

There is no “free lunch” when it comes to safety - a look at one of the biggest challenges for the safety professional.

I am going to talk about one of the biggest challenges facing the safety professional, and that comes in 2 parts, but before we get into the detail, I am going to talk a little around what is a safety professional.

Those of us involved in safety investigation would put up our hands and taking ownership of that title, and fair enough.

Those from the safety and quality background in industry would also see themselves as safety professionals, so up goes the hand.

Regulators also; they are there to promote and ensure safety, so up goes the hand.

Arguably the title should also belong to the head or leader of any transport operation. We have all heard the phrase that safety starts at the top, and there would be few rational people amongst us here who would argue with that. The leader has a wide range of responsibilities. He or she is responsible for the company achieving its goals and presumably to make a profit in the process. In the case of an airline that goal is usually to deliver passengers or freight on time and, in one piece and in good condition. What is expected by both the public and the regulator is that this will be done safely. It is simply not acceptable for industry to create unnecessary risk. So company leaders too are “safety professionals”. How professional will depend on commitment to running a safe operation, whether the organization is generative one where failure causes inquiry, new ideas are welcomed and safety is embraced, or a pathological organization where failure is covered up, new ideas are suppressed and safety is endured.

Moving into part 1, I recently took a five year break from accident investigation, to take up an operations/managerial role in a major transport company. I often refer to this as “taking a walk on the wild side”. I found myself in one of those dual roles being responsible for both operational efficiencies and for operational safety in a company that was on the brink of receivership, the classic conflict of interest. With 7 years previous background in safety investigation, faced with this choice my tendency was to err on the side of safety rather than operational efficiency. In spite of this I survived 5 years of company takeovers and restructures, at least physically unscathed.

It was a valuable 5 years. I gained a good appreciation for the pressures that affect corporations, the politics both internal and external; the relationship between operator and regulator – all driven by the dollar and reputation.

So how does the fight for the safety dollar go? If you can, imagine the workings of the transport business like a giant flywheel that is powered by an engine that is fueled by the dollar to keep it turning. A heavy wheel that by design stores energy to maintain momentum in the face of power fluctuations; designed to smooth out power fluctuations caused by interruptions to cash flow.

Any business will face challenges. Airlines are facing big challenges now. Fuel prices have reached unprecedented levels; there is a world-wide shortage of well-trained pilots and maintenance engineers; some routes are over-serviced by low-cost airlines. The company must at best return a profit to its shareholders, or at least survive. The flywheel must keep turning.

When the financial pressure comes on an operator something has to give; and so the hunt begins for cost cutting or cost saving measures. The difference between cost cutting and cost saving is not subtle, the latter relating to improving efficiencies and thereby making savings, the former relating to simply cutting expenditure to make the revenue side of the company ledger higher than the expense; you do not need to be an accountant to understand that.

This is the point when the safety dollar comes under attack. Some costs in an operation are not negotiable. Fuel for the aircraft - without it the plane doesn't fly. If the plane doesn't fly, the flywheel quickly loses momentum, because there is no revenue coming in to power it. On the other hand, safety is an easy target, because you can take away a little here and there and the flywheel absorbs the lulls; it smoothes it out. The cash-flow problem is saved in the short term with little noticeable effect. If you cut all training today, the planes are not immediately going to fall from the sky; the ships are not going to suddenly leave the channel, and neither are trains going to all immediately come off the rails. The problem is though, the flywheel is now struggling to maintain optimum revolutions; the operation is under stress; it is running at a higher level of risk.

Such an organization will often experience an upsurge in minor incidents, those precursors to accidents. Left in this situation for long enough, accidents will occur. Investment in people and training is kept to the bare minimum. Retraining is almost non-existent. Support for the true safety professional is small, if there at all. The head of such an organization often still holds his hand up claiming to be a safety professional.

So knowing that financial stress impacts on safety, how often does a regulator check the financial health of an operator? Or how often does an investigation look deeply into the financial health of an organization? Very rarely it would seem. The reason is that it is difficult. The financial health of an organization is jealously guarded as commercially sensitive and the relationship between financial health and an accident is not a direct one. Even if an investigating authority has the powers in statute to delve into these areas, it will need the expertise. Financial savvy does not feature highly on the list of core competencies for investigators. It is a specialist area, yet this is an area that can often be rich pickings for the true root causes of accidents and incidents. Often financial stress can be predicted. Flagging economy, increased competition, high fuel costs, or a combination of these factors will mean stress. A casualty of hard times is just one of those hard knocks of life. It happens all around us; finance companies go under, business goes into bankruptcy. We all share some responsibility for make sure a failing transport company exits the transport system without causing third-party casualties, the operator, the regulator, the investigator, which brings me to part 2 of this story, resourcing of the transport accident investigator.

As I have alluded to above, accident investigation is not a cheap service. To conduct thorough investigations takes a lot of time and a lot of money if it is to be done properly. Investigation cost for a single occurrence as we know can be tens of millions of dollars. In this respect, an agency is not unlike the transport operator. It too has a flywheel that needs to keep turning. The main difference is that the sole source of revenue is often the government. We spend, but do not generate direct revenue. Now we all understand that reducing accidents saves money, not only for transport operators, but in terms of

social cost to the public we serve. The problem is that it is difficult to measure our effectiveness, and thus how much we contribute in monetary terms.

For governments we represent the safety dollar that is all too easily overlooked.

The New Zealand Transport Accident Investigation Commission was formed in 1990 as an independent crown entity. It is a standing Commission of Inquiry, and its powers have been described as the strongest of all the other standing Commissions in New Zealand. In this regard it differs from most of our counterparts around the world. Commissions by their nature traditionally inquire into larger or more significant events. The TAIC Act has been written to give it a broad mandate to investigate a wide range of transport occurrences and to go as far as it needs to get to the root causes.

The Commission is made up of three part-time Commissioners who have a dual role. They are the board responsible for governance over the Commission's activities and they make determinations as to the causes of accidents and incidents and make recommendations. One of them must be a lawyer or judge so that the Commission can hold public hearings. It has the same powers as a district court. Accident investigation is only one tool the Commission uses to complete its inquiry. The TAIC Act allows the Commission to be directed to investigate an occurrence, but it cannot be directed not to. Once an investigation has been launched, it cannot be stopped except by the Commissioners themselves. In short, the Commission has been set up with all of the statutory tools required to investigate any occurrence to any depth, independently.

Recently questions have been asked of the Commission as to why it has not been fulfilling its mandate as a Commission of Inquiry. There were 2 answers:

- 1 Government and the New Zealand public have historically viewed the Commission as an accident investigation agency simply transitioned from its predecessor the Office of Air Accident Investigation, and the Commission has at large behaved like one; that is to say, it has never challenged that thinking until now, and
- 2 The Commission has never been funded to behave like a Commission of Inquiry

The total annual operating budget for the Commission has hovered between 2 and 2.7 million for as long as I can remember, at least a decade. For that New Zealand has purchased an accident investigation agency consisting of a total of 9 investigators, 3 in each of the 3 modes it investigates, aviation, rail and marine, supported by a small administration team. There is no specialist in any particular area. The investigator has been a "jack of all trades" using outside expertise when required, and when the Commission can afford it.

Historically, the Commission has adjusted its activities to fit the budget. It has limited the number and type of occurrences it investigates, putting that safety dollar where it believes the Government, the public and industry will gain the most benefit. Arguably, this financial constraint on its activities has been a risk to its independence.

Almost every year the Commission has run a deficit, and each year the deficit has simply been absorbed into government, thus hiding the true cost of accident investigation as we know it.

It is no secret that the Commission has been running lean. Training has been almost adequate, but for many years the Commission has been relying on the knowledge and skills of its staff carried over from its

predecessor, the Office of Air Accident Investigation. One would be forgiven for thinking the Commission has been not unlike one of those organizations under stress that I mentioned earlier. The flywheel has been turning, but the engine turning it has been struggling.

The Commission has recently been going through a period of rediscovering itself and changing its methodology to meet its mandate.

Recognizing that its staff was at risk of not remaining contemporary, in 2007 we began a review of the core competency training for investigators, initial and on-going. This was the start of exposing what the true cost of accident investigation is. This review continues, but already we have begun putting investigators through the Cranfield basic multimodal investigation course, including a number of experienced investigators. The rationale behind this is to have all investigators working to the same methodology. For the already trained investigator, it is like pushing the reset button with an automatic upgrade without losing the value of previous training and experience. For all training, it is essential that training providers are contemporary; that they are up to date with the latest methodology. The same old syllabus year after year, without review becomes a risk to organizational development.

We are still in the process of reviewing the on-going training program for advanced investigation skills, and for on-going refresher training. This initiative has been at the expense of attendance at some international forums that investigators have traditionally attended. As we know, training is expensive but necessary.

There is a guarantee from Government that the Commission will be funded accordingly should we have a major accident, but access to that funding is only available for high magnitude events that fit certain criteria. Year 2007 was an expensive one for the Commission. Accident activity was normal, but several investigations were higher than normal cost, but did not fit the criteria for funding a major accident investigation. The fishing vessel *Kotuku* capsized and sank in the Foveaux Strait; 6 people died. The cost of recovery of the wreck stretched the Commission's working capital and eroded its reserves, yet it was necessary. The Commission was able to identify numerous shortcomings not only with this boat but many others like it, shortcomings resulting from a flawed survey and regulatory system potentially affecting the country's entire fishing fleet. The lessons from that inquiry have been learned and a massive government-led restorative program is now in place. With the loss of 6 lives, these lessons did not come cheaply

About mid 2007, Government became concerned that the Commission might not have the capability and resources required to fulfill its statutory purpose and functions, so it decided that the Commission would undergo a capability review. The review was completed by late 2007 and contained a set of recommendations that TAIC should have increased funding to increase the scale and scope of inquiries; that is, to increase the number of inquiries launched, and increase the scope of those inquiries where appropriate.

Four scenarios were presented:

Scenario 1 – Where there is no change to the scale and scope of investigation activity, but more resources would be provided to support the functioning of the Commission.

Scenario 2 – Increase the scale of investigations together with the resources for support given under scenario 1

Scenario 3 – Increase the scope of investigations, but not the scale, together with the resources for support given under scenario 1

Scenario 4 – Increase the scale and scope of investigations, which is essentially all of scenarios 1,2 and 3.

The result of the budget bid was announced just over one week ago, and effectively the Commission has been given additional funding in line with scenario 1 with a little extra. This amounts to a 50% increase in base line funding with an additional one-off cash injection spread over 2 years for capital expenditure to improve information technology and investigation equipment. What this means is that the scale of the activity will remain the same, but the support for the investigators and Commissioners will be better. There will be more funds for training and equipment, and there will be additional personnel to take administrative load off the investigators, and support them in areas such as research, report-writing and internal legal counsel. In effect this will free up more time to increase the scale and scope a little, but not to the level envisaged under scenarios 2, 3 and 4.

The proposal is to add a fourth Commissioner in recognition of the need for more day to day involvement of the Commissioners in the inquiry process, and to allow for a seamless transition between Commissioners beginning and ending their respective terms.

So how can we compare what the Commission has gone through in the last decade to the transport operator who is often the subject of its investigations? They are in fact very similar. We both have that flywheel, and when the engine is struggling to keep it turning, both organizations are at risk. The operator is at risk of incidents, and eventually accidents. The Commission in investigating those incidents is at risk of in the worst case getting it wrong, and at best not doing as good a job as it may; not extracting the maximum learning from an occurrence, or to coin a phrase, a “good” accident or incident might be “wasted”

The key point I hope comes from this talk is that whether you are a safety professional on the “wild” or the other side; whether your objective is to make a profit or a difference, it is all about the dollar. There is no free lunch when it comes to safety.