CC5001
CC3002

Why projects fail

Why do IS/IT projects fail? (1)

"One of the worst IT projects I have ever seen."

Chairman of Public Accounts Committee speaking about Libra IT system for magistrates' courts, January 2003

Reported in Computer Weekly 30 January 2003
Cited in Government IT Projects, Report 200
Parliamentary Office of Science and Technology

Why do IS/IT projects fail? (2)

National Audit Office / Office of Government Commerce
List of common causes of project failure

1. lack of clear link between the **project** and the organisation's key **strategic priorities**, including agreed measures of success

2. lack of **clear senior management** and Ministerial **ownership and leadership**

3. lack of effective engagement with **stakeholders**

4. lack of **skills** and proven approach to project management and **risk management**

p. 8, Government IT Projects, Report 200
Parliamentary Office of Science and Technology

Why do IS/IT projects fail? (3)

National Audit Office / Office of Government Commerce
List of common causes of project failure *(continued)*

5. lack of **understanding** of and **contact** with the supply industry at senior levels in the organisation

6. evaluation of proposals driven by **initial price** rather than long term **value for money** (especially securing delivery of business benefits)

7. too little attention to breaking development and implementation into **manageable steps**

8. inadequate **resources** and **skills** to deliver the total delivery portfolio

p. 8, Government IT Projects, Report 200
Parliamentary Office of Science and Technology

Why do IS/IT projects fail? (4)

NHS Direct
Provides healthcare information & advice in England and Wales

User satisfaction of 95% or more
Call volumes grown by 20% per annum since introduction

Target: telephone helpline in England & Wales by end 2000
✔Target met November 2000

Target: companion website service by autumn 1999
✔Target met: December 1999

"...significant achievement given scale and innovative nature"
Public Accounts Committee

p. 9, Government IT Projects, Report 200
Parliamentary Office of Science and Technology

Why do IS/IT projects fail? (5)

National Probation Service
Case Recording and Management System (CRAMS)
To record details of offenders, sentences, supervision orders, etc.

- ✔ First pilot installed November 1995
- ✘ Withdrawn 3 months later with technical problems
- ✘ System's acceptability and usability unknown
- ✘ Poor user interface – illogical, inflexible, difficult to operate
- ✘ Development did not keep pace with changing needs

"Home Office underestimated technical risks"
"CRAMS management information capability not adequately specified"

Public Accounts Committee

p. 10, Government IT Projects, Report 200
Parliamentary Office of Science and Technology

Why do IS/IT projects fail? (6)

Inland Revenue / EDS strategic Partnership

Inland Revenue awarded 10 year contract to EDS for IT services
1900 of the department's IT staff transferred to EDS

- ✔ Helped deliver significant changes
- ✔ Active involvement by top management
- ✔ Active management of risk

April 2003: problems with child and working tax credits
"IT system supporting the new tax credits has not been working as well as we expected... unscheduled downtime..." - *Paymaster General*

"System's performance wholly unacceptable … swamped both the system and the staff" - *House of Commons Treasury Select Committee*

p. 11, Government IT Projects, Report 200
Parliamentary Office of Science and Technology

Why do IS/IT projects fail? (7)

NHS patient record system project
Biggest civilian IT project of its kind, cost >= £12.7billion

Cabinet Office Major Projects Authority Programme Assessment Review in 2011 of National Programme for IT recommended the break up of the NPfIT programme.
http://www.networks.nhs.uk/nhs-networks/nwas-library-and-information-service/guides/guide-to-information-sources-on-project-management-in-the-nhs

NHS National Programme for IT created in 2002
Cabinet Office MPA concluded
"not fit to provide the modern IT services that the NHS needs"
although substantial achievements achieved, "NPfIT has not and cannot deliver to its original intent"

http://www.cabinetoffice.gov.uk/resource-library/review-department-health-national-programme-it

Why do IS/IT projects fail? (8)

Standish Group Reports: Chaos Chronicles
50% of projects fail

2004 Cancellation of Avis car rental ERP system: $55m

2005 Failure of US Justice Department FBI virtual case file: after 5 years and $104m

2006 Failure of US Department of Homeland Security financial IT system: $229m

2008 Failure of terminal 5 baggage claim system at Heathrow airport on first day: $344m

Trillium White Paper 2009
Project Leadership: Investing in Experience for Better Return on Investment

Why do IS/IT projects fail? (9)

Standish Group Reports
Chaos Chronicles

Classification of IT projects

Successful – project completed on time and on budget, all features as originally specified

Challenged – project completed and operational, but over the budget, over the time estimate and with fewer features and functions than initially specified

Failed – the project is cancelled before completion

p. 3, Government IT Projects, Report 200
Parliamentary Office of Science and Technology

Why do IS/IT projects fail? (10)

Dynamic Markets survey (2007) of 800 IT managers

- 62% of IT projects fail to meet their schedules
- 49% suffered budget overruns
- 47% had higher-than-expected maintenance costs
- 41% failed to deliver expected business value & ROI

Failure rates have not improved over the past decade
In some cases they are ***worse***

http://news.cnet.com/8301-13505_3-9900455-16.html

Why do IS/IT projects fail? (11)

25% of IT projects are cancelled before completion

- IT departments don't allow for time between design and development
- QA not adequately understood and budgeted into project timelines

http://news.cnet.com/8301-13505_3-9900455-16.html

Why do IS/IT projects fail? (12)

Terminology of IT projects in difficulty

- **Crunch Mode** (Glass, 1998)
  - an extremely tight schedule

- **Death March** (Yourdon, 1997)
  - a project that has nearly an impossible schedule

- **Runaway**

  - a project nearing or after its termination

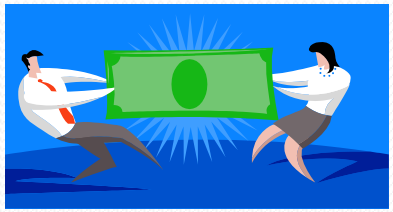
Definition

KPMG (1995) define a *runaway project* as one which has:

"failed significantly to achieve its objectives

and/or

exceeded its original budget by at least 30%"



KPMG survey

KPMG (1989, 1995) survey of 250 major enterprises

predictable findings:

- Many projects were '***overly ambitious***'
- Most failed from a ***multiplicity*** of causes
- ***Management problems*** more a dominant cause than ***technical problems***
- ***Schedule overruns*** more common than ***cost overruns***

KPMG Survey

Surprising findings were:

- **All sectors** were ***equally susceptible***
- Respondents were ***optimistic*** about the trend in runaways
- Packaged ***software did not help reduce*** incidence of runaways
- 25% showed ***symptoms*** during initial planning,
  50% during system development
- Indications ***initially spotted*** by project teams
  rather than senior management
- ***Technology*** is dramatically increasing as a cause of runaways
- ***Risk management*** only used in 38% of projects examined

Causes

Top 6 primary causes of runaways :

1. Project objectives not fully specified
2. Bad planning and estimation
3. Technology new to organisation
4. Inadequate/No Project Management Methodology
5. Insufficient senior staff on the team
6. Poor performance by suppliers of hardware/software

1. Project objectives not fully specified

Usually caused by problems with requirements

- too many requirements
- unstable
- ambiguous
- incomplete

2. Bad planning and estimation

Projects are often in schedule trouble

- optimistic estimate
- skipping required practices to meet schedules

Consider **Hofstadter's Law**:

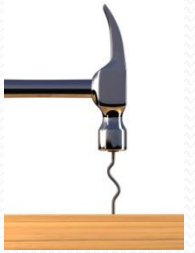
Software development always takes longer than you think, even when you take into account Hofstadter's Law

3. Technology new to the organisation

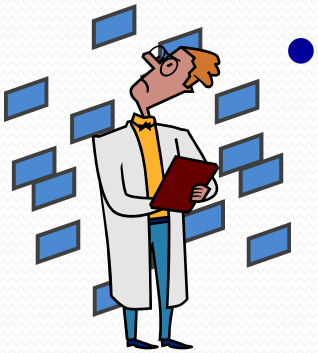
Increase in technical failures

Software practitioners forced to use ***breakthrough technologies***

- did not scale up
- are a solution to the wrong problem



- did not have the required functionality



4. Inadequate/no project management methodology

Suitable management can:

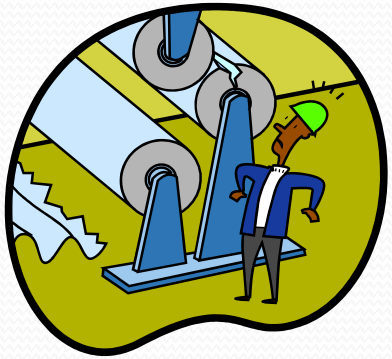
- avoid technical problems
- improve planning
- stabilise requirements

5. Insufficient senior staff on the team

Experience is what is really required

6. Poor performance by suppliers of hardware/software

Difficult to prove

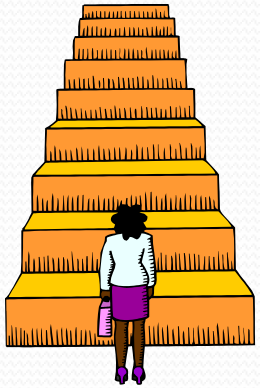


Suggested Remedies

1. Risk management
2. Issue Management
3. Remedies attempted during runaway
4. Longer term remedies

1. Risk Management

- anticipation of the most serious problems



- taking the necessary steps to handle them

- need to be managed from the beginning

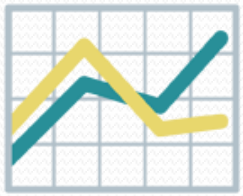
Risk Management

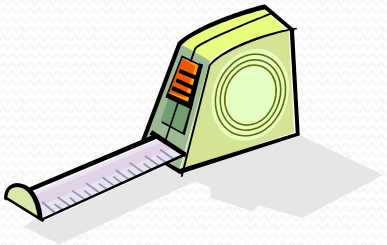
Medical Handbook Approach (Jones, 1994)

- Definition
- Severity
- Frequency of occurrence
- Where it occurs
- Susceptibility/resistance
- Root causes
- Associated problems
- Cost impact
- Prevention
- Control

Most serious risks

- Inaccurate metrics
- Inadequate measurement
- Excessive schedule pressure
- Management malpractice
- Inaccurate cost estimating
- Silver bullet syndrome
- Creeping user requirements
- Low quality
- Low productivity
- Cancelled projects

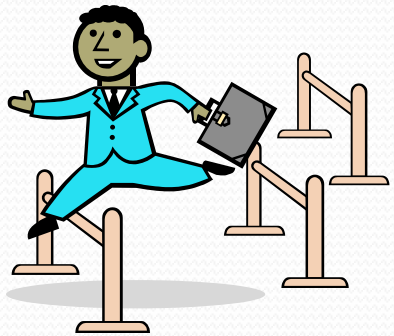




2. Issue Management

Obstacles can threaten to disrupt project progress

- Generic issues
- Measurement techniques can be used to evaluate the status of generic issues as well as some project specific issues
- Some management techniques can be applied to management by issue



3. Remedies attempted during runaway

- Extending the schedule
- Better project management procedures
- More people
- More funds
- Pressure on suppliers by withholding payment
- Reduction in scope of project

- New outside help
- Better development methodologies
- Pressure on suppliers by threat of litigation
- Change of technology used on the project
- Abandoning the project

4. Longer term remedies

Improved project management

- Feasibility study
- More user involvement
- More external advice

Project failures

Public Accounts Committee (1999)

"Improving the Delivery of Government IT Projects"

www.publications.parliament.uk/pa/cm199900/cmselect/cmpubacc/65/6502.htm (23 March 2010)

Focused on experiences of 25 project failures during the 1990s

Improving projects

Modernisation or failure? IT development Projects in the UK public sector

http://www3.interscience.wiley.com/cgi-bin/fulltext/118975610/PDFSTART (23 March 2010)

Government IT Projects: The McCartney Report "Successful IT: modernizing government in action" and the CSSA report "getting it right for government"

http://www.parliament.uk/post/pr200.pdf (23 March 2010)

CSSA & Cabinet Office (2000) guidelines

1. Need for a Partnering Approach
2. Project Management
3. Gaining Value from Review Processes
4. Senior Management Involvement
5. Change Control
6. Risk Management
7. Partnering
8. Project Team
9. Joint Project Management Essentials
10. Project Communications

1. Need for a Partnering Approach

- Create a culture and working ethos to tackle challenges of large-scale IT projects
- Leadership and universal commitment
- Effective partnering between departments and suppliers

2. Project Management

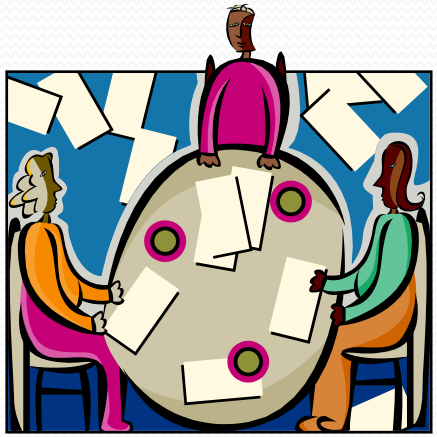
Recognise the need for a project management profession within the Civil Service :

- initiate a career path
- develop a qualification accreditation scheme
- provide appropriate remuneration for top-level achievers provide incentives for success
- orchestrate cross-department assignments

- with assistance from Industry

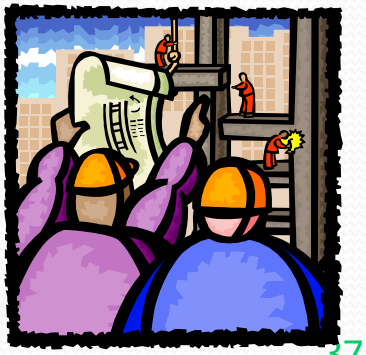
3. Gaining Value from Review Processes

- Government and industry should share what they know
- Government should ensure that pre-contract processes follow the guidelines laid down by HM Treasury and PAC
- Suppliers should seek opportunities for achieving best value gains
- Industry should aid the process of streamlining IT acquisition



4. Senior Management Involvement

- Responsibility belongs to the sponsoring department
- Risks and rewards should be shared between customer and supplier
- Senior management ownership of individual programmes is critical
- Senior official appointed for each project with responsibility as programme champion

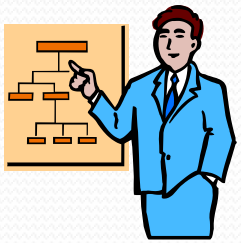


5. Change Control

Business programme manager must control changes to the project

Customers must :

- investigate proposals to change requirements
- accept impact statements and risk assessments from suppliers
- initiate business practice changes
- manage the impact of external changes



Suppliers must:

- closely monitor proposals for change
- limit the risk of cost and time overruns
- accept and manage essential changes to support the client's best interests
- assist the client in enforced large-scale business change

6. Risk Management

Risk management procedures should be adopted at the outset of the project:

- register of risks should be compiled
- each risk should be appointed an owner
- contingency plans must be drawn up for each risk identified
- project risk must be regularly reviewed and updated
- customer and supplier must co-operate in risk management

7. Partnering

Government and industry should collaborate in developing a partnering practice:

- facilitates better project planning
- enables sharing of risk and benefits as appropriate
- ensures availability of project staff and resources when required
- communicates objectives and actions clearly
- adopts recommended HM Treasury PFI/PPP guidance

8. Project Team

A Government customer provides an experienced, qualified programme manager, with a balanced team :

- appointed for the duration of the project
- trained in appropriate project methodologies
- with direct access to the programme champion
- delegated appropriate financial authority
- with incentives to encourage best performance
- given ample authority, responsibility and accountability for the role

9. Joint Project Management Essentials

Customer and supplier should co-operate with the following objectives:

- a modular and incremental approach to reduce risk of overruns of cost and time
- the project is business led
- training and testing methods are documented
- user is integrated into the project team
- project adopts relevant methodologies

- project team is fully trained in their use
- application of guidance is documented for later appraisal
- supplier fully co-operates in use of the methodology

10. Project Communications

Customer and supplier agree a joint project communication strategy

- both are fully informed about project progress
- user community is kept on-side
- eventual system acceptance is better assured
- difficulties and successes are openly publicised
- rewards and incentives can be established

Summary

- Categories of project failure
- Causes of project failure
- Remedies against project failure
  - Risk management
  - Issue Management
  - Remedies attempted during runaway
  - Longer term remedies
- IT Project guidelines

"Doing it right the first time makes all the difference in achieving a better return on investment."

Project Leadership: Investing in Experience for Better Return on Investment
http://www.trilliumsg.com/articles/media/TrilliumonProjectLeadership1.pdf (23 March 2010)

References and further reading

Intellect [CSSA] (2000) *Getting IT right for Government,* A review of Public Sector IT projects by Intellect (formerly the Computing Services and Software Association (CSSA))

Glass, R.L. (1998) *Software Runaways: Lessons learned from massive software project failures,* Prentice Hall

KPMG (1995) 'Runaway Projects - Causes and Effects' *Software World (UK),* 26 (3); A Cole of KPMG

HMSO (1999) *Improving the delivery of Government IT projects*, Public Accounts Committee report

HMSO (2000) *Successful IT: Modernising Government in Action*, Cabinet Office report

Dynamic Markets Ltd (2007) IT Projects: Experience Certainty, Tata Consultancy Services http://www.tcs.com/thought_leadership/Documents/independant_markets_research_report.pdf (23 March 2010)

Asay M (2008) The Open Road [online], 62 percent of IT projects fail. Why? http://news.cnet.com/8301-13505_3-9900455-16.html (23 March 2010)