

Problem Analysis Bite Size Presentation



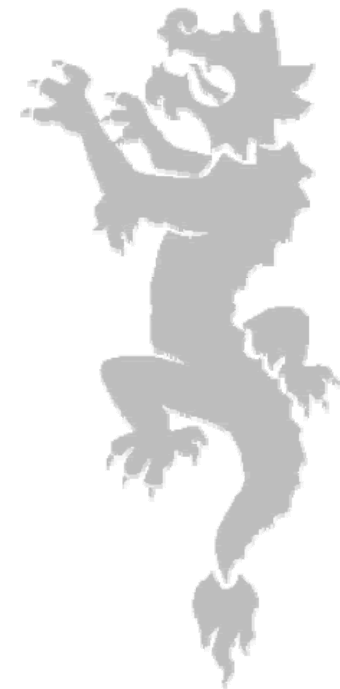
MIRAGROUP

Problem Analysis

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www.miragroup.co.uk



Reference:

UKCEB's mission is to transform secure information sharing for through life collaboration in defence acquisition and support

Version 1.0

Introduction

- This presentation is an extract of PPM and Change Management workshops developed for DWP and also used by Cranfield University for MSC
- A comprehensive workshop, including Case Studies and exercises, is available

Presented by:

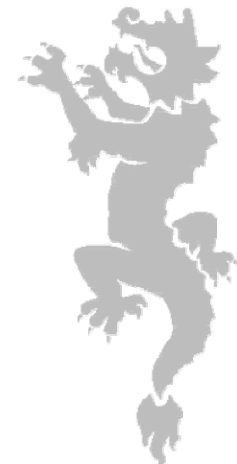
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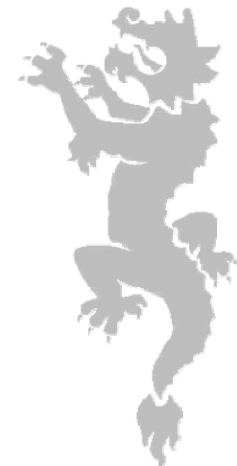


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Cranfield University Collaboration

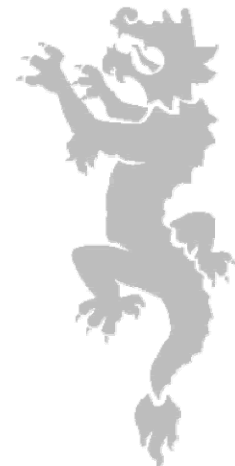
- The course material is part of an ongoing collaboration between Cranfield University and Miragroup since 2007.
- Address the PPM skills gap by bringing together battle hardened practice experience and academic rigour.
- Part of the MSc in Management and Information Systems
- Available as Cranfield Continuous Professional Development.
- Connected with the research work on enterprise systems implementation failure by Dr Ip-Shing Fan
- The workshop helps
 - novices to put academic concepts in real world, and
 - practitioners to organise their experience into usable patterns
- The workshop introduces
 - Holistic programme mindset
 - Effective methodology and toolset
 - Practice with realistic examples



Problem Analysis

Business Experience of Change

- The business areas are measured on their delivery
- Any changes to how they do their work will often worry them
- *'If it aint broke, don't fix it'* is often the motto and, from their perspective, it's probably not broken
- They may have bad experiences with change:
 - Systems don't do what they expected
 - Processes and procedures have been designed in isolation and don't really work
 - They lost access to key data/information
 - The change didn't make their job any better or worse, it was just different
 - The change was a trivial aspect of their job and therefore they paid very little attention
 - They didn't have time to deal with the change so they coped rather than improved
 - To them it was a lot of additional work for minimal gain
- Business can be either worried or frustrated by change



Problem Analysis Overview

Problem Analysis

- Issues Analysis
- Strategic Design
- Extending Improvements
- Enlisting Stakeholders
- Cost & Benefit Analysis
- Problem Solving Skills

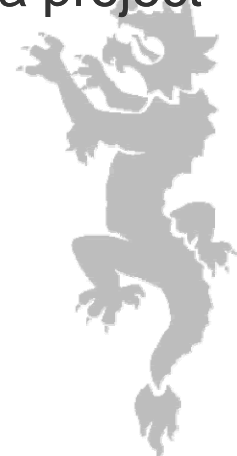
Solution Design

- Mapping current
- Designing future
- Validating design
- Forming recommendations

Problem Analysis

Applying Problem Analysis

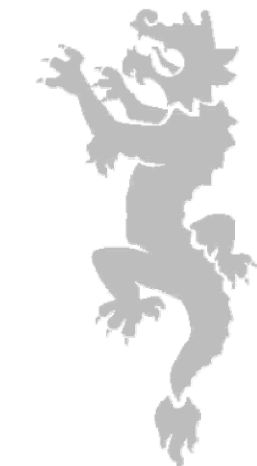
- Advanced analysis is primarily about resolving problems
- A problem can be:-
 - An issue or symptom within the business
 - An issue or symptom surfaced during a project
 - A new requirement or demand the business must react to
- Advanced analysis provides a technique for addressing any problem the business is dealing with
- These techniques can be applied at any time during or prior to a project



Problem Analysis

Undertaking an Analysis

- Business Analysts are often asked to analyse a situation or requirement and assess and solve core issues
- We do this by:
 - Discovering the issues through interview or facilitation
 - Capturing all issues unfiltered
 - Analysing the issues to understand the core issues
 - Understanding the organisation targets (i.e. Strategy, Efficiency, Service Levels, etc.)
 - Work with the business and other experts to understand how issues could be resolved
 - Forming recommendations to resolve core issues



Problem Analysis

Undertaking an Analysis cont...

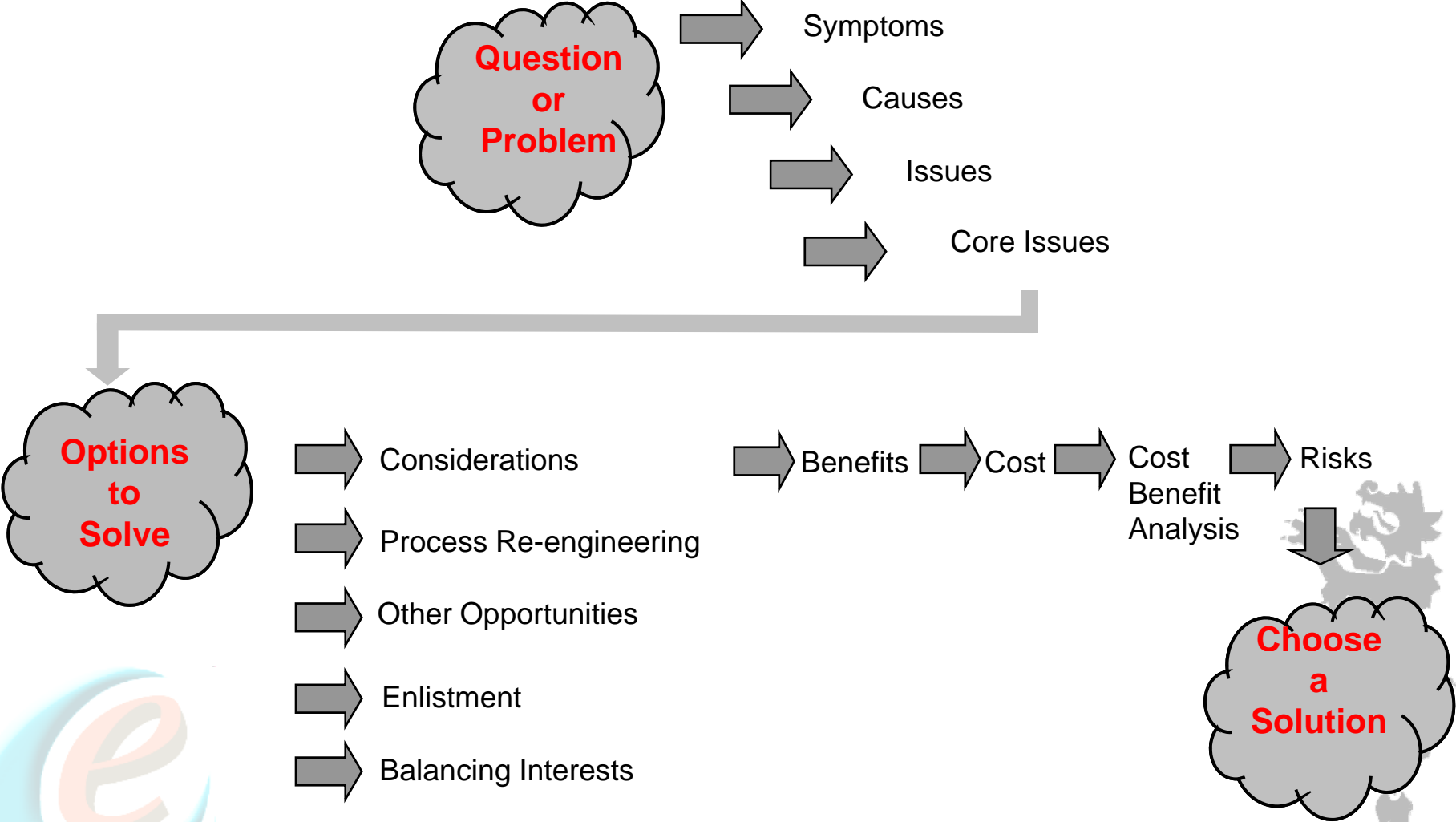
- Issues based analysis is a ‘discovery process’ which means we do not always know all the people or areas we may need to interview
- The problem will be explained by different people with different perspectives and issues
- Our job is to:
 - Interview all the relevant people
 - Listen to their descriptions of the situation, requirement and issues
 - Validate what we are told with other people
 - Extract all of the issues

Issues capture is about listening and enquiring to fully explore the situation, requirement and issues



Problem Analysis

Analysis Overview



Problem Analysis

Identifying Symptoms

Sometimes we are not provided with 'issues' but 'symptoms' that something is not working well

Symptom	Possible Causes	What is the issue?
A lot of exception processing		
Processes that are only understood by one person		
Reports that are meaningless or wrong		
Consistent quality control failures		
Unhappy customers		
Unhappy employees		
Losing important data/information		
Consistently failing to deliver targets		
Inability to get changes to stick		
Complacent staff		
Inability to find data/information		
Always finding errors after the fact		
It takes too long to generate reports		

Problem Analysis

Identifying Possible Causes

Symptoms are not issues so we need to identify the possible causes of a symptom

Symptom	Possible Causes	What is the issue?
A lot of exception processing	<ul style="list-style-type: none"> The processes do not support the work Staff are insufficiently skilled The systems do not support the work 	
Processes that are only understood by one person	<ul style="list-style-type: none"> Processes are not documented Processes are overly complicated The person is not cross skilling 	
Reports that are meaningless or wrong	<ul style="list-style-type: none"> The source data is wrong The reports are out of date The managers/team leaders do not know how to use the reports 	

- Further analysis is usually required to understand what the actual causes are
- Until we understand the cause of the symptom we cannot understand the real issue

Problem Analysis

Uncovering the Issues

With further interviews and analysis we can usually start to uncover the real issue causing the symptom

Symptom	Possible Causes	What is the issue?
A lot of exception processing	<ul style="list-style-type: none"> The processes do not support the work 	<ul style="list-style-type: none"> Processes need to be redesigned to deal with real requirements
	<ul style="list-style-type: none"> Staff are insufficiently skilled 	<ul style="list-style-type: none"> Staff need to be trained in everything they need to know to do their jobs
	<ul style="list-style-type: none"> The systems do not support the work 	<ul style="list-style-type: none"> There are too many systems workarounds and systems need to be better aligned to business processes

- We can use the issues to:
 - Identify the real problem
 - Develop options to solve the problem
- We cannot solve a symptom until we have uncovered the real issue(s)

Problem Analysis

Finding Core Issues

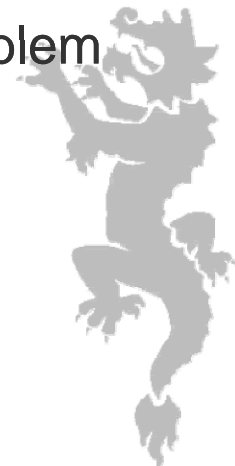
- Having captured all of the issues we usually find we have a long list of issues
- We are told about some issues and often we will add issues based on our analysis
- We need to analyse these issues logically as there will be ‘red herrings’, duplication and real issues of varying importance and relevance

ISSUE	SOURCE	DESCRIPTION	CAUSES	VALIDITY
Processes need to be redesigned to deal with real requirements	FRED JOHN	<ul style="list-style-type: none"> • Each region has different processes to deliver the same outcome 	<ul style="list-style-type: none"> • Systems are implemented slightly differently • Each region has different organisation structure and roles • There seems to be unnecessary variation between regions 	HIGH
There are too many system workarounds and systems need to be better aligned to business process	JOHN	<ul style="list-style-type: none"> • Systems don't support processes • Systems require a lot of manual processing 	<ul style="list-style-type: none"> • Systems have been poorly specified 	MEDIUM (needs further cost analysis)

Problem Analysis

Finding Core Issues cont...

- An Issues Table surfaces all issues
- We use the table to:
 - See all issues
 - Assign a cause
 - Identify need for further analysis
 - Highlight shared issues
- Issues are usually related
- There are usually only 3 – 6 core issues that represent the problem
- As Business Analysts we identify the core issues

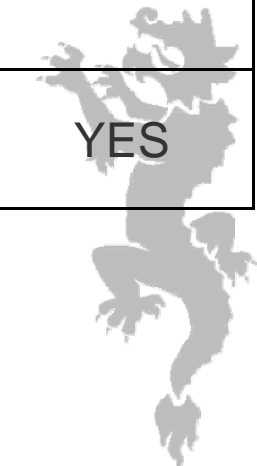


Problem Analysis

Finding Core Issues cont...

- A core issue is an issue, that if resolved, will resolve other related issues
- Using this approach we can identify which specific issues must be resolved to solve the problem

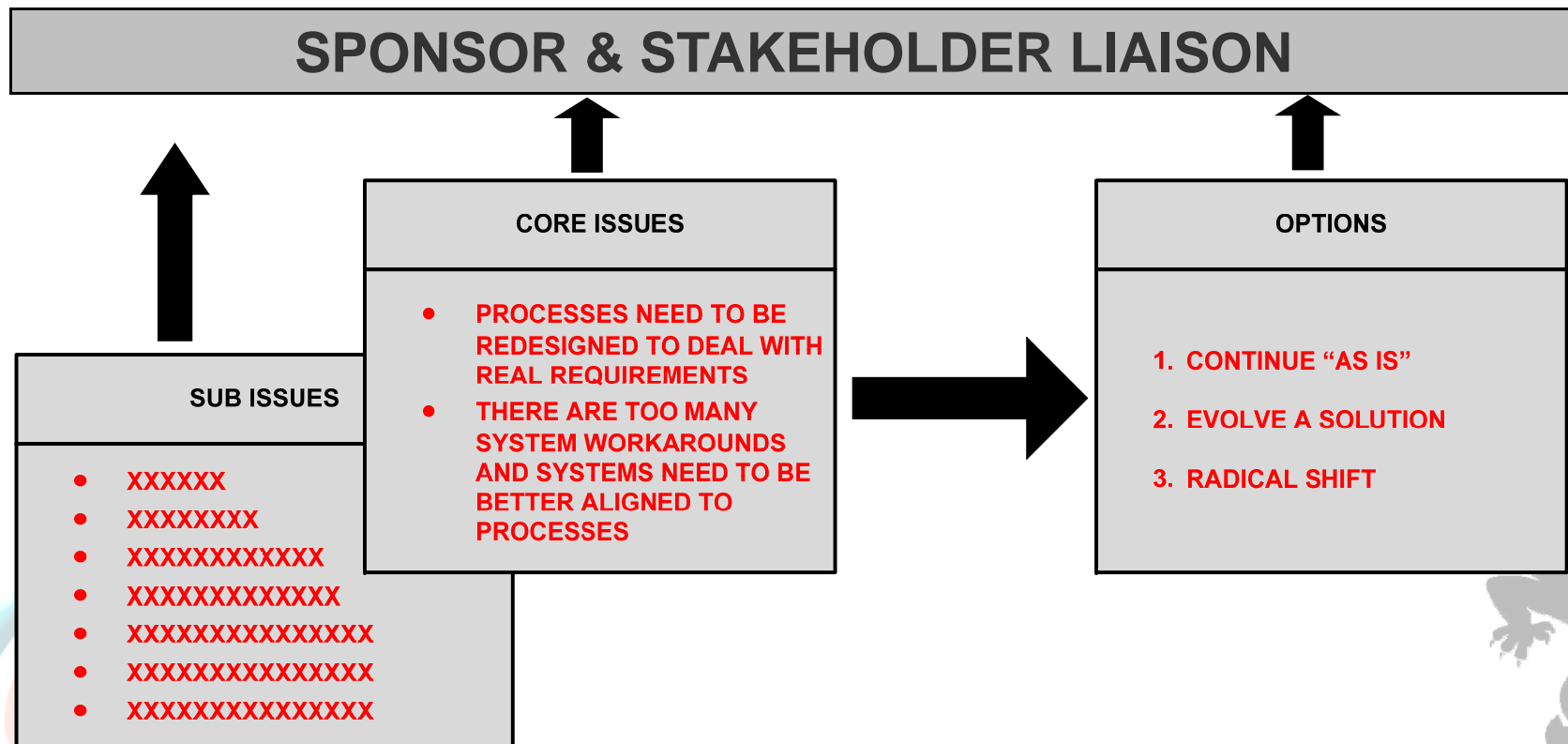
ISSUES	CORE ISSUE?	SUB ISSUE?
<ul style="list-style-type: none"> • Processes need to be redesigned to deal with real requirements 	YES	
<ul style="list-style-type: none"> • There are too many system workarounds and systems need to be better aligned to processes 		YES



Problem Analysis

Issues Evaluation

Once we have distilled the issues to the core issues we can evaluate how to solve the core of the problem



Problem Analysis

Developing Options

Having identified Core Issues we need to develop options to resolve the issues

CONTINUE “AS IS”	EVOLVE A SOLUTION	RADICAL SHIFT
DESCRIPTION: Do not change current processes or Systems	DESCRIPTION: Create standard processes and align regions where possible	DESCRIPTION: Create standard processes and systems
BENEFITS: No investment	BENEFITS: Immediate savings	BENEFITS: All savings as fast as possible
RISKS: Continuing inefficiently	RISKS: Hybrid Solution	RISKS: Expensive project and may fail
LOST OPPORTUNITY: Cost Savings	LOST OPPORTUNITY: Gradual cost savings only	LOST OPPORTUNITY: None

DO NOTHING!

REALITY RULES!

HIT IT WITH A HAMMER!

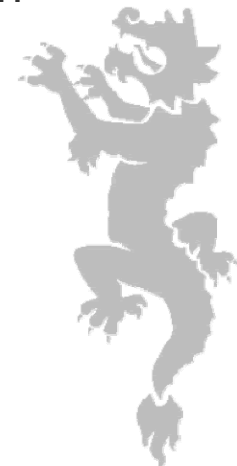
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Problem Analysis

Describing an Option

Pitch

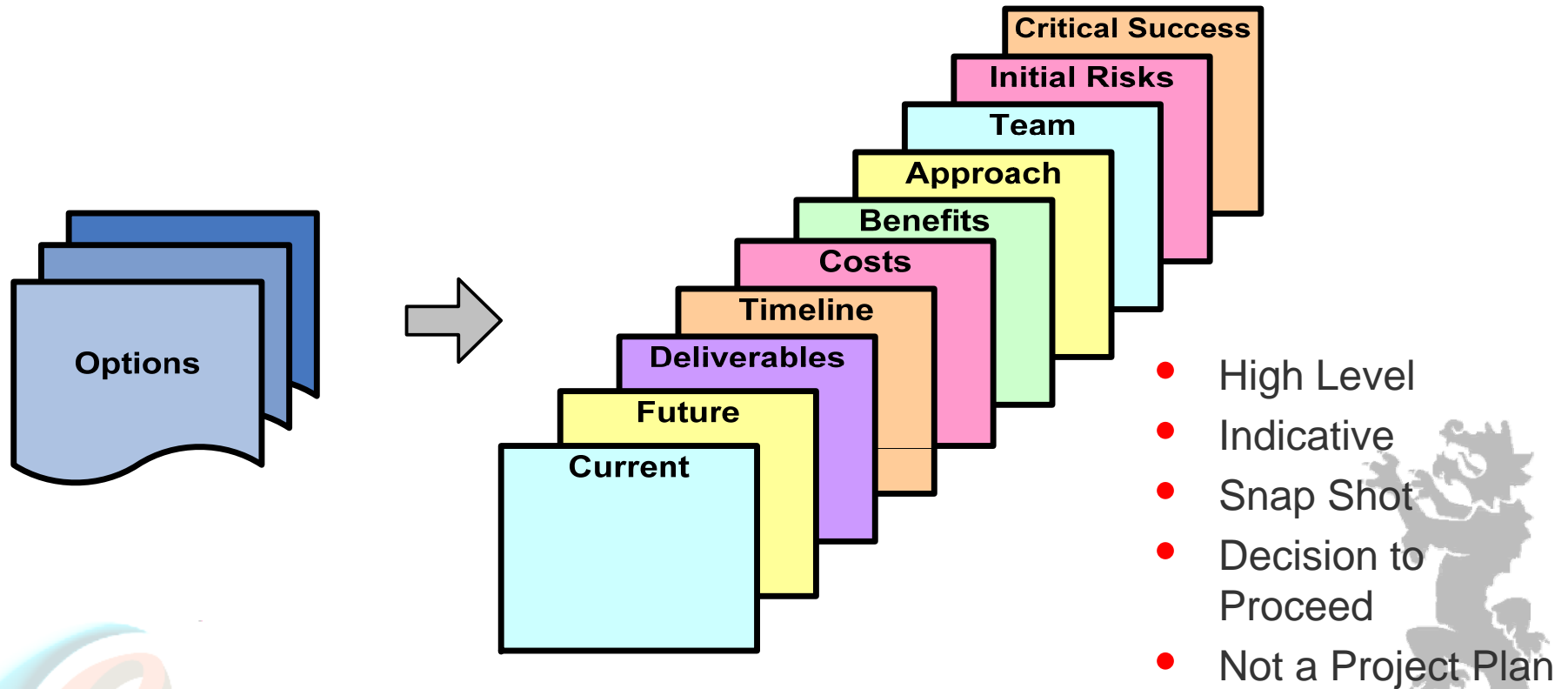
- We need to describe an option so everyone can understand our vision to solve the problem:
 - use plain language
 - do not go into too much detail
 - describe what you know and don't know
 - 'soft' estimates are okay
- Our Sponsor, Stakeholders and Business Managers only need enough information to decide if further investigation is worthwhile



Problem Analysis

Describing an Option cont...

Optional Content



Problem Analysis

Describing an Option - Content

For each relevant option:

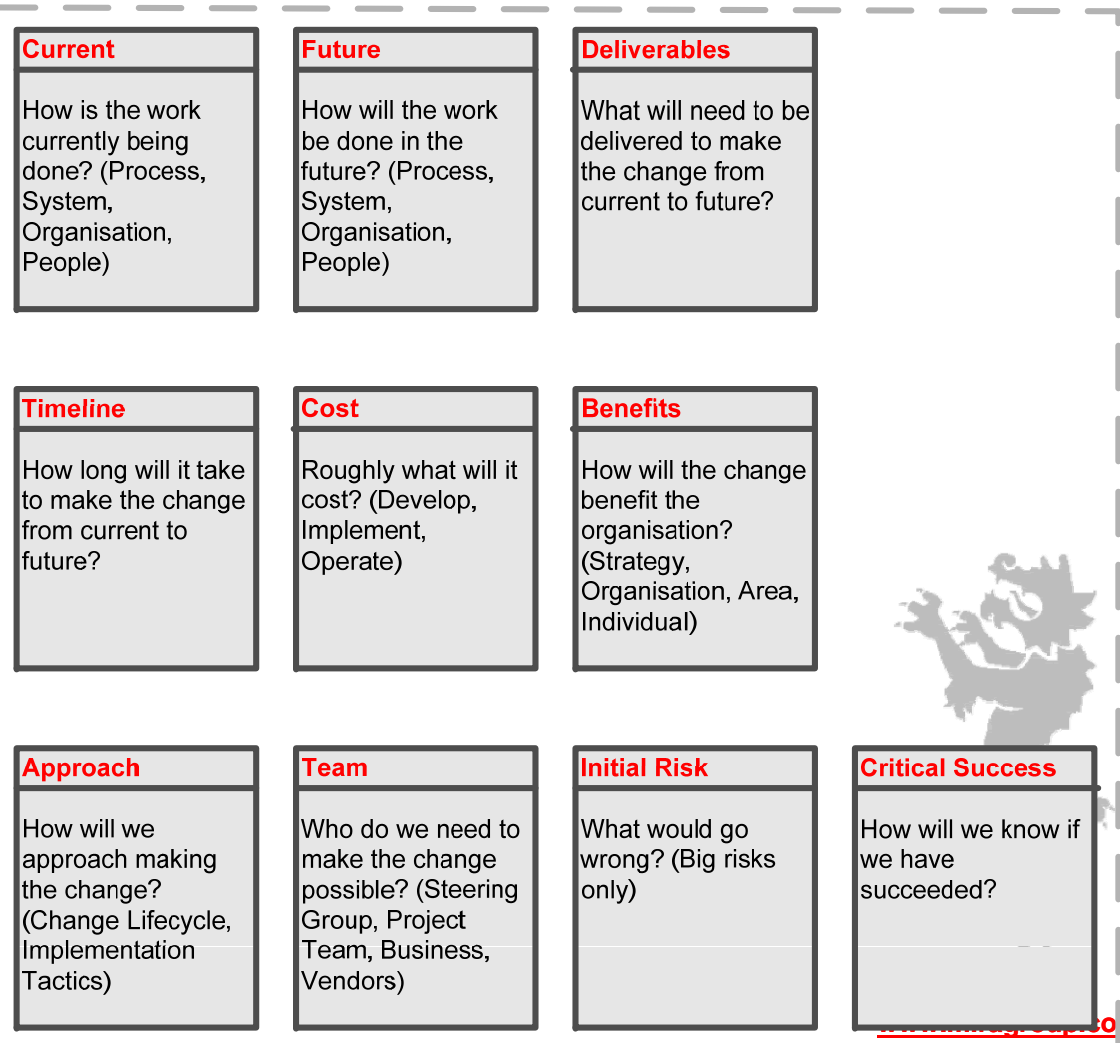
Problem Statement

- What is the problem?
- What are the core issues?
- Why do we need to solve this problem?

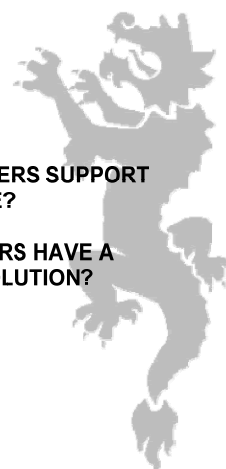
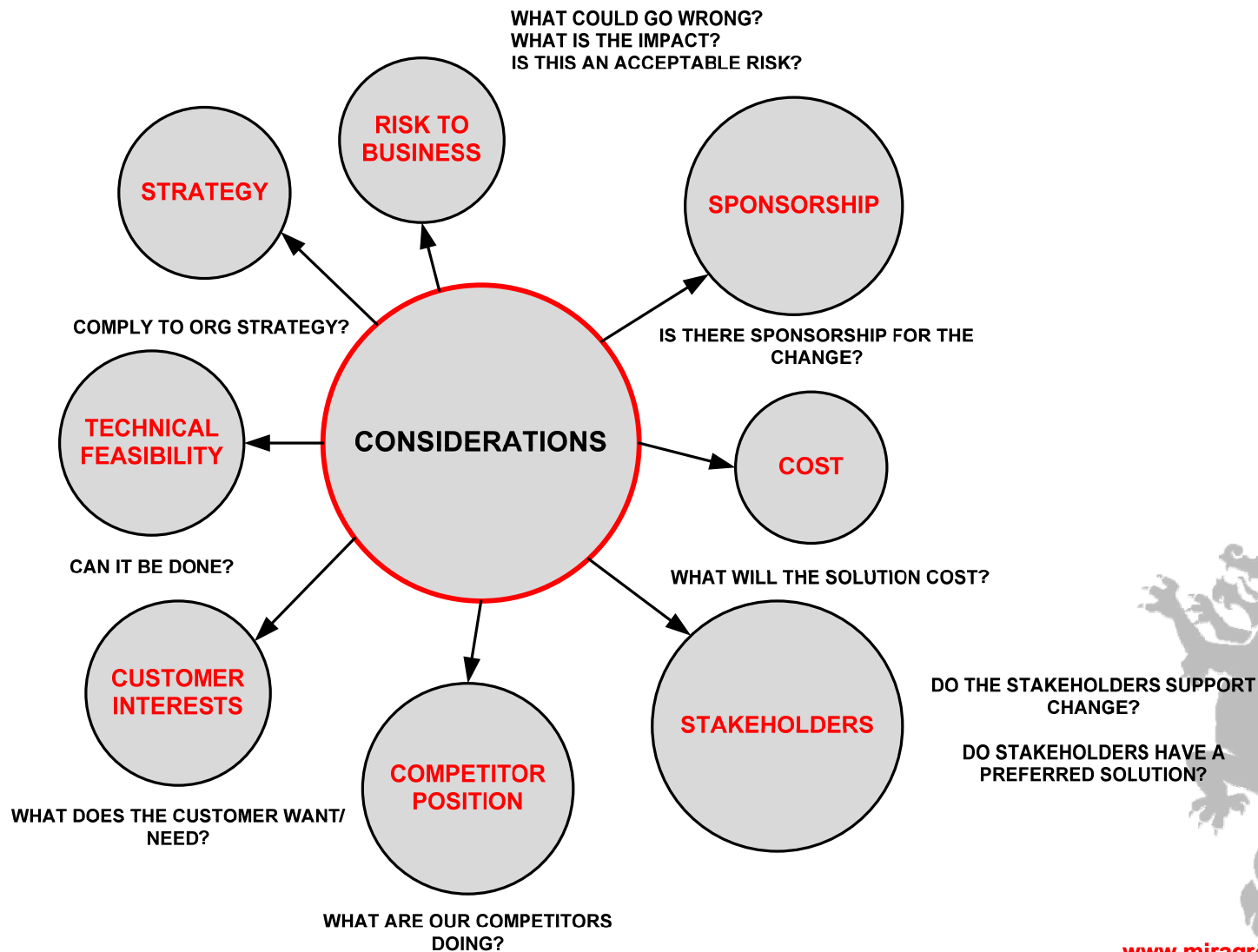


Options

- What are our options? (Summary only)



Problem Analysis Considerations



Problem Analysis

Applying Process Re-engineering

We should also look at other ways of solving the problem using Process Re-engineering principles

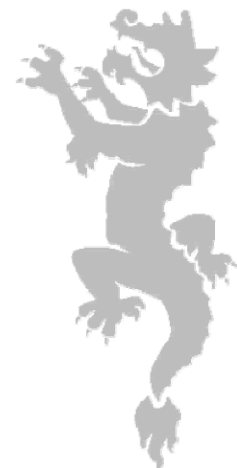
Process Re-engineering Principle	Can it be applied?	Option?
Could this be outsourced?		
Could we use 3rd parties more effectively?		
Could we simplify the organisation structure?		
Could we simplify the processes?		
Could we share information more effectively?		
Could we remove the function?		
Could we merge this function with another?		
Could we consolidate systems?		
Could we remove administration?		
Could we web enable?		
Could we use work flow control?		
Could we simplify authorisations?		
Could we remove redundant/parallel steps?		
Could we create single accountability?		

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Problem Analysis

Widening Opportunity for Improvement

- Analysis is an exploration to ensure we solve the right problem in the right way
- We can explore:
 - Any ways to solve the problem
 - Any other opportunities
- Finding additional opportunities can add weight to any business case BUT may also increase risk



Problem Analysis

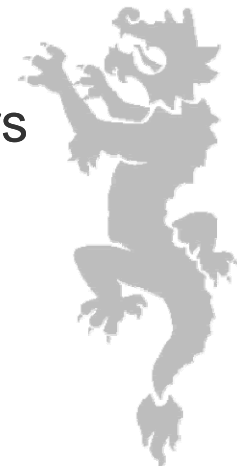
Widening Opportunity for Improvement cont..

Looking for Opportunity	Can it be applied?	Which Option?
<ul style="list-style-type: none"> • Can we extend any solution to include other functions? 		
<ul style="list-style-type: none"> • Can we create IT solutions that could benefit other areas? 		
<ul style="list-style-type: none"> • Can we create more effective reporting solutions for the business? 		
<ul style="list-style-type: none"> • Could this support other change initiatives? 		
<ul style="list-style-type: none"> • Could we enlist 3rd parties including the customer to make a more effective solution? 		
<ul style="list-style-type: none"> • Could this style of solution be extended across the business? 		

Problem Analysis

Enlisting Sponsors & Stakeholders

- Having identified all options, considerations and widening the opportunity it is always essential to enlist Sponsors and Stakeholders
- The Sponsors & Stakeholders will need to agree:
 - With the analysis and core issues
 - With a specific option
 - With the considerations
 - With any widening of the opportunity
- Generally we need to ‘sound board’ with Sponsors and Stakeholders to understand if there is a preferred option
- If there is then we will need to bring Sponsors and Stakeholders together to gain consensus



Problem Analysis

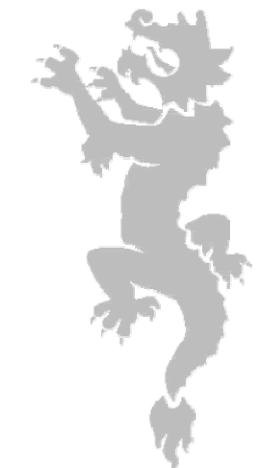
Balancing Different Interests

- Sponsors and Stakeholders may agree on a single option but they will often have different interests
- These different interests can be:
 - Different priorities to design & implement an option
 - Different view of benefits and costs
 - Different agendas that may affect the overall solution
- These differences in opinion and viewpoint need to be surfaced as part of enlisting
- Generally Sponsors and Stakeholders will need to see a distinct benefit to their area to maintain their interest and enthusiasm for any option
- Maintaining their commitment can mean the option is compromised to ensure all Sponsors and Stakeholder interests are met

Problem Analysis

Benefits Analysis

- There are always 3 levels of benefits:
 - The organisation as a whole must benefit
 - The business areas must benefit
 - Individuals must benefit
- The individual benefits are identified during the detailed Solution Design
- The business area and organisation benefits must be identified as part of any Cost Benefit Analysis



Problem Analysis

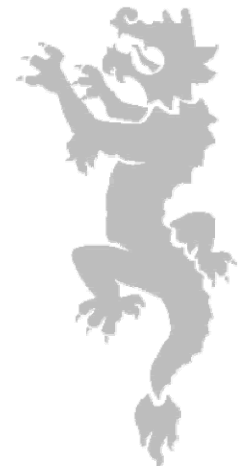
Benefits Analysis cont...

Looking for Benefits	Does it apply?	What is it worth?
• Can we reduce costs?		
• Can we improve customer service?		
• What organisation strategies does this serve?		
• Will we be more efficient?		
• Does this make us more competitive?		
• Can we provide additional services/products?		
• Could we extend this solution to other problems?		
• Will this reduce risk to the business?		
• Will this offer future opportunities?		
• Will this increase revenue/opportunity?		

Problem Analysis

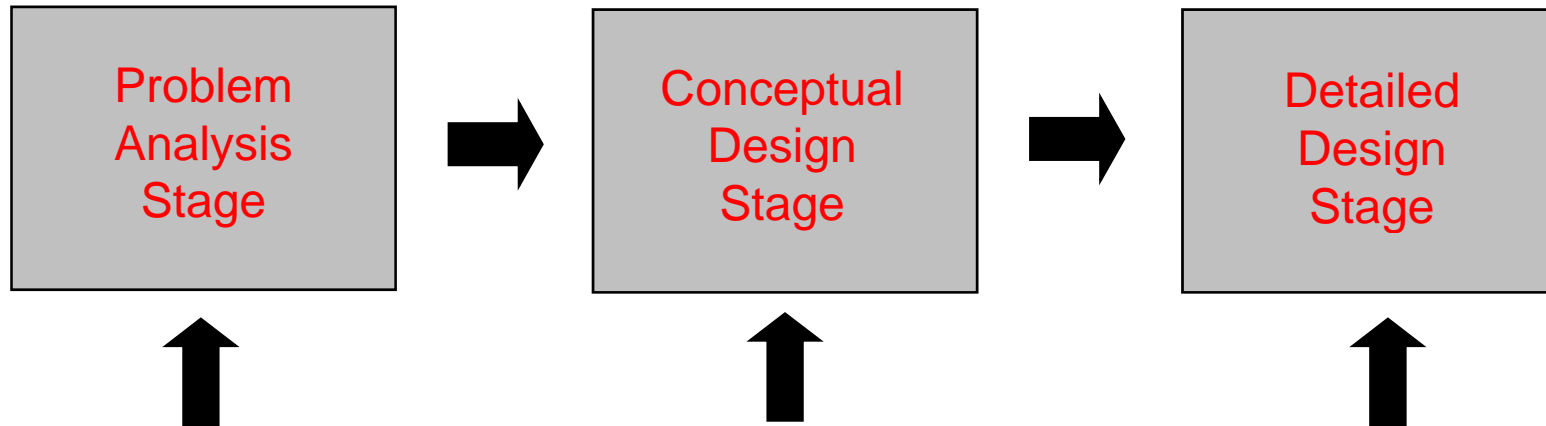
Cost Analysis

- With every option there is an associated cost
- In addition to analysing risk we also need to understand the cost of each option
- Costs must include:
 - The cost of design & implementation
 - Ongoing Operations costs



Problem Analysis

Cost Analysis cost...



- Costs, benefits and savings are high level and indicated only

- Costs, benefits and savings are more detailed but not fully validated

- Costs, benefits and savings are specific and can be proven through financial reporting



Problem Analysis

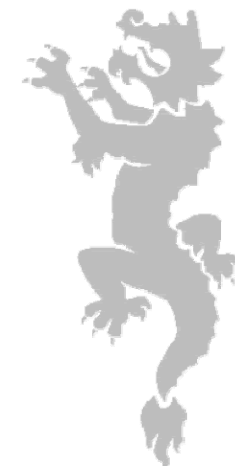
Cost Analysis cost...

Operational Costs

Cost Category	Current Cost	Proposed Cost
• Resources		
• Facilities		
• System		
• Maintenance		

Design & Development Costs

Cost Category	Cost
• Resources	
• Facilities	
• System	
• Transition	



Problem Analysis

Cost Benefit Analysis

- Cost Benefit Analysis is a summary of all costs (including future operational costs) against the benefits
- You may need to create a Cost Benefit Analysis for all options

Costs	Benefits	Return
Design & Development £	Future Operational Savings £	Anticipated Returns £

- Usually the Costs, Benefits and Anticipated Return are done over a period of 2 – 5 years
- Most organisations target a full Return on Investment within 24 months
- The Cost Benefit Analysis will refine the options you are developing

Problem Analysis

Analysing Risk

Even once all options are fully explored, Sponsors and Stakeholders are enlisted and there is a good Cost Benefit Analysis we still need to assess risks

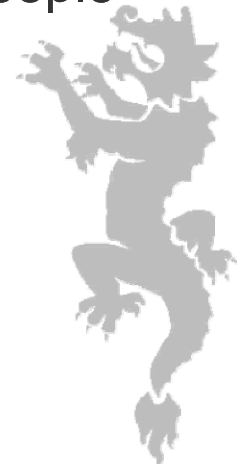
Risk Type	Does it apply?	Rate the Risk (H, M, L)	Risk Mitigation?
• Could we damage the business?			
• Are the costs realistic?			
• Is the timing realistic?			
• Is this too much change?			
• Is this a change in culture?			
• Have we failed at this before?			
• Is the business strategy too dynamic?			
• Are all Stakeholders committed?			
• Do we have the skills?			
• Do we have the resources?			

- The options will be refined based on risk

Problem Analysis

Choosing an Option

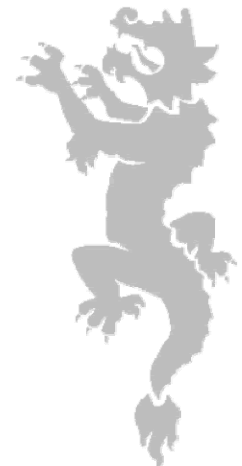
- As Business Analysts we are not responsible for deciding our options
- Our role is to:-
 - Clearly understand the core issues
 - Develop options to solve issues
 - Fully explore each option
 - Develop cost benefit for each option
 - Make a sound risk assessment for each option
- The results of our analysis are presented (by us or others) to people who are responsible for making decisions



Problem Analysis Tips

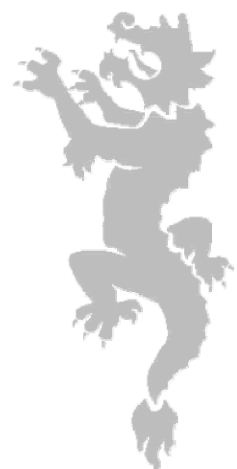
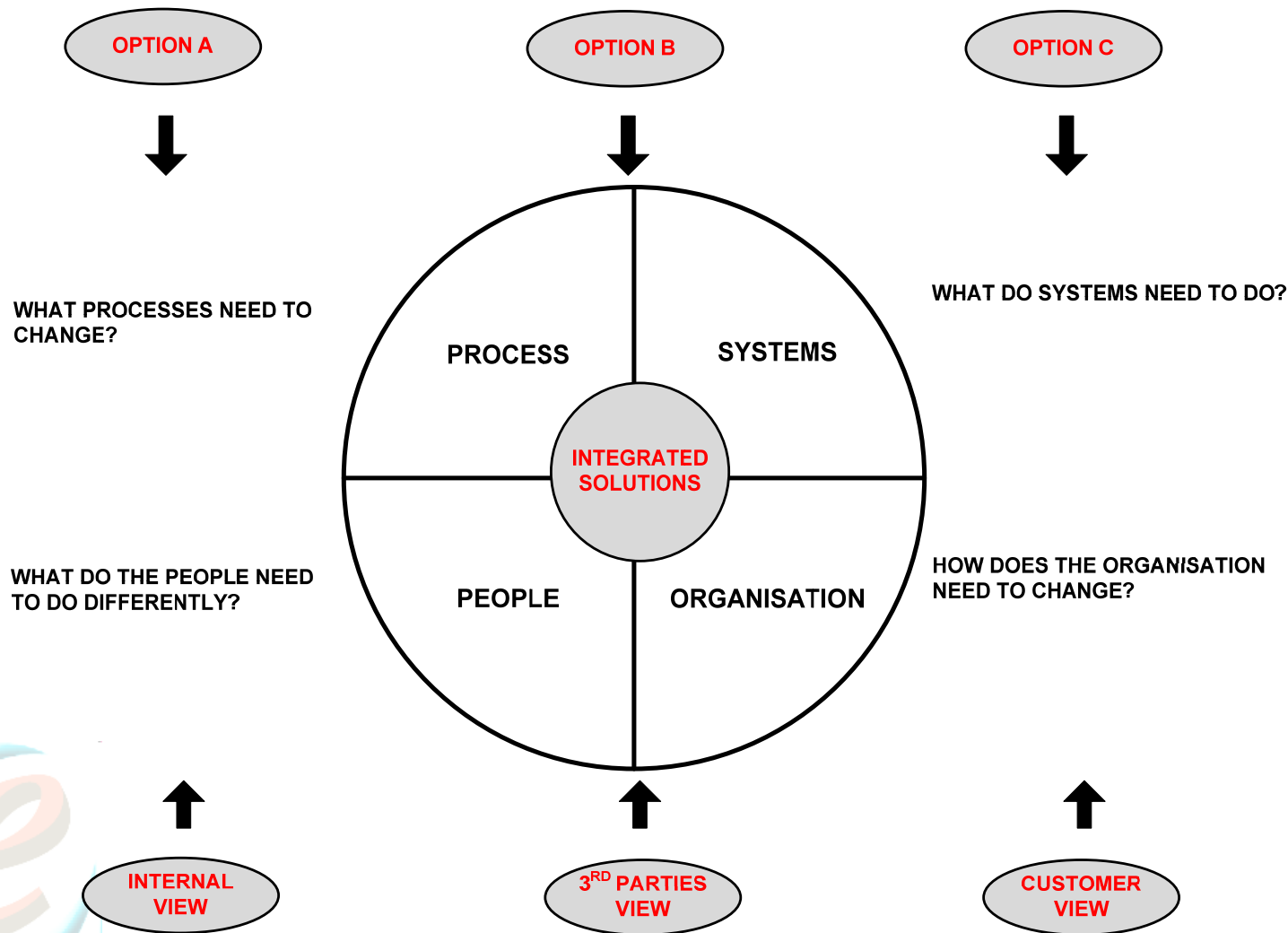
Solving the Whole Problem

- Even when all issues have been uncovered and the core issues identified there is a tendency to get fixated on one aspect of the solution
- Systems solutions can often be viewed as a 'panacea' that will solve all aspects of a problem
- When looking for solutions always consider all dimensions of the problem



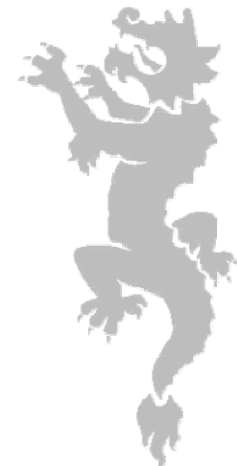
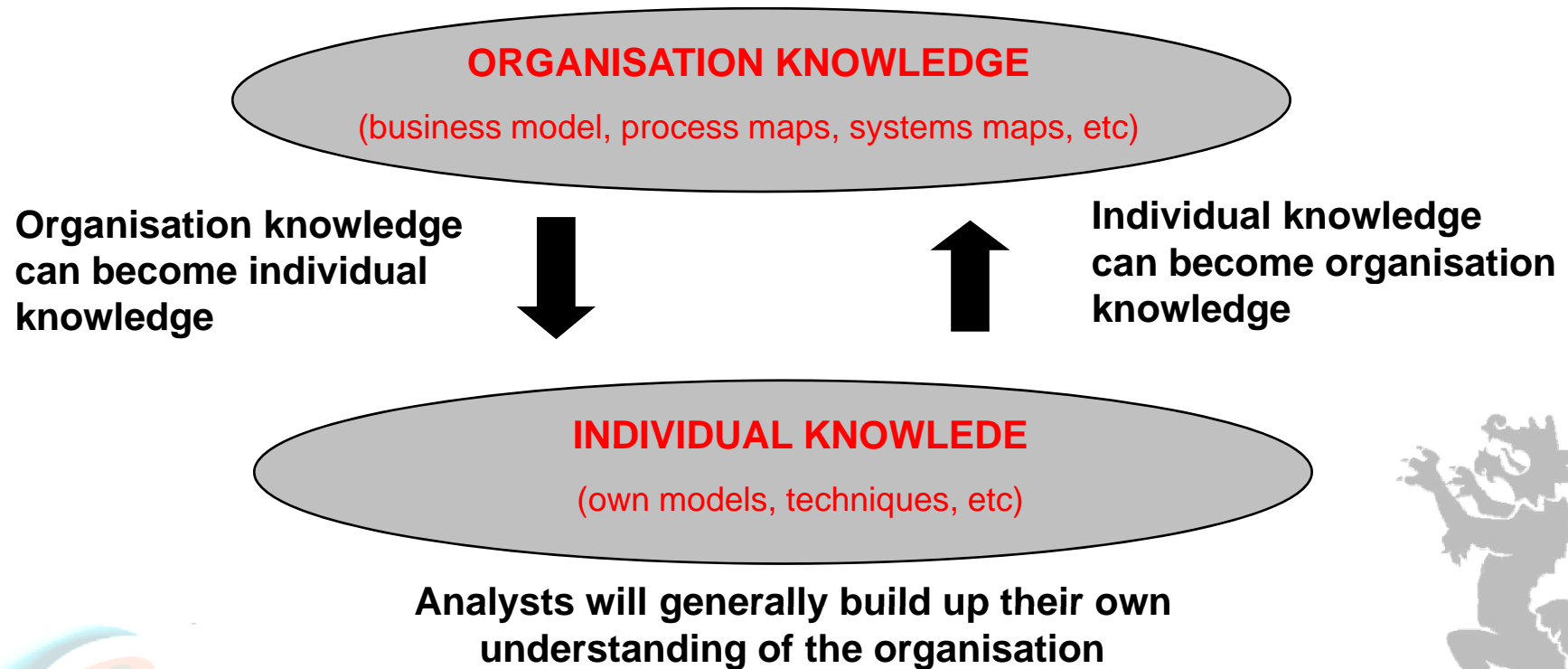
Problem Analysis Tips

Solving the Whole Problem cont...



Problem Analysis Tips

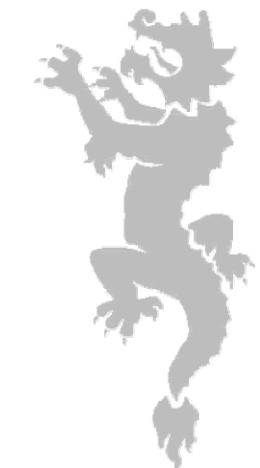
Building Individual Knowledge



Problem Analysis Tips

Communication for Comprehension

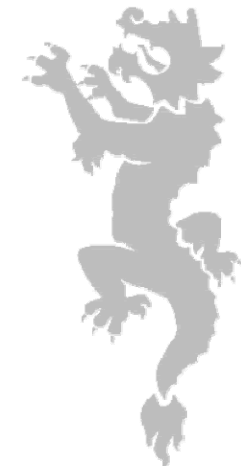
- Even the best solution can come unstuck if it is not communicated well
- You may not be the person who will present the solution but you will provide the information for others to present
- Understanding the problem, issues and solution is not enough you must also know how to communicate effectively



Problem Analysis Tips

Communication for Comprehension cont...

- Some tips when communicating:
 - Know your audience group
 - Use language they will understand
 - Tailor the presentations to their interests
 - Use concise language
 - Use clear and obvious logic
 - Avoid unnecessary detail
 - Keep presentations to the point
- Communication is also about:
 - Listening to feedback
 - Answering questions clearly and concisely
 - Following up on any questions that cannot be answered immediately



Problem Analysis Tips

Understanding Resistance

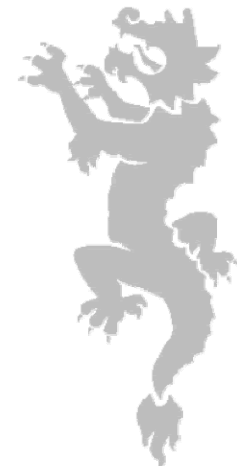
- As Business Analysts we are often on the frontline of resistance
- We need to understand the difference between resistance and feedback
 - Feedback is usually constructive advice or questioning
 - Resistance is usually constant barriers to proceeding
- Barriers to proceeding can include:
 - Avoidance (i.e. you cannot meet with the person or area)
 - Endless questioning even once questions are answered
 - Repeated negativity about the analysis, solution design or project
 - Refusal to engage with the analysis or design
 - Unwilling to give public agreement to proceeding
- You will need to work with people to understand exactly what they are resisting and why
- The only way to address resistance is to surface the real issues



Problem Analysis Tips

Understanding Resistance cont...

- People do not resist without a reason
- As a Business Analyst we need to surface the reason
- In surfacing the reason for resistance we can often resolve the resistance
- If we are unable to surface the reason for resistance we must raise the issue with our Sponsors and Stakeholders
- Failure to resolve resistance can result in later problems



Problem Analysis Tips

Understanding Resistance cont...

Common reasons for resistance

Reason for Resistance	Managing Resistance
Don't understand problem	One-on-one explanation using their terminology
Problem has low priority for them	Explain why they are important to solving the problem
Problem does not directly affect them	Explain why they are important to solving the problem
Don't think problem can be solved	Ask why. Listen. Work out why the problem can be solved. Explain
Have tried & failed to solve problem before	Ask what happened. Listen. Learn from previous attempts. Explain what will be different
Don't have time to be involved	Use their time effectively
Don't think they should be involved	Ask why. Listen. They may be right. If not, then explain why they are important to solving the problem
Potential solutions may affect them negatively	Ask about their concerns. Validate if their concerns are valid. Enlist other stakeholders
They don't think this is the way to solve the problem	Ask their opinion. Consider their views. Explain why one way is better

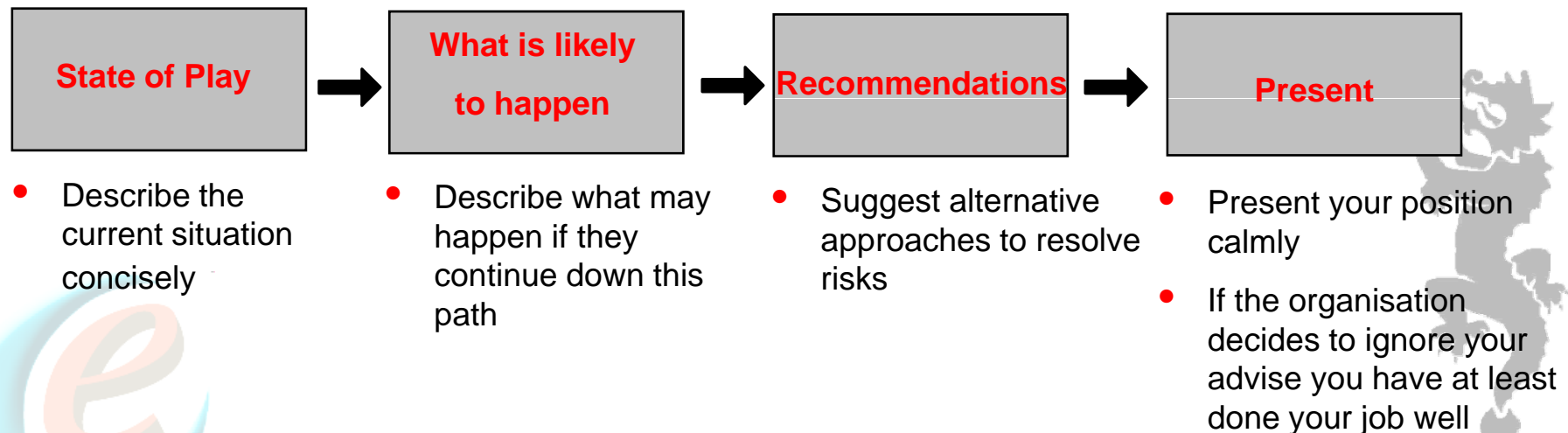
Problem Analysis Tips

Dealing with Potential Failure

Typical problems can include:

- Stakeholders do not agree
- Problem Analysis is flawed so the solution is flawed
- Stakeholders are avoiding dealing with issues, etc.

What should anyone do if they believe the solution will fail?



Problem Analysis Tips

Understanding the Business Perspective

Every business area has their own perspective and behaviours

SALES
<ul style="list-style-type: none"> • Outward focus • Future focus • High communications • Energetic • Negotiation skills • Good interpersonal • Look for wins • Good with concepts

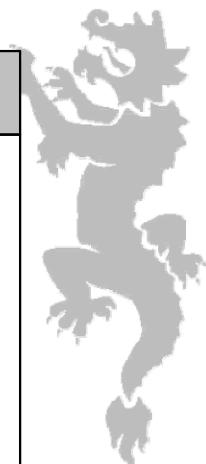
DESIGN
<ul style="list-style-type: none"> • Detail oriented • Engineering based • Risk adverse • Logical, structured, practical thinking • Highly intelligent • Like to think through the detail

OPERATIONS
<ul style="list-style-type: none"> • Focussed on today's delivery • Practical realistic thinkers • Risk adverse • Prefer visible & simple approaches to problem solving • Makes decisions

HUMAN RESOURCES
<ul style="list-style-type: none"> • People focussed • Usually good comms • Good interpersonal • Tend to prefer consensus • Trust "group" thinking

FINANCE
<ul style="list-style-type: none"> • Numbers focus • Can be creative problem solvers • Good with concepts • Like to work through the detail • Good risk managers

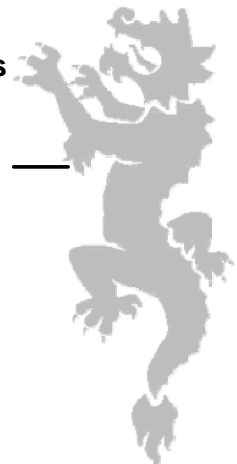
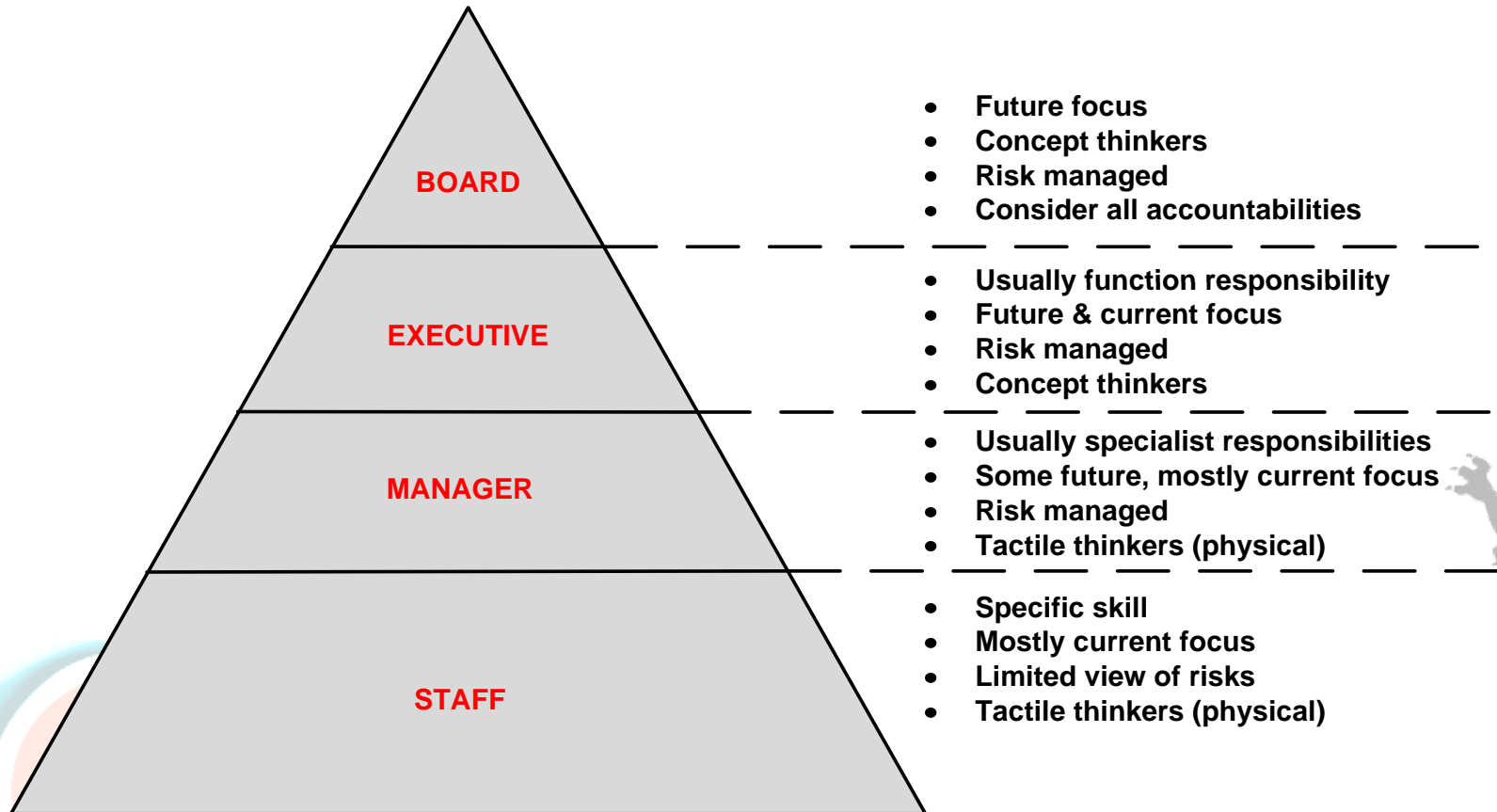
PROCUREMENT (SC)
<ul style="list-style-type: none"> • Tend to have higher expectations for delivery • Good risk managers • Used to making decisions • Usually good with concepts • Future focussed



Problem Analysis Tips

Understanding the Business Perspective cont...

Every level in the business has a different perspective



Problem Analysis Tips

Understanding Strategy

- Most organisations have a published strategy which is developed by senior management
- However, as strategy is filtered down the organisation it can be subject to interpretation
- Sometimes it can be very difficult to get a single and complete explanation of the strategy
- Business Analysts do not define or interpret strategy
- We are reliant on how executives and managers choose to interpret the strategy
- We can provide our own interpretations as part of analysis but it will need to be validated by the executives and managers
- However, it does help to read the strategy so always have a copy of the published strategy

Problem Analysis Tips

Group Thinking

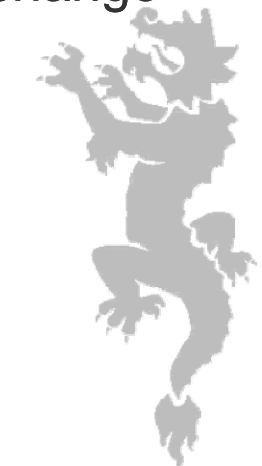
- Most problems are actually solved through ‘group thinking’
- ‘Group thinking’ is when we facilitate teams to work through a problem logically to an agreed resolution
- As Business Analysts we need to decide:
 - When a problem must be resolved by a team
 - Who needs to be involved
 - What the problem is
 - How to explain this problem
- People are usually very happy to contribute to problem solving
- Our role is to give people facilitated environment to help them work together to solve the problem
- Always document the outcomes and conclusions of any team sessions



Problem Analysis Tips

Developing Business Area Strategy

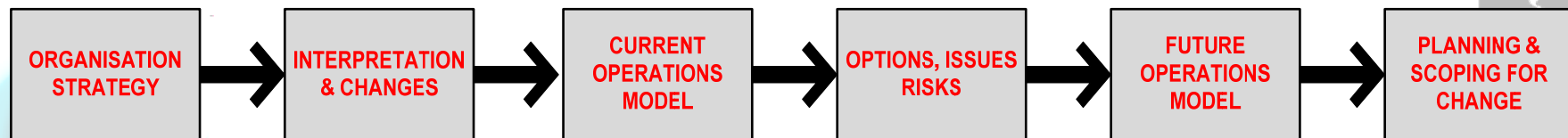
- Every business area must interpret the organisation strategy to understand what they may need to change
- This means they need to:
 - Understand their current operation
 - Understand the strategy
 - Understand what they should do to support the strategy
 - Understand how they will need to change their area to support the strategy
- Sometimes the organisation strategy will require a significant change for their operation



Problem Analysis Tips

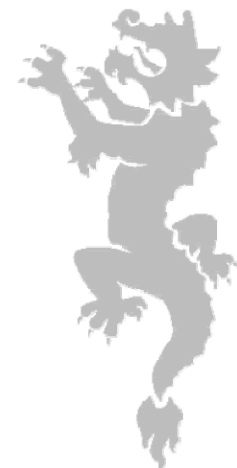
Developing Business Area Strategy cont...

- Business Analysts will often be asked to help develop the strategy for an operation
- The Business Analyst will need to develop a business model for that area including:
 - Function Model
 - Process Model
 - Information Model
 - Systems Model (business view only)
 - Data Model (business view only)
- The approach to developing a business area strategy is:



Thank You!

Q&A



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- Contact Dr Ip-Shing Fan, i.s.fan@cranfield.ac.uk

