MN-3019 – Project Management

Week 8

Project Success and Failure

In Person Workshop: Week 8

- Classification and definitions
- Theoretical models
- Project lifecycle and methodology context
- Project failure factors
- Case examples
- Strategies for mitigating the impact of project failure?
- Questions?

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Classification and definitions

Classification of Project Success and Failure

- An important element of project initiation is to clearly define the success and acceptance criteria. Likely to be:
  - Outcomes based
  - Achievement of benefits
  - Achievement of objectives
  - Delivering within budget
  - Attainment of full project scope
  - Delivered to defined quality constraints
  - Operational within agreed time period

- Success criteria is set out at the start of the project but can change at any stage within the project in response to a change in emphasis as agreed with key stakeholders and project manager

Classification of Project Success and Failure

It can be problematic to agree a definition of success. Often there are two interconnected dimensions in which project success or failure is judged. There is "project management success" (i.e. delivering in accordance with the agreed project objectives) and there is "product success" (i.e. the amount of value the project's deliverables bring once the project is over).

Classification of Project Success and Failure

- Traditional method of defining project success – often referenced as the “iron triangle”
- Triple constraint of <u>time</u>, <u>cost</u> and <u>scope</u>.
- If a change is posed to any one of these elements, another constraint needs to change.
- Trade-offs – e.g. if the customer shortens the time frame (schedule), the project will likely need more resources, or perhaps a scope reduction to maintain trajectory.

Classification of Project Success and Failure

Customers are happy	Costs don't exceed the budget	Works as designed
People use it	The people who funded the project are happy with it	It meets the goals that drove the project

The Project Management Institute (PMI) states that six factors must be met for a project to be categorized as successful.

Classification of Project Success and Failure

- What if only <u>some</u> customers are happy?
- What if the costs <u>exceed</u> the budget but the customer is happy?
- What if the system works as designed but the customer is <u>not happy</u>?
- What if people use the new system but the budget was exceeded and the project was <u>late</u>?
- What of the funders are happy but the users are not?
- What if the goals are met but the project <u>exceeded</u> its budget.

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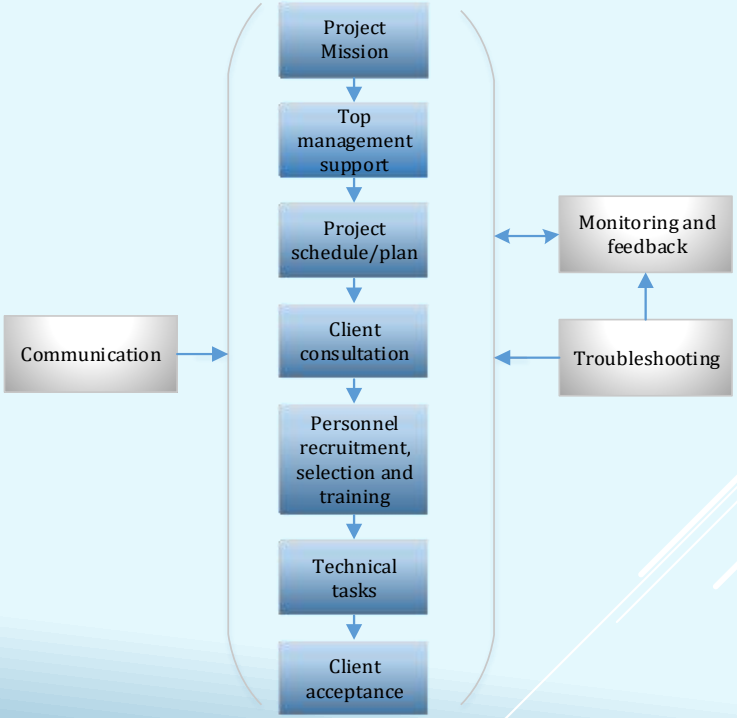
Theoretical models

Theoretical Models

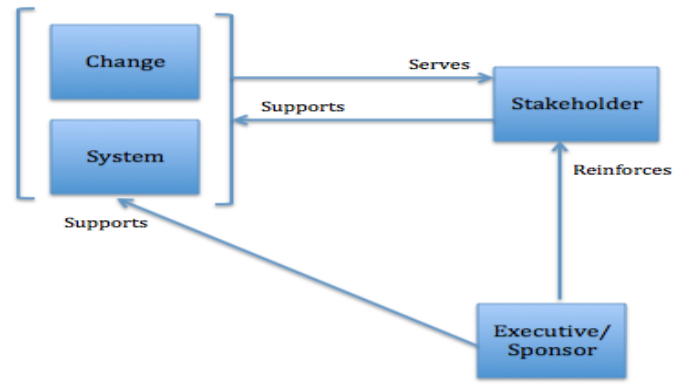
- Pinto and Slevin presented a set of ten factors critical to project success
- Positioned in the context of project managers using the factors to deal with the management and delivery of the project
- Factors are analysed relative to the potential impact at key stages in the project lifecycle



Success model (Pinto and Slevin 1987)

Theoretical Models

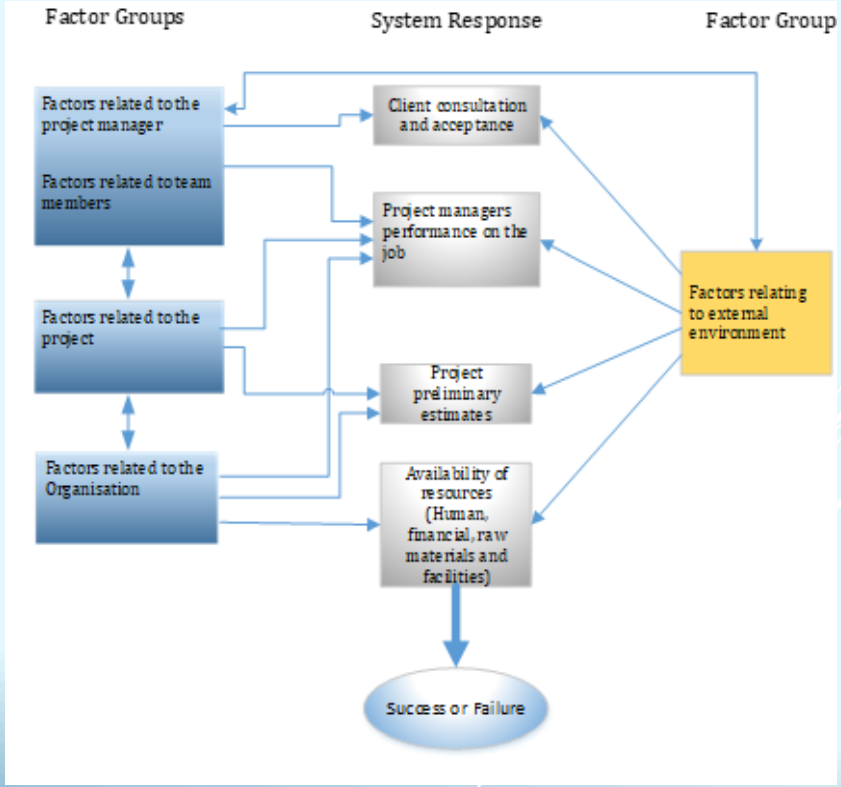
- The model presented by Sauer depicts an information system that functions through its reliance on the project organisations activities and support from stakeholders that require some form of payback from the system.
- Sauer hypothesised that if problems remain unresolved, they can manifest in any one of the three components of the model. The consequence could be withdrawal of support for the system and ultimately result in system failure



Triangle of Dependencies (Sauer 1993)

Theoretical Models

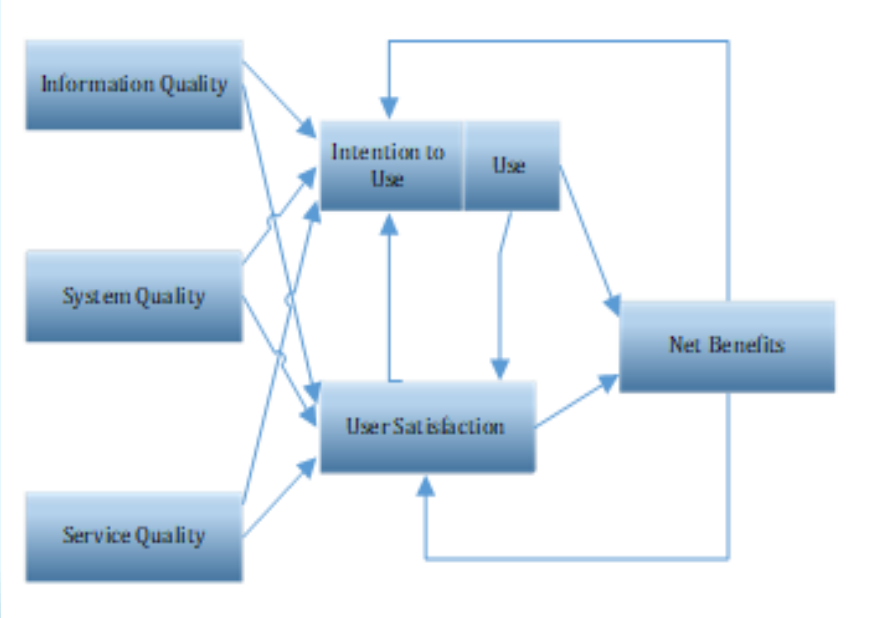
- Belassi and Tukel model classifies the factors based on impacts on performance under four groupings:
  - factors related to the <u>project</u>
  - factors related to the <u>project manager</u> factors related to the team
  - factors related to the <u>organisation</u>
- The model reflects the influence of the project manager's skills and increased interaction between factors, particularly when projects are categorised as being <u>large and complex</u>



Success and failure model (Belassi and Tukel 1996)

Theoretical Models

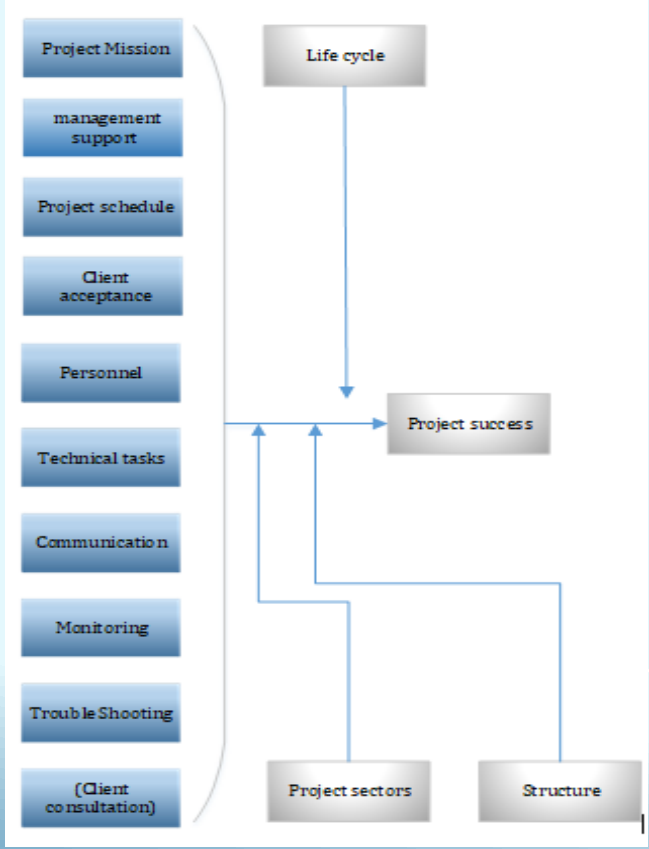
- The model articulates the impact that systems quality and information quality have on the use and user satisfaction aspects of system adoption by stakeholders
- The model is presented as an attempt to capture the multi-dimensional and interdependent nature of project success.
- The addition of net benefits highlights the criticality of organisations aligning their approach to the tangible benefits that would be realised on completion of the project, formalised via a benefits realisation plan.
- 2003 update aligns the model with more recent reflections on the stakeholder role in defining success



Success model (DeLone and McLean 2003)

Theoretical Models

- The Belout and Gauvreau model analysed the effect on <u>success factors by stages in the project life cycle:</u> conception, planning, execution and completion.
- Model highlighted the <u>contribution of early- stage factors</u> such as top management support and communicating the project's mission.
- Projects can suffer if these factors are not addressed <u>early</u> in the lifecycle



Success model – (Belout and Gauvreau 2004

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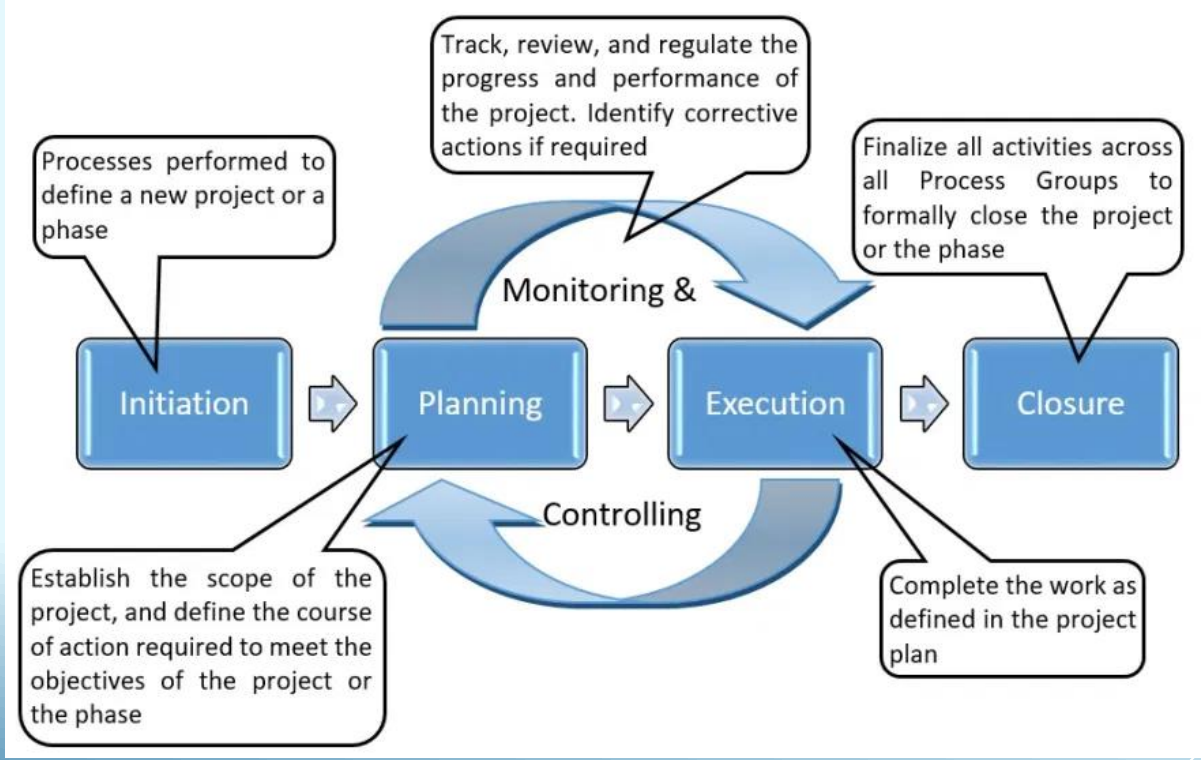
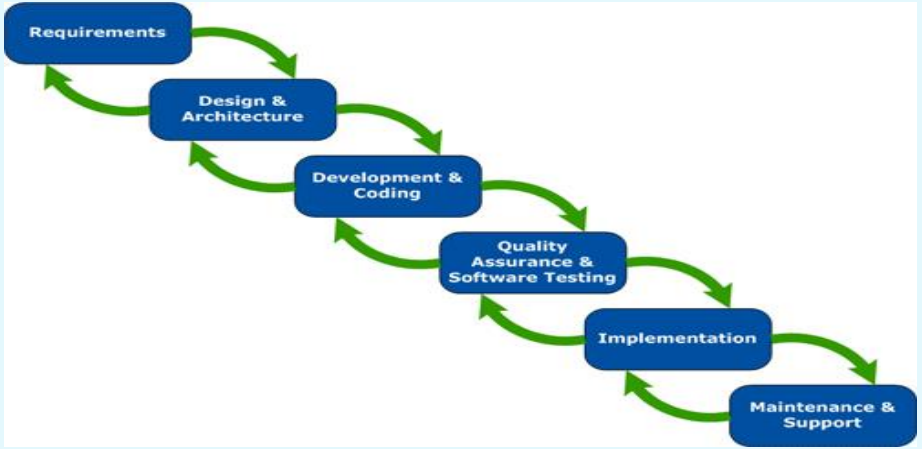
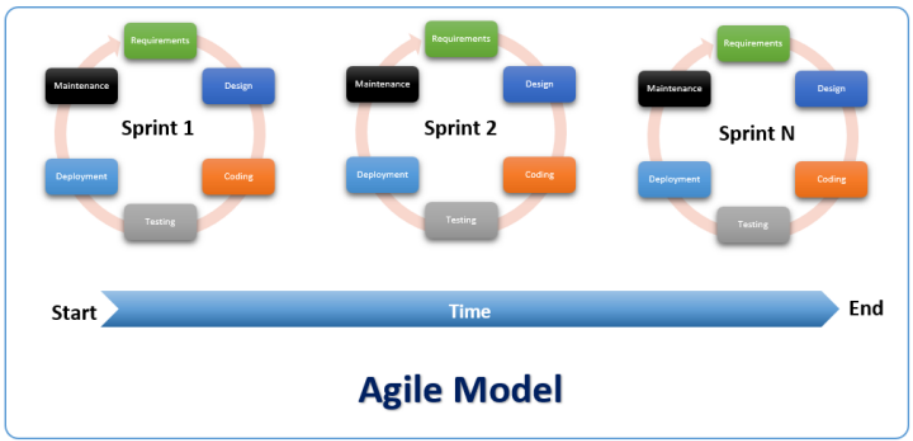
Project lifecycle & methodology context

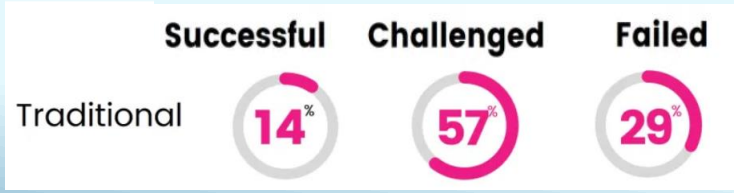
Generic High Level Project Lifecycle



Waterfall & Agile Project Lifecycle – Software Development







Successful - A successful project was one that met all three of the triple constraints: schedule, cost, and scope.
Challenged: A challenged project would have met two out of three constraints, for example, delivered on time and on budget but not with the desired scope.
Failed: project is cancelled or completed but not used

The CHAOS Report by the Standish Group (2020) shows that agile projects are more successful than Waterfall projects, have fewer challenges and fewer failures.

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Project failure factors

Project failure factors

The most common causes of failure can be divided into 8 primary categories

Sourced from: University of British Columbia's, Sauder School of Business: http://calleam.com/WTPF/ and Standish Group Chaos Report (2020)

Project failure factors

1. The underestimation of size & complexity, cost and/or schedule
2. Failure to establish appropriate control over requirements and/or scope
3. Poor communications & failure to engage stakeholders
4. Failure to address cultural and people change issues
5. Lack of oversight / poor project & risk management
6. Poorly planned transition to operations or system launch
7. Poor executive support and project sponsorship

Sourced from: University of British Columbia's, Sauder School of Business: http://calleam.com/WTPF/ and Standish Group Chaos Report (2020)

Project failure factors

1. **The underestimation of size, complexity, cost and/or schedule**:
   - Failure as a direct result of the project being too large and complex where the scale of the project becomes a key factor
   - Failure to see those complexities leads to the underestimation of schedule and budget, plus a host of other problems.

Studies conclude that there is virtually a zero chance of large projects being delivered successfully. Large projects are ten times more likely to fail outright than smaller and less complex projects (Standish Group, 2013

Project failure factors – Case example

National Health Service – UK
Project name : NHS Care Records Service
Date : Oct 2008 – UPDATED Sep 2010 Cost :$24B project (World's largest civil IT project)

Synopsis :
Rollout of the Care Records Service component of the UK's National Program for IT grinds to a halt after pilot sites report significant problems. Already 4 years behind schedule, the initial pilot releases in London England were branded a shambles as failure to address culture change issues interacted with 'technical faults' to produce weeks of chaos at hospitals. After several months of working on the problems, the rollout is placed on hold as further hospitals wait for the problems to be resolved before allowing the rollout to proceed.

UPDATE – 10 Sep 2010 – Department of Health announces that efforts to centralize health records has now been abandoned.

Contributing factors as reported in the press :
Original scope and cost of project was radically underestimated. Original budget was $4.6B, it has subsequently grown to $24B, with some observers estimating it could grow to as much as $40B. Rollout at first pilot site had been hampered by insufficient training for the user community and issues relating to culture change.

Reference links: https://www.computing.co.uk/news/1831629/nhs-care-record-rollout-grinds-halt

Project failure factors

2. Failure to establish appropriate control over requirements and/or scope:

- Inadequate management of scope changes and poor configuration control where changes to the project scope are not managed effectively.
- Poor definition and ongoing management of project requirements
- Inadequate processes in place to manage change can lead to poor outcomes.

Project failure factors – Case example

Rate Collection Agency – Northern Island
Project name : Abbacus
Date : Jun 2008 Cost :$260M USD

Synopsis :
Problems with local property tax ("property rates") collection system result in $260M worth of payments going uncollected. Calculation errors result in one person receiving a disability allowance of £2.9M. System lacked basic functions such as the ability to send late payment notices or initiating collection proceedings if payment not received. Audit and internal control functions serious compromised resulting in serious fraud concerns.

Contributing factors as reported in the press and official enquiries :
Poor requirements specifications, missing requirements, problems migrating data from legacy systems, pressure to deploy the system before adequate testing had been completed.

In addition, significant changes in rate collection policies / procedures were made concurrently with the project. The concurrent efforts left insufficient time for the necessary changes to be built into the new system before planned production release.

Reference links: http://news.bbc.co.uk/1/hi/northern_ireland/7484537.stm

Project failure factors

3. Poor communications & failure to engage stakeholders

- Poor communications within the project team and wider stakeholders
- Stakeholders are the people who need to provide key input to the critical decisions made in the project, lack of engagement can lead to poor outcomes.
- Failure to formalise communication mechanisms and processes with supplier organisation.

Project failure factors – Case example

Qantas – Australian airline
Project name : Jetsmart
Date : Feb 2008 Cost :$40M

Synopsis :
"Jetsmart" engineering parts management system is renamed "Dumbjet" by aircraft engineers because the system is so difficult to use. Failure to engage the engineers who would be the eventual users of the system into the requirements and design processes resulted in a system that the engineers deemed to be unusable once it was launched. After just a few years in operation (during which time some staff refused to use it and unions threatened industrial action), the system is dumped and a new system introduced. In one of the most egregious comments I've ever heard, Qantas's Chief Financial officer is quoted in Australian IT Magazine as having said "We wouldn't ask the engineers what their views on our software systems were. We'll put in what we think is the appropriate for us". Apparently the definition of "us" was too limited in this particular project and the failure to engage the right stakeholders resulted in the total rejection of the project and the need to start from scratch with a replacement. In the second take at the project Qantas learned its lesson and did indeed engage with the stakeholders.

Contributing factors as reported in the press :
Lack of stakeholder engagement. Requirements solicitation management failure. Change management failure.

Reference links: https://www.cio.com/nz/

Project failure factors

4. Failure to address cultural and people change issues

- Although technology is the focus of many projects, failure to recognize and address culture change can derail the deployment of a new system.
- Failure due to inadequate individual and organisational change management. Poor involvement of users in the project and resistance issues negatively impacting the project and its realisation of benefits.

Project failure factors – Case example

Service Personnel and Veterans Agency (SPVA) – UK
Project name : JPA (Joint Payroll Administration)
Date : Oct 2007 Cost :$100 Project (but cost due to failures not disclosed)

Synopsis :
New system to unify Army, Navy and Air Force payrolls results in a deluge of complaints about missing pay, incorrect pay and bungled allowances. Although system apparently works when used correctly, problems with the transition into operational use result in chaos.

Fewer than a third - 31% - of service personnel expressed satisfaction with the system at one point, although the MoD said that figure had since risen to 45%.

Contributing factors as reported in the press:
Failure to address culture change issues, poor UI design, inadequate training
The Commons Defence Committee said there were "basic and fundamental" errors in the design of the system greatly impacting useres which wrongly paid out almost £29m.

Reference links: https://www.computing.co.uk/analysis/1859946/jpa-teething-trouble-causes-unrest-ranks

Project failure factors

5. Lack of oversight / poor project & risk management

- Failings within the project directly attributable to the performance of the project manager.
- Failure due to inadequate individual and organisational change management. Poor involvement of users in the project and resistance issues negatively impacting the project and its realisation of benefits.
- Inadequate planning and poor decision making on planning and scheduling.

Project failure factors – Case example

Department for Transport – UK
Project name : Shared Services
Date : May 2008 Cost :$160M

Synopsis :
Program to improve efficiency in the UK's Department of Transport ends up costing more than it saves. By sharing hardware and software services across the department the project was intended to save the organization $114M. A May 2008 study the the UK National Audit Office however finds the projects is in deep trouble and that the project will actually cost $160M more than it saves.

Contributing factors as reported in the press :
In the words of Public Accounts Committee (PAC) chairman Edward Leigh MP "The Department for Transport planned and implemented its shared corporate services project with stupendous incompetence. This is one of the worst cases of project management seen by this committee." Other contributors include; Underestimation of cost. Excessive schedule pressure resulting in inadequate procurement and testing. Poor requirements definition. Lack of vendor management. Poor quality implementation.

Reference links: https://www.nao.org.uk/report/shared-services-in-the-department-for-transport-and-its-agencies/

Project failure factors

6. Poorly planned transition to operations or system launch

- Inadequate planning for transition to live environment
- Inadequate assessment and poor management of the "people aspect of transitioning to new systems and processes.
- Failure due to inadequate individual and organisational change management. Poor involvement of users in the project and resistance issues negatively impacting the project and its realisation of benefits when transitioning to operations

Project failure factors – Case example

British Airways PLC. / British Airports Authority
Project :Move of operations into Heathrow Terminal 5
Date : Apr 2008 Cost :$32M USD

Synopsis :
Opening of Heathrow Terminal 5 labeled a fiasco after 28,000 bags get lost and hundreds of flights are cancelled. Problems resulted in British Airways having to cease accepting passengers with bags to check-in while a backlog of thousands of passengers built up in the terminal. Problems persisted for more than a week drawing attention of the media from around the world. Top British Airways executives forced to resign following the debacle and CEO Willie Walsh summed up events with the phrase "not our finest hour""

Contributing factors as reported in the press :
Lack of staff training, poor staff morale resulting in failure to secure enough staff to effectively manage problems as they arose, programming errors in the baggage system, failure to test the system with realistic loads.

Reference links: http://news.bbc.co.uk/1/hi/uk/7323198.stm

Project failure factors

7. Poor executive support and project sponsorship

- Lack of visible and tangible support for the project from the senior management team.
- Failure of executive and senior management to address key issues to stop a project before catastrophic failure

Project failure factors – Case example

Federal Bureau of Investigations (FBI) – USA
Project : Virtual Case File – Project Trilogy
Date : Apr 2005 Cost : $170M USD

Synopsis :
Ambitious program to replace paper based reporting of crimes and investigations with an online system is scrapped. System was intended to aid efficiencies and allow pieces of information gathered through different channels at different times to be connected up thereby allowing for more effective investigations through better flows of information.

Despite assurances given to Congress that the project was proceeding, the project was in serious trouble and was eventually deemed unfit for use. The project was ultimately scrapped in 2005 and the FBI started out again with a completely new project (Sentinel)

Contributing factors as reported in the press :

- Poor requirements and continual changes in specifications. Poor communications. Lack of planning. Lack of central architecture. Lack of oversight.
- Repeated changes in specification
- Repeated turnover of management, which contributed to the specification problem
- The inclusion of many FBI personnel who had little or no formal training in computer science as managers
- Scope creep as requirements were continually added to the system even as it was falling behind schedule
- Changing specifications and scope creep—at one point it was estimated the software had over 700,000 lines of code.

Reference links: https://en.wikipedia.org/wiki/Virtual_Case_File

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Mitigating project failure

Mitigating project failure

According to the Standish Report (2020) The top five factors found in successful projects are:

1. Stakeholder involvement throughout the project
2. Executive management support
3. Clear Statement of Requirements
4. Proper planning
5. Realistic expectations

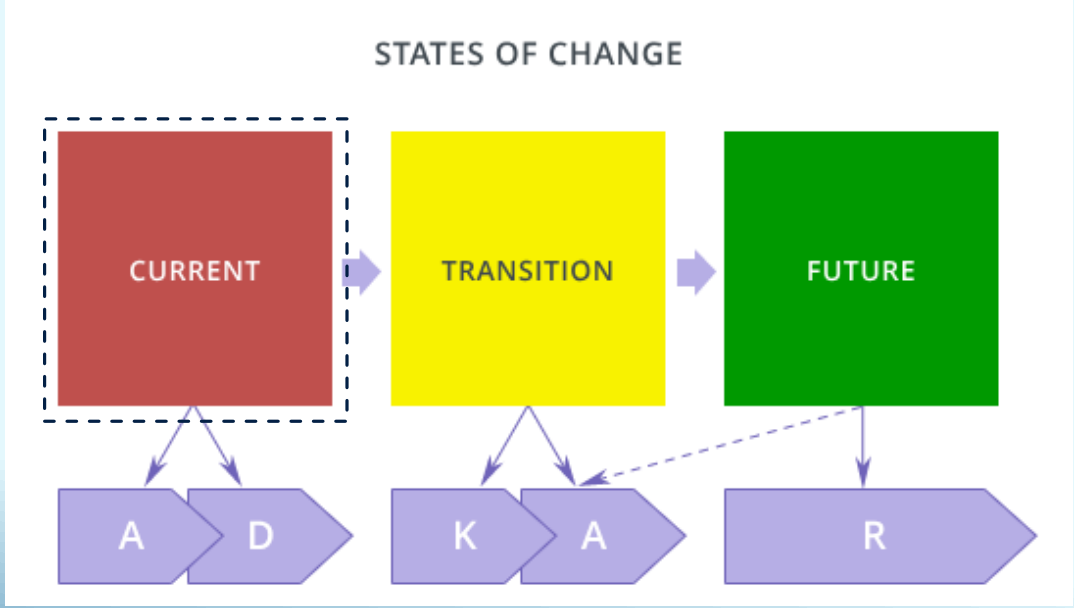
These factors should be put on a checklist for anyone considering any project, whether large or small. While risk rises with size and complexity, even simple projects can fail if the participants do not have clarity on these five principles.

Mitigating project failure

Let's look at the top 2 factors in more detail using <u>change management</u> processes.

1. Stakeholder involvement throughout the project
2. Executive management support

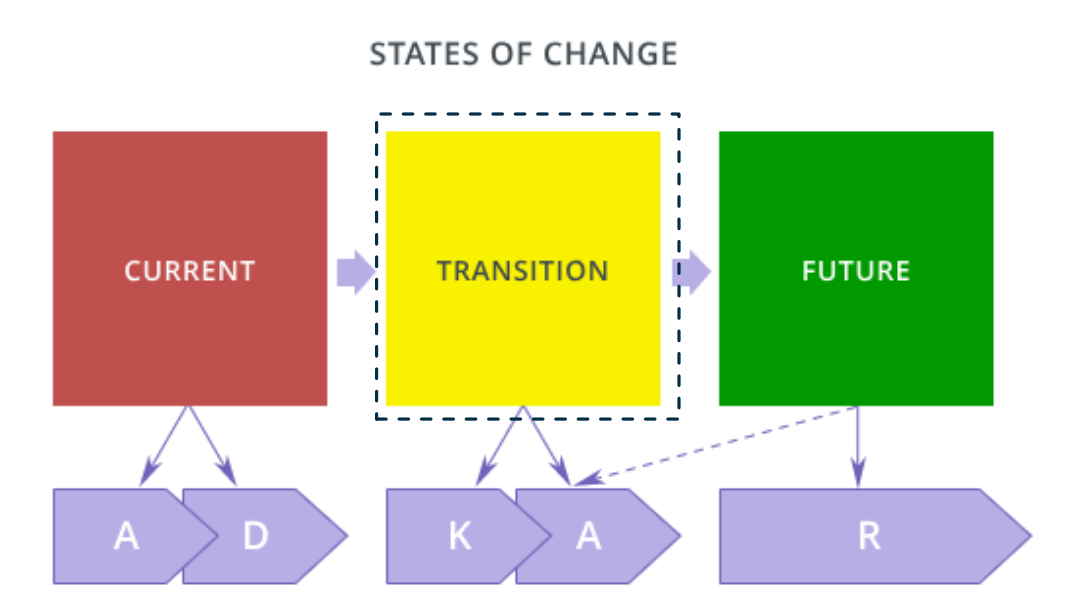
Mitigating project failure



Current: to move out of the current state, an individual needs awareness of the need for change and a desire to participate and support the change

Prosci ADKAR® model

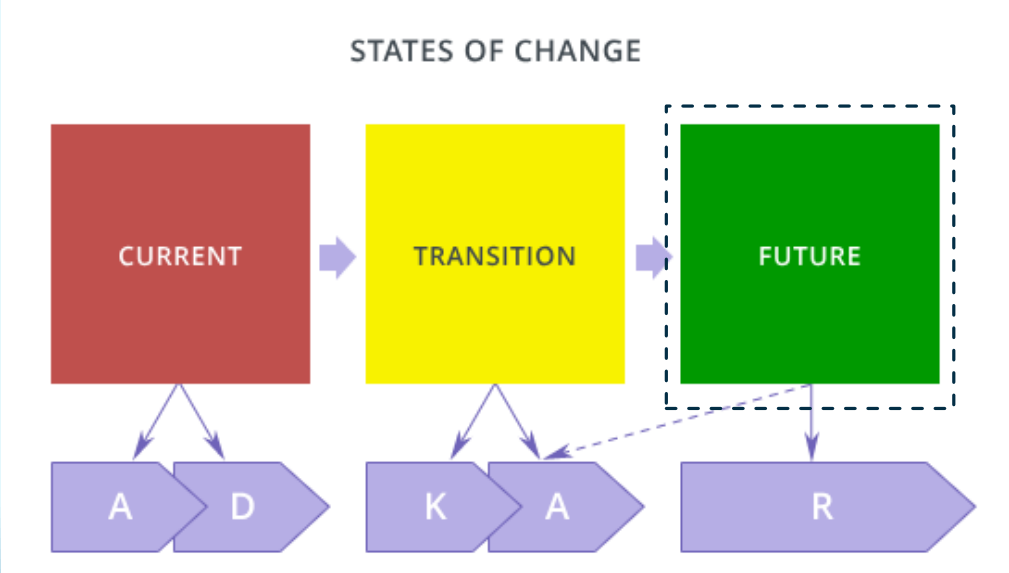
Mitigating project failure



Transition: To successfully move through the transition requires knowledge on how to change and the ability to implement the required skills and behaviours.

Prosci ADKAR® model

Mitigating project failure



Future: In the future state people need to sustain the change via reinforcement

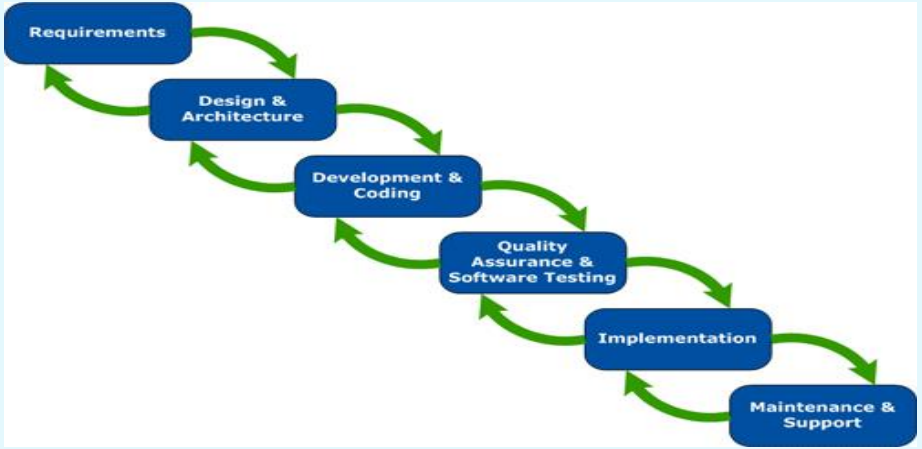
Prosci ADKAR® model

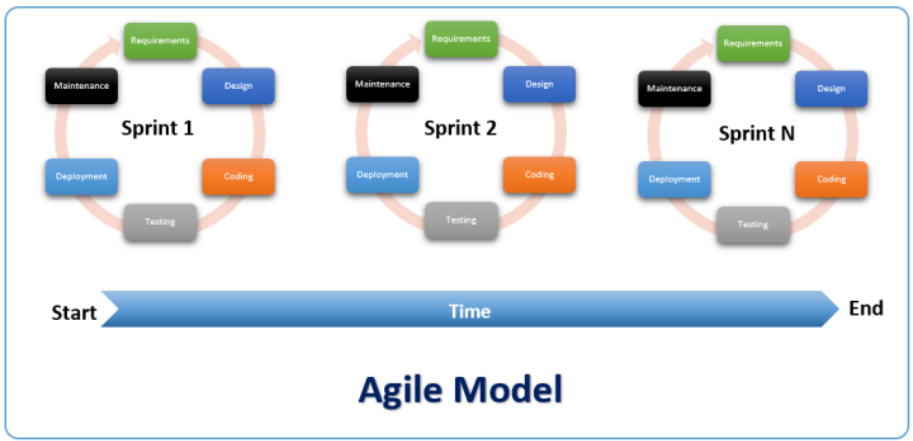
Mitigating project failure

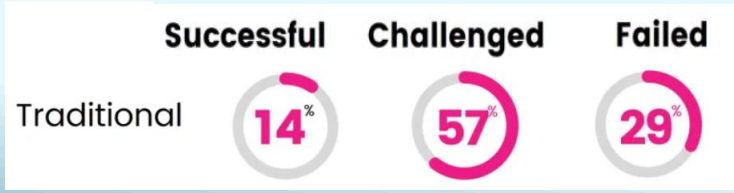
A	AWARENESS OF THE NEED FOR CHANGE
D	DESIRE TO SUPPORT THE CHANGE
K	KNOWLEDGE OF HOW TO CHANGE
A	ABILITY TO DEMONSTRATE SKILLS & BEHAVIORS
R	REINFORCEMENT TO MAKE THE CHANGE STICK

Prosci (2019)

Agile approach to Managing Projects







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Fail Quickly

- The average large company, running around 150 projects at any one time, loses £13 million a year by not stopping projects that are failing.
- It's not always management's responsibility to cancel projects: if you're working on something that you know isn't going to deliver the proposed benefits, you need to speak up. Quickly.
- Keith Richards, one of the UK's Agile experts, said, "If you are going to fail, fail fast."
- Mistakes happen. Things go wrong. It is how you deal with it that counts.
- A project manager who makes mistakes and owns up to them early will find people willing to help to get things back on track, these projects are late at the beginning but tend to make up the time later.
- A project manager who hides mistakes, crossing her fingers until the project is nearing its due date, will find that people will – for the most part – rally round to help get things back on track.
- But this will be because there is now little choice about pressing on. These projects are "on track" until near the end but then have been shown to take, overall, twice as long.
- So, own up to your mistakes, and put things right as soon as you can.
- If you can't, remember that the project manager's role is partly to direct the work and partly to provide an objective position on how the work is done – and that means suggesting stopping everything and starting again, or even not starting again, if necessary.
- Recommending that a project is closed can be a very positive action.

APM (2020) https://www.apm.org.uk/blog/if-you-are-going-to-fail-fail-fast/

Scenarios

- Project too large and complex
  - Split up and divide into smaller projects as part of an overall programme of work
- Users exhibiting resistance to changes to be delivered by new project
  - Use change management techniques to identify what the points of resistance are and address peoples transition using techniques such as the ADKAR model
- Users change their requirements during the project after initiation.
  - Ensure that adequate change control procedures are in place to identify impact of changes to requirements and the agree trade-off against: time, budget or scope.
- Project sponsor and executive are not supportive of the project
  - Stop the project as the project is likely to fail without senior management support
  - Actively engage with executive on benefits that project will deliver
- Customer not sure on requirements with unclear vision of outcomes
  - Utilise agile approach with iterative delivery focused on minimal viable product (MVP).
- Identified poor communications amongst stakeholder groups and lack of awareness of user impact for transition to operations.
  - Urgently address communication issues, utilise change agents and identify areas of resistance.

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Personal Case Example

QUESTIONS ?