principle 9. A bad news reporting system depends on top organisational commitment.

A bad news reporting system requires significant resourcing and should not be introduced unless there is a clear commitment from the Board and or the CEO to make it work. Either the CEO or a senior manager who reports to the CEO must be made accountable for the process. See "A cautionary tale about an HRO program", elsewhere in this document.

Principle 10. Governments should guarantee that bad news reporting systems will not increase the risk of prosecution.

Company lawyers sometimes fear that such a reporting system will increase the risk of prosecution. If so, they should make a case to government for the kind of immunity that would be necessary to allay their fears. Governments need to respond positively to any such concerns and find ways to guarantee that a bad news reporting system will not increase the risk of prosecution.

Concluding comment – a system that promotes risk-awareness

The end result of a bad news reporting system that is working well is a highly risk-aware workforce. Employees are alert to warnings of danger and to precursors of all sorts. They exhibit the type of mindfulness that is characteristic of high reliability organisations. They do so because the system is one that encourages, recognises and rewards this mindset. It continually reinforces risk-awareness by identifying reports that are most helpful in reducing fatality risk.

A Cautionary Tale about an HRO program.

Introducing HRO principles into a large company in the resources sector requires a commitment from the top of the corporation and it requires a significant commitment of resources. It is not just a matter of educating the workforce to think differently.

The oil and gas company, BP, made a concerted effort to transform itself into an HRO starting in the year 2000. It failed totally, culminating in 2005 in a major refinery accident at Texas City that killed 15 people. The story is instructive[11].

BP's approach was laid out it its HRO "leadership fieldbook", which was distributed to leaders throughout its refining organisation.

The fieldbook sets out some of the theory of HROs, and it includes an "HRO toolkit" of games, exercises and quizzes aimed at teaching people to think mindfully, that is, to be alert to warnings of danger, to think about "what might bite them", and so on. In short, the HRO program is an educational program, aimed at changing the way people think. It is quite explicit about this: "… cultural change [is about] how people think about themselves, their job and the people they work with." The assumption is that, if people can be educated to think mindfully, BP will be transformed into an HRO.

A memo written by BP's "HRO champion" demonstrates this assumption. The memo was a commentary on an HRO survey that had been conducted among BP employees. It said, among other things:

"There may be some frustration and cynicism on the part of the frontline workers. Frontline workers may also have an insufficient understanding of HRO, and may not be effectively engaged (with HRO, operating envelopes, etc), may lack an overview of the intent and purpose of initiatives they work on, and may not really appreciate their own impact and influence.

We thought that a common area for improvement is in developing a better understanding of HRO and engagement of the frontline in the behaviours and actions that can have the biggest difference on results."

It is clear from these comments that the whole HRO culture change program was aimed at educating frontline workers to think differently.

The above comments speak of cynicism on the part of the workers. The explanation for this cynicism can be found in the report of a culture survey done at Texas City a few months before the accident. Respondents had learnt the HRO language and were willing to talk about weak signals and warning signs. However, in their view the organisation itself was not taking warning signs seriously. Here are some comments from the survey:

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[11] Hopkins A (2008), *Failure to Learn: The BP Texas City Refinery Disaster* (CCH, Sydney), Chapter 11, "Culture"¨¨

- *""We have warning signs occur every day; like pipe thinning." (A reference to corrosion)*

- *"Warning signs are everywhere, but the real ones ... [are] the lack of funding, and the application of band aids on top of band aids." (A reference to the shoddy maintenance wor, that was being done.)*

- *"The root cause of (a particular) fire was a lack of sufficient inquiry into weak signals."*

Educational programs have their place. But an educational program, by itself, cannot be expected to move the culture of an organisation in an HRO direction. What is required is a different set of organisational practices in relation to training, maintenance, auditing, and so on — all of which lay outside the scope of BP's HRO program.

There was something else that made significant change unlikely. Culture change in organisations starts at the top. One of the problems with BP's HRO culture change program was that it was not driven from the top. It appears that neither the CEO, nor his immediate subordinate, the chief executive for refining and marketing (the CE), had anything to do with it.

The fieldbook described above was commissioned by an executive who was one step below the CE, and it was developed a little further down the line by an HRO manager. This man described his job as being a "cheerleader for HRO", assisting refinery managers to implement an HRO culture. The HRO culture change program was the responsibility of refinery managers, which meant that it had to be funded out of refinery budgets. Given that refineries were under pressure to cut maintenance costs, training costs, staffing costs, and so on, there was really no way that places like Texas City could progress towards HRO status.

Recommended reading

When these materials area used for a workshop, they can be accompanied by an article that highlights the importance of warning signs, and how proper attention to them can potentially prevent major accidents. The article is entitled - "A culture of denial: sociological similarities between the Moura and Gretley mine disasters". See bibliography. Available from author on request.

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www.youtube.com/watch?reload=9&v=I5ORFsf3QpQ

Biographical statement

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Andrew was an expert witness at the Royal Commission into the 1998 Exxon gas plant explosion near Melbourne. He was a consultant to the US Chemical Safety Board in its investigation of the BP Texas City Refinery disaster of 2005, and also for its investigation into the BP Gulf of Mexico oil spill of 2010. He has written books about these accidents, with over 100,000 copies sold.

He has been involved in various government reviews of Work Health and Safety regulation and regulators and has done consultancy work for major companies in the mining, petroleum, chemical and electrical industries, as well as for Defence. He speaks regularly to audiences around the world about the human and organisational causes of major accidents.

- BSc and MA (Sociology) from Australian National University, PhD (Sociology) from the University of Connecticut.
- Winner of the 2008 European Process Safety Centre safety award, the first in time it was awarded to someone outside Europe.
- Honorary fellow of the Institution of Chemical Engineers in recognition of his "outstanding contributions to process safety and to the analysis of process safety related incidents"
- Life member of the Australian Institute of Health and Safe and recipient of its highest award for "lifetime achievement".
- Member of the advisory board of NOPSEMA – the Australian National Offshore Petroleum Safety and Environmental Management Authority
- Officer of the Order of Australia (AO) in recognition of his "distinguished service to industrial safety and accident analysis"

Books by Professor Hopkins:

Making Safety Work (Allen & Unwin, 1995)
Managing Major Hazards: The Moura Mine Disaster, (Allen & Unwin, 1999*)*
Lessons from Longford: The Esso Gas Plant Explosion (CCH, 2000)
Lessons from Longford: The Trial. (CCH, 2002)
Safety, Culture and Risk (CCH, 2005*)*
Lessons from Gretley: Mindful Leadership and the Law, (CCH, 2007)
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Disastrous Decisions: Human and Organisational Causes of the Gulf of Mexico Blowout (CCH 2012)
Nightmare Pipeline Failures: Fantasy planning, black Swans and Integrity Management. (CCH 2014) with Jan Hayes
Risky Rewards: The Effect of Company Bonuses on Safety (Ashgate,London,2015) with Sarah Maslen
Quiet Outrage: The Way of a Sociologist (CCH: Sydney, 2016)
Organising for Safety: How Structure Creates Culture. (CCH Sydney, 2019)
Credibility Crisis: Brumadinho and the Politics of Mining Industry Reform (CCH, Sydney, 2021), with Deanna Kemp