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information society

## **Achieving successful IT-enabled business change.**

**BCS Bristol Branch  
City of Bristol College  
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### **Issues to be covered**

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- **Problem – what problem?**
- **Does ICT matter anyway?**
- **Business change not just ICT change...**
- **Key ground rules for success.**
- **Approaches that reduce risk.**
- **IT “fitness”?**
- **Final thoughts.**

## Overruns

- US office of mines \$15m
- Metropolitan Police System (London) \$30m
- Bank of America \$65m
- Department of Employment (UK) \$75m
- All State Insurance \$92m
- Aetna Insurance \$100m
- United Airlines reservations system \$145m
- Norad update \$207m
- US Navy Automated System \$446m
- Advanced Logistics System \$490m
- US Army TACFIRE \$525m
- United Education & software Inc. \$650m
- London Stock Exchange (Taurus) \$675m
- US Army sgt. York \$1000m
- US Air Force B-1B EW system \$1200m
- British AEW Nimrod \$ 2200m



Source: Software forensics centre, Middlesex University

## Overruns ...

- House of Lords \$ 2m
- UK MAFF - BSE \$ 2m
- UK MoD Sema \$ 3m
- UK Foreign Office \$ 4m
- British Council \$ 6m
- NI Vehicle System Replacement \$ 6m
- Northern Ireland Office education Sys. \$ 7m
- BT Personnel system \$ 8m
- UK MoD Landscape \$ 10m
- Lloyds \$ 11m
- London Fire Brigade \$ 12m
- UK Eagle Star Life \$ 12m
- UK North West Water \$ 12m
- London Ambulance \$ 14m
- US Office of Mines \$ 15m
- Baring Brothers \$ 16m
- UK Training and Enterprise Councils \$ 17m
- UK Student Loan System \$18m



Source: Software forensics centre, Middlesex University

## More overruns

- UK Passport Agency \$20m
- UK Customs and Excise \$23m
- UK Inland Revenue \$25m
- NZ Crime Info. System \$26m
- UK Crown Prosecution Service \$27m
- UK Performing Rights Society \$29m
- NatWest Share Registration System \$30m
- Frizzel \$30m
- Metropolitan Police System (London) \$30m
- UK DoH Hiss \$42m
- DMV California \$50m
- Prudential Life and Pensions \$60m
- Bank of America \$65m
- UK MoD (Proj. Trawlerman) \$65m
- UK Department of Employment - Field \$75m



Source: Software forensics centre, Middlesex University

## And more ...

- All State Insurance \$ 92m
- Wessex Regional Health Authority \$ 95m
- Aetna Insurance \$ 100m
- Dept. of Social Services - California \$ 100m
- UK DoH Casemix \$ 107m
- United Airlines reservations system \$ 145m
- American Airlines reservations system \$ 165m
- California Child Support System \$ 200m
- US NORAD update \$ 207m
- UK Inland Revenue \$ 285m
- UK MoD IUKADGE (Boxer) \$ 300m
- US Navy Automated System \$446m
- Advanced Logistics System \$490m
- FBI \$ 500m
- US Army TACFIRE \$ 525m



Source: Software forensics centre, Middlesex University

## and more....

- |   |  |
|---|--|
| • UK Ministry of Defence \$ 600m              | • UK Post Office Automation (Pathway) \$ 1150m   |
| • United Education & software Inc. \$ 650m    | • US Air Force B-1B EW system \$ 1200m           |
| • London Stock Exchange (Taurus) \$ 675m      | • Eurofighter \$ 1600m                           |
| • Canadian Air Traffic Control Sys. \$ 810m   | • UK Inland Revenue \$ 2200m                     |
| • British Air Defence System \$900m           | • UK DSS Operational Strategy \$3000m            |
| • US Army Sgt. York \$ 1000m                  | • US National Weather Service \$3200m            |
| • State of California - Welfare sys. \$ 1000m | • Denver International Airport, baggage \$ 3200m |
| • US IRS \$ 4000m                             | • US FAA Air Traffic Control system ?+ \$ 3700m  |



Source: Software forensics centre, Middlesex University

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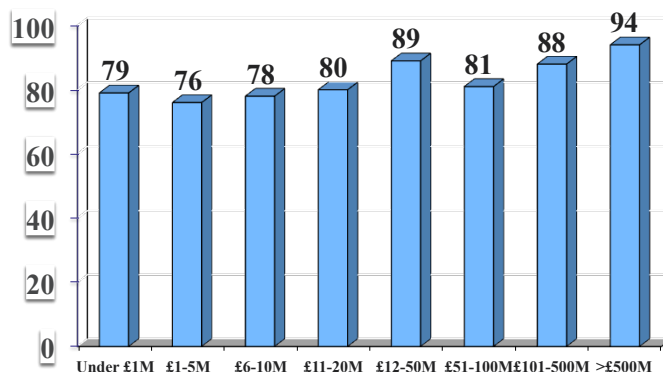




## Importance of ICT by organisation size

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Percentage indicating ICT as key factor in growth



Annual turnover

*Investment in ICT is important to organisations of all sizes - only a very weak correlation with size*

Source: IoD Business & Technology Report 2007 (unpublished)



## Key reasons for investing in new ICT

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	2007	2006	2004
Increase productivity	35%	42%	64%
Increase sales	16%	8%	8%
Competitive pressure	8%	12%	3%
Save time	8%	11%	9%
Reduce costs	5%	2%	5%
Reduce risk	2%	2%	3%
Combination of factors	15%	9%	1%

Source: IoD - Dell Studies 2004 & 2006, IoD-Dell Report SMEs: Successful Growth through Innovation, IoD Business & Technology report 2007 (unpublished)



## IoD Members grow steadily more worried across a range of ICT issues...

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Issue	2007 Result	2006 Result	2004 Result
Data Security	78%	68%	64%
Business Continuity	74%	71%	54%
Spam	67%	57%	47%
Maintenance & Support	57%	43%	41%
Mobility/Flexible Working	51%	30%	N/A
Data Storage	47%	48%	27%
Keeping up with Technology	46%	36%	21%
IT Training	38%	30%	13%
Setting up an online presence	37%	29%	12%

Source: IoD - Dell Studies 2004 & 2006, IoD-Dell Report SMEs: Successful Growth through Innovation, IoD Business & Technology report 2007 (unpublished)

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## There is no such thing as an ICT project ...

- The purpose of ICT is to enable and support efficient working practices
- Getting these business processes right takes time, consultation and experiment.
- Introducing new business processes takes time and money, and is often disruptive.

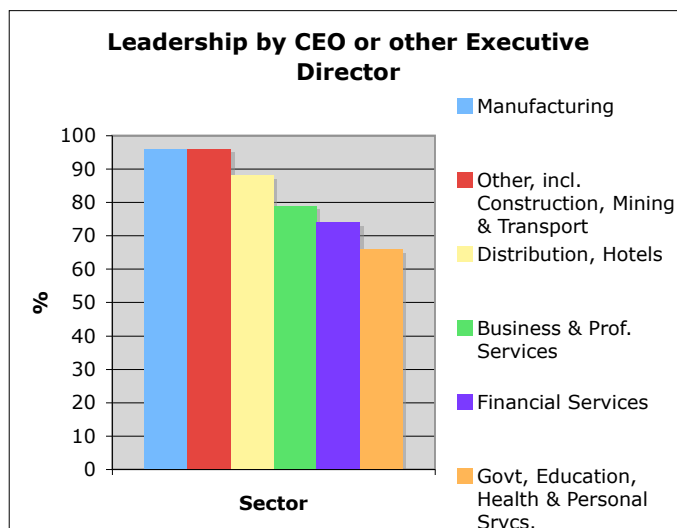


In the words of the CSSA/Intellect report "Getting IT right for Government" published back in June 2000: *"There is no such thing as an IT project in isolation from its business change programme..."*



## Sectors vary on the degree of Board-level leadership of major change

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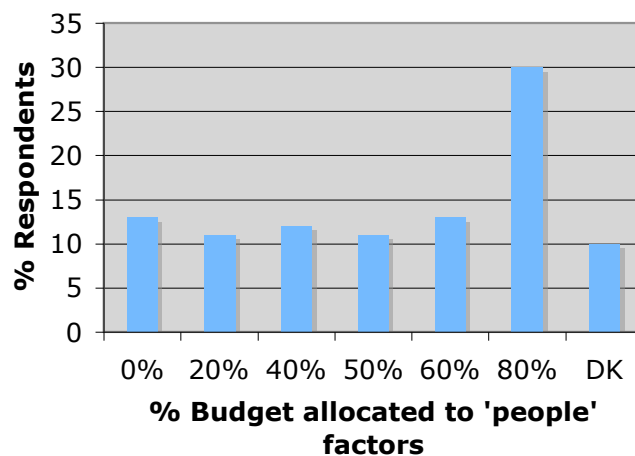


Source: IoD Business Opinion Survey researched May 2006



## What is the typical budget split between technology spend 'people' spend in major business change?

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'People' spend includes: business process re-engineering, internal communications, training, changes to performance measurement, reward,...

Source: IoD Business Opinion Survey researched May 2006

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## **First, understand where you are... scope holistically – budget honestly**

**If people are at least equal partners with Information Systems in delivering service, then surely they deserve at least half of the project budget allocated to them in order to communicate:**

- **why change is required;**
- **how it will be achieved;**
- **the new skills required;**
- **the development of new business models, and**
- **to reward positive change?**

**Best practice suggests an allocation of 80% of the budget to 'people and process' and 20% to ICT systems.**

## **Second, provide leadership, sponsorship and governance**

- **The change programme must be visibly owned and sponsored at the highest level.**
- **The board-level sponsor must have clear authority to resolve conflict before it can get out of hand and block progress.**
- **A small steering group of senior executives is helpful to drive speedy decision making, openly sharing information and reducing political inertia.**

**This is business change not IT change...**

### Third, ensure executive alignment...

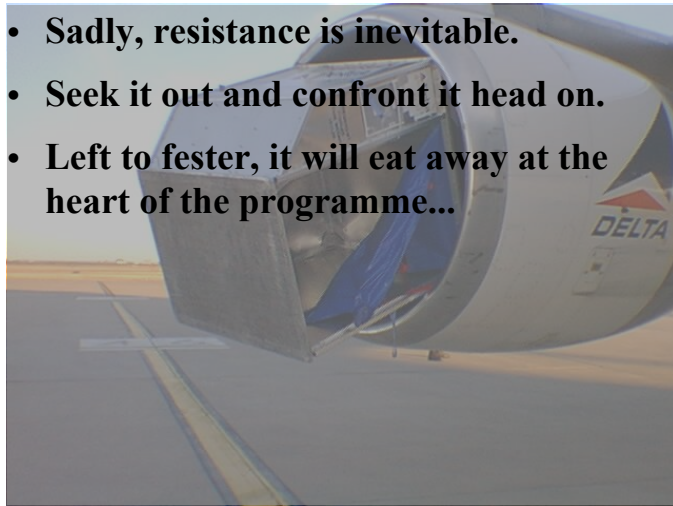
- The more the executive team shares a common point of view on the challenges of change, the greater the chance of success.
- Any chink of difference within the team will be exploited by the forces within the organisation that oppose change.

### Fourth, don't take too long...

- Transformation programmes have a limited shelf life beyond which little can be achieved.
- An early focus on the positive outcomes of change, and the means for their delivery, is essential.
- Regular (and honest) updates to the steering group by the champions of individual elements of the programme are vital.
- Large projects will develop a life and bureaucracy all their own unless tightly managed.

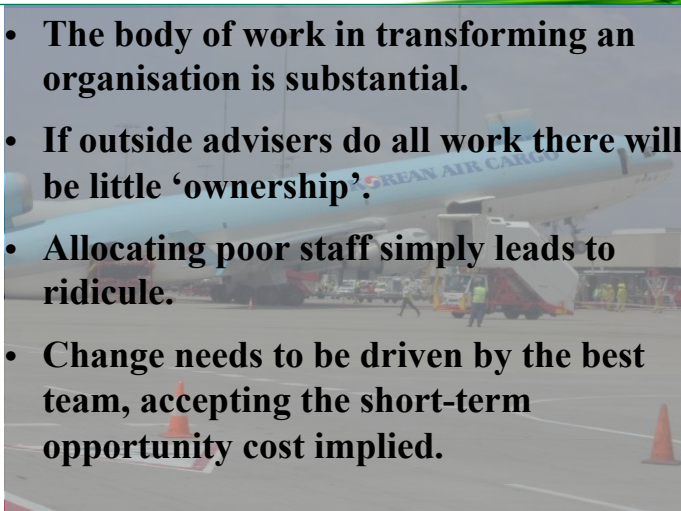
### **Fifth, confront organisational resistance...**

- **Sadly, resistance is inevitable.**
- **Seek it out and confront it head on.**
- **Left to fester, it will eat away at the heart of the programme...**



### **Sixth, remember workload, capability and ownership**

- **The body of work in transforming an organisation is substantial.**
- **If outside advisers do all work there will be little 'ownership'.**
- **Allocating poor staff simply leads to ridicule.**
- **Change needs to be driven by the best team, accepting the short-term opportunity cost implied.**



### **Seventh, avoid problem overload...**

- **Success is highly dependant on starting with a clear understanding of the new business model required and clarity on the path for its achievement.**
- **The journey offers many tempting diversions.**
- **Ruthless focus is required in avoiding such opportunities for own goals...**

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### Create cross-functional teams...

- Such teams break down barriers and reduce the potential for tunnel vision in problem solving.
- Few problems sit neatly in a single function
- The best team members become skilled advocates for the transformation.

### Don't over centralise...

**A small number of large linked systems may be more effective (and less vulnerable) than a single mega system.**



### Use irrefutable facts...

- Evident facts kill unwanted and otherwise contentious arguments.
- Opinions are open to debate and contradiction.
- Robust analysis and structured feedback are important tools for presenting key findings and drawing unresolved issues to a close.

### Communicate regularly...

- It is literally impossible to over-communicate during a change programme.
- Far better to get the facts out clearly and quickly, even if not always palatable.
- Left in a vacuum, people will create their own stories based around fiction more often than fact.
- It is vital to address directly the unspoken fears and emotions of individuals and groups.

## Document agreements and disagreements...

- **The factual and specific documentation of important agreements (and disagreements) acts as a referee in times of crisis.**
- **Once progress has been achieved, it is important to “lock the doors behind” so that people have to move forward.**

These pictures are apparently of an Express Airlines Saab in Memphis. The mechanics had pushed the plane out of the hangar after working on it all night. What they failed to do was have someone riding brakes in the plane, failed to bring chocks, failed to set the aircraft parking brake and failed to set the tug parking brake. They then left the aircraft unattended.

When they returned to the aircraft ...

## Declare regular victories...

**When progress is irrevocable, declare a victory. This brings unambiguous completion to a phase of change and generates momentum for further success.**

### **Adopt reinforcement mechanisms...**

- **Change is at least as much about behaviour as it is about business process.**
- **Make sure that your performance measurement, pay and reward systems reinforce the new behaviours.**
- **Don't give people excuses to cling on to the old.**

### **Finally, practice programme management...**

- **Too often there is not enough time to get it right, but always time to do it again...**
- **A well-structured programme management office act as both control centre and communications device.**
- **Sadly, a stream of reports over the last ten years have emphasised that the procurers of “change” projects still tend to regard the people who will operate and use these systems as a necessary evil rather than an integral part of the overall system design, don't fall for that illusion...**

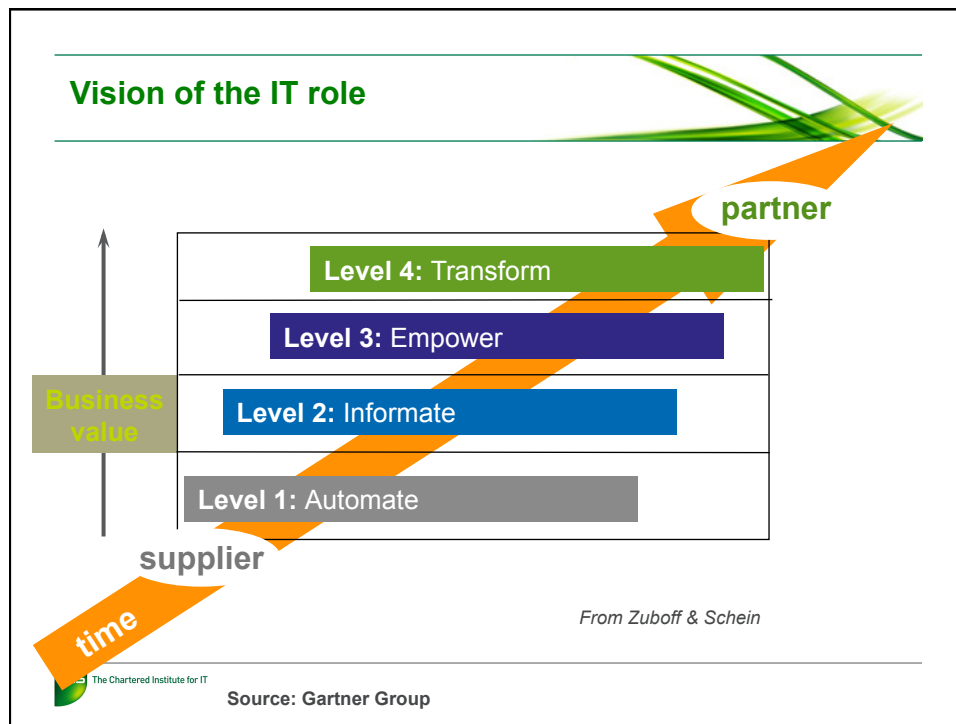


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## How IT fit are you?

	Stage 1: Passive	Stage 2: Reactive	Stage 3: Proactive	Stage 4: Pioneering
<b>Attitude to IT</b>	Sees no role for board	Responds to CIO proposals	Works with CIO	Adopts a leadership role
<b>Board's IT agenda</b>	Not normally on agenda	Budgets and projects	Strategy and infrastructure	Business opportunities
<b>IT fluency</b>	Foreign language	Principles understood	Treated as special	Part of normal discussion
<b>IT governance</b>	Control is delegated	Budgets and ownership established	IT aligned to business strategy	IT integral to business strategy
<b>IT education</b>	Not seen to be needed	Ad hoc	Learns when needed	Learning structured
<b>Information</b>	Invisible	Occasional usage	Valued for monitoring and queries	Business asset
<b>IT risk</b>	What risk?	Delegated but left alone	Delegated but monitored	Managed by board
<b>Perception of CIO</b>	Chief technologist	Departmental head	Specialist on the board	Business colleague



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## Suggested actions: Budget & Benefit

***Holistic budgeting:*** Make sure that you have properly scoped the project including all the people related business change costs and the “opportunity costs”. Remember that: “there is no such thing as an IT project, merely business change projects mediated by people and IT”.

***Benefits realisation:*** Reject out of hand all proposals that do not contain clear and quantified benefits realisation plans, plus clear plans for post implementation review.

## Suggested actions: Public Sector Governance

***Machinery of Government:*** Clarity on the responsibilities at the Accounting Officer/Permanent Secretary level where functions are internally “contracted out” to Agencies or equivalent bodies which may be supporting several Departments (Shared Services). This is particularly important with respect to responsibilities to the National Audit Office (NAO) and the Public Accounts Committee (PAC).

***Parliamentary scrutiny:*** Development of “Business Change Risk Assessments” to be made available to Parliamentarians when new primary legislation (such as Identity Management) is being debated.

***Research:*** Fund the development of stronger software engineering methods that are soundly based on computer science and mathematically rigorous.

## Suggested actions: Procurement

**Every ambiguity, contradiction and omission in your specification ...**

- Adds an unknown amount of risk
- Invalidates the planned costs and timescales
- May require a contract change, transferring risk back from the supplier to the customer

**... but drawing up unambiguous specifications is a specialised skill.**

**The Royal Academy of Engineering (with the BCS and IET) recommends that all major procurements employ a systems architect — analogous to the use of an architect in a civil engineering project.**



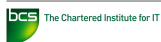
## Driving back to sustained growth will need skilled use of IT enabled business change...

- A former Minister once said to me that he: “had no intention of being the Minister for failed computer projects...”
- But many areas of saving in both public and private sectors will need the implementation of radical business change.
- Properly scoped IT support to that business change will be crucial.



## Don't be slothful....

- **Avoid being the first or the largest.**
- **Plan and budget the whole business change, not just the IT.**
- **Manage the technical specifications professionally, avoiding unnecessary changes**
- **Employ competent suppliers.**
- **Ensure that any conflicting objectives between the stakeholders are resolved before the technology sub-project starts...**

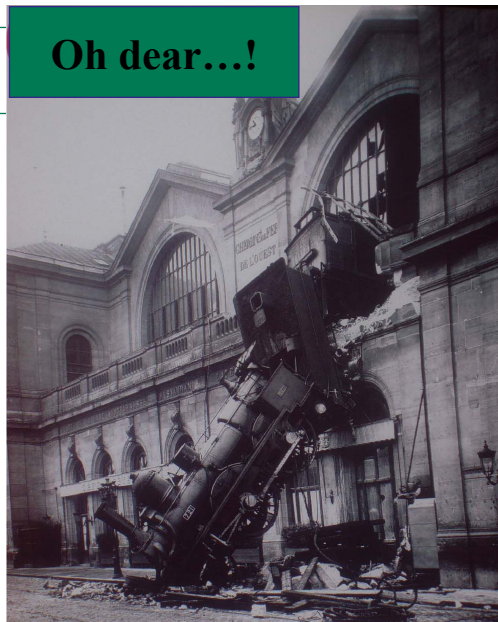


Acknowledgement: With grateful thanks to Mike Lander of Consulting Strategies, Prof Martyn Thomas and the whole of the IET IT Policy Panel

## End note

But remember, managing change is a continual battle. Don't ever sit back and believe that you have won!

Oh dear...!



Presentation can be

Downloaded from: <http://www.profjimmorton.com/bcsbristol1.pdf>