# Module 5
# Developing an integrated management system

*Presented by*

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# Gap analysis

There are various types of analysis that will be needed to help you define the scale, scope and potential impact of the transition to the IAEA documents.

GAP analysis is particularly helpful here:

1. What is point B: Where are you trying to take the organisation; what does the new system look like?

2. What is the point A: Where are you now by comparison with point B?

3. What are the changes needed to close this gap?

**1** **B**

**3** CHANGES NEEDED TO CLOSE THE GAP

**2** **A**
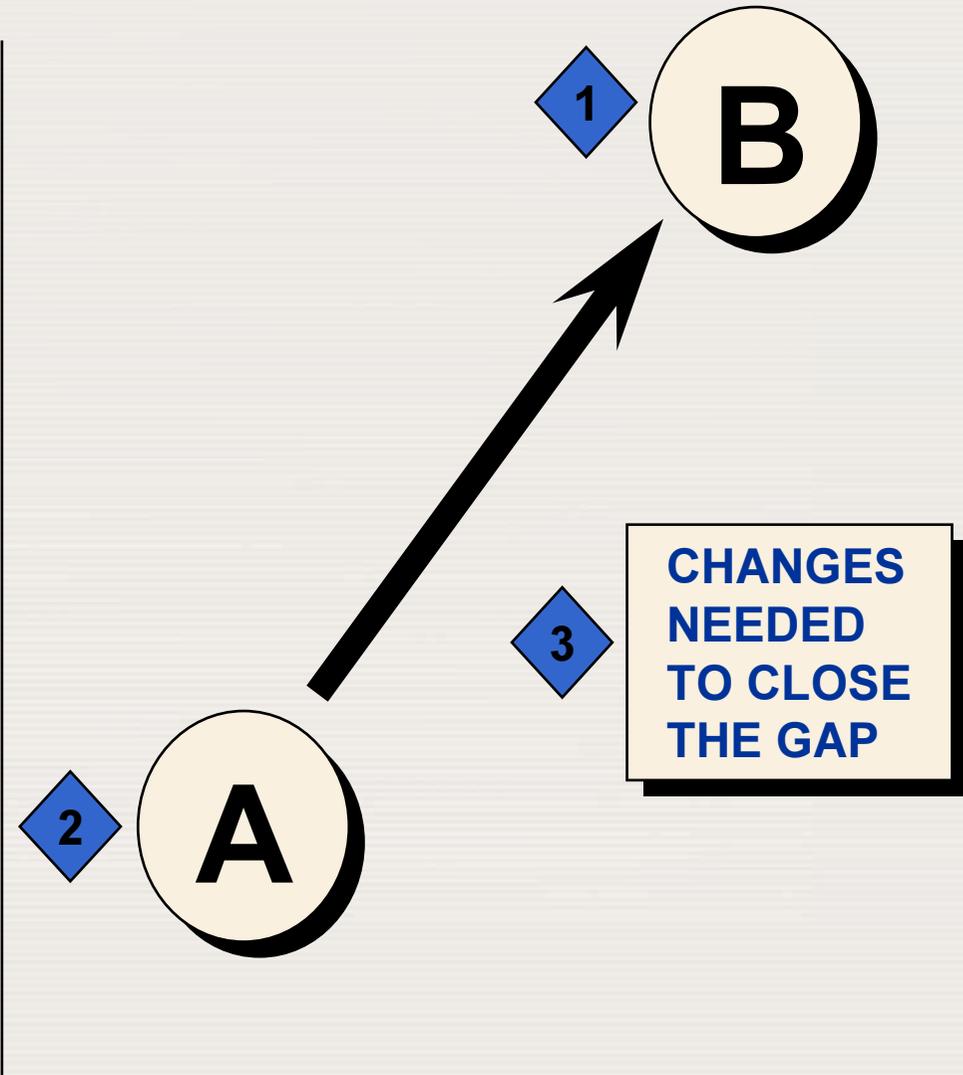
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# What is your gap?

Point B – We have implemented a Management System that addresses all the new IAEA requirements/guidance

A₁  A₂  A₃  →  B
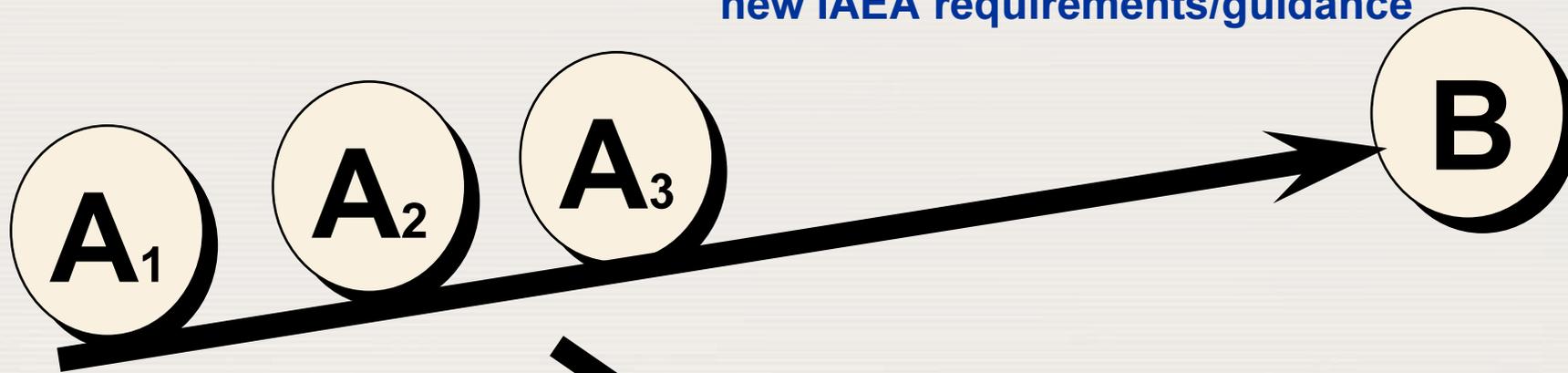
CHANGES
NEEDED
TO CLOSE
THE GAP

You could all be starting at a different point A!

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# Which point A are you?

**A₁** No management system

**A₂** Separate management systems that do not use processes

**A₃** An integrated management system that does not use processes to describe its activities

**A₄** Separate management systems that use processes (e.g. safety, environment, financial and quality)

**A₅** Any other option I've forgotten to mention!!!!

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# Whichever point A you are at -

• Review the IAEA documents and carry out a gap analysis to establish your point A (what requirements and guidance are you not addressing)

• Appoint a project leader and establish a project team

• Develop plans for the project to develop the management system

• Obtain approval of the plan and ensure resources are provided

• Develop plans for communication

• Examine the commonalities between various management systems such as documentation control, records and assessments

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# Alignment is the key

Management commitment & leadership with unity of purpose

Mission, Vision

↓

Policies

↓

Business plan & objectives

↓

Processes

↓

Supporting procedures

↓

Work Instructions
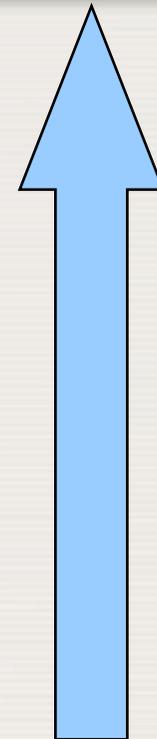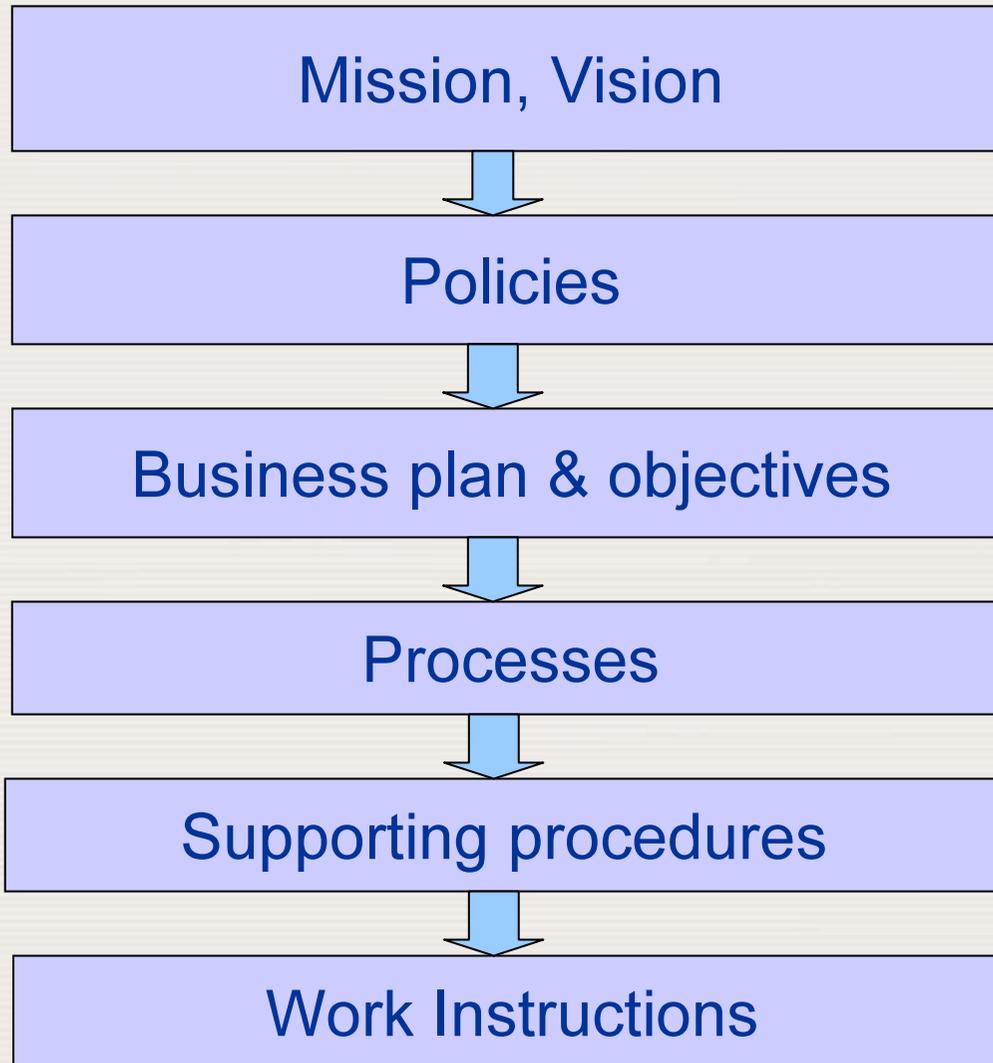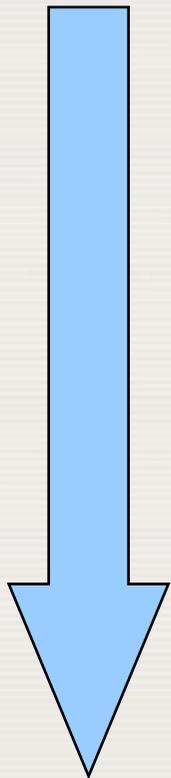
Staff participation & involvement that supports accomplishment

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# Developing a process approach

- Identify the process model of the organization – e.g. core, management and support processes

- Determine how the processes interact to enable the achievement of the organization's objectives.

- Develop a logical document and process hierarchy

- Identify process owners and train them

- Develop the processes with the process owners and other interested parties

- Review current documentation for completeness and relevance

- Develop an implementation plan, train the staff and implement the processes

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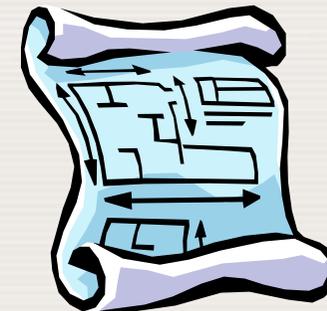
# Process Mapping

- Develop a generic process mapping style for the organisation – there are many available

- Identify current activities or process steps (noun & verb)

- Arrange these into a logical sequence
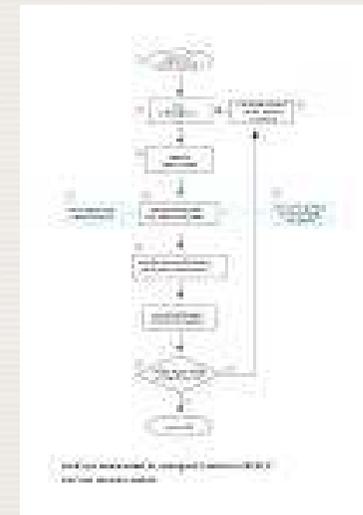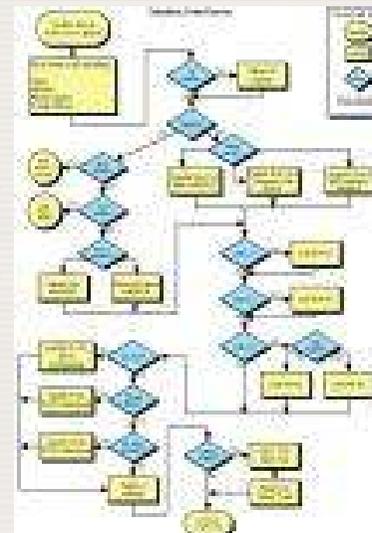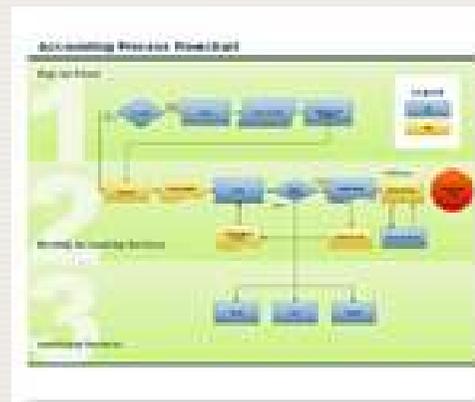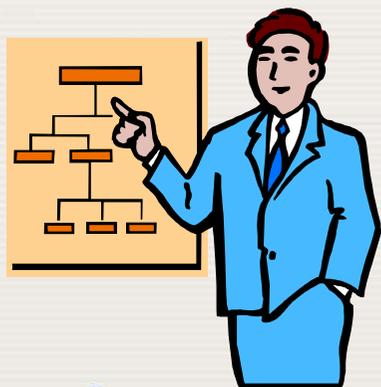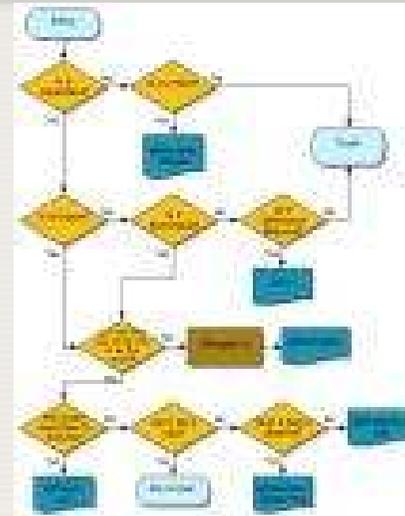
# Within each process

- Agree the 'purpose'  and 'scope' of each process
- Identify what work is done, who carries it out and how it is performed
- Identify the resource needs (in terms of individuals, finance and equipment)
- Clarifying the constraints or requirements that affect how the process operates
- Make sure the inputs and outputs are identified

# Process can be decomposed into smaller components that make up a hierarchy.

An example of a hierarchy:

- Support Process
  - Design safety management

- Departmental Process
  - Produce Safety analysis

- Sub-process
  - Asses Safety analysis
- Activities
  - Conduct independent peer review
- Tasks
  - Review assumptions
  - Check calculations

**Support Process**

Major-processes

**Departmental Process**

Sub-process

**Sub-process**

Activities

**Activities**

Tasks

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*Activities and tasks are often described in procedures*

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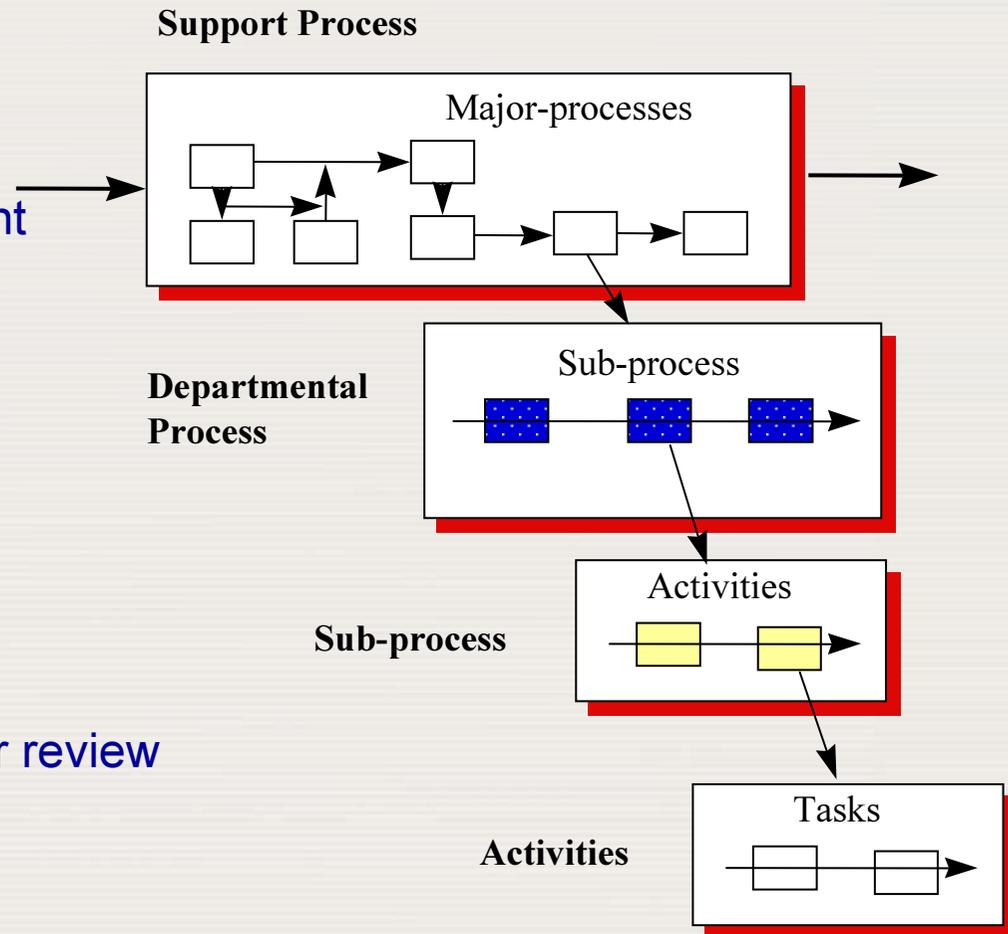
# GS-R-3 – Developing Processes

5.4. The development of each process shall ensure that the following are achieved:

- Process requirements, such as applicable regulatory, statutory, legal, safety, health, environmental, security, quality and economic related requirements, are specified and addressed;

- Hazards and risks are identified, together with any necessary mitigatory actions;

- Interactions with interfacing processes are identified;

- Process inputs are identified;

- The process flow is described;

- Process outputs (products) are identified;

- Process measurement criteria are established.

IAEA Safety Standards
for protecting people and the environment

The Management System
for Facilities and Activities

Safety Requirements
No. GS-R-3

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# The management system building block

**Drivers/Constraints**

Contractual documents
Standards
Site Licence requirements
Regulations

**Input**

**PROCESS**

**Output**

Materials
Information

Transformed Material
Transformed Information

Equipment
People
Money

**Resources**

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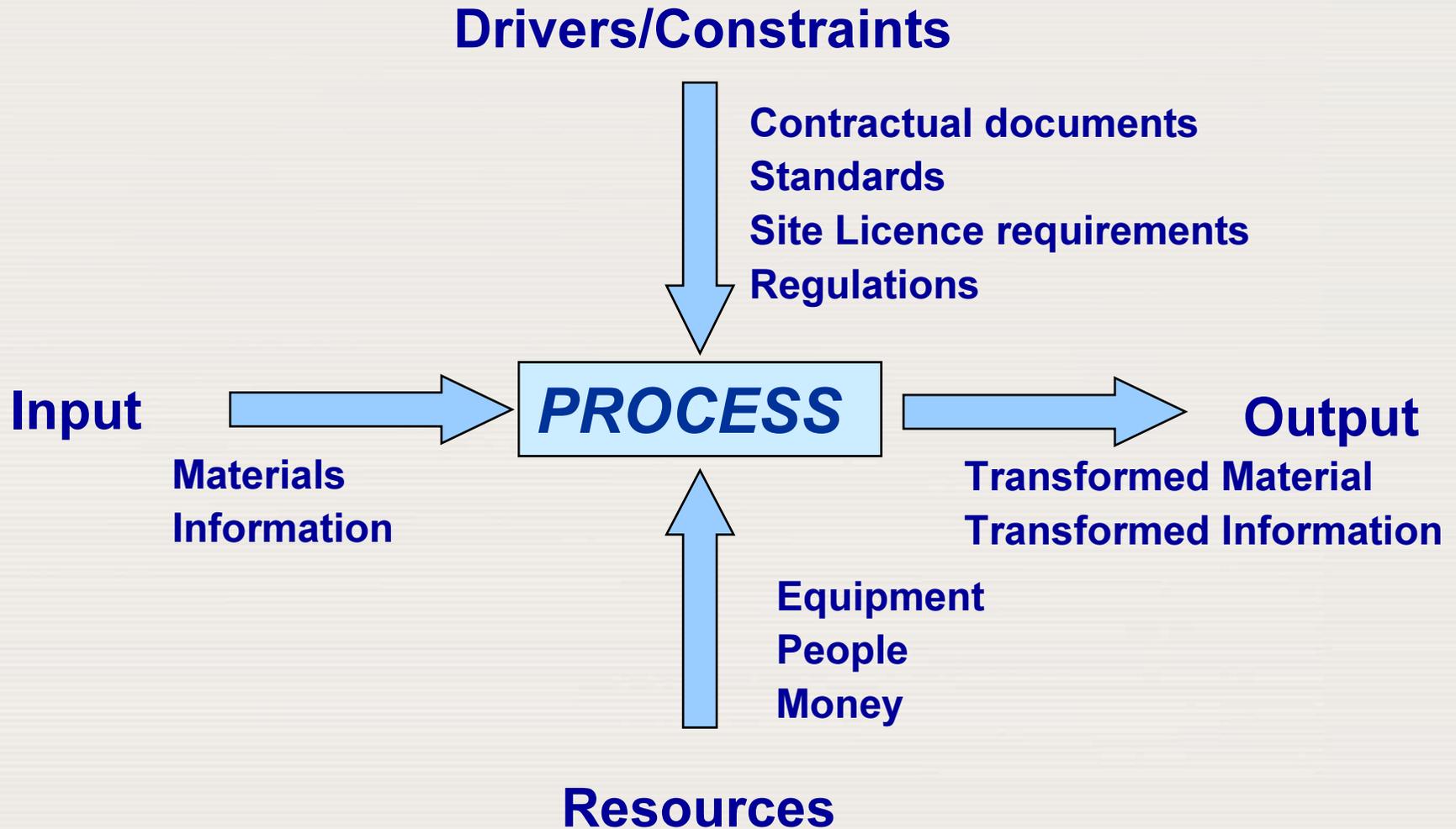
# Implementation requires:

**Communications**
Effective and diverse communications systems are essential to implement a new management system. Without intensive communication, implementation effort becomes poorly directed and cut off from the rest of the organisation.

**Leadership**
Providing the vision and overall direction for the management system, and demonstrating by personal example their support, are the critical leadership contributions.

**Decision making**
It should be clear where decisions are made within the organisation. Senior management should understand the inter-relationship between decisions and how they impact on each other. Decisions that divert resources from implementation should be properly considered

**Business Planning**
An integrated system which ensures that everyone is clear about their goals and objectives for the new management system - from organisation to individual level. BP enables the organisation's resources, to be focused on management system development.

**Enabling Culture & Organisation**
Implementing a management system is worthless if implanted into an alien culture and organisation system. An implementation-focused, can-do culture provides the necessary context. Appropriate organisation systems, e.g. rewards and training, reinforce it.

**Accountability & Control**
Following through, and knowing what is going on, keep implementation on track. Clear systems of accountability and effective, balanced control systems are the key.

**Infrastructure**
Implementation requires infrastructure - systems, resources and people that identified in a project plan. A project team should provide the training and support to those responsible for implementation.

Communications — Leadership — Decision making — Business Planning — Enabling Culture & Organisation — Accountability & Control — Infrastructure

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# Process Owners

All processes should have a clearly defined Process Owner who is responsible and accountable for:

- Identifying the inputs, outputs, constraints and resources for each process

- Developing and documenting their process and supporting documentation (procedures, working practices, record formats etc.)

- Providing the signpost to any current supporting documents including
  - aligning them to the processes
  - revising where necessary
  - withdrawing obsolete or superseded documents

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# Process Owners part 2

- Ensuring process documentation incorporates any relevant legal or industry requirements
- Ensuring that the records requirements are specified within the process documentation
- Monitoring the performance of the process to ensure the process remains effective
- Ensuring staff who are required to work in the process are trained/familiar with the process and process documents
- Co-operating with the Process Owners of interfacing processes.

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# Understand there are different categories of process

The IAEA documents recognise 3 categories of processes:

- Management processes
- Core Processes (sometimes called key or business processes)
- Support Processes

*While these three categories play significantly different roles, they must be aligned and integrated to enable effective performance of the organization*

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# Management Processes

These provide direction and governance for an organization. They are generally implemented by senior management to:

- set organizational goals
- direct and manage the organization
- manage external relationships and interfaces
- manage and improve the processes
- assess and improve performance of work.

*Management processes also shape and manage the core and support processes used by an organization*

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# Identifying core processes

The following questions may help you identify core processes:

- What are the critical outputs of the organization and which processes deliver these?

- Which processes reflect the unique competencies of the organization and are mission-critical?

- Which processes are the value-creating activities of the organization and are the processes that are seen and experienced by external customers?

- Which processes have the greatest impact on profitability?

- Which processes are so important to our competitive position that we would never outsource them?

- Which processes have the greatest impact on performance (safety, quality, cost, speed, innovation)? ·

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# Support processes

Support processes exist to sustain the organization. Since the support needs of many organizations are similar, these processes tend to be fairly standard and are frequent candidates for outsourcing. The customers of support processes are internal customers – within the organization.

They include processes such as:
- Provide financial resources
- Provide human resources
- Provide emergency preparedness
- Provide security
- Provide environmental monitoring
- Provide information technology support
- Provide materials and procurement support
- Provide documentation and records

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# Have we identified all our processes?

For an operational nuclear plant here are some standards which are worth cross-checking against:

- The reference documents (IAEA guides) mentioned in DS 349
- IAEA Safety Guides on Operation (NS-G-2.1 through 2.10)
- TECDOC-1078, Technical Support for Nuclear Power Operations
- INSAG-13, Management of Operational Safety in Nuclear Power Plants
- WANO Performance Objectives and Criteria
- An Owners' Group's concept for plant management, e.g. the Standard Nuclear Performance Model
- IAEA Safety Guide DS 347, Conduct of operation at nuclear power plants

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**Don't try and develop an integrated management system from a bottom up approach, by identifying requirements from management system standards or without the buy-in and support of your management team**

# IT WON'T WORK !!!!!!!

# In Conclusion  - Expected benefits

• Increased focus on <span style="color:red">safety</span>

• **<u>All</u>** the processes of the organization are identified

• **<u>All</u>** requirements are addressed

• The goals, strategies, plans and objectives  of the organization are more likely to be achieved

• **<u>All</u>** supporting documentation can be identified & referenced from a process

• More concise management system with all aspects adding value

• Enhanced communication through simplicity and uniformity

• Better risk identification and management

• Enhanced stakeholder understanding and satisfaction

• Accelerated training and reduction in training needs

• A system that management can see some benefit in having

• Buy-in and use at all levels in the organization

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# Objectives of this training package were to help top managers:

- Understand the structure and content of the IAEA safety guides and safety publications
- Understand why it is beneficial to have a coherent management system that addresses all requirements in a structured way using processes.
- Understand the appropriateness of all the management system standards to a nuclear utility.
- Understand the roles and responsibilities of senior managers and how leadership supports the development and implementation of the management system.
- How to align the management system to the goals and objectives of the utility and transition the current management system to the GS-R-3 approach.

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# Questions and Answers

Questions to Module 5

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