

Advances in Project Management Series¹

Foresight saga: Pursuing insight through chaos and disaster

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My background is one of project planning. My training as an engineer, project manager and army officer made me conversant with the skills and practices associated with the science of planning. I liked nothing more than producing a detailed GANTT chart that took account of all the vagaries and uncertainties that might disrupt progress towards the successful completion of whatever task occupied my time. I knew about the ideas of robustness, resilience and agility but questioned their place within the pantheon of planning tools because I knew that, if the plan was good enough, these "add-ons" would not be required. How wrong I was!

For me the key turning point came when I tried to reconcile multiple texts of risk management. The texts, all written by serious academics and practitioners, seemed to contradict each other. How could this be? How had no-one else noticed this anomaly? I gave myself the task of understanding how the differences in these texts might be resolved. After several false starts I realised that these contradictions were caused by a difference in the assumptions underlying the way the world worked. It was these differences that caused the contradictions to arise. In due course, I identified that there were three parallel sets of assumptions (paradigms).

I have set out these paradigms in Table 1. The paradigms existed around the three main drivers of risk management: these being project management, process management and accident investigation. The project management paradigm seemed to be driven by the linear temporal nature of projects. The process management paradigm seemed to be driven by the circular nature of a repetitive process and the accident investigation paradigm seemed to be driven by an event at a point in time. After much debate, I labelled these paradigms as "Lines", "Circles" and "Dots". Again I now see that these initial labels were not quite right. Circle is only a circle if you look at a process head-on. If, however you take into account that processes happen over time (that is, look at it from the side), then a circle becomes a helix. This all goes to show how important it is to understand how (the way) you see something affects their shape. For me, two important lessons arose from this experience. The first was to recognise how blinkered I had been in my view of the world; other views exist. The second is that these paradigms exist concurrently. In my previous writings I have explained this using the example of air operations from a naval carrier force. I showed how different people in different roles viewed the same events in terms of either

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the line, circle or dot paradigm. What was important about this is that each paradigm brings different, incompatible solutions to the same problem. This experience made me wonder what else was I wrong about.

| | Forward or Backward Looking | Desired or Unwanted Outcome | Chosen or Imposed Outcome | Variance or Invariance of Process | Unique or Recurring |
|---|------------------------------------|------------------------------------|----------------------------------|--|----------------------------|
| Line Project/ Linear | Forward | Desired | Chosen | Variance | Unique |
| Circle Process/ Repetition | Forward | Desired | Chosen | Invariance | Recurring |
| Dot Scenario/ One-off | Backward | Unwanted | Imposed | Variance | Unique |

My main area of interest is organisational failure (in its many forms) and how we might learn from these experiences. In particular I am interested in "failure of foresight". You will see this phrase bandied about by many authors of inquiry reports. They suggest that, with just a little more effort and a little more foresight, whatever problem that had occurred, could and should have been avoided. In my work I look at whether such exhortations are worthwhile or even valid. I have considered whether such a simple thing as the way we look at a problem means that we come up with incompatible solutions that might make foresight more problematic than it would first appear.

In my latest book I describe a thought experiment where I took a recognised accident model and re-engineered it to be a tool for foresight. I used Barry Turners Disaster Incubation Theory as my starting point. I like Turner's model because it really helps me think about the issues being addressed rather than offering prepacked solutions. This is consistent with my own approach. Turner produced a six stage model. He defined these stages as:

- **Stage I - Notionally Normal Starting Point:**

Allows the context to be set, enables beliefs about potential hazards to be articulated and the precautions that are considered normal to be articulated.

- **Stage II - Incubation Period:**

Explains the accumulation of an unnoticed set of events which are at odds with the accepted beliefs about hazards and the norms of their avoidance.

- **Stage III - Precipitating Event:**

The event "forces itself to the attention and transforms general perceptions of stage 2." Such an event arouses attention because of its immediate characteristics for example: the train crashes, the building catches fire, or share prices begin to drop.

- **Stage IV - Onset:**

The precipitating event is followed immediately by the **onset—Stage IV**. The onset starts when "the immediate consequence of the collapse of cultural precautions becom[es] apparent".

- **Stage V - Rescue and Salvage:**

First stage adjustment: the immediate post-collapse situation is recognized in ad hoc adjustments which permit the work of rescue and salvage to be started.

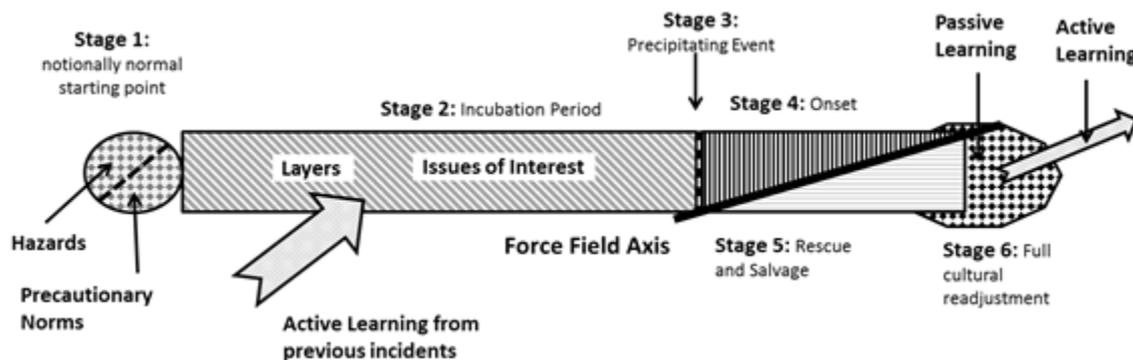
- **Stage VI - Full Cultural Readjustment:**

An inquiry or assessment is carried out, and beliefs and precautionary norms are adjusted to fit the newly gained understanding of the world

These stages can be represented in a neat linear model such as the one depicted below:

| | | | | | |
|--|--|---|----------------------------|--|---|
| Stage I - "Notionally normal starting point" | Stage II - Incubation period | Stage III - Precipitating event | Stage IV - Onset | Stage V - Rescue and salvage | Stage VI - Full cultural readjustment |
|--|--|---|----------------------------|--|---|

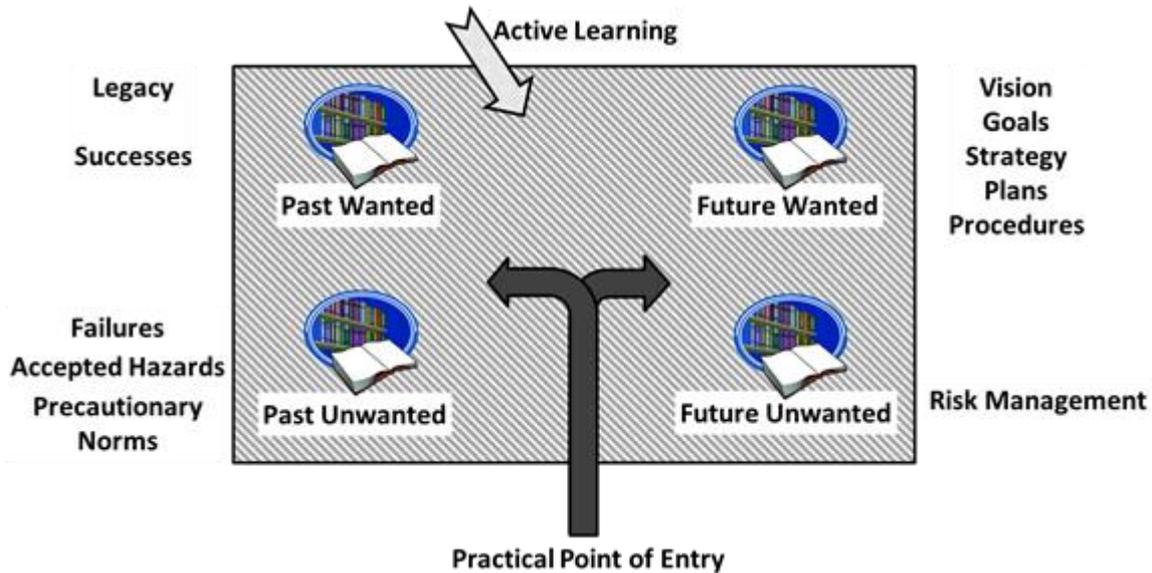
However, this does not depict reality: life is messier. After some consideration I reconfigured the model to look somewhat different.



In this short article, rather than explaining how I justified such a reconfiguration, I will highlight a number of key points that emerged from this work.

The first key topic concerns the point of entry into the model. Conventionally it might be assumed that you would start at Stage One. This is not the case. During my early studies, one of my professors pointed out how you always “join a conversation in the middle”. In a project management context this phenomenon can be recognised in that others will have initiated the project before you became engaged and the users will remain engaged with the project long after you have moved on to other things. Therefore, in terms of the revised model, the point of entry is somewhere within the incubation period. Here the crisis is probably somewhere over the horizon (in that you are unable to see it as yet), but some crisis, large or small, containable or fatal is incubating and is “inevitable” unless appropriate action is taken. The implication of this is that context becomes all important. Those joining the project need to understand not only what has happened before in terms of setting the desired outcome but also the potential hazards the project may face and the steps taken to

mitigate them. This later step is encapsulated in the model Stage One review. This work establishes a baseline for the project. When looking backwards we also need to determine what we can learn for the past. I will cover this in more detail in a moment.



The incubation period represents your normal working mode. Having established the baseline, we then work towards success using the pantheon of project management tools while avoiding “that which is unwanted” (risks) labelled “risk management”. One of the weaker features of current basic risk management techniques is our failure to see drift within our system. Drift means that work done in the past to mitigate risks becomes obsolete and therefore ineffective thereby allowing new risks to emerge. This work emphasises that we must not only be looking forward to what needs to be done but we also need to review what we have done to ensure that the measures in place are still working in the way we thought they would.

A second key topic is the idea of “stable steady state”. Many of our current management tools focus on achieving “steady state operations”. I consider this to be illusory; here, when viewed through the lens of complexity theory, chaos should be seen to be the normal state. For those who see the world as being stable but occasionally disrupted, I can only go back to the Monty Python quote “What have the Romans ever done for us?” The characters then list all the things the Romans had done for them finishing with “... but besides those, what have the Romans ever done for us?” We can only consider our working world to be stable if we ignore all the changes that face us and our work each day. These changes range from changing requirements, changing technology, changing methods, changing clients and even the effects of changing weather, to mention but a few. Another example is the ever changing team composition. Even if personnel do not change, then the people do; they may gain confidence and experience which changes what they want to do and are capable of doing. Conversely they may become tired and less motivated with the same implications. Change is constant and therefore the question is whether we recognise this, see chaos as normal and learning to cope, or do we pretend it is not happening in order to maintain a neat plan?

In studying the model, I start to explore how we might cope if we accept chaos as being normal. I offer three suggestions. The first suggestion is that we must try to change the way we look at the world. For my example I will take the risk management mantra that “risk comes with opportunities as well a threat”. To me, this is an example of quite static, binary, thinking and seems to make little sense. One of the basic risk mitigation strategies taught is to “stop” an activity in order to remove the risk. Therefore, if the risk does not offer an opportunity, why take the risk? The writer Erik Hollnagel describes it better when he says that risk and reward are two sides of the same coin. That is, every action comes with jeopardy as well as benefits. The question then becomes whether the opportunity offered by an action is big enough to warrant the risk taken. This consideration therefore becomes a constant balancing act. This now leads one to think in terms of perpetual motion rather than trying to establish some kind of false binary state of either stability or instability.

The second suggestion is to recognise the complex nature of everyday activity. While it may be necessary and expedient to simplify an issue in order to manage it, it is important not to forget in what way you have simplified it. It is often these simplifications that lead to provoking unintended consequences. I suggest the simple mind tool of dividing each problem into layers in order to understand their true complexity. This layering should not be seen as a reductionist exercise, that is reducing the problem to its basic part, but more as an exercise to understand the multiple factors that are interacting and in a constant state of flux. This model, using the simple labels of micro, mezzo and macro-layers act as a starting point for understanding the true complexity being confronted. Any simplification after this exercise is done with a conscious understanding rather than ignorance of the actual complexity being addressed.

The final suggestion is to provide, what I have labelled “Issues of Interest”. Multiple texts implore managers to be constantly vigilant or mindful of the issues that may cause them difficulties. Few of these texts offer coherent suggestions as to “of what” they should be mindful. My text does. Turner offered his suggestions and others have also tried. As part of previous work I conducted a review of accident and related literature. From these texts I identified over 250 causes of failure. After an exercise in winnowing and abstraction, I reduced these down to twenty questions. However, experience has shown that this is still too many to be of daily practical use to managers. After further work I reduced these down to seven overarching issues. It is of these that managers need to be aware if they are to spot emerging risks. They are:

| Label | Issue/ Question |
|---------------------------|---|
| <i>Who Cares</i> | What are the differences in views on potential unwanted occurrences? |
| Erroneous Assumptions | Are we checking the validity of critical beliefs and assumptions? |
| Failure to Launch | Are our teams prepared, co-ordinated and aligned? |
| <i>Structural Secrecy</i> | Are the organisational structures and processes preventing the delivery of critical pieces of data? |
| Dysfunctional Momentum | Are we seeing and appreciating critical data and making necessary changes, which may be against the momentum of the organisation? |

| | |
|-----------------|--|
| Practical Drift | Where are there risks to plan delivery, caused by an unconscious drift over time from accepted practices? |
| Plowman Effect | Are we keeping constantly aware for adverse unintended consequences emerging from routine and change activity? |

The pursuit of foresight during the incubation period is no simple problem and when the crisis arises it can come quickly. The transition from normal to abnormal chaos, Stage 3 (the Precipitating event) when your life goes from being routine to being hellish, often lasts as little as 30 minutes. In my book I list 13 occasions where it is possible to identify this timescale from publicly available reports. These include the Bradford Stadium fire in 1985, the Hillsborough disaster, the crash of AirFrance flight 447 in 2009 and the Fukushima Nuclear accident in 2012. From this we can see that whereas the incubation period (Stage 2) may last for decades, the Precipitating Event (Stage 3) is often upon us in minutes. This extended incubation period helps explain the problem of induction that leads us to perceive out truly chaotic world as being stable.

My true interest is not in crisis management and therefore I spend much less time in my book exploring the issues around Onset (Stage 4) and recovery (Stage 5). However, examination of these two stages did reveal another key topic. In the Turner model these two stages are depicted as being consecutive. After many discussions with my colleagues who specialise in crisis management, we would contradict this assertion. We feel that it would be more accurate to depict this period as a contest between two opposing forces: onset factors that look to perpetuate the crisis and the other factors aimed at resolving it. It is in this period that we can start to appreciate the true value of being robust, resilient and agile.

Finally, we come to Stage 6 which concerns learning form such events. In my first book (“It Should Never Happen Again”) I examined the value provided by public inquiries following major organisational failures. In examining over 30 public inquires and commissions from around the world I found no new lessons to be learned. At best the inquiry accurately identified a known cause within their specific context. At worst these inquiries produced reports that, to the informed (those specialising in these matters), were breeding ground for the unintended consequences that had already started the incubation of the next crisis. This can be seen in the fact that inquiry reports often contradict the finding of previous investigations. There is great hubris and narcissism in thinking that our failures have been caused by something unique and unforeseeable. In practice our experience is unlikely to have much new to teach others. Our failures are more likely to have arisen from us failing to learn from the past. Therefore, the key point here is that rather than the main learning coming at the end of the process, it should come during Stage 2 (the incubation period) where we should be spending more of our time trying to learn from the past. So why do we not learn? I would say that this is because few of us have the luxury of having the time to explore all the potential causes of failure and applying them to our everyday work. We could however, for a place to start, try and apply the seven “issues of interest” identified above.

Please do not interpret these ideas as an attack on planners and planning. It is not. There is a clear and important role for planning however, as has been said many times before, it is

planning not the plan that is important. Elsewhere plans that do not satisfy their end have been described as “fantasy documents”. In a world where chaos is normal, achieving foresight into how we might fail and planning for the future, is complicated and time consuming. However, some foresight is possible and planning remains a vital task. The question is whether the cost of doing so produces sufficient rewards; at what point does planning suffer from the law of diminishing returns? How might we adapt our linear perspective to help cope more effectively with the world as it actually is. Answering this question is my next quest.

About the Author



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Dr Mike Lauder MBE served as a Royal Engineer in the British Army for 25 years. On leaving the Army he continued to work on a wide range of projects until he started his doctorate in 2008. His doctoral thesis examined how we think about risk in our quest to develop foresight. His first book (“it should never happen again”) examined whether public inquiries add to our understanding of risk taking. “In pursuit of foresight” is his second book. His research showed how many crises and accidents have their roots in those involved trying to manage a complex (chaotic) world using linear (cause-effect) based tools. His current work is the consideration of how we may develop more suitable tools to operate in a world where chaos is recognised as being normal.

Learn more about Dr. Lauder’s books at the following:

In pursuit of foresight:

<https://www.routledge.com/products/9781472468895>

It should never happen again:

<https://www.routledge.com/products/9781472413857>