2. Why ERP and IT Investments Fail (70% totally, 20% underperform)
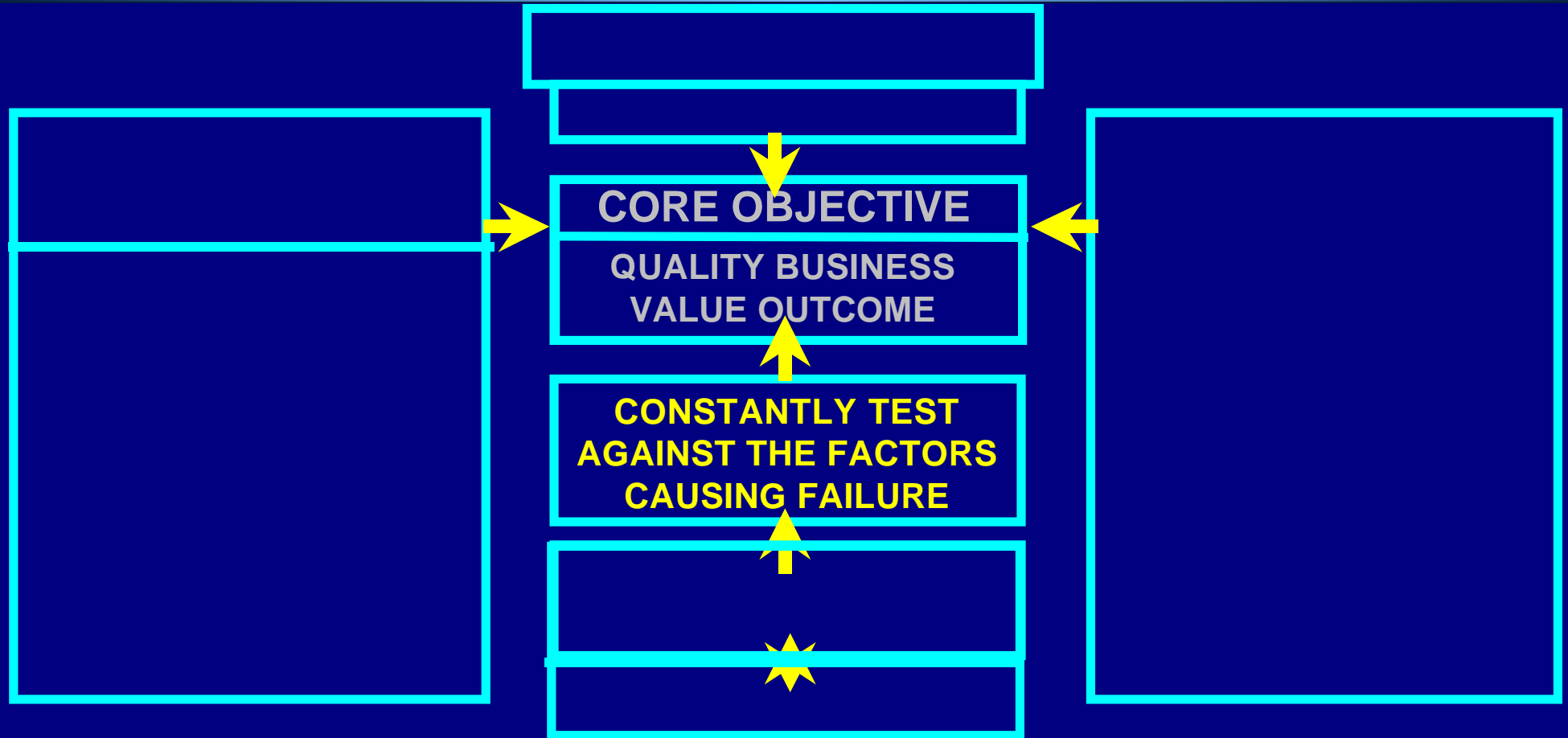
Why your ERP is NOT delivering and how to FIX it

The Critical Factors for Information Technology Investment Success

Two Day Course

Dr James Robertson
Chief Executive Officer
James A Robertson and Associates
James@JamesARobertson.com

SOLUTION & COURSE MAP

CORE OBJECTIVE

QUALITY BUSINESS VALUE OUTCOME

CONSTANTLY TEST AGAINST THE FACTORS CAUSING FAILURE

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**

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

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

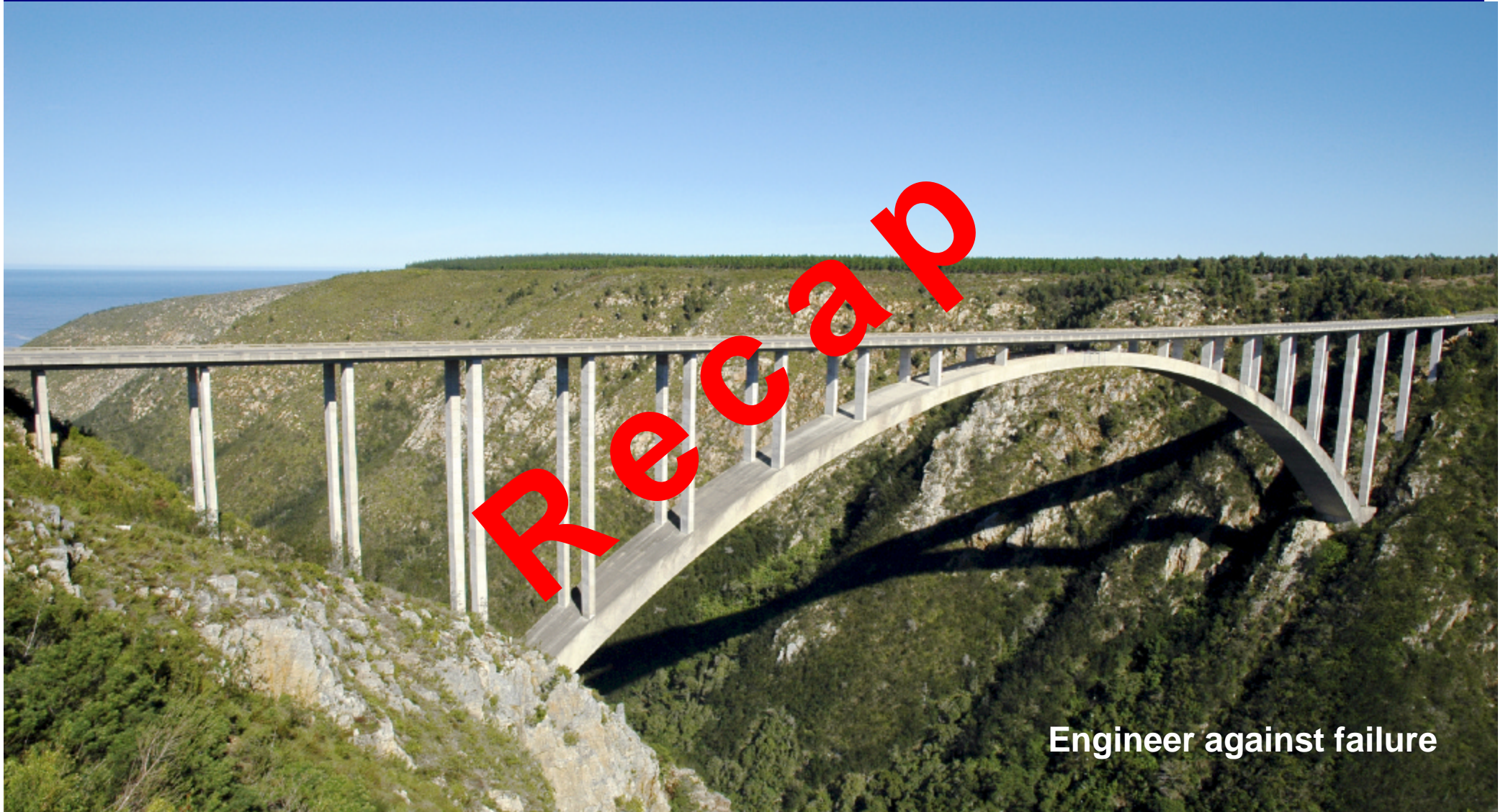6. *"Most organisations are NOT making better decisions than they did five years ago."* **Gartner**

Recap

Why?

Engineers design bridges NOT to fall down

Recap

Engineer against failure

CAUSES OF I.T. INVESTMENT FAILURE
Considerations With Regard to This Presentation

1. **Engineering approach**

2. **ALL components equal probability of failure**

3. **Design for success by engineering against failure**

4. **Focus on weaknesses and risks in order to design failure out**

5. **Failure more expensive than doing it right first time -- quality cheaper**

6. **It IS possible to identify the right things to do and to do them right**

7. **There are solutions for every risk presented - once understood risk can be managed**

CAUSES OF INFORMATION TECHNOLOGY INVESTMENT FAILURE

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%)**
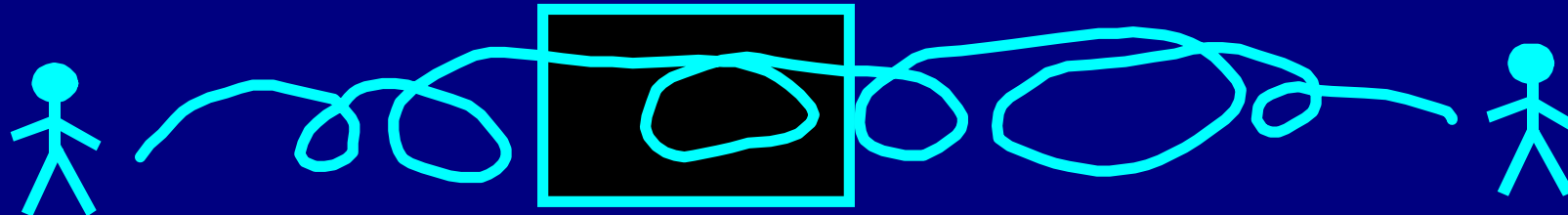
INFORMATION TECHNOLOGY MYTHOLOGY

1. **Information technology CAN destroy a business**

2. **Abstractness and complexity**

3. **Critical lessons**

chemicals distribution, health insurance, staffing

Y2K, "dot com", E.R.P. 95% ← **5% probability of meeting or exceeding expectations!**

4. **Information technology is not about technology**

PEOPLE ARE PART OF THE SYSTEM!!

IN FACT : YOU ARE PART OF THE SYSTEM!

INFORMATION TECHNOLOGY MYTHOLOGY

5. **Long-term investments - five / ten / twenty / fifty / ... years ?**

6. **Professional standards**
   - **c.f. Engineering, medicine, accounting, etc**
   - **Legal and financial accountability**
   - **Statutory regulation**

7. **User friendly is NOT about technology**
   - **Standards**
   - **What you know**
   - **What you are trained on**
   - **Not necessarily graphics / graphical**
   - **Difference between experienced users and new users**
     - **who is important to your organisation?**

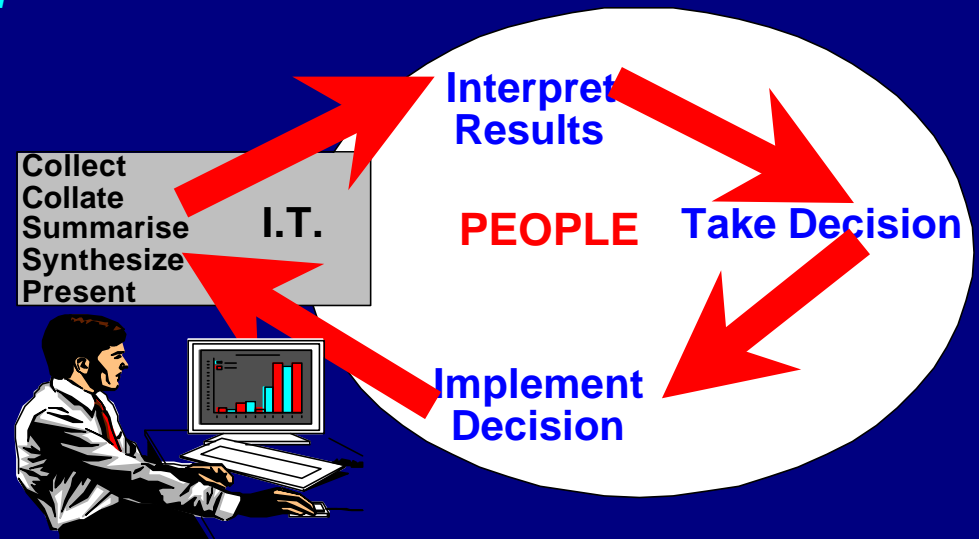# LACK OF EXECUTIVE CUSTODY AND INAPPROPRIATE POLICIES

1. **Role of executives in strategic leadership -- CUSTODY**

   "The greatest barriers to strategy are often self imposed and many are internal. Strong leadership by the chief executive officer is almost a necessity if strategy is to be created and implemented" Professor Michael Porter

2. **Systems support decision-making**
   - **do not make decisions**

3. **The issue is support for competitive advantage NOT productivity**

Collect
Collate
Summarise **I.T.**
Synthesize
Present

PEOPLE

Interpret Results

Take Decision

Implement Decision

LACK OF EXECUTIVE CUSTODY AND INAPPROPRIATE POLICIES

4. **The cost experience curve, utilize resources effectively and efficiently, recognize true cost, where errors originate**

5. **The fundamental components of information technology**

Hi cost of "NEW"

Operating Costs

Cumulative Experience
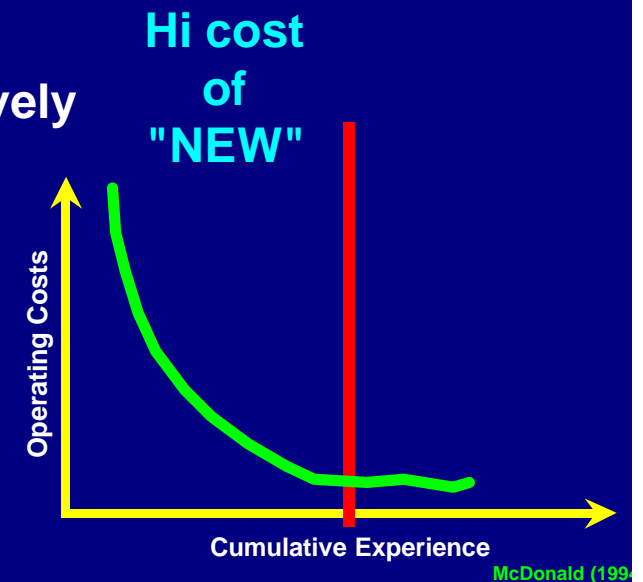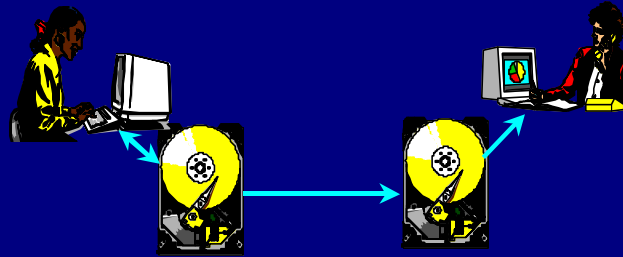
6. **Cost versus quality versus speed**
   - **Errors - 55% analysis, 30% design, 15% implementation**
   - **Cheap - fast - good --> pick any two OR trade-off**

EXECUTIVE CUSTODY AND POLICIES
Inappropriate Policies

Can cause considerable business trauma
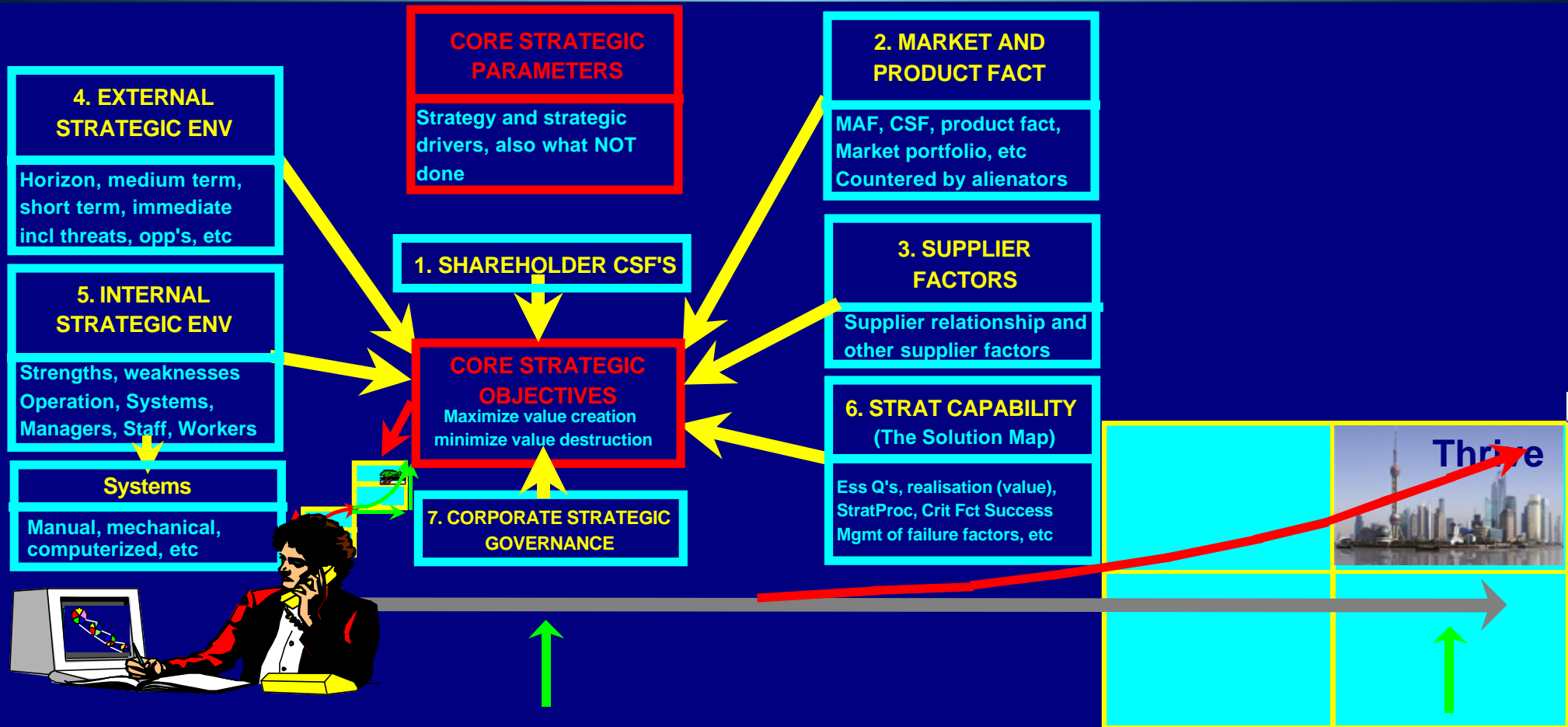e.g.:

1. Must be able to upgrade

2. Every upgrade

3. Must be Windows

4. Do not customize

5. etc

What is appropriate for YOUR business?

Understand ESSENTIAL technology knowledge

CORE STRATEGIC PARAMETERS

Strategy and strategic drivers, also what NOT done

4. EXTERNAL STRATEGIC ENV

Horizon, medium term, short term, immediate incl threats, opp's, etc

5. INTERNAL STRATEGIC ENV

Strengths, weaknesses Operation, Systems, Managers, Staff, Workers

Systems

Manual, mechanical, computerized, etc

1. SHAREHOLDER CSF'S

CORE STRATEGIC OBJECTIVES
Maximize value creation minimize value destruction

7. CORPORATE STRATEGIC GOVERNANCE

2. MARKET AND PRODUCT FACT

MAF, CSF, product fact, Market portfolio, etc Countered by alienators

3. SUPPLIER FACTORS

Supplier relationship and other supplier factors

6. STRAT CAPABILITY
(The Solution Map)

Ess Q's, realisation (value), StratProc, Crit Fct Success Mgmt of failure factors, etc

Thrive

Discussed in detail later

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The Technology Life Cycle after McDonald

Strategic technology vs strategic business application of commodities

KEY CHARACTER-ISTICS	UNIQUE	PRODUCT DIFFER-ENTIATION	SERVICE DIFFER-ENTIATION	COMMODITY
PRICE	VERY HIGH	HIGH	MEDIUM	LOW (CONSUMER CONTROLLED)
MANAGE-MENT STYLE	VISIONARY	STRATEGIC	OPERATIONAL	COST MANAGE-MENT

Maturity

Time

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LACK OF AN ENGINEERING APPROACH
CRITICAL ATTRIBUTES OF AN ENGINEERING APPROACH

A. **Meticulous design detail**

B. **Meticulous planning detail and costing**

C. **Multi-disciplinary teams and specialists**

D. **High professional standards and legal accountability**

E. **Cross checking and double checking of all important details**

F. **Physical world metaphor and impact analysis**

G. **Engineers know the limitations of their expertise and when to call in specialists**

Meticulous design detail

Meticulous planning detail and costing

PEOPLE / SOFT ISSUES
Organizational Design Impact of Information Systems

CEO

Conventional Organizations:
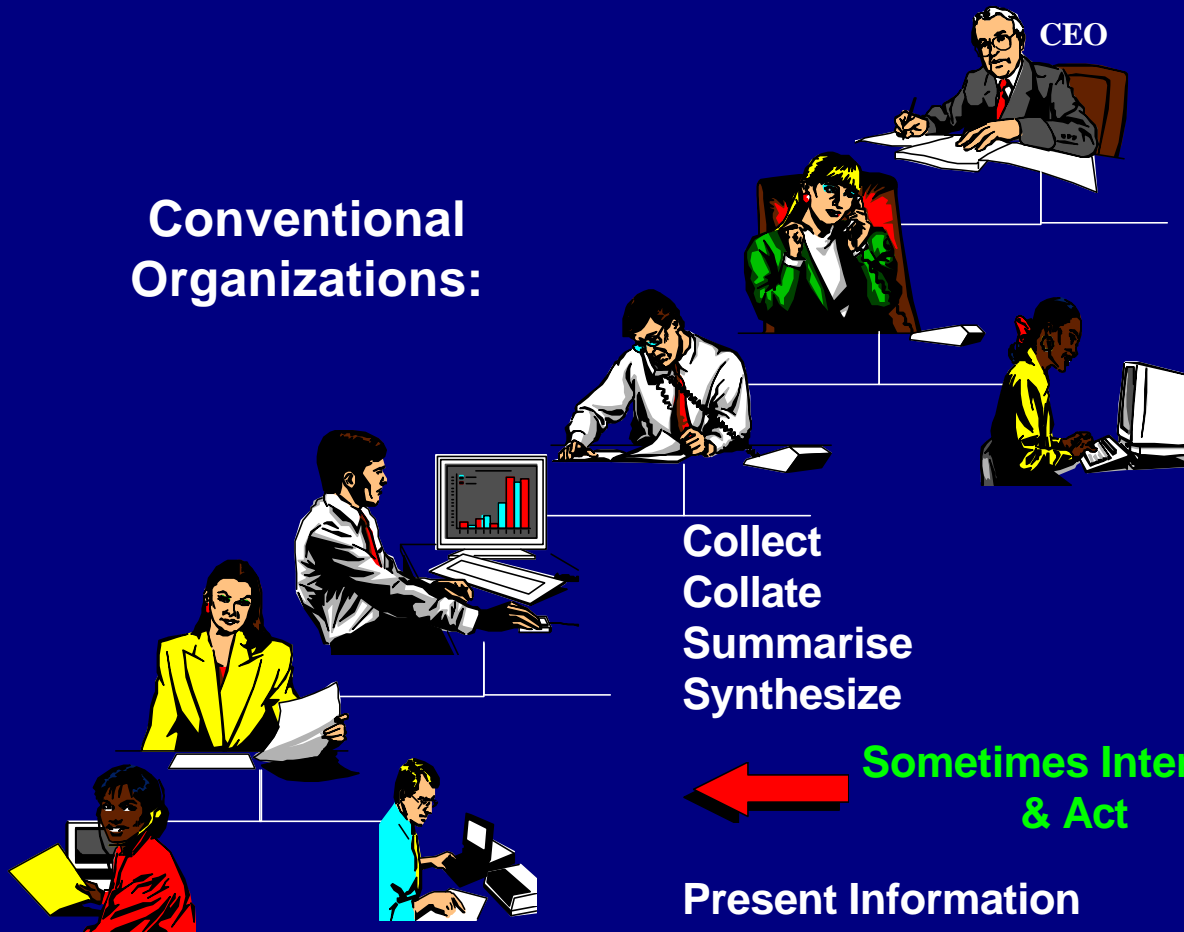
Collect
Collate
Summarise
Synthesize

Sometimes Interpret & Act

Present Information

Collect
Collate
Summarise
Synthesize
Present

I.T.

Interpret Results

PEOPLE   **Take Decision**

Implement Decision

15
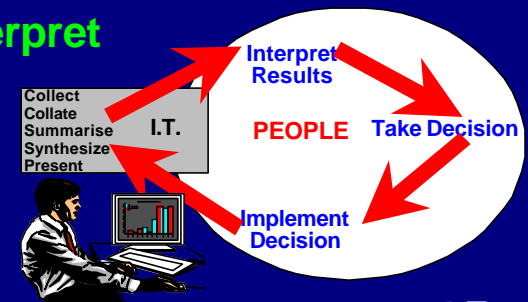
PEOPLE / SOFT ISSUES
Organizational Design Impact of Information Systems

Effective implementation of effective integrated I.T. solutions WILL give rise to Business Organization Redesign

Before

CEO

CEO
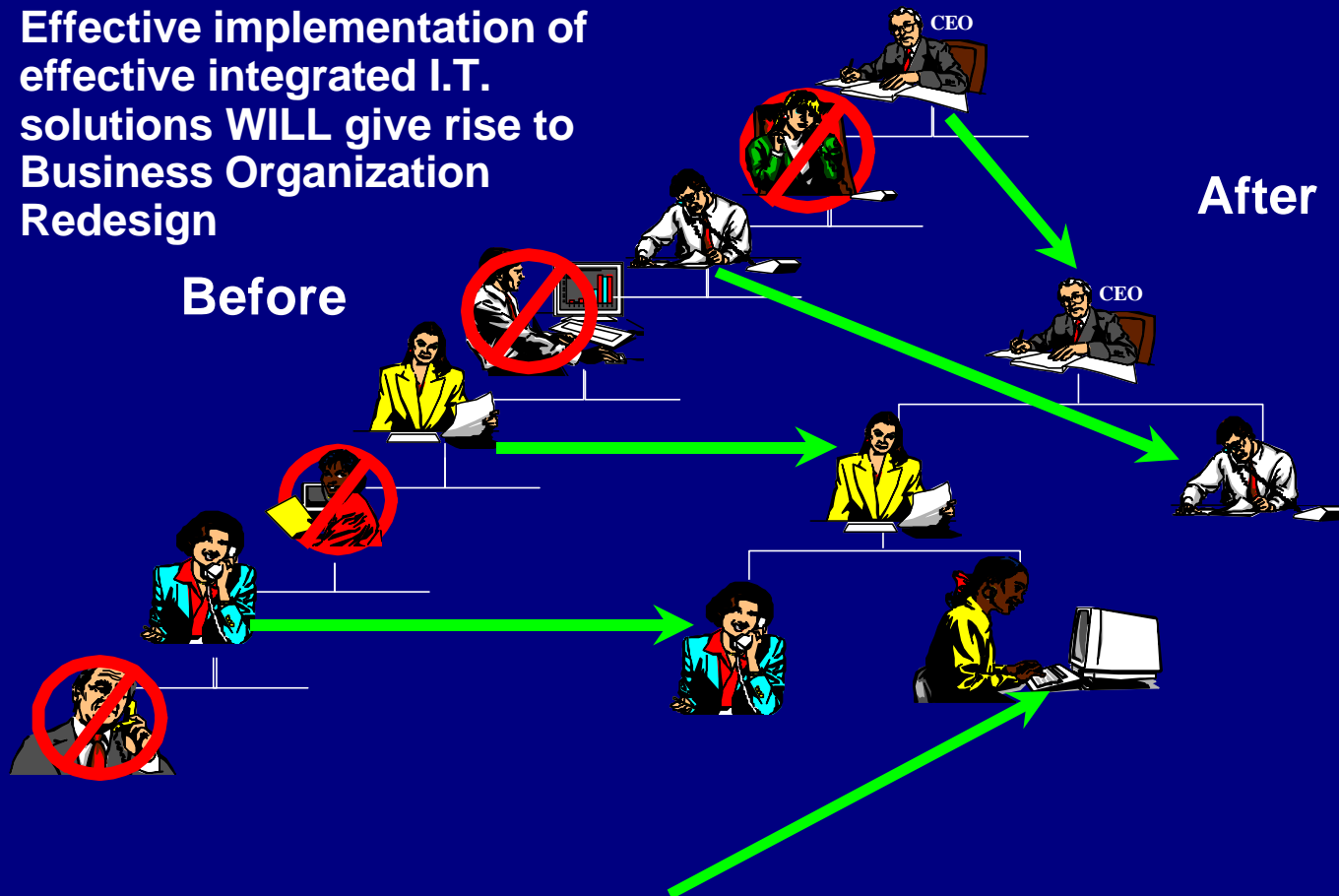
After

Requires effective:
- **Interpretation**
- **Decisions**
- **Actions**
- **Measurement**

PEOPLE / SOFT ISSUES
Personality Style / Psychometric Profile

RELATIONSHIP   INNOVATOR

"John is a good friend and if he says so that is good enough for me!!"

"If it's been done that way before there must be a better way!!!"

"I like things just the way they are!!!"

"I want it done now and I don't care who gets hurt in the process!!!"

ADMINISTRATOR / BUREAUCRAT   RESULTS
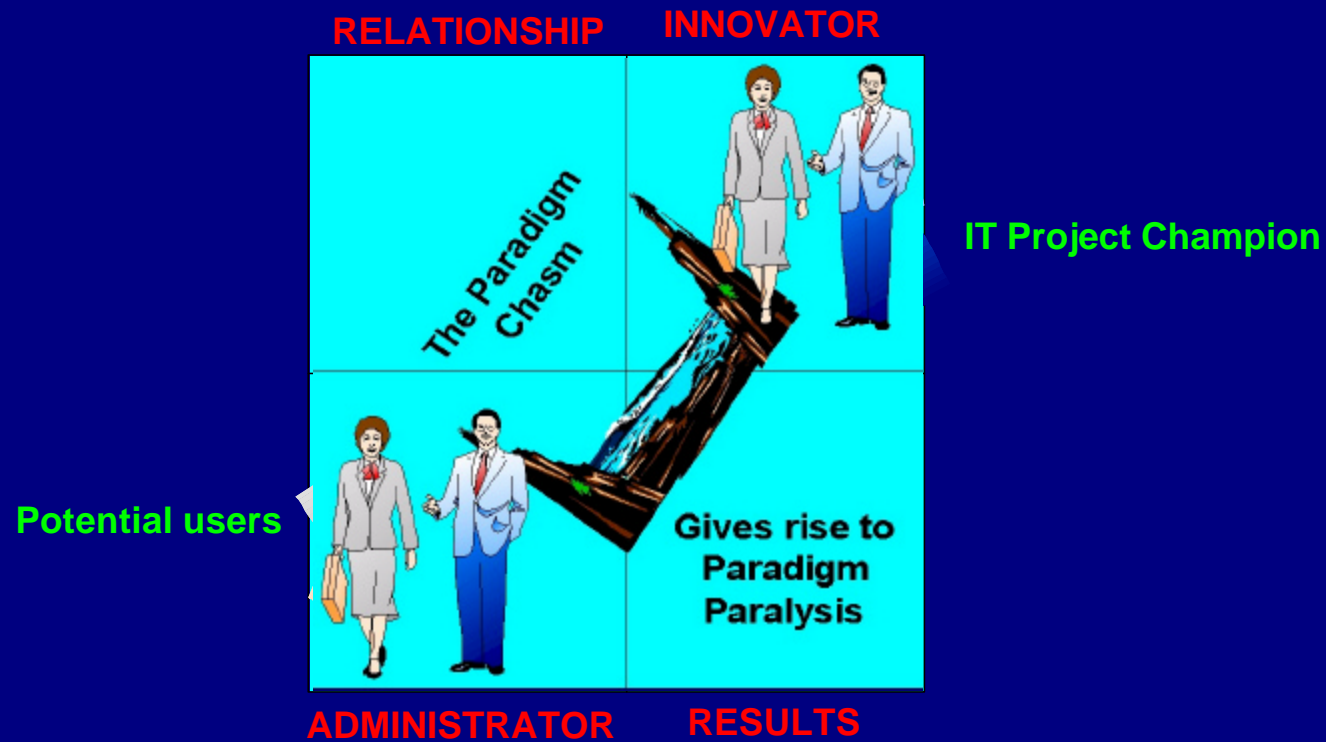
after Jung
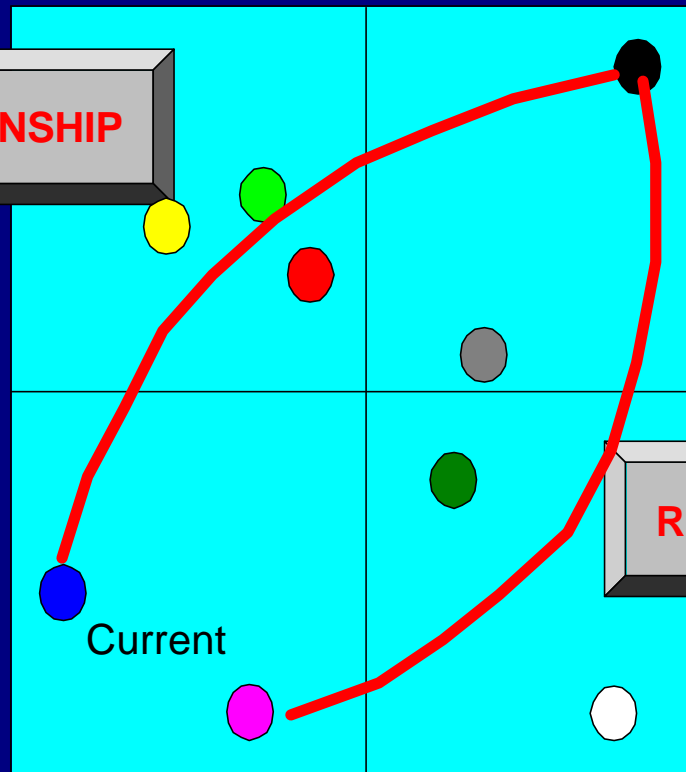
17

PEOPLE / SOFT ISSUES
End User Support Issues

Problem Escalation & Skills Level →

3 — "Boffins" / Back-room boys very specific expertise outsource?

2 — Technical specialists problem solving skills know specific environment

1 — Customer focused interpersonal skills basic problem solving dedicated to group of users

Specific Groups of users

THE PARADIGM CHASM

RELATIONSHIP   INNOVATOR

IT Project Champion

Potential users

ADMINISTRATOR   RESULTS
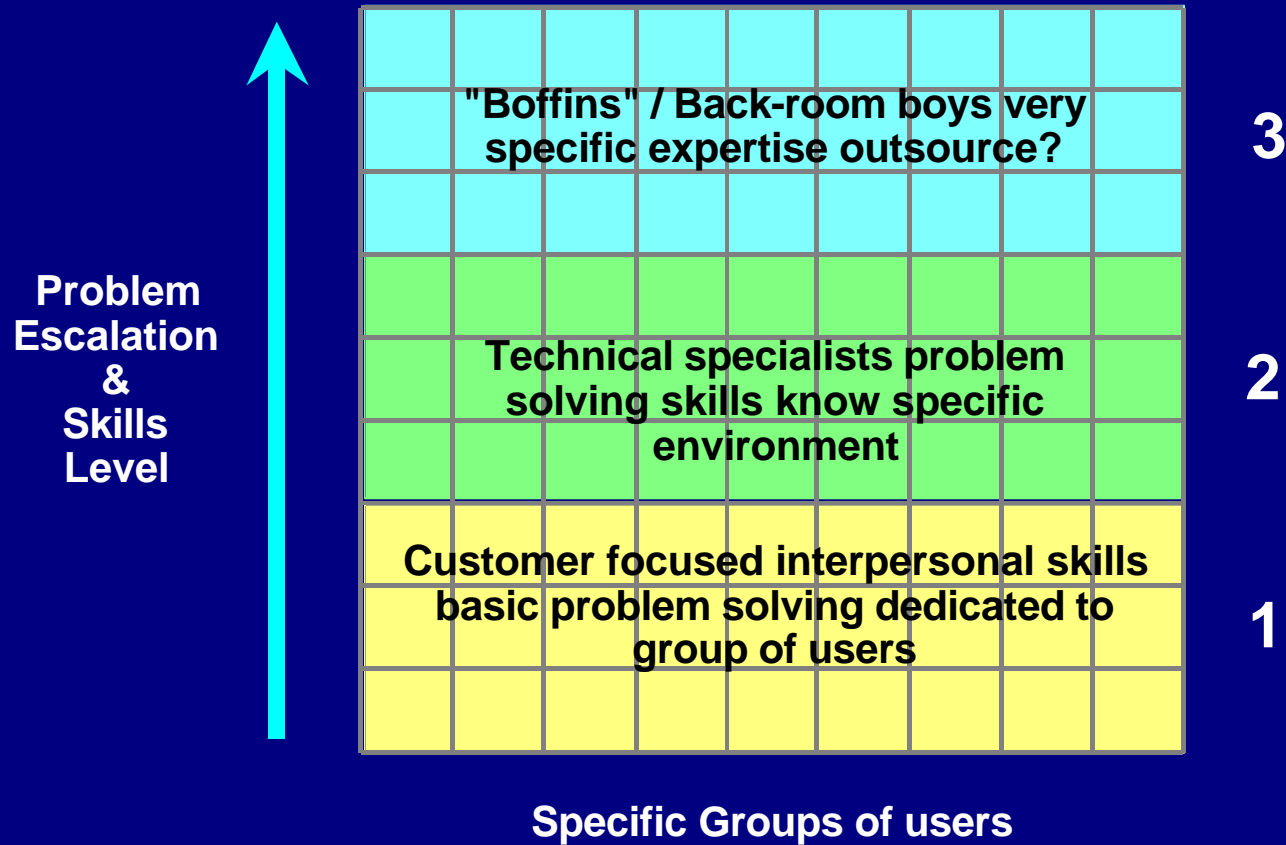
Objective

Hand holding

RELATIONSHIP

**DIFFERENT PATHS FOR
DIFFERENT PERSONALITY
STYLES AND PARADIGMS**
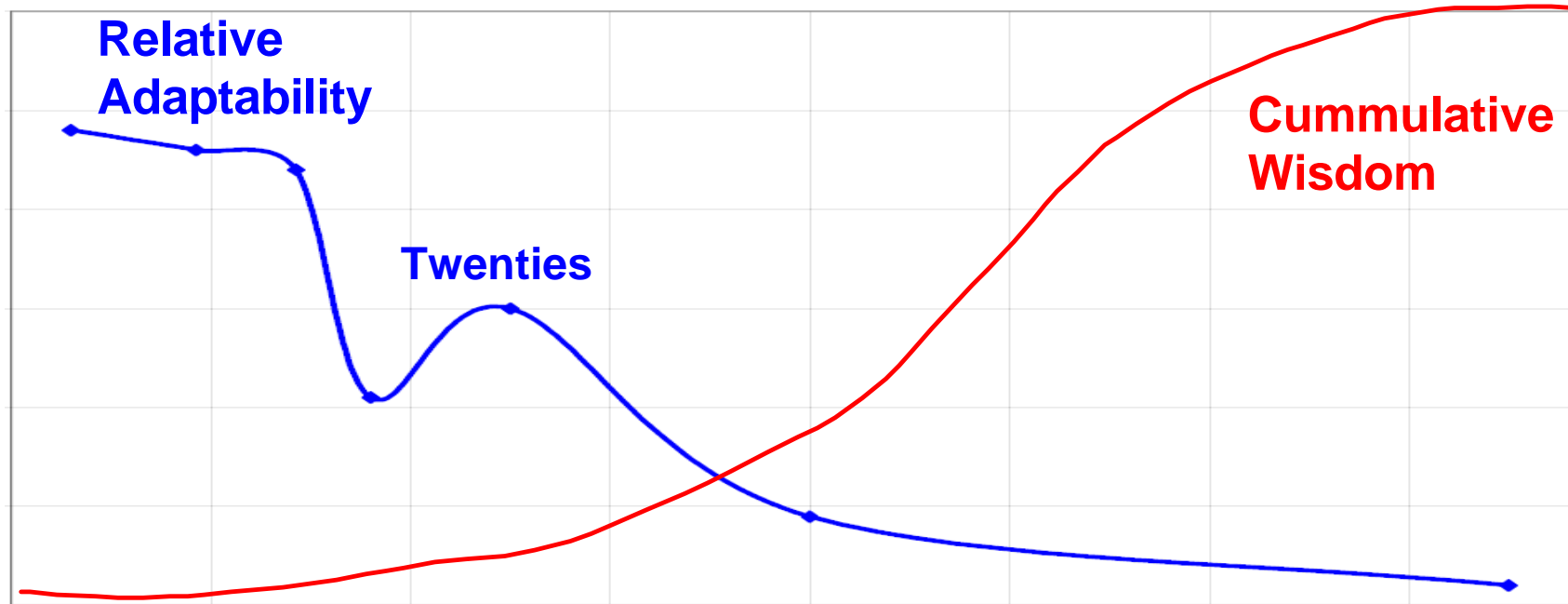
RESULTS

Prove it works

Current

Cognitive Ability
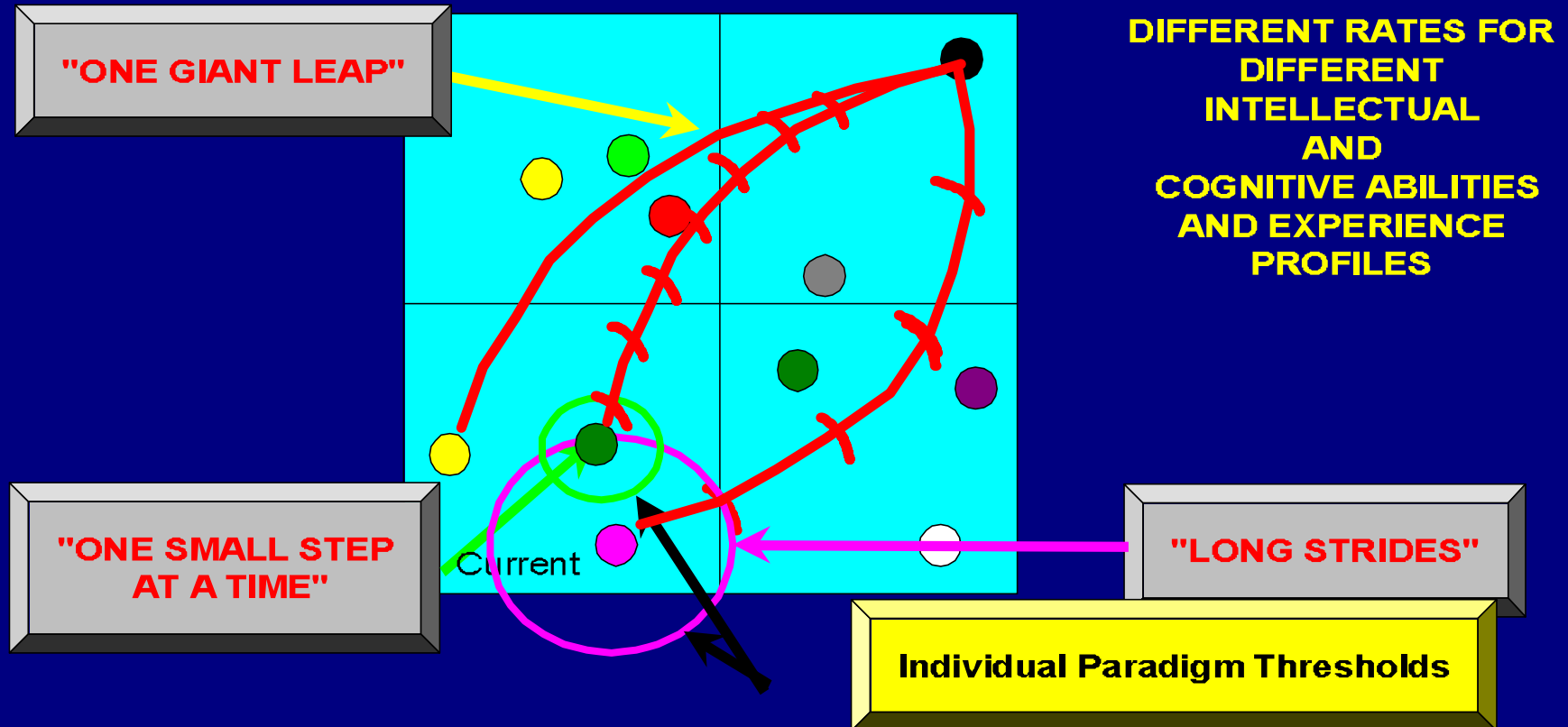
"ONE GIANT LEAP"

"ONE SMALL STEP AT A TIME"

Current

DIFFERENT RATES FOR DIFFERENT INTELLECTUAL AND COGNITIVE ABILITIES AND EXPERIENCE PROFILES

"LONG STRIDES"

Individual Paradigm Thresholds

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PEOPLE / SOFT ISSUES
Competence = Knowledge and Experience

6 = Considerable knowledge and experience, ability to train others

6
5
4
3
2
1
0

Common ignorance

← **Person 2 knowledge and experience**

Knowledge & exp gap

← **Person 1 knowledge and experience**

Common knowledge & experience

0 = No knowledge or experience

Gap > 1.0 = Communication problem

Gap < 0.7 = Hierarchy problem

refer McPhee : Job Analysis and Competence Evaluation

PEOPLE / SOFT ISSUES
Competence = Knowledge and Experience
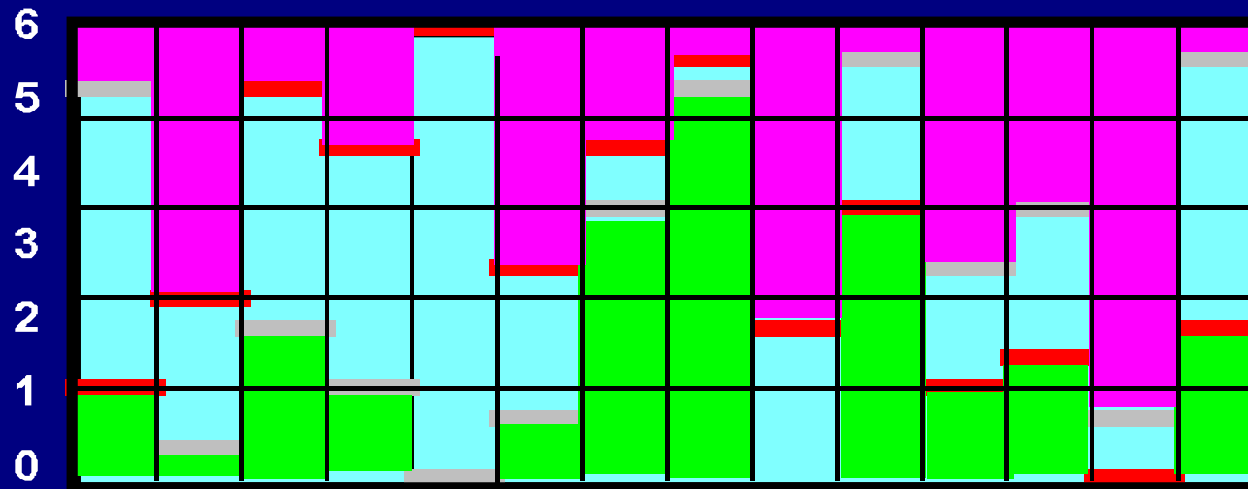
Every human being is a unique and complex compilation of knowledge and experience

Every job requires a specific compilation of knowledge and experience

Assembling project teams is a challenge

PEOPLE / SOFT ISSUES
Management of Change

1. **Effective business change requires:**
   - **consultation**
   - **intuitively relevant and appropriate change**
   - **sensitive response to unpleasant implications**
   - **communication**
   - **training**
   - **etc**

2. **Experience of users in the transition from one system to another**
   - **carefully planned and managed**
     - **OR**
   - **like being pushed off a cliff**

ALTERNATE RAMP-UP SCENARIOS FOR A NEW SYSTEM
(approximately same level of functionality as previous system)
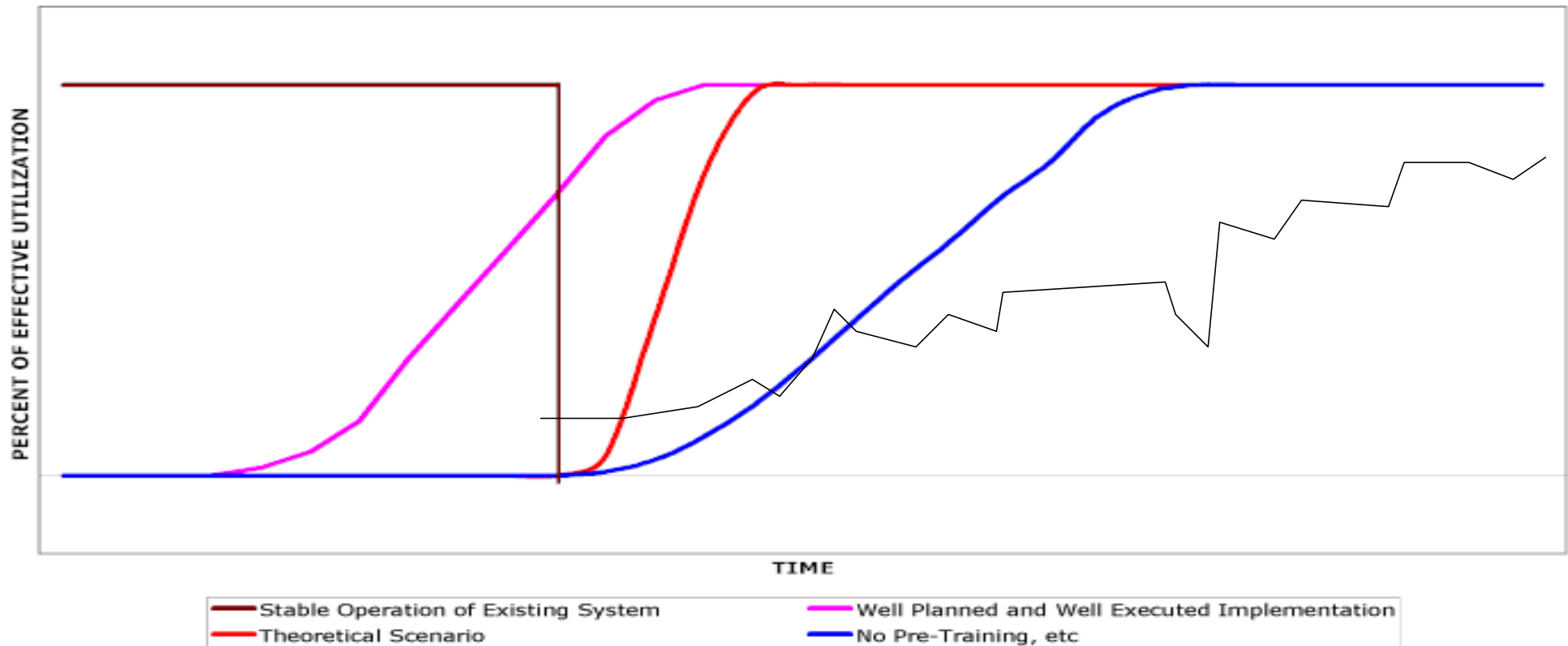
TECHNOLOGY ISSUES
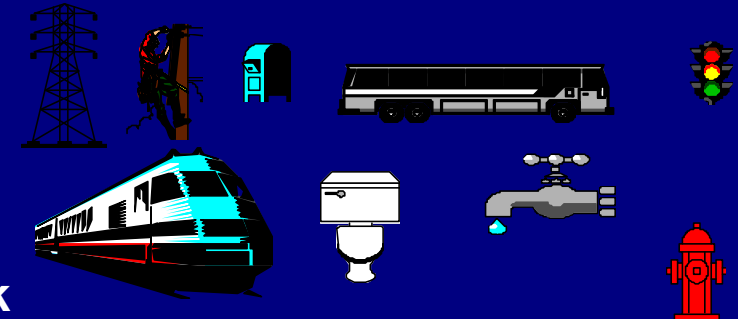## USE PHYSICAL WORLD METAPHORS

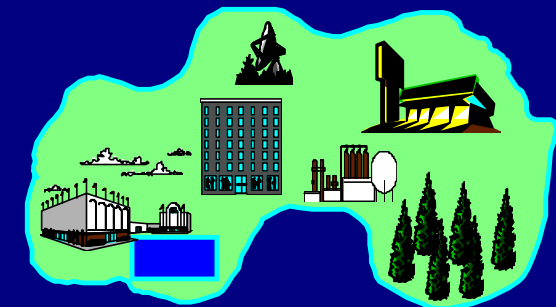1. **E.R.P. and similar business systems -- Industrial Metaphor**
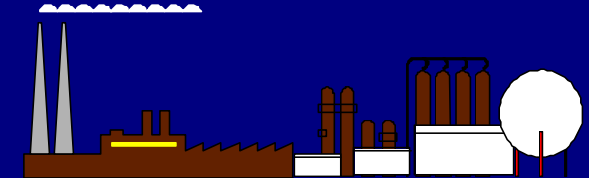
2. **Office automation and similar systems - Municipal Metaphor**

3. **Custom business systems - Custom Building Metaphor AND industrial and municipal**

4. **Integrated Systems - Industrial and Office Park Metaphor**
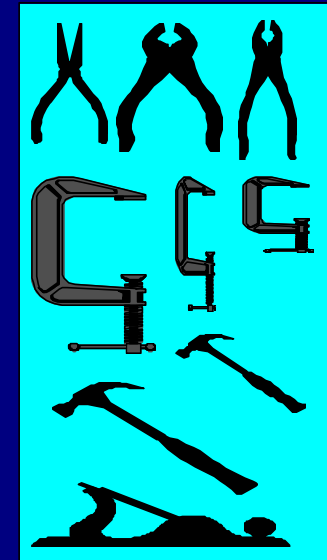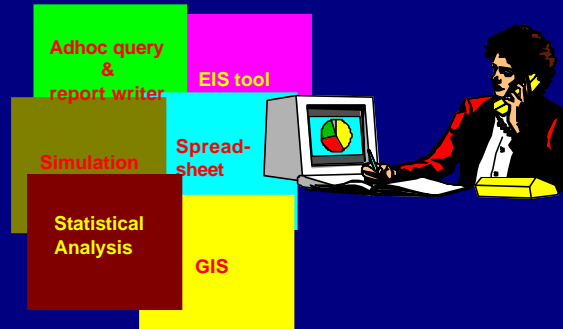
5. **Impact of Different Classes of System**

6.   **Craftsmen Use Well Worn Tools**

Adhoc query & report writer

EIS tool

Simulation

Spread-sheet

Statistical Analysis

GIS

7.   **Maturity of the Airline Industry**

747 is over 30 years old

8.   **There IS Very Old Software Out There**
   banking Cobol applications

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CONCLUSION

1. **Any of these factors can cause failure**

2. **Success requires that ALL possible causes of failure are designed OUT of the solution**

3. **Requires a structured approach**

4. **Requires high level of executive custody**

Engineer against failure in order to achieve success

CAUSES OF INFORMATION TECHNOLOGY INVESTMENT FAILURE

QUESTIONS?

Dr James Robertson PrEng

James A Robertson & Associates

Telephone: +27-11- 782-5997
Cell: 083-251-6644 (preferred)

P O Box 4206, Randburg, 2125, South Africa

www.JamesARobertson.com
email: James@JamesARobertson.com

Finding the missing pieces of your I.T. and strategy puzzles

Please remember the evaluation forms