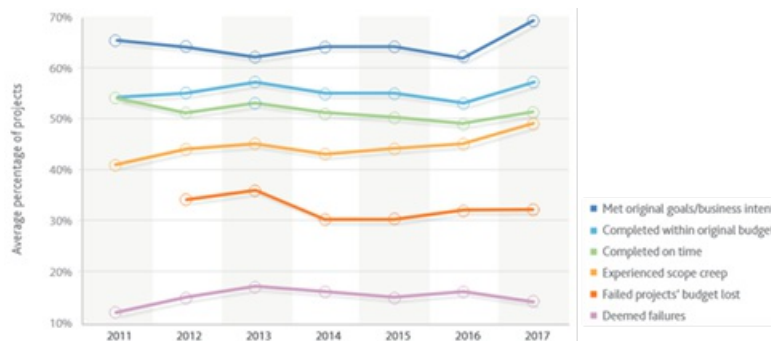# Why IT projects fail, time and again!

In April 2018, furious TSB customers found themselves unable to access their accounts following a failed system migration; despite planning, experience and no doubt a fleet of internal auditors it becomes the latest addition to a plethora of IT projects that have nose-dived spectacularly. But why? And does it project assurance really add value?
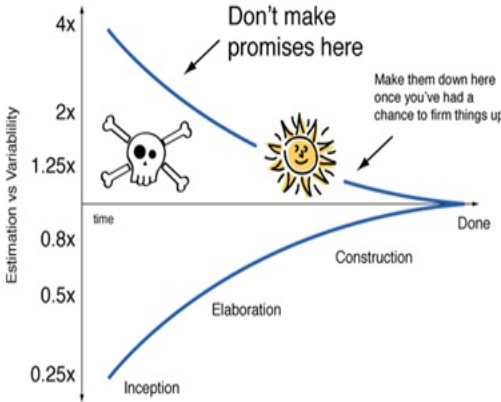
This paper explores the topic of IT project assurance through a series of questions that audit leaders may find themselves asking of the person in the mirror or in candid discussion at networking events.

A 2017 report by the Project Management Institute (PMI) surveying over 3000 professionals identified that whilst 14% of projects were total failures, a further 49% were delivered late, 43% had budget overruns and 31% didn't meet their goals. Which begs the question do any succeed? Thankfully yes, almost 70% of projects were successful. The PMI looks at benefit realisation to define success not limited to the traditional measures of scope, time and cost.

 The table below looks at common reasons for projects to fail and suggests ways in which auditors can recommend mitigation's before failure effects are realised.

Common reasons for failure	Ways to mitigate
Changing priorities. Even when delivered as requested, a project might not meet the needs of a changing organisation.	Align project scope to strategy – review and realign when change is agreed regardless of the phase of the project. For complex and large organisations use a programme office to co-ordinate activity.

Poor requirement definition. Unclear or unrealistic specifications from the business will doom even the best project to failure as it's unlikely to deliver a system that is fit for purpose.	Identify and involve all stakeholders in defining requirements – from decision makers to end users, programmers and architects – the business states 'what' is needed with IT finding the solution as to 'how' it can be achieved
Changing the scope. One of the three project constraints; time, cost and scope. Both agile and waterfall methodologies are susceptible. Agile is designed to allow for scope change by prioritising requirements it needs strict control. Waterfall scope change impacts time or cost as the project is planned according to the scope.	Having a process to manage change avoids unnecessary scope creep. Agile projects work in time periods known as 'sprints' that vary between 1-4 weeks, this minimises wastage, placing non-critical requirements in a backlog – waterfall project teams can build in 'checkpoints' to work in a staged way and avoid continuing on obsolete requirements.
Inaccurate estimates. As a consequence of being developed too early in the project or with insufficient skill. A model known as the cone of uncertainty suggests that there is always the potential for a +/- variance of x4.	Validate assumptions/modelling for cost estimates – is the tolerance level reasonable? Have initial figures been revisited once requirements and design agreed and a more robust figure determined?
Known and unknown risks. According to PMI, 27% of projects fail due to unexpected risks. Teams typically focus on the known knowns rather than anticipating the known unknowns and the unknown unknowns (remember Donald Rumsfeld!).	Build contingency into the project plan; proportionate to the overall challenges not an arbitrary figure. Utilise risk logs and assurance maps with stakeholders, ensure reporting includes likelihood of potential risks not just issues.
Disengaged or Uninvolved project sponsor. Very often a member of the executive is assigned sponsorship however this can result in token involvement until the project is finished.	Define the role of the sponsor (and others), key decision points and reporting requirements to the project steering group, audit committee/board etc. The sponsor mediates and resolves non-technical issues for the project.

Inter-dependencies. Large and/or complex projects often have handovers between functions, teams or vendors. Like cogs in a wheel, a delay or error in one section has an effect on the whole.	Identify and risk assess all inter-dependencies. Ensure decision makers are aware of the highest risks, include contingency in the project plan. Define internal SLAs and commit third parties to penalty clauses.
Insufficient resource. Change is the only certainty during a project. A well planned project will only experience this if time, cost and scope are all inflexible.	Educate decision makers as to the trade-off between managing risk during the lifecycle of the project and project failure. One element must be flexible.
Weak project management. Ineffective management through lack of experience, poor methodology/compliance, insufficient monitoring and control.	Recruit appropriate to the rigours of the project. Validate/test experience, seek references. Monitor individual's performance regularly throughout the project not just at the end. Exit or support as necessary. Observations should be included in stage gate/end of sprint audit activity.

Why do projects continue to fail?

Mark Kozak-Holland, author of Titanic Lessons for IT Projects said "IT projects have terrible track records. I just don't get why people don't learn. When you look at the reasons for project failure, it's like a top 10 list that just repeats itself over and over again."

More importantly, why do they continue to fail in an era when organisations have increasing risk management maturity and invariably have internal audit teams providing independent assurance?

In 2008, Qantas introduced a parts management system only to have their airplane mechanics refuse to use it. It wasn't fit for purpose. Management designed what they thought was needed without asking the users. The result was a $40m scrappage cost plus the design and implementation of a new system.

The earlier list details the specifics although more generally could it be that the expectations of IT projects are just too high? System change is often at the heart of major transformations, digitalisation strategies, re-engineering programmes, restructuring… strategic survival often rides on the success of such initiatives yet so many barriers and variables exist are they ambitious, realistic or illusory?

An 18 month project to digitise the BBC began in 2008 with a fixed cost of £82m; awarded to incumbent technology partner without tender. A no-fault termination in 2009 eventually led to the project being abandoned in 2013 with a £100m write off. Transparency issues, poor contract management and lack of interaction between IT and the business led to its demise.

Audit leaders should leverage existing relationship and their trusted advisor role from before the inception of major projects. Counselling decision makers on issues such as risk appetite, business case analysis, modelling assumptions, project approach, vendor selection could prevent a major project from starting off on the wrong footing from which it will only ever stumble forward rather than gain momentum with surety.

In the agile project world there is a common phrase 'fail fast', this suits the learning cycle approach as does a similar phrase 'fail forward'. The focus of both is to learn from setbacks not to see them as failures; getting back on a horse after a fall, going for a fourth job interview after three knockbacks, toddlers picking themselves up following a tumble…all resilient examples of failing forwards.

Examples and lessons to be learnt are often found in the transparent scrutiny of public sector spending whilst the private sector sign legal agreements to protect commercial interests and abide by Chatham House rules in round table discussions.

How to prepare stakeholders?

IT project assurance is not straightforward; audit leaders may benefit from robust management of stakeholder expectations from the outset.

The audit committee may be comforted to see the project on the internal audit plan but are they clear on the depth, relevance and timeliness of any planned assurance? For large or complex IT projects internal audit should create a comprehensive assurance map; a specific detailing of who by, how and when assurance will be provided. This also makes it very clear where assurance is not planned and for the board to accept or resolve the gap. It is naive for a board to rely solely on internal audit and incumbent on audit leaders to develop their understanding where necessary.

An National Audit Office report *found that a £55.4m IT project in 2005 designed to save the Department of Transport £112.4m over ten years actually cost £121.2m with savings of just £40.1m. Complexities, unplanned changes and poor project management all played a part.*

A good project lead will have identified stakeholders and created a roles and responsibilities matrix; internal audit should be part of this. A project lead that does not pro-actively engage with internal audit is an indication of poor appreciation of governance. Audit leaders should ensure appropriate frameworks are put in place from the outset of the project, advising on or facilitating their development where necessary.

When warning signs are ignored?

Even in positive cultures, there are times when internal audit may be perceived as the harbinger of doom! This can be magnified when the pressure intensifies to deliver a major IT project. So what can internal audit do when their stakeholders are wearing rose tinted glasses and being overly optimistic that 'it'll all come together in the end'?

At a project or executive level, staging an intervention to mediate the issue can be beneficial – focus on resolution, commitment and action not fault finding or blame – think about the culture of your organisation.

Are reporting channels effective? Is the audit message being undermined by other perspectives? Audit leaders need to ensure their communications are beneficial and not just ticking a box. Waiting for the next audit committee to convene is not an option; deliver findings to the board, direct to the audit committee chair, pick up the phone for an informal briefing…whatever works within the culture and existing relationships…insist that internal audit concerns have a platform and are heard.

Performance Standard 2600: Communicating the Acceptance of Risks

When the chief audit executive (CAE) concludes that management has accepted a level of risk that may be unacceptable to the organisation, the CAE must discuss the matter with senior management.

If the CAE determines that the matter has not been resolved, the CAE must communicate the matter to the board.

Interpretation:

The identification of risk accepted by management may be observed through an assurance or consulting engagement, monitoring progress on actions taken by management as a result of prior engagements, or other means. It is not the responsibility of the CAE to resolve the risk.

Is there a future for IT project assurance?

Heresy! Can the question even be raised?

In the world of science such as genome editing, there is often the ethical question of just because we can, does it mean we should. Perhaps audit leaders should be asking the same question from the perspective of the Code of Ethics for internal auditors.

Confidentiality is not a concern specific to projects and undoubtedly auditors have the **competency** to undertake the task. **Objectivity** however is where the question starts to get interesting; how can an objective assessment be made with incomplete knowledge? The velocity and depth of large IT projects makes it probable that internal audit will not be aware of everything that may be pertinent to forming a judgement.

Which leads to whether IT project assurance has the potential to impact on the **integrity** of the internal audit function and indeed the profession? If the assurance is so narrowly scoped to avoid assumptions, is it of real value compared the overall project? If the assurance is heavily caveated was it even worth doing? And if internal audit provides positive assurance during the lifetime of the project and yet it still fails, what does that say about the credibility of the audit assurance?

Ultimately, ethics guide and direct internal audit activity, they must never be used as an excuse not to audit something that is challenging. Major IT projects have the ability to turn even the calmest, respectful and tactful business leaders into emotive, stressed and political beasts! If internal audit turns its back on the provision of project assurance there is no other independent, diplomatic, voice of reason to take its place.

Closing thoughts

Organisations in all sectors are continuing to face strategic challenges; many of these will result in IT projects. All of the issues discussed in this paper are intensified when replacing legacy systems…which will be the vast majority. Legacy systems held together with goodwill, informal knowledge, sticking plasters and elastic bands. They often have unknown elements which are missed from process maps, historic long forgotten code or linkages which are critical to ways of working and a comfort factor that is hard for people

to let go. IT projects are as much about people, looking between the cracks and organisational culture as they are technology; exactly the reason why internal audit's involvement is as essential as the chief information officer.

> *'A smooth sea never made a skilful sailor'*

- Franklin D Roosevelt