JAMES A ROBERTSON AND ASSOCIATES
EFFECTIVE STRATEGIC BUSINESS SOLUTIONS

INFORMATION TECHNOLOGY AUDIT CONFERENCE

28 and 30 May 2007

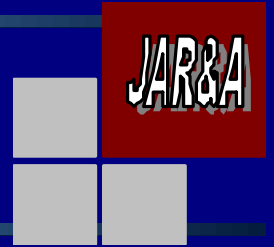### *The REAL Issues in I.T. Audit*

Dr James Robertson
Chief Executive Officer
James A Robertson and Associates   **http://www.jar-a.com**

AGENDA

THE REAL ISSUES IN I.T. AUDIT

1. Context -- why you should reconsider your approach to I.T. audit

2. The REAL risks of I.T.

3. The critical factors for successful I.T. investments

4. How do you audit these factors

5. How to go about an audit to determine strategic compliance

POSITIONING THIS PRESENTATION

1. Appropriate, well implemented information technology applications can <u>add substantial value</u>

2. Sometimes they can <u>add dramatic value</u>

3. Such I.T. solutions can be <u>delivered successfully</u>

4. Such I.T. solutions can be <u>delivered economically</u> and in <u>realistic time frames</u>

5. <u>Doing it right is cheaper</u> than doing it wrong

6. <u>Doing it wrong is always more expensive</u> than the client organization can afford

7. As evidence of my conviction that dramatic success is economically attainable it is important to note that I have spent most of my career seeking ways of <u>getting it right first time reliably and sustainably</u>

A CRITICAL PRINCIPLE FOR SUCCESS
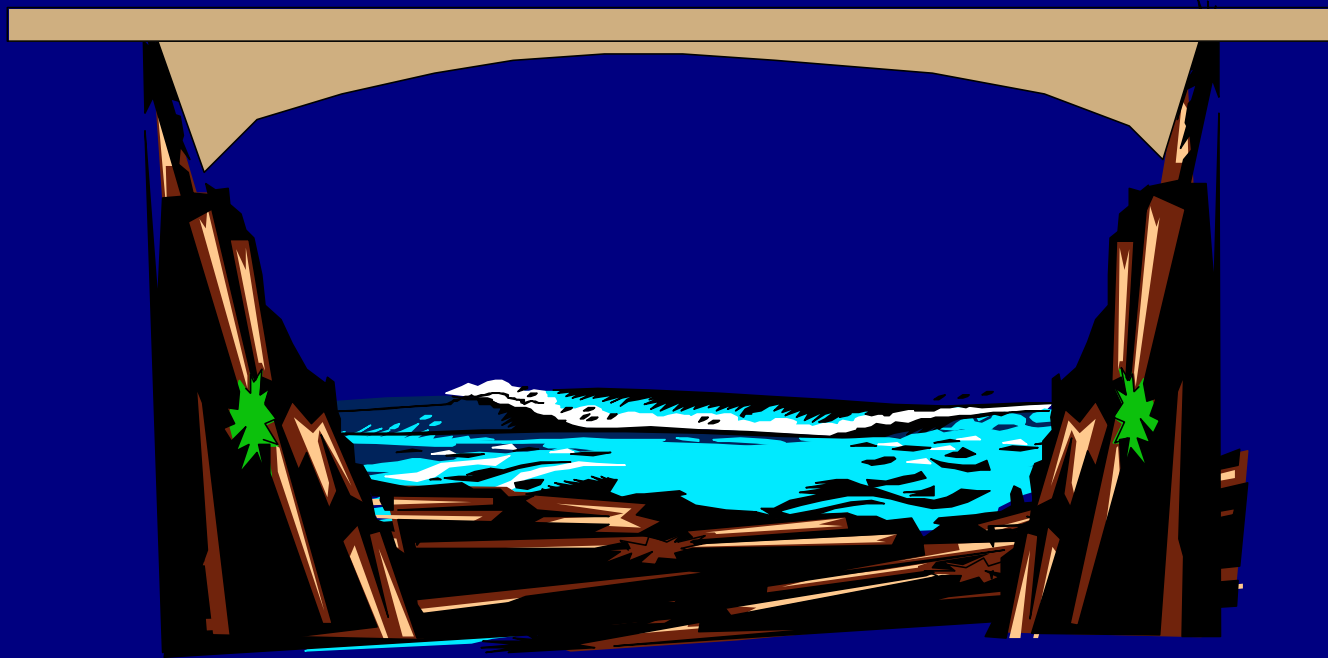## Engineer Against Failure

Engineers do NOT design bridges to stand up!

A CRITICAL PRINCIPLE FOR SUCCESS
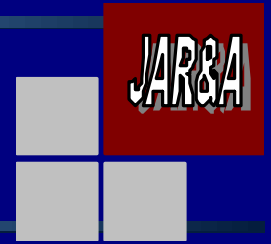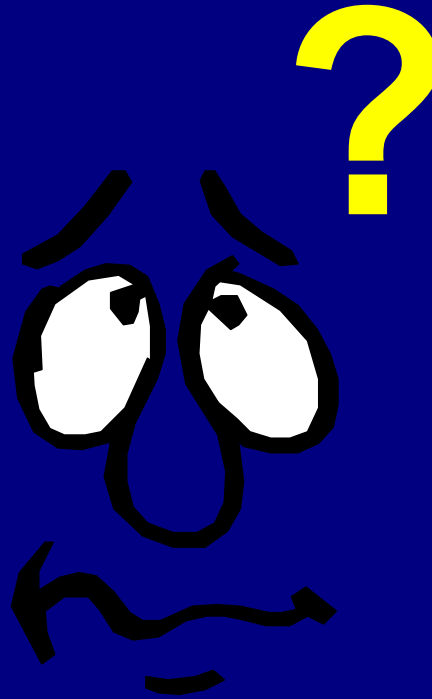## Engineer Against Failure

Engineers do not design bridges to stand up!
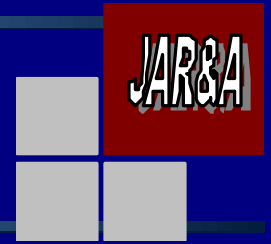
They design bridges NOT to fall down!

WHAT IS STRATEGY?

STRATEGY DEFINED

WHAT IS STRATEGY?
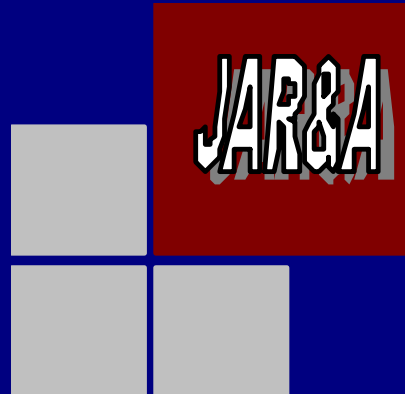
**The essence of why an organization exists
and how it thrives**
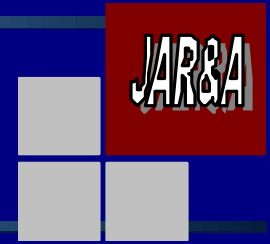
DOING THE RIGHT THINGS

**Professor Malcolm McDonald
Cranfield School of Management**
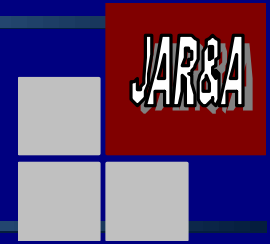
DOING THINGS RIGHT

Professor Malcolm McDonald
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STRATEGY vs TACTICS : A DEFINITION
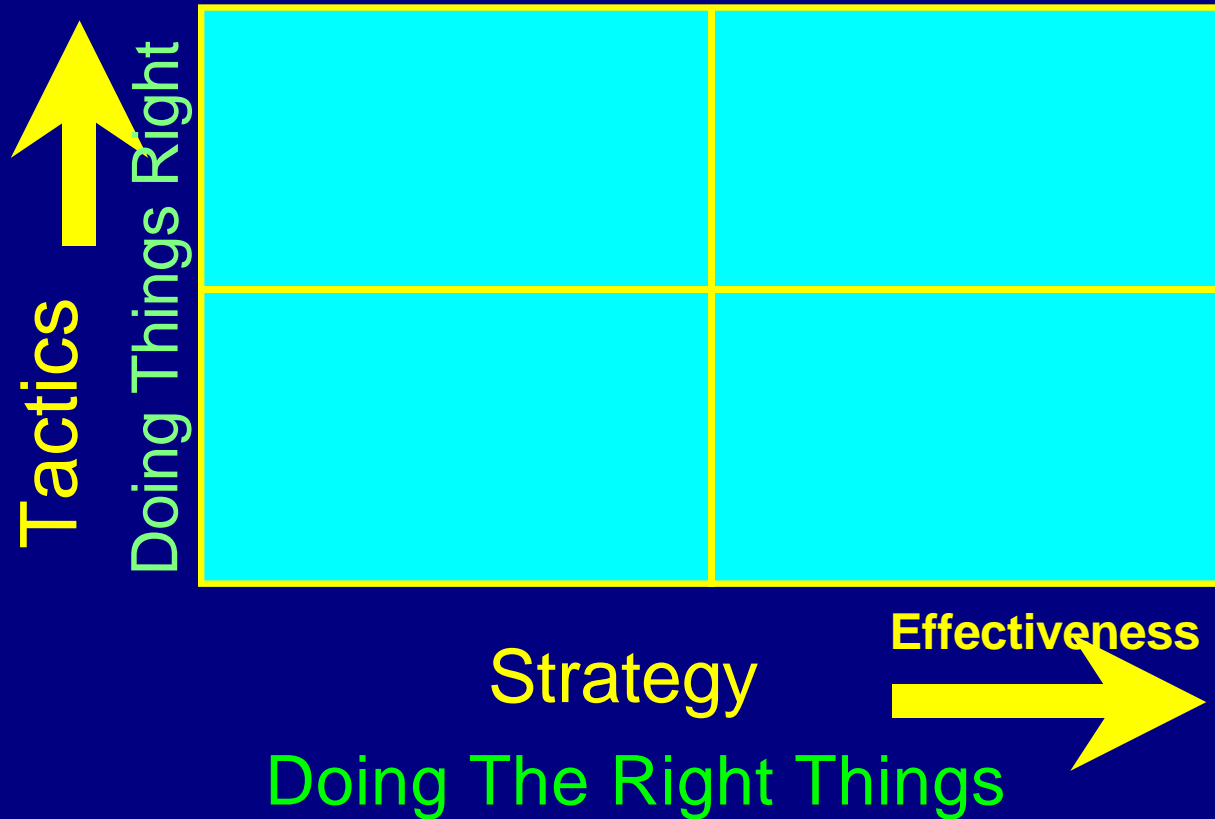
Professor Malcolm McDonald

Tactics — Doing Things Right

Strategy — Doing The Right Things

Effectiveness

STRATEGY vs TACTICS : A DEFINITION
Professor Malcolm McDonald

Tactics / Doing Things Right (vertical axis)

Thrive (top right quadrant)

Strategy — Doing The Right Things

Effectiveness →

STRATEGY vs TACTICS : A DEFINITION

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Tactics — Doing Things Right

Strategy — Doing The Right Things

Effectiveness

Thrive

Survive

STRATEGY vs TACTICS : A DEFINITION

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Tactics — Doing Things Right

Thrive

Die — R.I.P.

Survive

Strategy — Doing The Right Things

Effectiveness

STRATEGY vs TACTICS : A DEFINITION

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Tactics — Doing Things Right

Die Fast

Die Slowly

R.I.P.

Thrive

Survive

Strategy — Doing The Right Things

Effectiveness
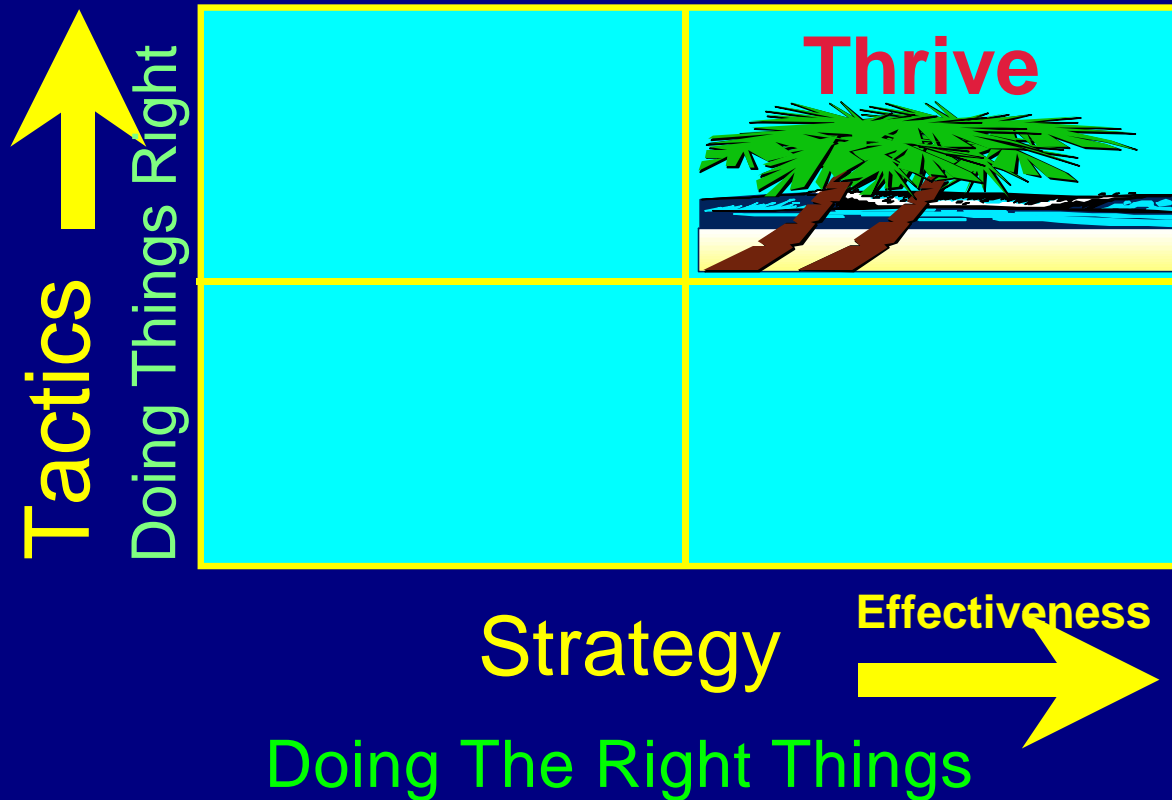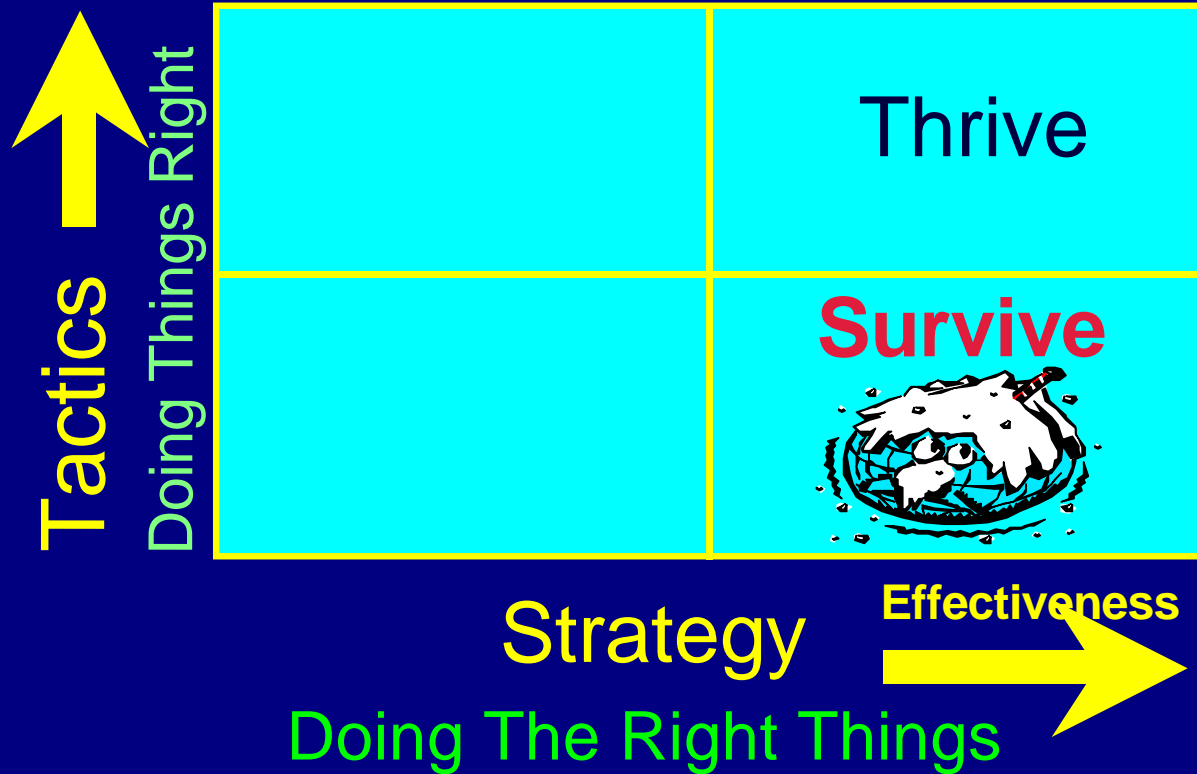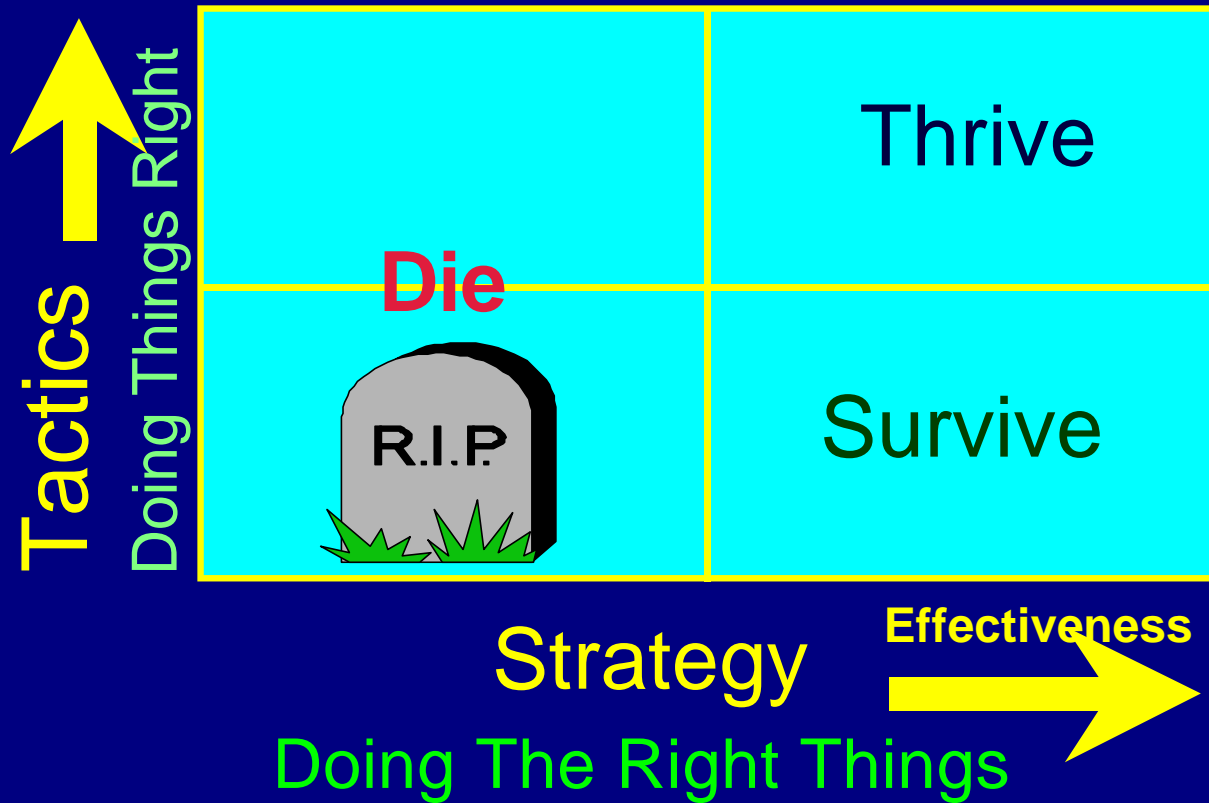
STRATEGY vs TACTICS : A DEFINITION
Professor Malcolm McDonald

	Strategy — Doing The Right Things	
Tactics (Doing Things Right)	**Die Fast**	**Thrive**
	Die Slowly	**Survive**

Effectiveness →
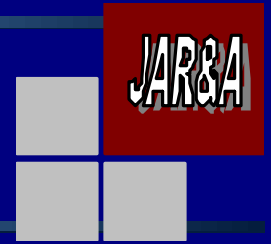
WHAT IS YOUR ORGANIZATION's STRATEGY?

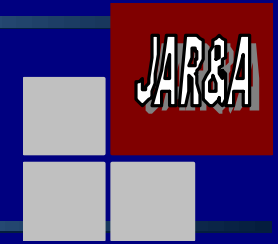## What is the essence of why your organization exists and how it thrives?

CONTEXT: INFORMATION TECHNOLOGY GOVERNANCE DEFINED BY KING

1. **Governance = Care!**

2. How does this company make money? What are our competitors doing? **What can destroy our business?** More satisfied employees. More Capital.

3. I.T. -- should we take something like COBIT and enforce or have certified managers?

4. **Board is responsible for I.T. Systems** and does it have effective control, **part and parcel of strategic view.**

5. Ultimate responsibility is business success. Balance conformance and performance. **Legislation is NOT the recipe for good governance.** Increased cost of running the business.

Presentation on "I.T. Governance" to the I.T. Governance and Strategy Summit on 22 August 2006 by Professor Mervyn King SC, former High Court Judge and author of the King reports on Corporate Governance. Free hand notes taken by J Robertson during the presentation.

CONTEXT: INFORMATION TECHNOLOGY GOVERNANCE
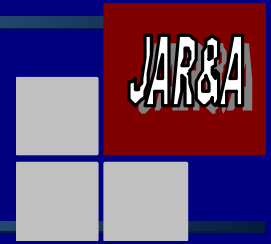
1. "This [I.T.] is an area where boards of directors will be named in stockholder suits"

2. "Senior management is not engaged enough in strategic information technology decisions and situations that could put the company at risk."

3. "Information systems could cause the next outbreak of Enron-like corporate scandals."

4. "I.T. is the next corporate disaster waiting to happen"

"Creating an IT Watchdog for the Board by Assembling an I.T. Oversight Committee" presented to the I.T. Governance and Strategy Summit by Professor Rossouw von Solms of Nelson Mandela Metropolitan University quoting Richard Nolan of Harvard Business School in Harvard Business Review

CONTEXT: INFORMATION TECHNOLOGY
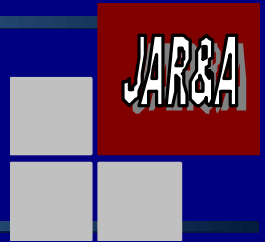
1. **Major I.T. Write-Offs**
   - **After spending seven years and close to <u>half a billion dollars</u> implementing a mainframe E.R.P. system, the Dow Chemicals Co stopped and started over with a client-server version**
   - **Nike -- <u>$400 million</u> against their supply chain management system**
   - **Disney -- <u>$878 million</u> against its go.com web portal**
   - **Kmart -- <u>$195 million</u> against supply chain hardware and software**
   - **Gateway -- <u>R143 million</u> against I.T. projects no longer fitting its strategy**

   "Creating an IT Watchdog for the Board by Assembling an I.T. Oversight Committee" by Professor Rossouw von Solms of Nelson Mandela Metropolitan University at the I T Governance and Strategy Summit

2. <u>**"I.T. Efficiency and Effectiveness are Waning"**</u>

3. **"85% of problems are caused by I.T. changing something"**

   "Achieving I.T. Governance Through Service Management and Transformation" by Alkesh Patel, IBM Global Technology Services speaking at the IT Governance Summit

CONTEXT: INFORMATION TECHNOLOGY
AN INDUSTRY CHARACTERISED BY FAILURE
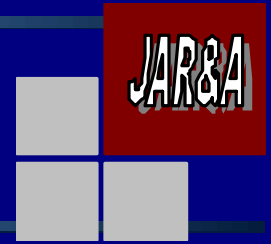
1. **Seventy percent of I.T. investments fail TOTALLY**

2. **Another twenty percent fail to fully satisfy the original business requirement**

3. *"19 out of 20 E.R.P. implementations do not deliver "what was promised"*
   McLeod (FM)

4. **Ninety percent of strategic plans fail**

5. **Seventy percent of B.P.R. investments fail**

6. *"Most organisations are not making better decisions than they did five years ago."*
   Gartner

I.T. AUDIT

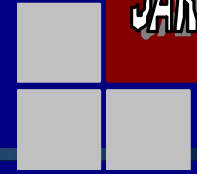Why?

What should an I.T. Audit seek to evaluate?

What are the REAL risks of I.T?

CAUSES OF INFORMATION TECHNOLOGY INVESTMENT FAILURE

65%

1. **Information technology mythology (30%)**

2. **Lack of executive custody and inappropriate policies (20%)**

3. **Lack of strategic alignment (15%)**

4. **Lack of an engineering approach (12%)**

5. **Poor data engineering (10%)**

6. **People / soft issues (8%)**

7. **Technology issues (5%)**

The first three require quality decisions and limited time and are seldom audited

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WHERE IN THE WORLD IS I.T. GOING?
WHERE SHOULD WE FOCUS OUR ATTENTION?
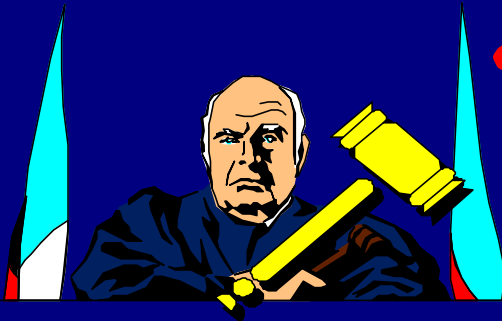
1. **Dramatic failures, litigation and legislation (5%)**

2. **Software company shake outs (6%)**

3. **Long software product life spans (7%)**
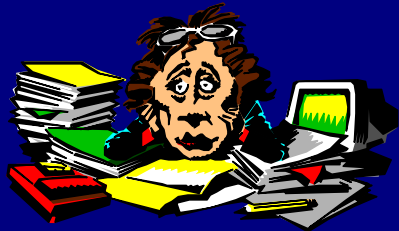
4. **Less is more (10%)**

5. **Executives take custody (20%)**

6. **Emphasis shifts to decision support (22%)**

7. **Corporate level solution innovation (30%)**

Radical redefinition of the industry

A challenging and exciting place to be

Leading edge technology mothballed

Run of the mill technology = worlds most successful aircraft
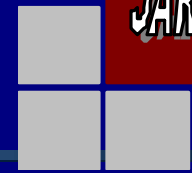
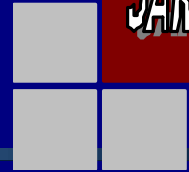1. **Buildings stand up, aircraft fly, ships float, machines work, motor vehicles operate, houses keep out the weather, etc** ──┐ **Reliably -- AND people know how to use them effectively and profitably**

2. **Expect the same level of reliability from I.T.**

3. **A successful solution is one that does NOT FAIL**
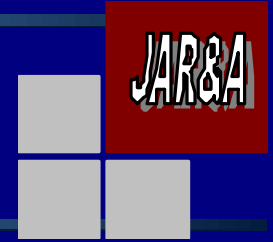
Success = getting to "NOT failure"

THE CRITICAL FACTORS FOR SUCCESS

59%

1. **Executive Custody (25%)**

2. **Strategic Solution Architecture (18%)**

3. **Strategic Alignment (16%)**

4. **Business Integration and Optimization (14%)**

5. **Programme and Project Management (12%)**

6. **Data Engineering / Information Management (10%)**
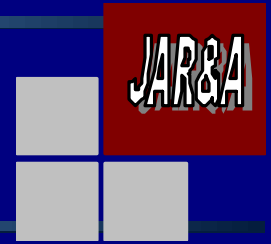
7. **Technology Components (5%)**

COMPONENTS OF ACHIEVING EXECUTIVE CUSTODY

1. Engagement

2. Leadership

3. Prove it works

4. Make it work

Executive Custody is an attitude, a state of mind, NOT a large amount of work
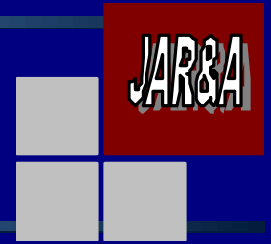
CRITICAL FOCUS AREAS
OF EXECUTIVE CUSTODY

1. Creating and delivering value to customers

2. Differentiating from competitors

3. Motivating and leading personnel

4. Meeting and exceeding owner expectations

5. Building exceptional partnerships with suppliers

6. Integrating and optimizing the business

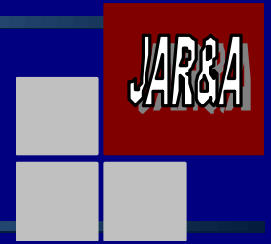7. **Day to day operational efficiency and effectiveness** ⟵ 5%?
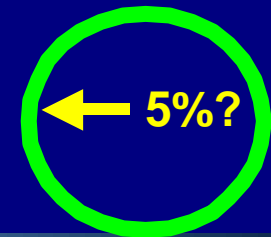
**How involved should executive management
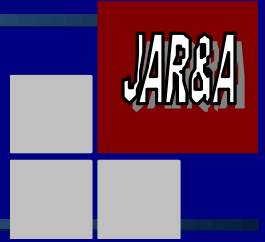be in I.T. Strategy?**

EXECUTIVE INVOLVEMENT

How involved should executive management be in I.T. Strategy?

How involved should executive management be in business strategy?
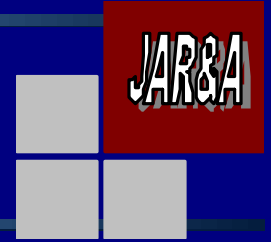
EXECUTIVE INVOLVEMENT

How involved should executive management be in I.T. Strategy?

How involved should executive management be in business strategy?

Executive Custody is an attitude, a state of mind, NOT a large amount of work

So -- how do you go about auditing these factors?

1. Is there a clear organization wide <u>definition of the strategy</u> of the organization (why it exists and how it thrives) that is understood and APPLIED to I.T? (30%)

2. Do executives speak of the I.T. function as being <u>theirs</u> ("our" / "my" / (20% etc) or someone else's?

3. Are executives able to obtain the <u>information they want</u> off the I.T. systems when they want it -- can they get the information they "know" is there? (14%)

4. Is all the hard management information <u>accessed directly</u> off the core (E.R.P. / B.I.S.) databases (12%) or is it maintained and manipulated partially or completely in spreadsheets?

5. Is the person in charge of I.T. regarded by the executive team as <u>**business savvy**</u> and as communicating in business terms? (10%)

6. Are the <u>**staff**</u> of the I.T. function regarded as business savy problem solvers? (8%) or as unintelligible geeks out of touch with the real world of business coupled with widespread frustration with I.T. and talk of replacing the core systems?

7. Is the I.T. strategy a logical extension of a structured analysis of <u>**how the business thrives**</u> with very little reference to technology trends, etc? (6%) -- or is I.T. actually a technology fashion statement?
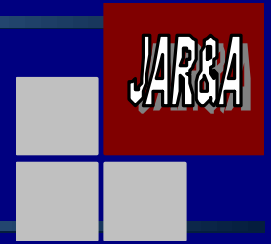
Rate each of these factors on a scale of 0 to 10 where:

0 = there is <u>not even a shred</u> of evidence to support a positive answer to this question -- scaled against a primitive view of business

10 = it is not possible to envision a more positive response -- scaled against a view of exceptional world class <u>business excellence</u>

Determine the weighted average scores

HOW TO GO ABOUT AN AUDIT OF THESE FACTORS
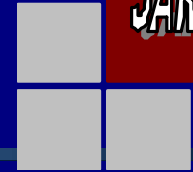
1. **<u>Interview the executive team</u>** one on one -- ask the following questions, LISTEN and take notes

2. **<u>Interview business management</u>** and ask the same questions, LISTEN and take notes

3. **<u>Interview I.T. management</u>** and ask the same questions, LISTEN and take notes

4. Seek to **<u>understand the gaps</u>** that exist and ask limited questions in order to gain understand
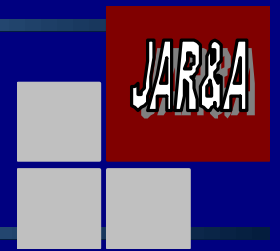
HOW TO GO ABOUT AN AUDIT OF THESE FACTORS

5. **Evaluate** the seven audit questions and seek clarification as required

6. **Rate** the seven audit questions

7. Recommend appropriate **actions**

< 3 = crisis

5 = average, middle of the road

> 7 = exceptional, world class

HOW TO GO ABOUT AN AUDIT OF THESE FACTORS -- INTEVIEW QUESTIONS

1. What is the strategy of the organization (why it exists and how it **thrives**)? (27%)

2. What are your **critical concerns** with regard to I.T. in the organization? (23%)

3. Who has custody of the I.T. investment? -- who gives **passionate** but concise, focussed, time limited, visionary direction for solutions that work? (20%)

4. Is there a clear definition and specification in a concise, clearly worded, easily understood, concise, bullet point document of the **strategic architecture** of the organization, current and objective and an outline of how the organization will attain the desired objective? (12%)

HOW TO GO ABOUT AN AUDIT OF THESE FACTORS
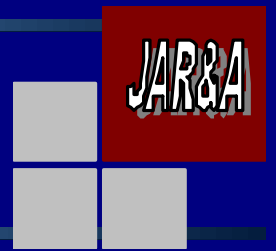
5. Is there **tight integration** of the I.T. solutions with the business and do all personnel know the components that apply to them intimately and are they able to use them effectively and efficiently? (8%)

6. Is there robust data engineering (**taxonomy and quality**) in place that is intuitive, finely granular and supportive of effective decison making? -- are executives and managers consistently obtaining the right information at the right time AND making the right decisions? (6%)

7. The tangible stuff -- can ALL transactions be reliably traced through the systems, hardware, software, operating systems, network, etc -- is I.T. well maintained, documented, standards, policies and procedures -- all the components of a **traditional** I.T. audit and I.T. strategy ... (4%)

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CONCLUSION
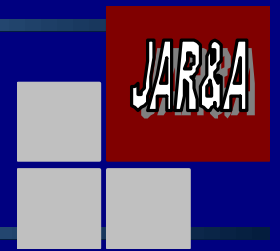
1. **The core technology is capable and available**

2. **Valuable I.T. is about people and strategy**

3. **Effective I.T. is a robust utilitarian infrastructure that gets the job done**

4. **Efficiency and effectiveness of users is essential to deliver high value**

5. **Content is independent of processor, database, network topology, development platform and screen display and is the essence of the requirement**

6. **Clear strategic governance is the essence of a low risk I.T. environment**

7. **Create high value by engineering against failure**

ACKNOWLEDGEMENTS
AND DEDICATION
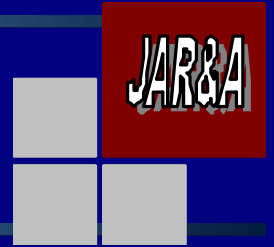
**I would like to acknowledge
the contributions and inputs of all my clients, associates, staff and families without
whom the work on which this presentation is based would not have been possible**

**Particularly my father and mother, Angus and Thelma, whose love and support for
all my endeavours made it possible for me to gain this knowledge and to Sandra
and Helene for their unreserved love and giving**

**This presentation is dedicated to
The Glory of The Eternal Creator
who is the source and reason for our existence**

Psalm 136:5 *"To Him who by wisdom made the
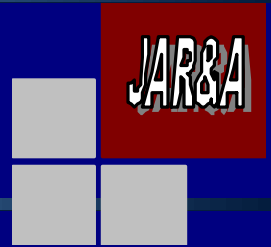heavens, for His mercy endures forever;"*

CALL TO ACTION

SOME QUESTIONS TO CONSIDER
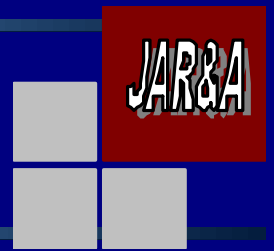
1. **What are the (three) most important insights you gained from this presentation?**

2. **What are the (three) most important actions you propose arising from this briefing?**

Make notes

If you gain an insight into something new and do not take some action within 48 hours the chances are you never will ... Justin Cohen, attributed to Bill Gates

QUESTIONS ?