Document Control Excellent

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Objectives

- Introduction to Document Control
- Provide an understanding of the functions of document control
- Standards and Regulation
- Give an overview of how to design and implement a Document Control system.

Introduction to Document Control

What is a Data?

Data

- PERATURAN MENTERI ENERGI DAN SUMBER DAYA MINERAL NOMOR 027 TAHUN 2006

- PERATURAN PEMERINTAH REPUBLIK INDONESIA NOMOR 28 TAHUN 2012 TENTANG PELAKSANAAN UNDANG-UNDANG NOMOR 43 TAHUN 2009 TENTANG KEARSIPAN

Peraturan Menteri Energi dan Sumber Daya Mineral Nomor 27 tahun 2006

Tentang

Pengelolaan dan Pemanfaatan Data yang diperoleh dari survey umum, eksplorasi, dan eksploitasi minyak dan gas bumi

Pasal 1

2. Data adalah semua fakta, petunujuk,indikasi dan informasi baik dalam bentuk tulisan(karakter),angka(digital),gambar)analog),media magnetig,dokumen,perconto batuan,fluida dan bentuk lain yang didapat dari hasil survey umum,eksplorasi dan eksploitasi minyak dan gas bumi
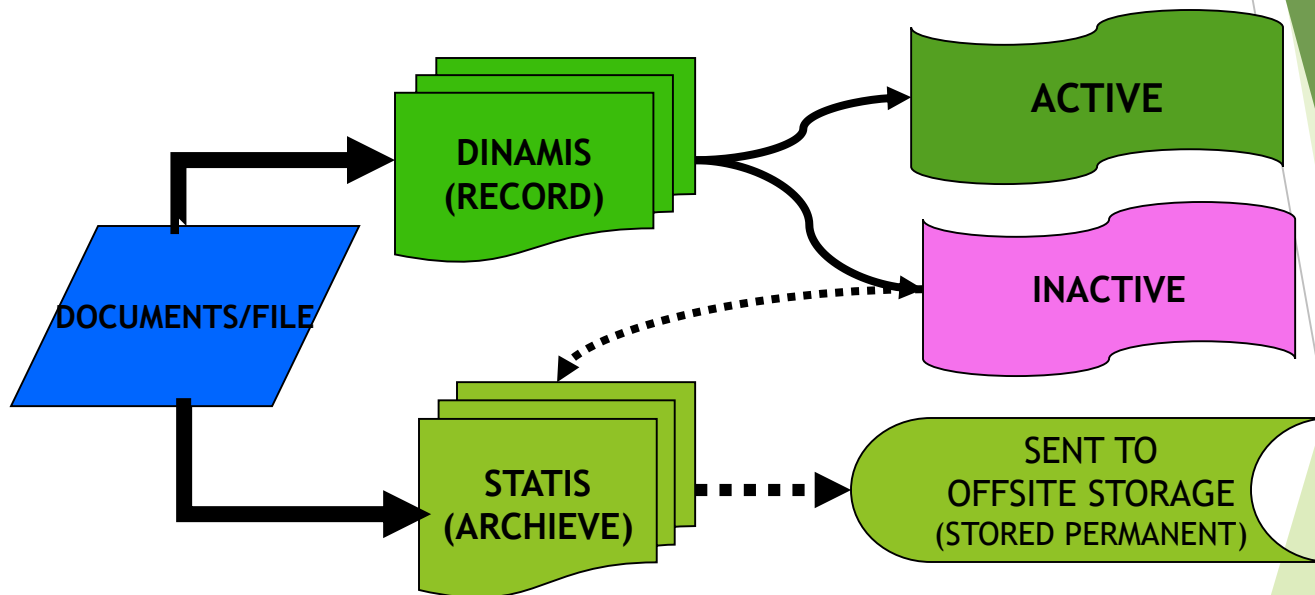
Pasal 2

1. Data yang diperoleh dari survey umum,eksplorasi dan eksploitasi adalah milik Negara yang dikuasai oleh pemerintah

2. Data yang diperoleh dari survey umum,eksplorasi dan eksploitasi sebagaimana dimaksud pada ayat(1) wajib diserahkan kepada pusat data dan informasi

PERATURAN PEMERINTAH REPUBLIK INDONESIA
NOMOR 28 TAHUN 2012
TENTANG
PELAKSANAAN UNDANG-UNDANG NOMOR 43 TAHUN 2009
TENTANG KEARSIPAN

Arsip adalah rekaman kegiatan atau peristiwa dalam berbagai bentuk dan media sesuai dengan perkembangan teknologi informasi dan komunikasi yang dibuat dan diterima oleh lembaga negara, pemerintahan daerah, lembaga pendidikan, perusahaan, organisasi politik, organisasi kemasyarakatan, dan perseorangan dalam pelaksanaan kehidupan bermasyarakat, berbangsa,dan bernegara.

ARSIP BERDASARKAN FUNGSINYA

Document lifecycle

Create / Capture → Review / edit → Approve → Deploy → Dispose → Use → Archive → Improve → Review / edit
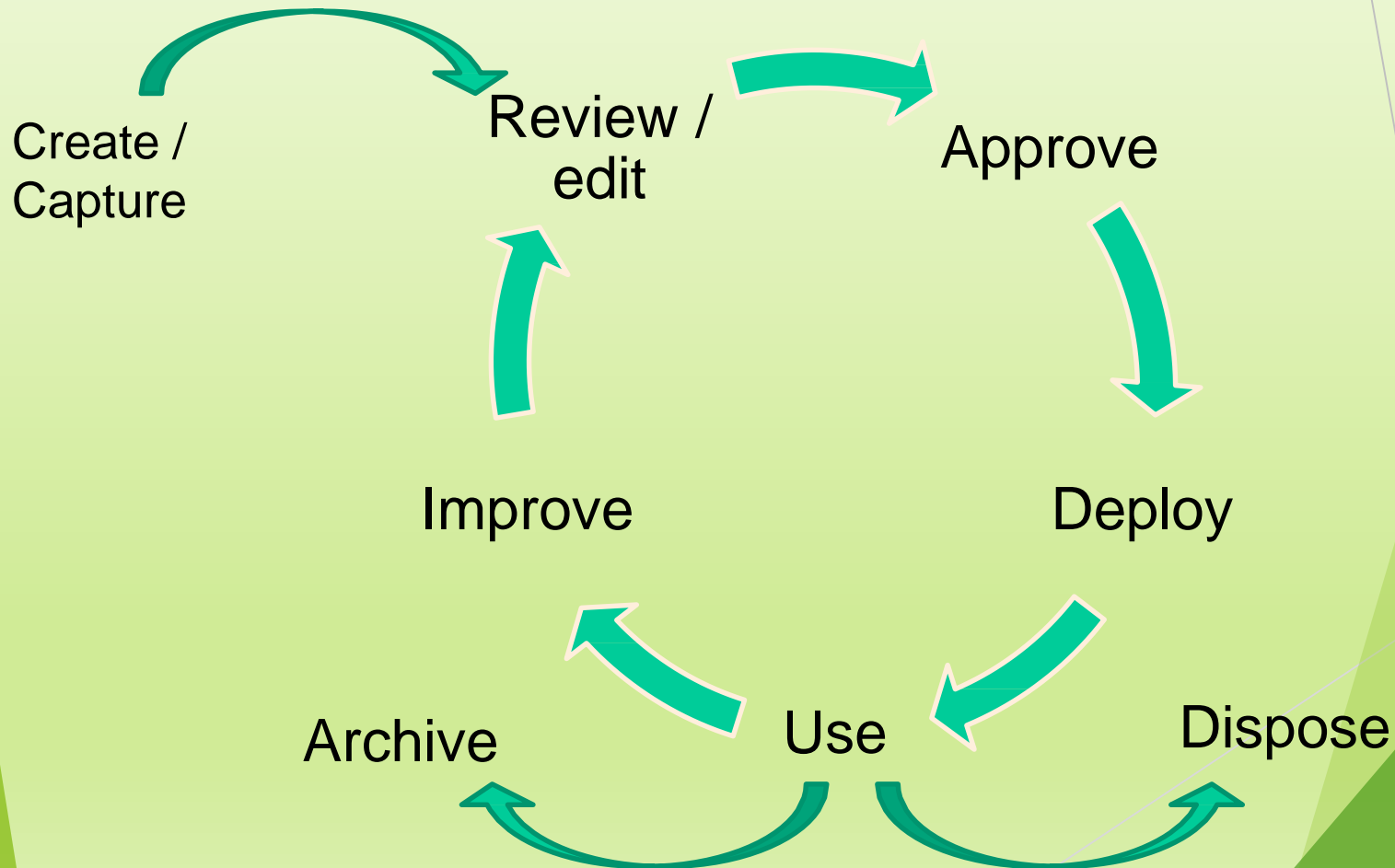
Where do documents come from?

- Internal
  - Projects
  - Processes
  - Management
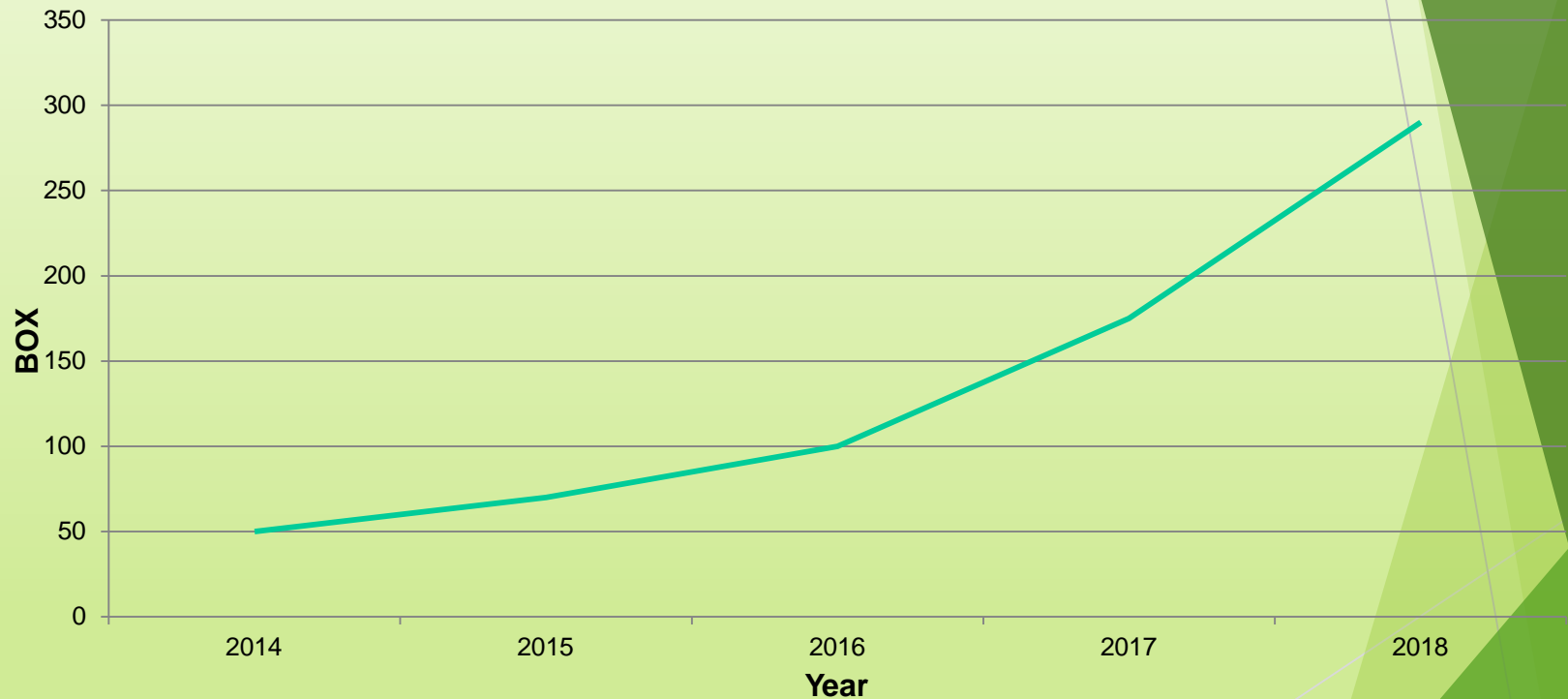- External

Common aspects

- Originator

- Document number

- Revision number

- Document Title

- Date created

- Document size
- Company name

Business challenges for documents

- Volume
- Multiple storage areas
- Multiple formats
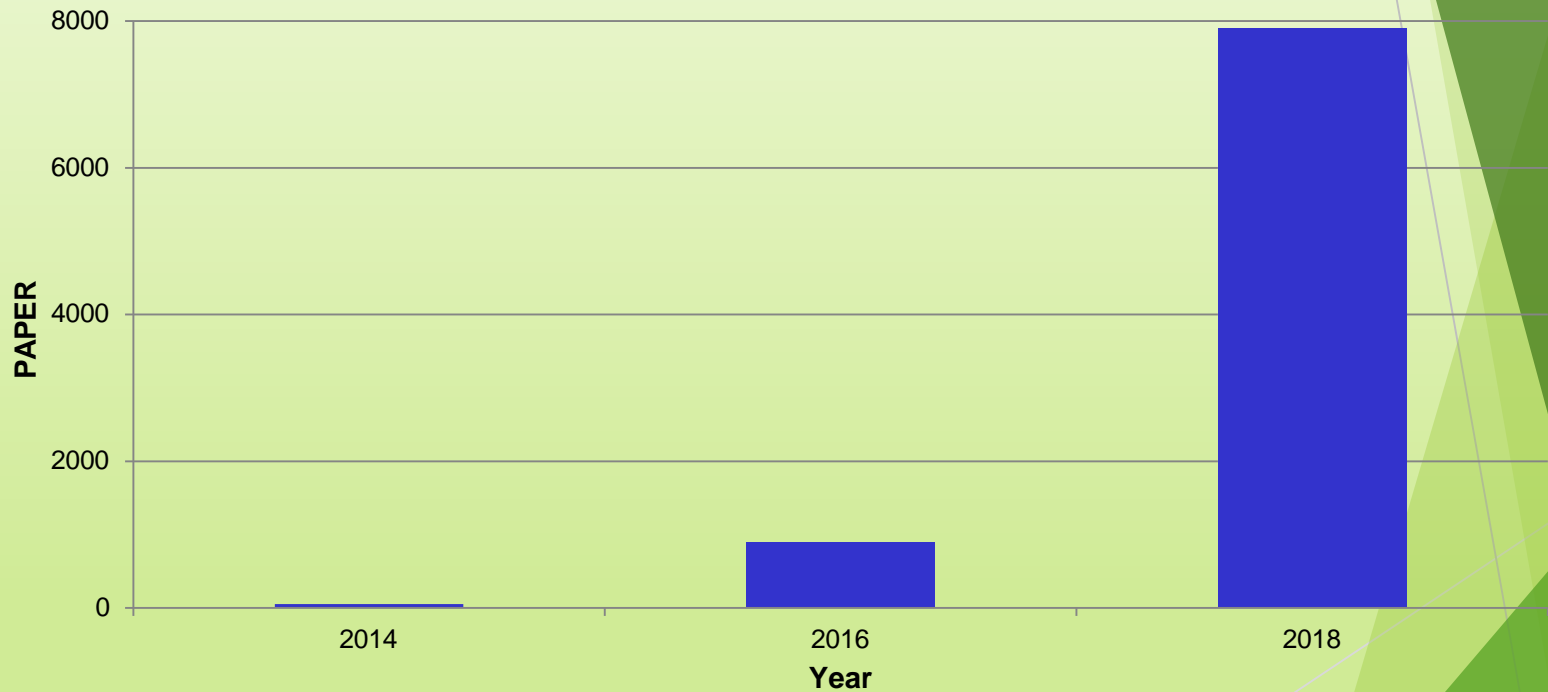- Multiple systems
- People

Volume

New Information Data Storage Summary

Onsite Storage and Offsite Storage

Volume growth

New Information Data Storage Summary

Onsite Storage and Offsite Storage

Storage areas

- Hard-copy
  - Onsite Storage
  - Offsite Storage
- Electronic
  - Network drives
  - Database Systems
  - E-mail
  - Portable media (CD's, External Disk, etc)

Multiple formats

- Paper, photograph
- Microfilm
- Electronic
  - Office formats (any version)
  - Images
  - Databases

Multiple systems

- Standard operating system (network drives)

- Document management systems

- Scanning systems

- Inconsistent protocols (e.g. naming conventions, formats)

Other challenges to managing documents

- Accuracy
- Finding
- Readability

Accuracy

- Latest version
- Correct/relevant version
- Multiple versions

Finding

- Naming
- Locations
- Speed of retrieval
- Security access

Readibility
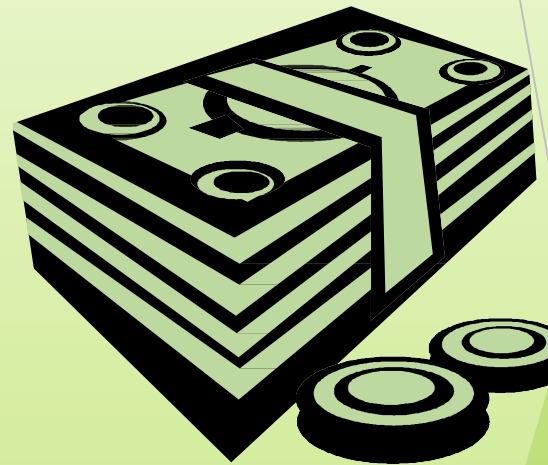
- Format
- Legibility
- Language

Impact of Poor Document Control

- Time
  - Finding
  - Arranging
  - Storing
  - Managing

Impact of Poor Document Control

- Money
  - Storage
  - Finding
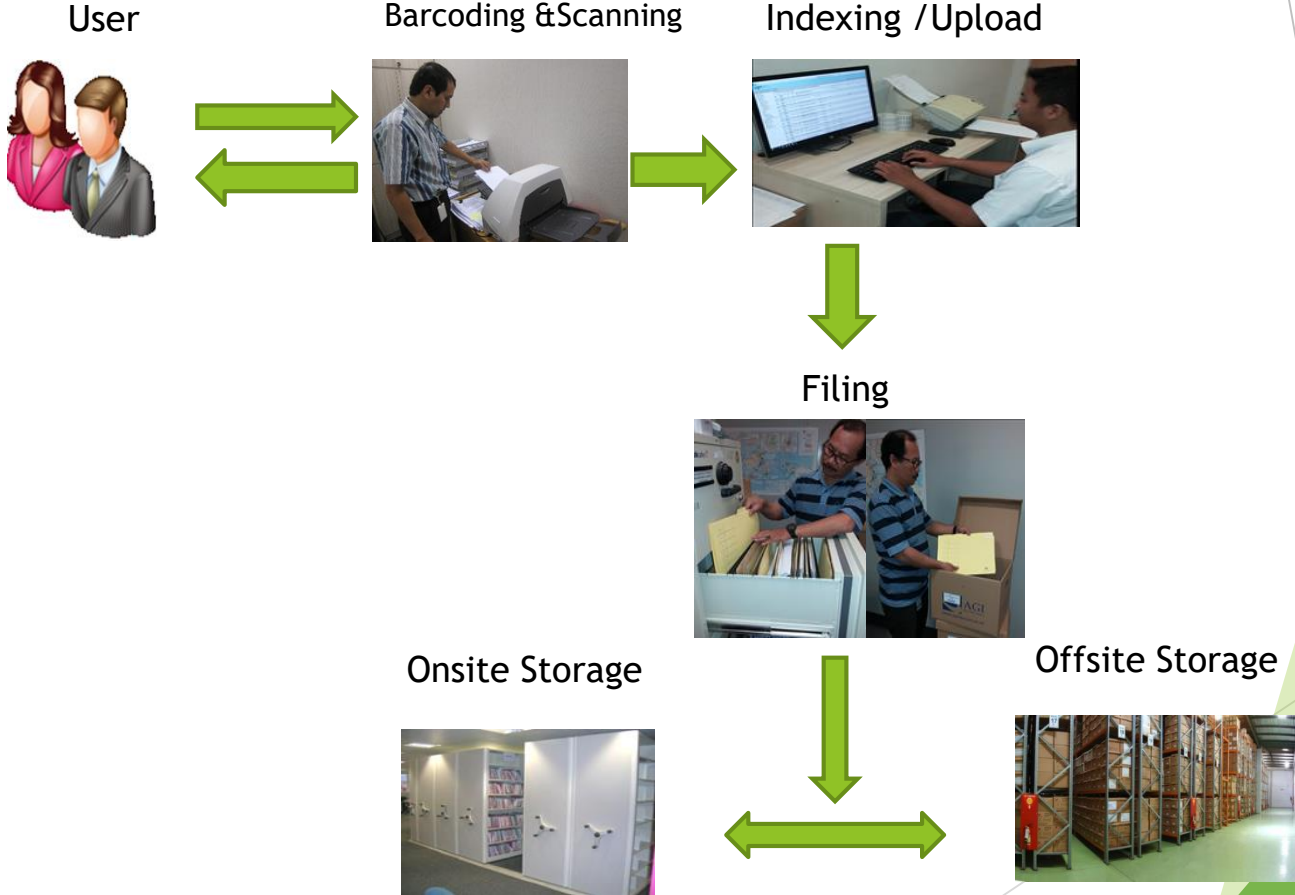 - Producing

Functions of Document Control

In other words…

- Managing documents effectively is a challenge

So…
What do we do?

CATALOGUING PROCESS

User   Barcoding &Scanning   Indexing /Upload

Filing

Onsite Storage   Offsite Storage

CATALOGUING PROCESS

Users :

- Record Creation
- Review
- Edit
- Approve
- Filing

CATALOGUING PROCESS

Barcoding and Scanning :

Barcoding :
- Location / Area
- Character / Numeric
- Total Number
- Print

Scanning :
- Size
- Format Type
- Optical Resolution : 600 dpi
- Simplex or Duplex

CATALOGUING PROCESS

Indexing and Upload :

Indexing :
- List Tracker
- Barcode number
- Company Name
- Title
- Date
- Subject
- Coding By
- Coding Date

Upload :
- Database
- Server

CATALOGUING PROCESS

Filing :

- Location
- Barcode Number
- Box number

Onsite Storage :
- Location / Area
- Shelf Number

Offsite Storage :
- Transmittal
- Box Number

Document Control

- To provide registration of all documents, identifying the whereabouts of not only the original, but also of every copy of every revision of every document, including those which are completed progressively by more than one party.

- To enable the status of any copy of any revision of any document to be determined at any time.

Document Control

- To manage the formal movement of documents by appropriate means to agreed standards

- To provide a reporting system to enable the full history of any document or group of documents or grouping to be listed

Document Control

- Organising documents, data and information in a consistent, standardised and controlled manner

- The set of measures taken to regulate the preparation, review, approval, release, distribution, access, storage, security, alteration, change, withdrawal or disposal of documents

Document Control

- Consists of managing all commercial and technical documents for the company. Implementing processes and tools, providing system reports, maintaining and updating electronic information systems, distributing documents, and ensuring accuracy of all documentation are all essential functions of a document controller. Ensuring regulatory procedures and changes are followed is also an essential part of the job junction.

Challenges & problems with Document Control

- Inconsistent use of other documents such as:
  - forms
  - attachments
  - drawings
  - documents of external origin

Challenges & problems with Document Control

- Approval

- Distribution

- Keeping distribution current

- Too many documents are distributed.
  The system cannot be maintained.

- Lack of control of documents of External Origin.

Benefits of document control

- Information is important. Document control helps manage this important asset.

- Document control supports quality standards

- Ensures accurate information is available as and when needed

Benefits of document control

- Changes controlled and tracked
- Ensures a formal process for the production/revision of documents

The main players

- Document owner
  - Responsible for the document
  - Approves versions
- Document reviewer
  - Review the document
- Document user
  - Anyone who uses the document

The main players

- Document controller
  - Steward of the documents
  - Controls the process

Should all documents be controlled?

- Not all documents have the same business importance
- Identify business need

External documents

- Published outside the organisation and used within the scope of the document control system
  - Troubleshooting or calibration manuals
  - Test procedures, specification, drawings from other organisations
  - Instructions or specifications from suppliers
  - Standards

Work Flow Diagram

SCM Documents
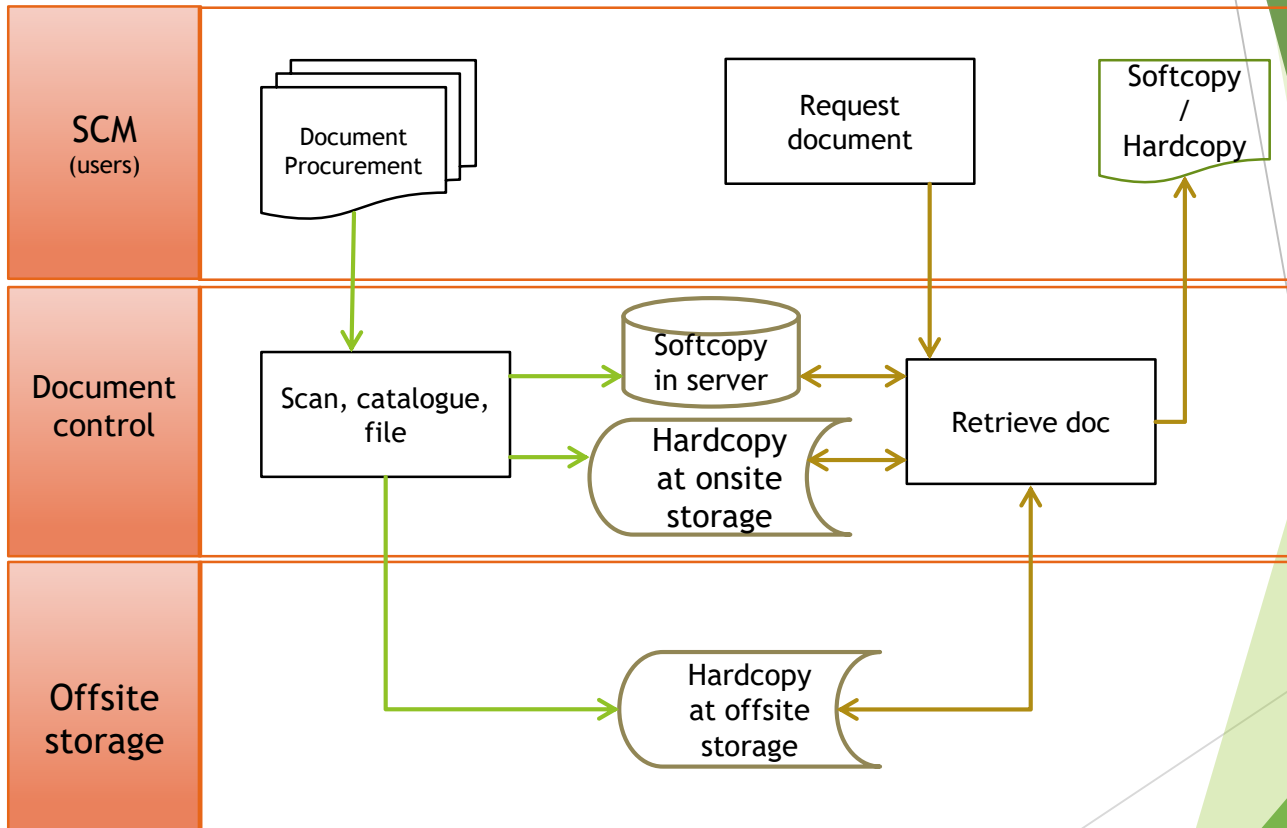
Document Control Functions

Registration

Security

Distribution

Document lifecycle

Release control

Revision control

Audit

Archiving

What is registration?

- Creating and maintaining a register of all controlled documents
- Essentially a list of all the documents that you control

Why is registration important?

- Essential if you are to control a document

- Controlling the allocation of registration identifier

- Provides a register that you refer to of all controlled documents

- Do not circulate documents unless registered

Before you register a document

- Identify missing documents and documents not listed

- Identify incorrectly numbered documents or documents without numbers.

- Fix incorrect revision numbers.

- Deal with damaged documents which might be difficult to copy.

What registers might you need?

- Correspondence
  - Incoming
  - Outgoing
  - Incoming fax
  - Outgoing fax

What to record

- Document originator

- Date received

- Reason issued

- Document number

- Revision number

- Document Title

The Register

- Online system
  - Need a system
  - Easier since information that is stored against the document can flow through to the register

Accuracy/Integrity

- Documents must reflect how they were stored

- Must be confident that the information has not changed

- What are some implications of accuracy not being guaranteed?

Distribution

- Making the document available to the correct people
- Controlling who should see the document
  - During development
  - During approval process
  - Once it is published

Distribution techniques

- Controlled copies
- Identifying potential recipients
- Only distribute copies, not the original

Why?

- Not everyone needs to see all documents
  - Sensitivity
- Many external documents arrive in paper form. Knowing where they are located is critical to controlling the information in them

Reasons for issuing documents

- Different reasons why documents released
  - Preliminary
  - Information
  - Tender
  - Comment, review, approval
  - Construction
  - As Built

- Can affect the recipients

Recipients

- Could vary during the different phases of the document
  - One set for development
  - Another set post-release
  - Another set following archiving (when the document is obsolete)
- What size document is needed (e.g. A0 vs A3)

Controlling distribution

- Workflow

- Ensure access controls are correct

Document Distribution matrix

- Identifies who should receive what documents
- Can have simple codes
  - E – electronic
  - P – paper
  - May have number of copies (e.g. P2 = 2 physical copies)

Distribution List

- Defines the number of copies in existence and their location
- Copies are often numbered, and the numbers matches the locations on the distribution list

Can be elaborate

- Some organisations develop elaborate processes for distributing documents. Often involve "Acknowledgement of receipt" form that needs to be signed and returned, along with obsolete copies of documents

How to distribute

- Manual
  - Notify by e-mail
  - Print and send
- Automated
  - Workflow

Publishing process

Draft

↓

Review & comment

→ → → Consolidate

↓

Approve (responsible person)
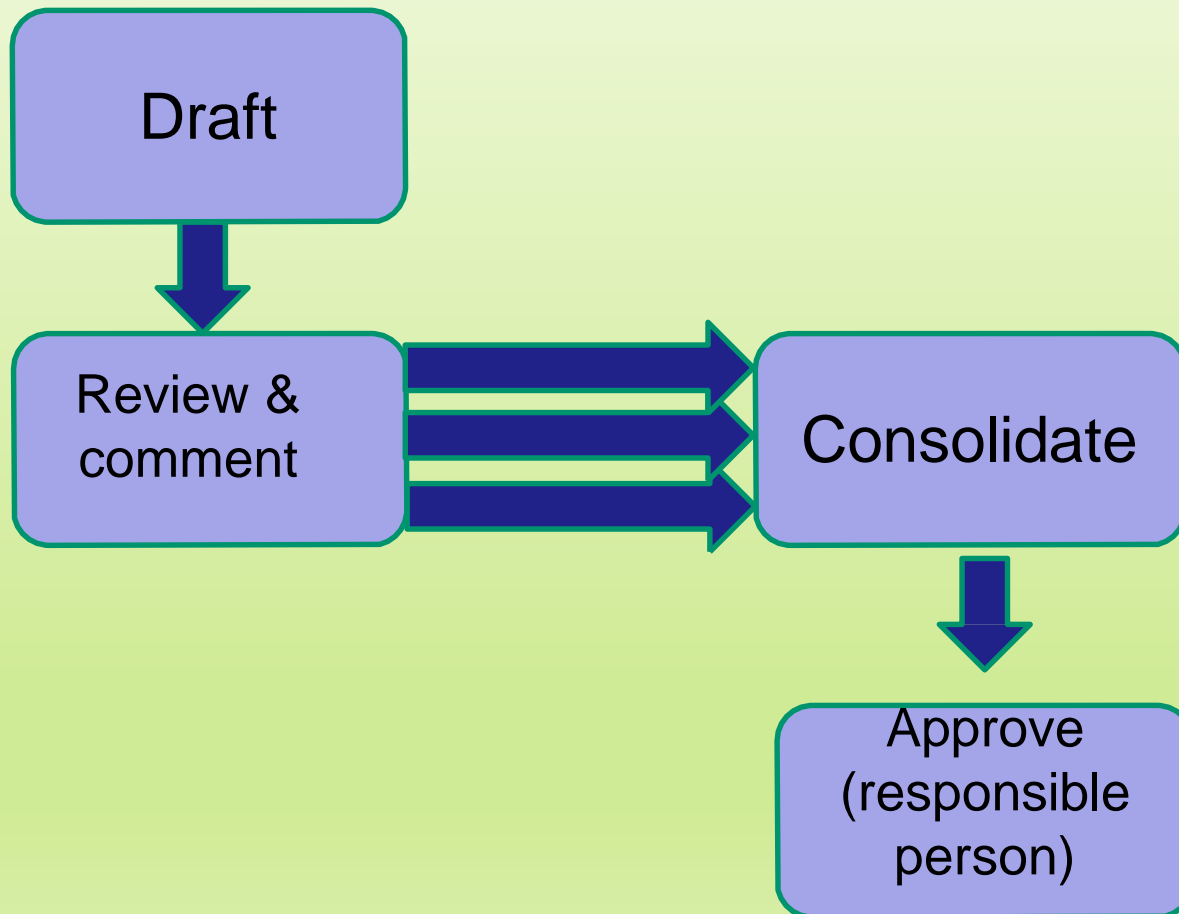
Approval information

- When produced
- Scope of document/drawing
- When reviewed
- When approved
- Who approved
- When issued for construction

Revision Control

- Identifying changes
- Controlling changes
- Audit trail of changes
- Regression capability

Revision Control considerations

- On-demand (i.e. when need to) or regular review and update?

- Status of the document needs to be clear

  - Draft

  - Final

- Version numbering can help

Revision Numbering

- Can be considered to be part of identifying a document
    - Gives the precise version being referred to
- Ideally have same numbering approach for all documents
- In reality, may well have different approaches depending on who sent the document (e.g. 3rd party contractor)

Two main issues

- Media
  - What the information is stored upon
  - Where the information should be stored
- Format
  - Is current format "future" proof?
  - If not, what format to choose

Storing Paper

Microfilm

•Easy to duplicate for back up

•Stable format But

- Unwieldy

- Slow retrieval times

- Not easily computer readable

Electronic

- Locations
  - Multiple storage systems
  - CD, memory stick, C drive, network drive

Electronic

- Systems
  - Multiple storage systems – HR, CAD, etc.

Obsolete documents

- Should these be kept or destroyed?
- Retention period
- Ensuring destruction of all copies
- If kept, then must be identified
- Prevent unintended use
- Retaining these can preserve knowledge

Destroying physical documents

- Consider Security
  - Storage of Records before Disposal
  - Shredding
  - Use of 3rd Parties
- Standards and guidelines
  - BS 15713 - The Secure Destruction of Confidential Material
  - DIN 32757 – specifies security levels for paper shredding

Destroying electronic documents

- Deletion
    - Ensure recovery not simple
- Backups
    - Backups should only be for recovery
        - Hardware failure
        - System failure leading to data corruption
    - Backups are NOT a substitute for long
      term managed storage.

Proses pemusnahan Document

Standards and Regulations

What are standards?

- Common, repeatable, agreed approach to development and delivery of goods, services and processes

Why are they important?

- Supports trade and partnership working at regional, national and international levels

- Framework for quality, consistent, compliant rules, methods, guidelines & inter-operability

Regulations

- An official rule or law that says how something should be done
- Typically country and industry specific
- Penalties for failure to comply

What standards affect you?

- What standards or regulations relating to document control do you need to take account of?

ISO 15489 Series

- Quality management
- A strong driver for organisations to have formal document control

- ISO 15489 includes
    - Document control
    - Records control

So many to choose from

- ISO 3272, ISO 4087, ISO 11506, ISO
- 6199, ISO 8514, ISO 6200, ISO 8126,
- ISO 8127, ISO 8402, ISO 8514, ISO
- 9001, ISO 9923, ISO 15489, ISO 19005,
- ISO 22938, ISO 23081, ISO 29861, ISO
- 14001, IEC 82045

Proving compliance

ISO Standards for the oil & gas industry

Standards in brown issued or revised in 2005

Standards in green are a priority for 2006 issue

Many of these standards are adopted by API, CEN and other recognised standards bodies
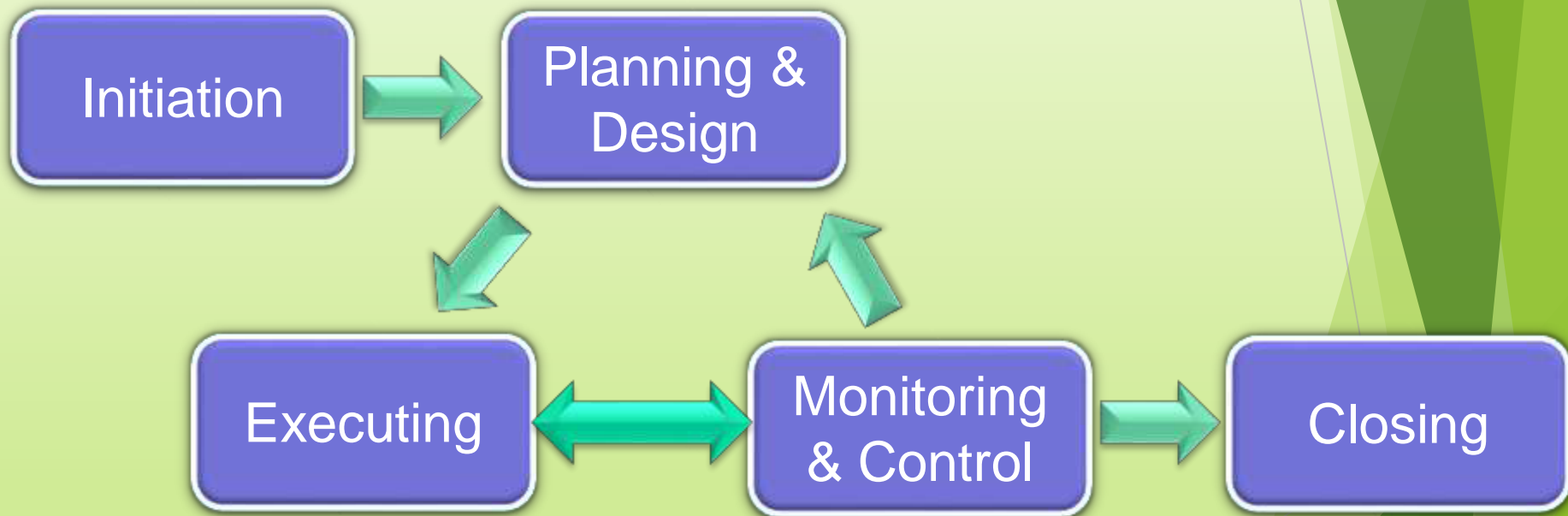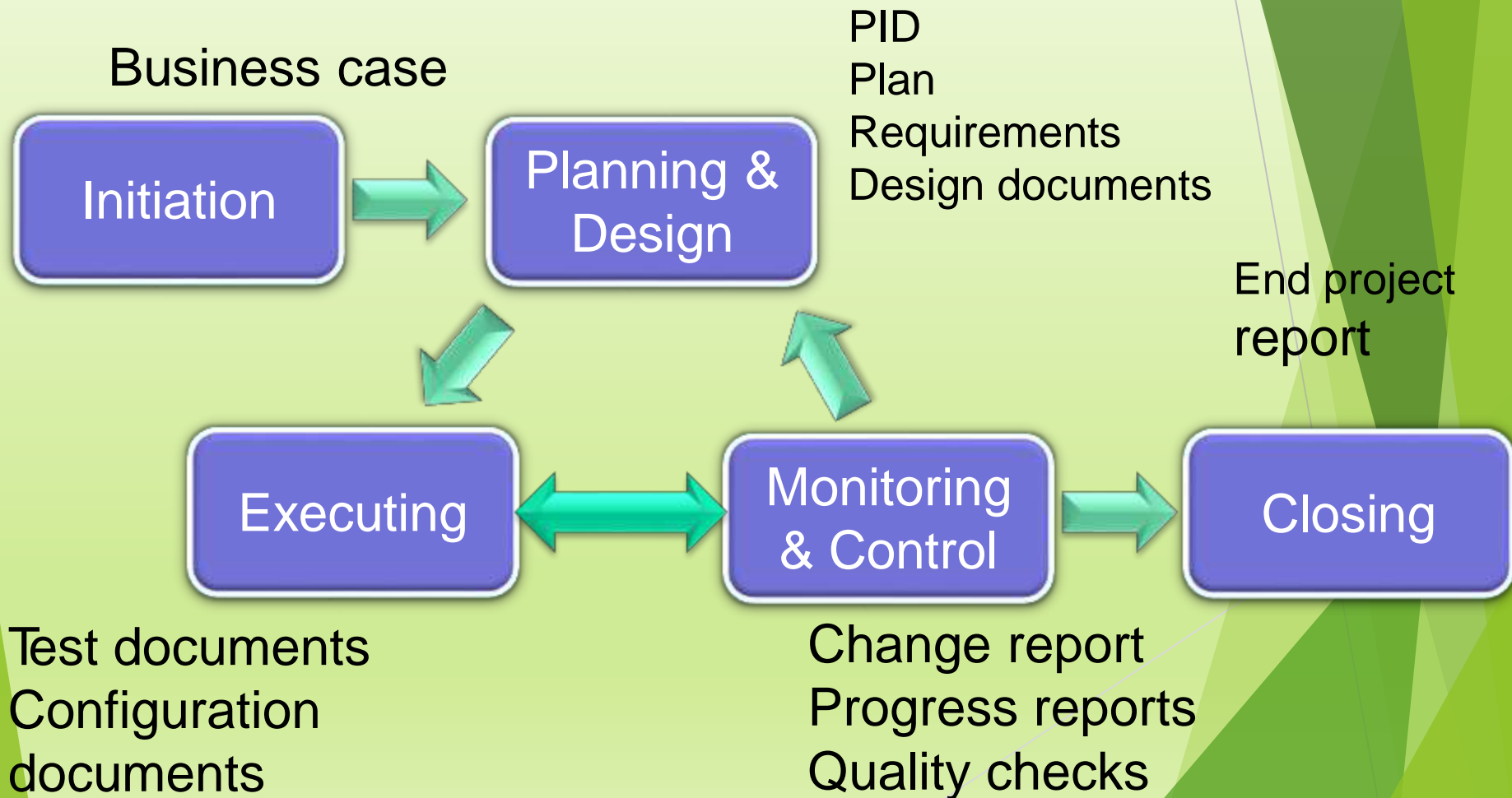
(Rev) = Revision

Engineering Document Deliverables

Deliverables

- Documents are produced as part of regular business

- Varying importance

- Documents that are delivered to/from a 3rd party (e.g.. Client)

- Processes and projects are two activities that produce specific deliverables

Example Deliverables

Business case

PID
Plan
Requirements
Design documents

End project report

Initiation → Planning & Design

Executing ↔ Monitoring & Control → Closing

Test documents
Configuration documents

Change report
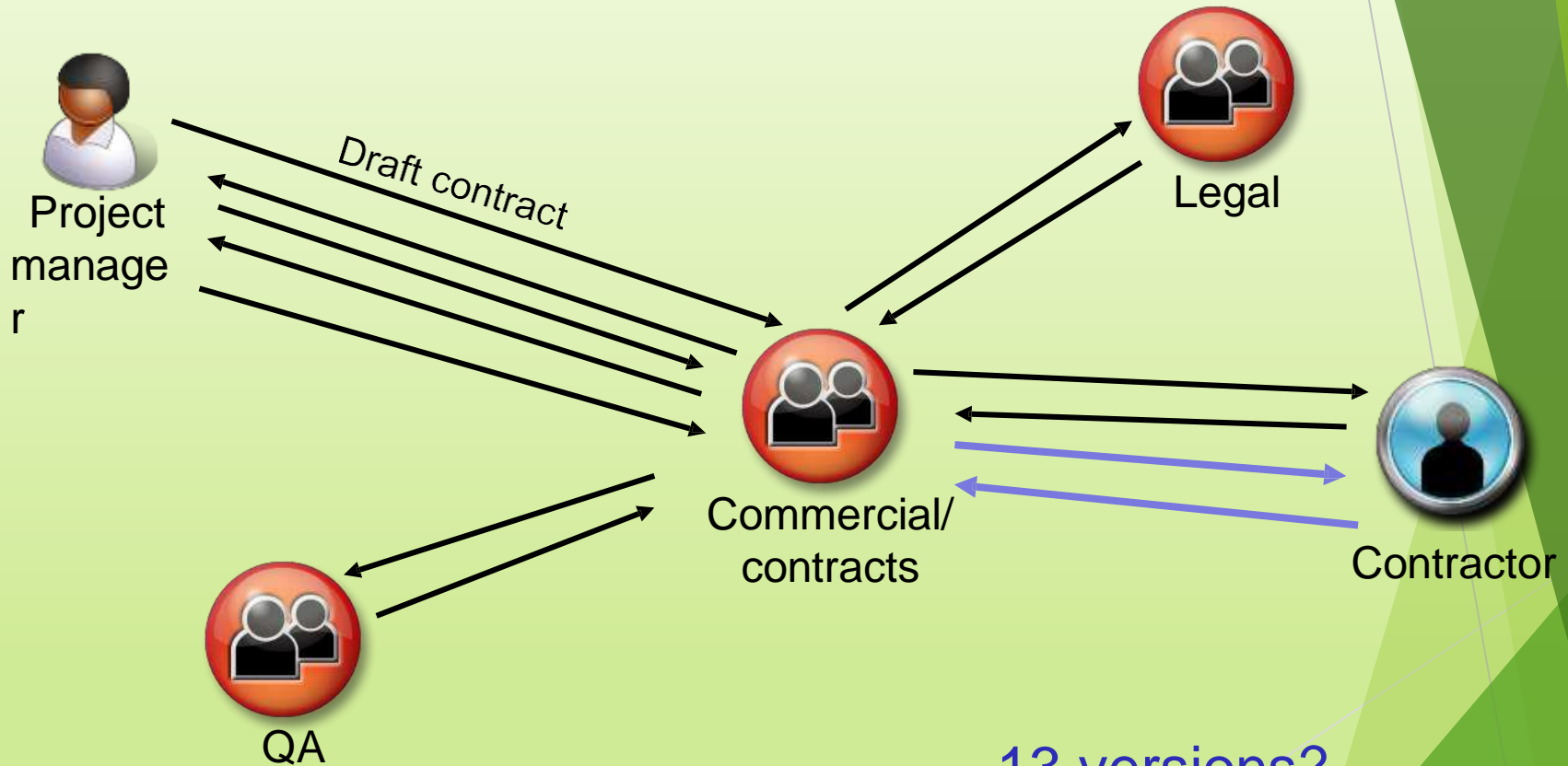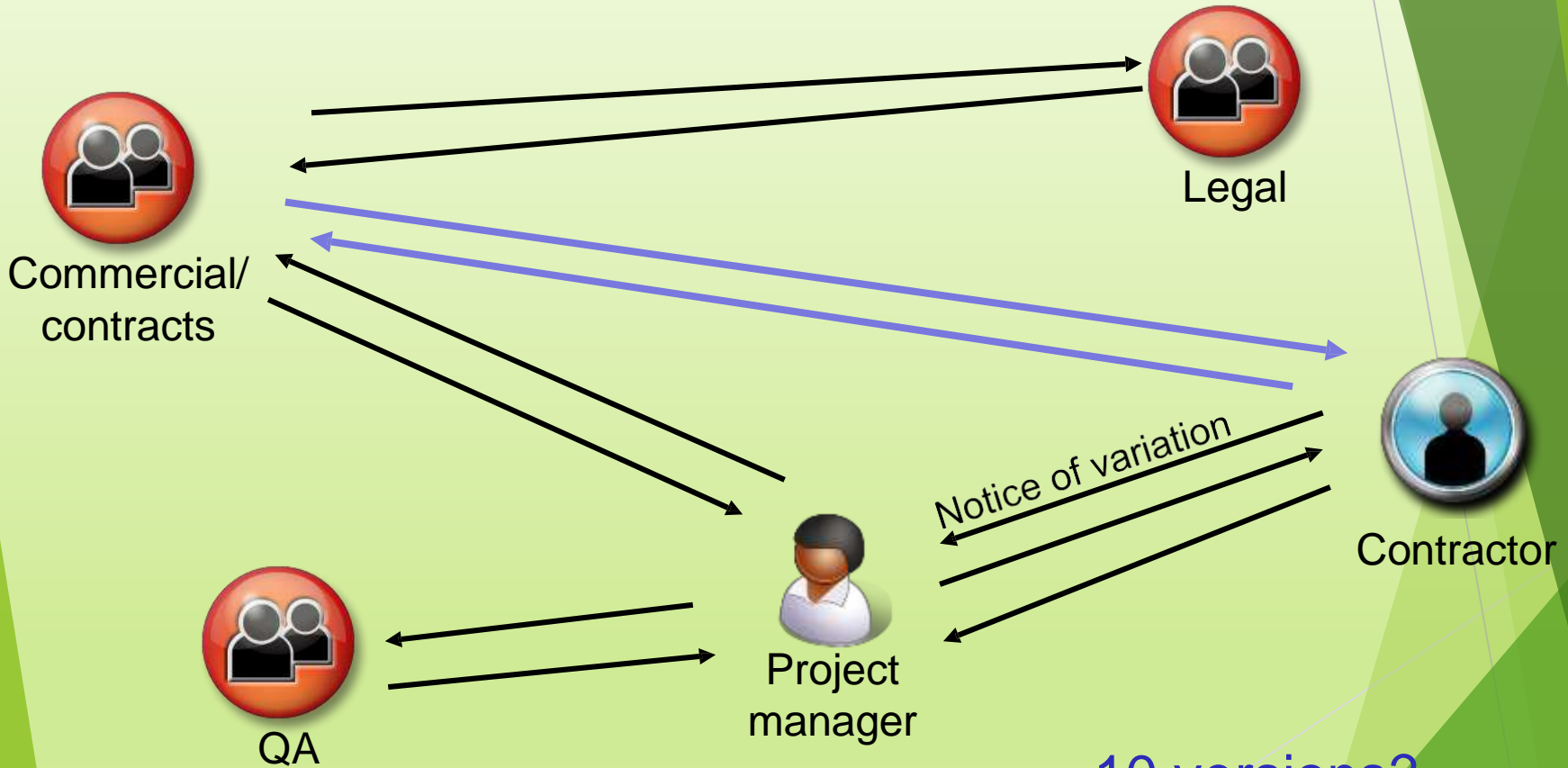Progress reports
Quality checks

Managing Project Deliverables

- Managing deliverables produced during the project must be part of the project scope

- Can follow organisational standards (e.g. naming conventions)

- Could be specific to the project

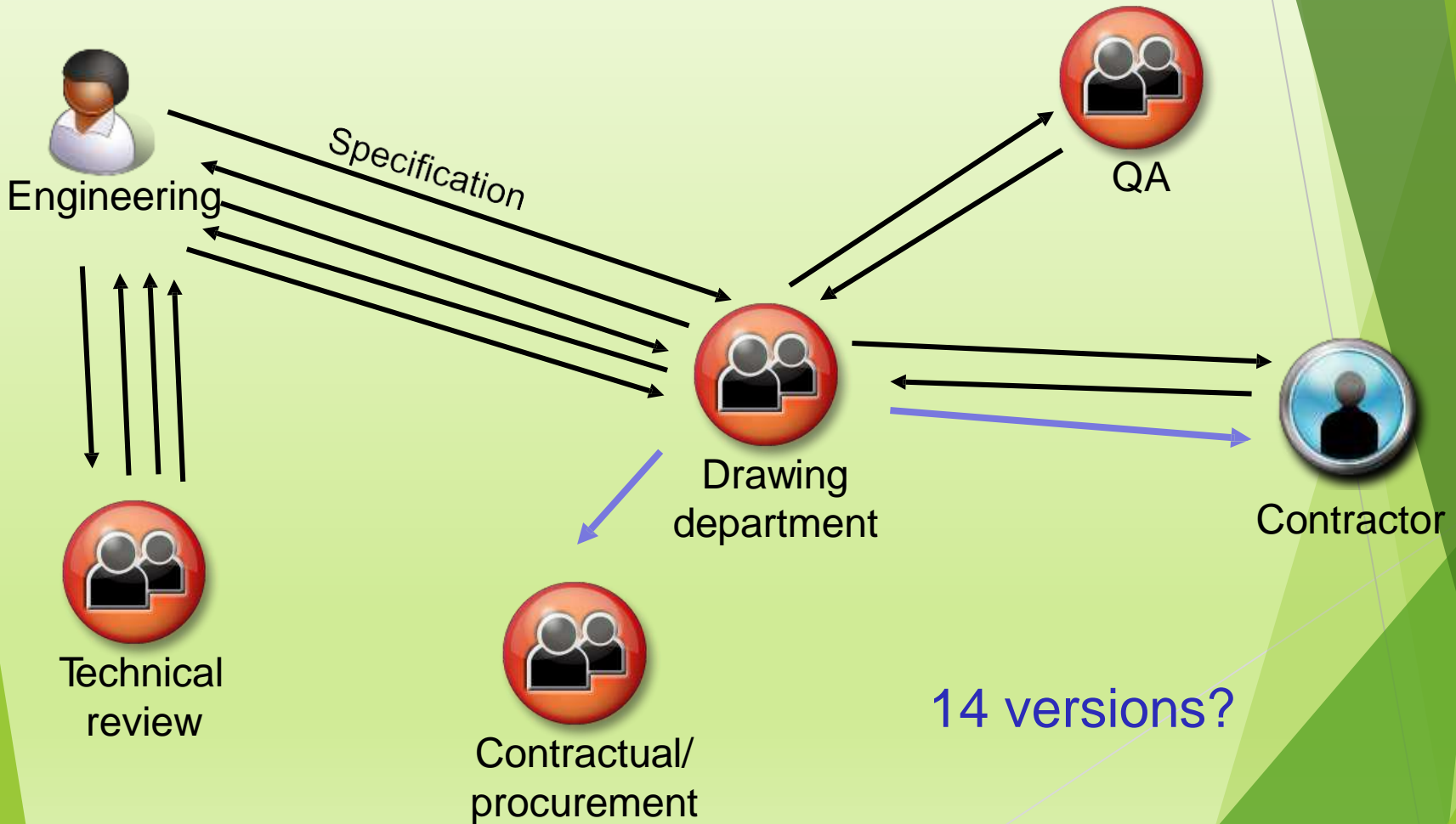- Allow for 3rd-party deliverables

Creating a contract

Amending a contract

Legal

Commercial/
contracts

Notice of variation

Contractor

QA

Project
manager

10 versions?

Creating a drawing

Engineering

Specification

QA

Technical
review

Drawing
department

Contractor

Contractual/
procurement

14 versions?

Document Identification

Why

- Uniquely identify the specific document you want/need

- Otherwise how can you control it (you will not know if you have the correct document)

Identifying documents

- Decide whether or all documents or just some

- Can be free form or coded

- Different approaches

  - Title

  - Document number

  - Other unique identifier

Title naming guidelines

- Title very useful for searching
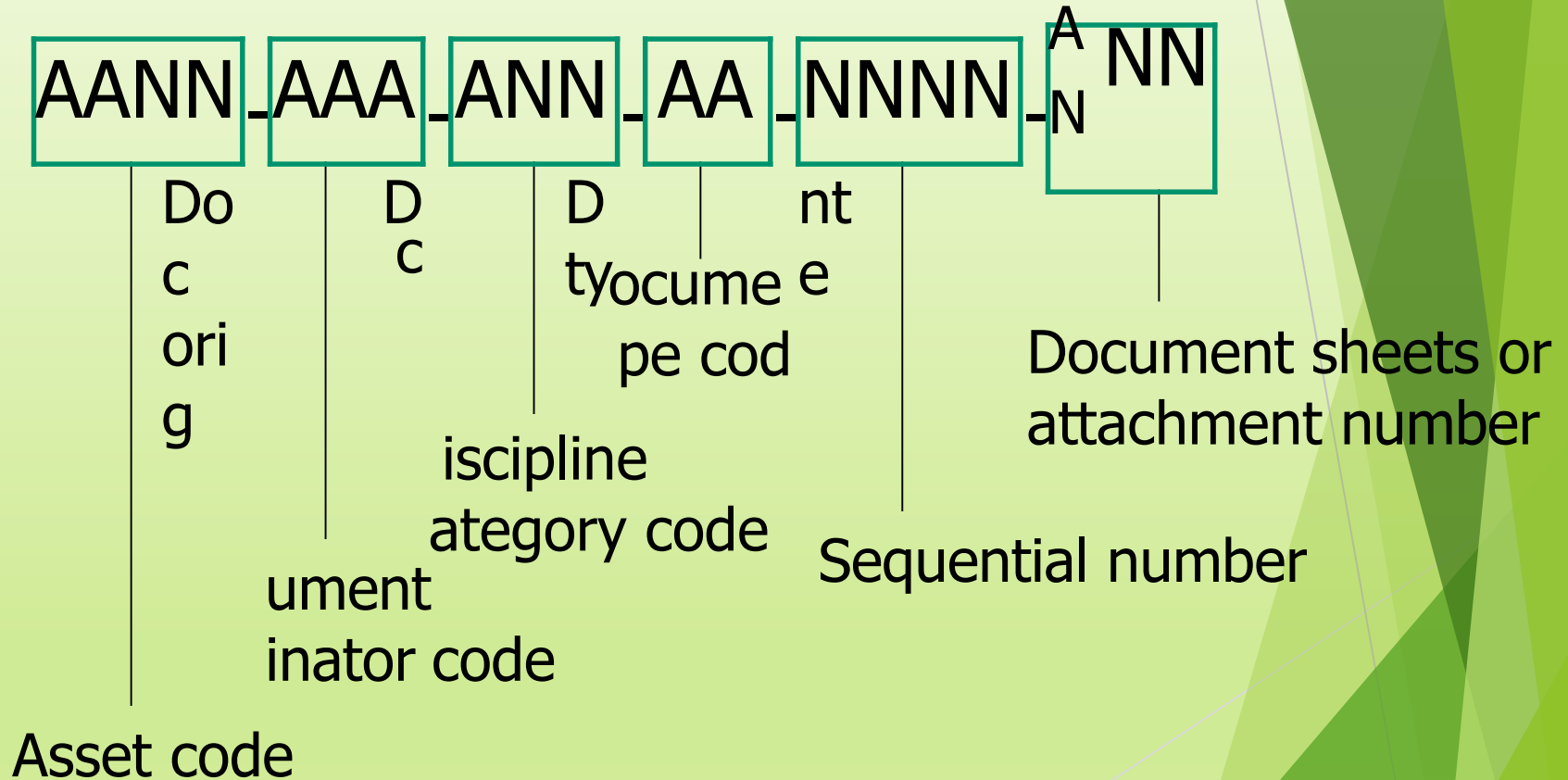- Can have both number and title
- Must have guidelines

Document Number

- Often used to track documents effectively

- Must be unique

- Can have meaning attached to it, or just
- ▶ a unique number

- Probably want to use in conjunction with title

Revision Numbering

- Clearly identifies the status of the document
  - Draft/final
  - Version
- Is also part of identifying a document
  - Can be essential to refer to the actual version, not just the latest

Naming Standards

AANN _ AAA _ ANN _ AA _ NNNN _ AN NN

Asset code

Document originator code

Discipline category code

Document type code

Sequential number

Document sheets or attachment number

Example Document Names

- GE00-KST-K61-GL-0011-000_A01
  - DMS Document Guidance
- GSFC-S-722-93-002-A
  - Goddard Space Flight Centre specification issued 1993, first revision
- POL-FIN-024-004
  - Financial Policy, draft 4

Linking Document name with Filing Structure

- Can consider structured filing for electronic information

- Helps match paper and electronic

- But
  - Can be deep structures
  - Not always easy to find or browse
    - Need search capability

Active Engineering project, number 2-3-18

Active projects
2
3
18
1-Title 3 Documents
1a-Construction Logs
1b-Title 3 Permits
2-Reports
3-Financial

Recording identification information

- Can be in a filename
- But
  - Long
  - Unwieldy
  - Cannot fit all necessary information

Recording identification information

- Header/footer
  - Title
  - Document number
  - Date issued
  - Revision number
  - Page number
  - Total number pages
  - Copyright
  - Disclaimer (period of validity)

Document Types

Exercise

- Take the following document types
  - Procedure
  - Technical drawing
  - Standard
  - Form
- What document control processes are common to these and what are likely to be different?
- In what way?

Templates

What are they?

- Standard format and content
- Can set up templates
  - e.g. MS Word template
- Can lock certain fields

Header and footer

- Version
- Status
- Print Date
- Revision Date
- Page x of y
- Document name/number

Why use templates?

- Ensures consistent look
- Ensures consistent content (although this can be by-passed if someone is not following guidance)
- Supports quality system

Transmittals

What is a Transmittal?

▶ The controlled distribution of formal documents to engineers, sub-contractors, vendors, fabricators, government bodies and other parties in the form of a cover page identifying the information that is included in the contractual documents being delivered.

Purpose

- To provide an audit trail of a document
- To help during distribution
- Important for document traceability
- A contractual document

Storing Transmittals

- These need to be kept.
- They are important and need to be treated as such
- Electronic or manual
- How long to keep?
  - Life of document?

Managing Quality

What is quality?

A measure of excellence or a state of being free from defects, deficiencies and significant variations. It is brought about by strict and consistent commitment to certain standards that achieve uniformity of a product in order to satisfy specific customer or user requirements.

Example structured information gathering

Sampling for auditing compliance

Number of records in batch	Sample size	Reject number
2 – 8	2	1
9 – 15	3	1
16 – 25	5	1
26 – 50	8	1
51 – 90	13	2
91 – 150	20	3
151 – 280	32	4
281 – 500	50	6
501 – 1,200	80	8
1,201 – 3,200	125	11
3,201 – 10,000	200	15
10,001 – 35,000	315	22
35,001 – 150,000	500	22
150,001 – 500,000	800	22
500,001 and over	1,250	22

Industry standard for acceptable level of non-conforming records = 4%

- ISO 2859

Undertaking the Audit

- Method
  - Interviews
  - Observation
  - checking compliance of related data samples
- Areas
  - Organisational and Management Issues
  - Specific processes

Procedures & Specifications

What is a procedure?

- Guidance and instructions on
    - Organisation's policy in this area
    - The process to follow
    - Responsibilities

Why?

- Provides standard way of doing things

- Clarifies what happens and who does it

- Guides people in what needs to be done and how to do it

- An essential part of a Quality Management System (QMS) and a Document Control System

What procedures could exist?

- Project documentation
- Engineering
- Drawing/CAD
- Materials management
- Contract management
- Commercial management

Too many procedures

- Confusion
  - Which one to follow?
- Overlap
- Inconsistency between procedures
- Time consuming to update
  - Need to ensure all procedures are consistent

Designing and Implementing a Document Control System

Components

- "System" refers to everything
  - Processes and activities
  - People
  - Technology

- It's not just technology

Outline Document Control System
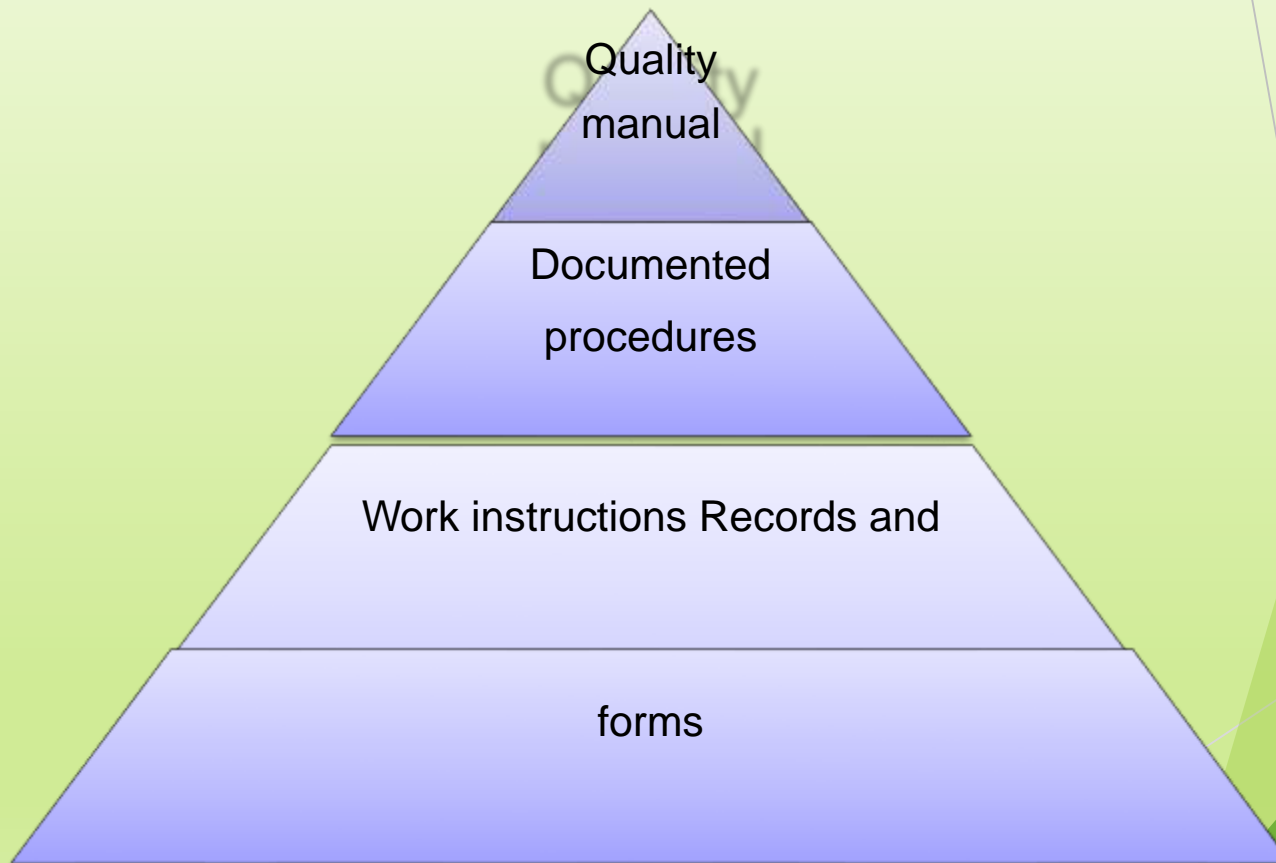
People

- Author

- Reviewer

- Approver

- Recipient/reader

- Auditor

- Document controller

Reviewer
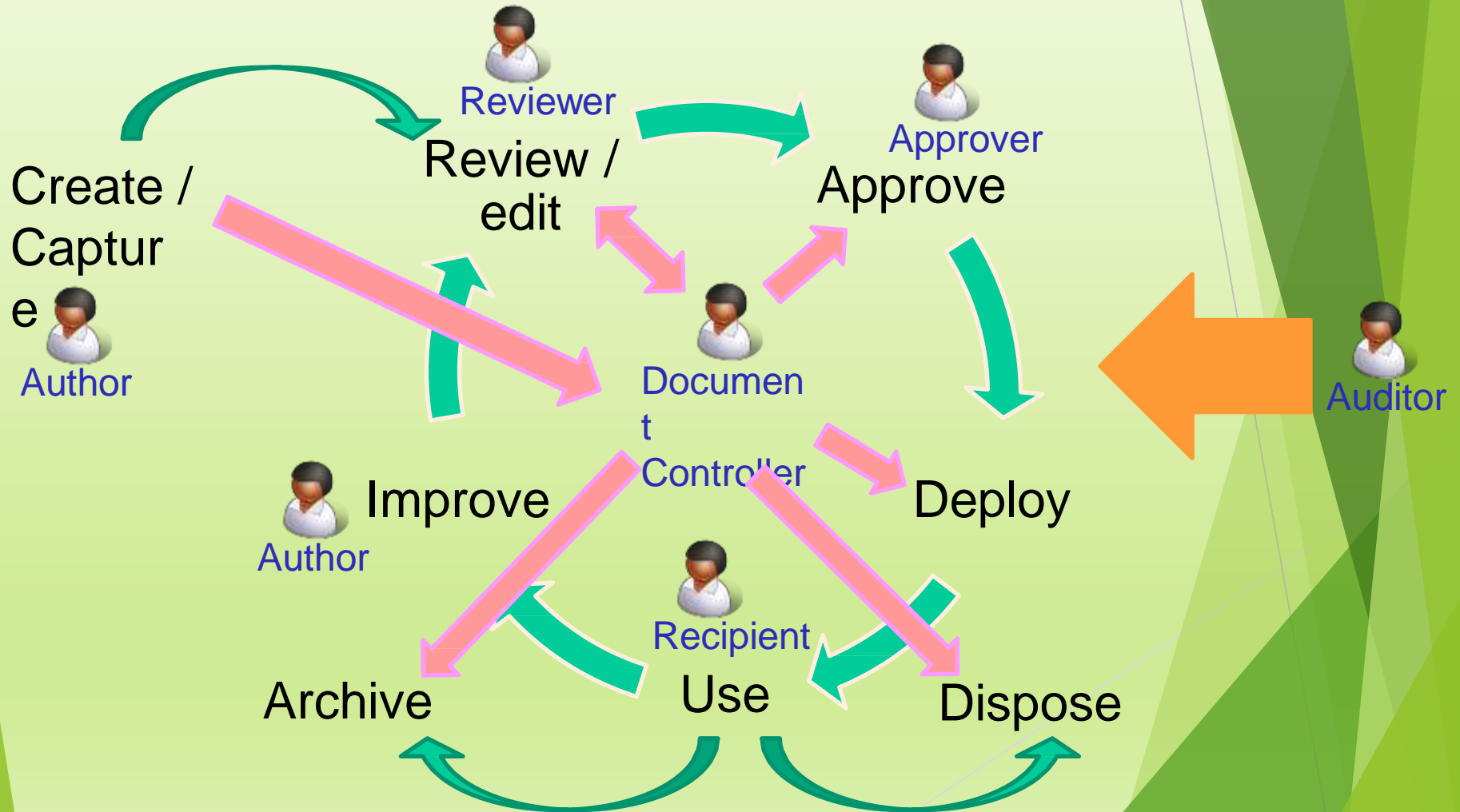
- Reviews the document and makes changes

Approver

- Approves the document as an official version
- May be multiple people

Putting the roles together

All in agreement?

- Can be friction between different parties
- E.g. Document Control and departments
  - Departments don't like being told how to do their work
  - Departments don't always see all information (e.g. confidential)

Technology

- Two basic choices
  - Manual/hardcopy
    - E.g. book, spreadsheet
  - Electronic
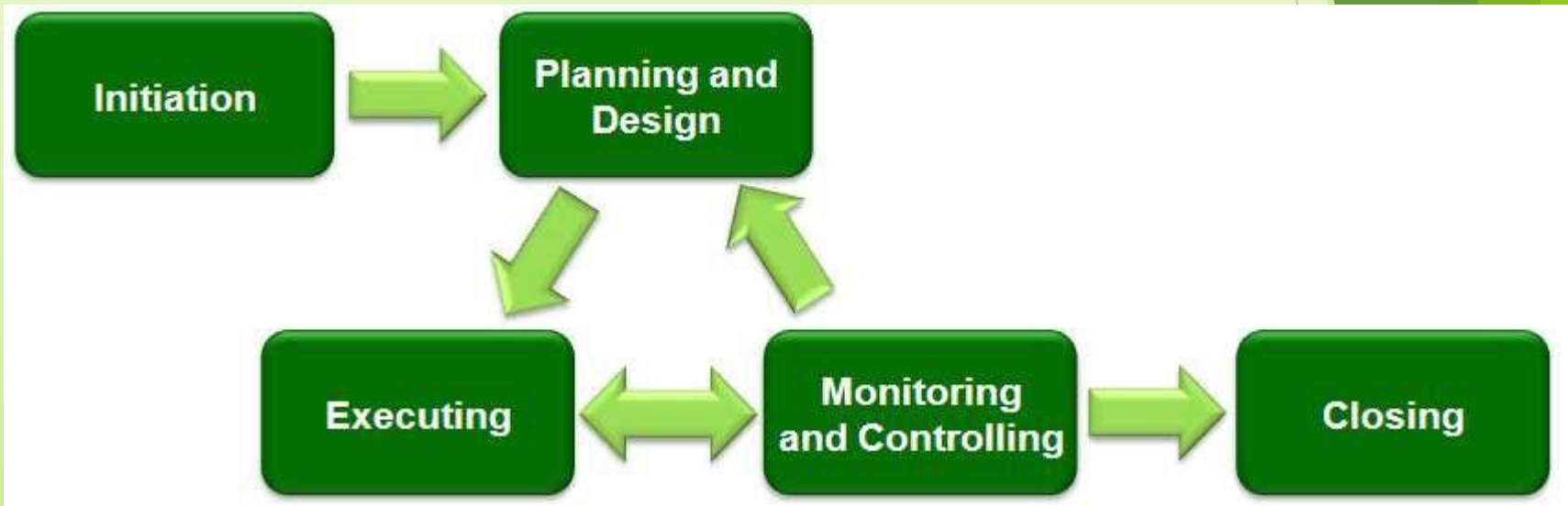   - E.g. online system

Example manual system

- The master electronic documents are stored in "Word".

- A Master list is prepared and kept in "Excel".

- Hard copies are copied on to paper that

  is marked "CONTROLLED".

Implementing a System

Initiate → Requirements → Buy / build → Configure

→ Test → Implement → Operate & maintain
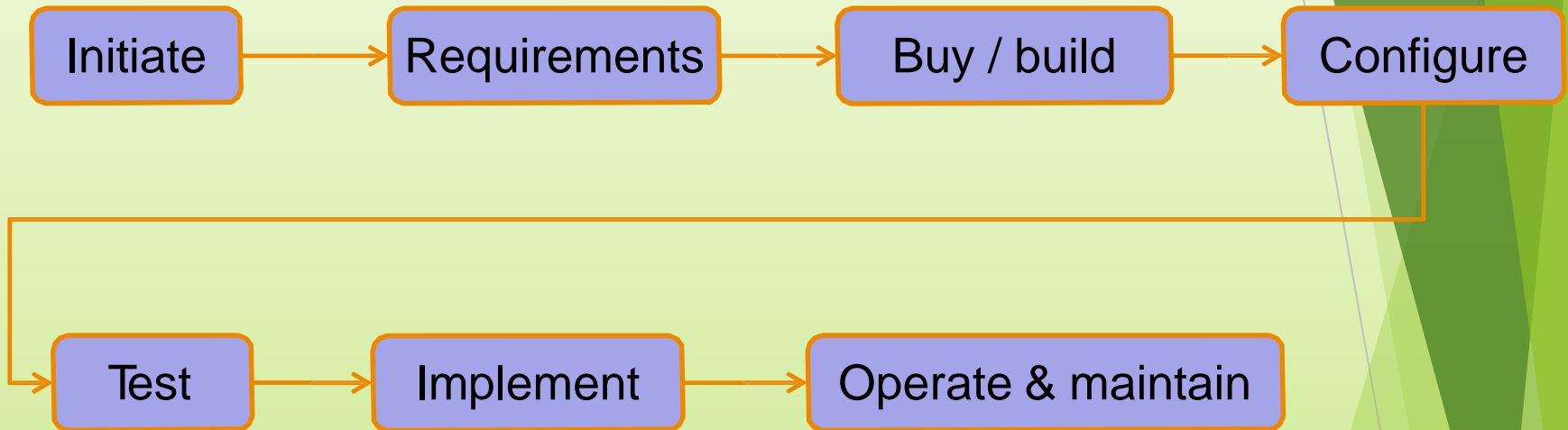
Change management
Project management

Project management

Document & Records Management Systems

How document control relates to other areas

- Document management

  - Create, edit, search

- Records management

  - Maintaining information for its lifetime

- E-mail management

  - Deal with e-mails

  - Archives

Records Management

- The discipline and practices to manage records for their lifetime

Records Management defined

- "The field of management responsible for the **efficient** and **systematic control** of the **creation, receipt, maintenance, use** and **disposition** of **records**, including the processes for capturing and maintaining **evidence** of and **information** about **business activities** and **transactions** in the form of records."

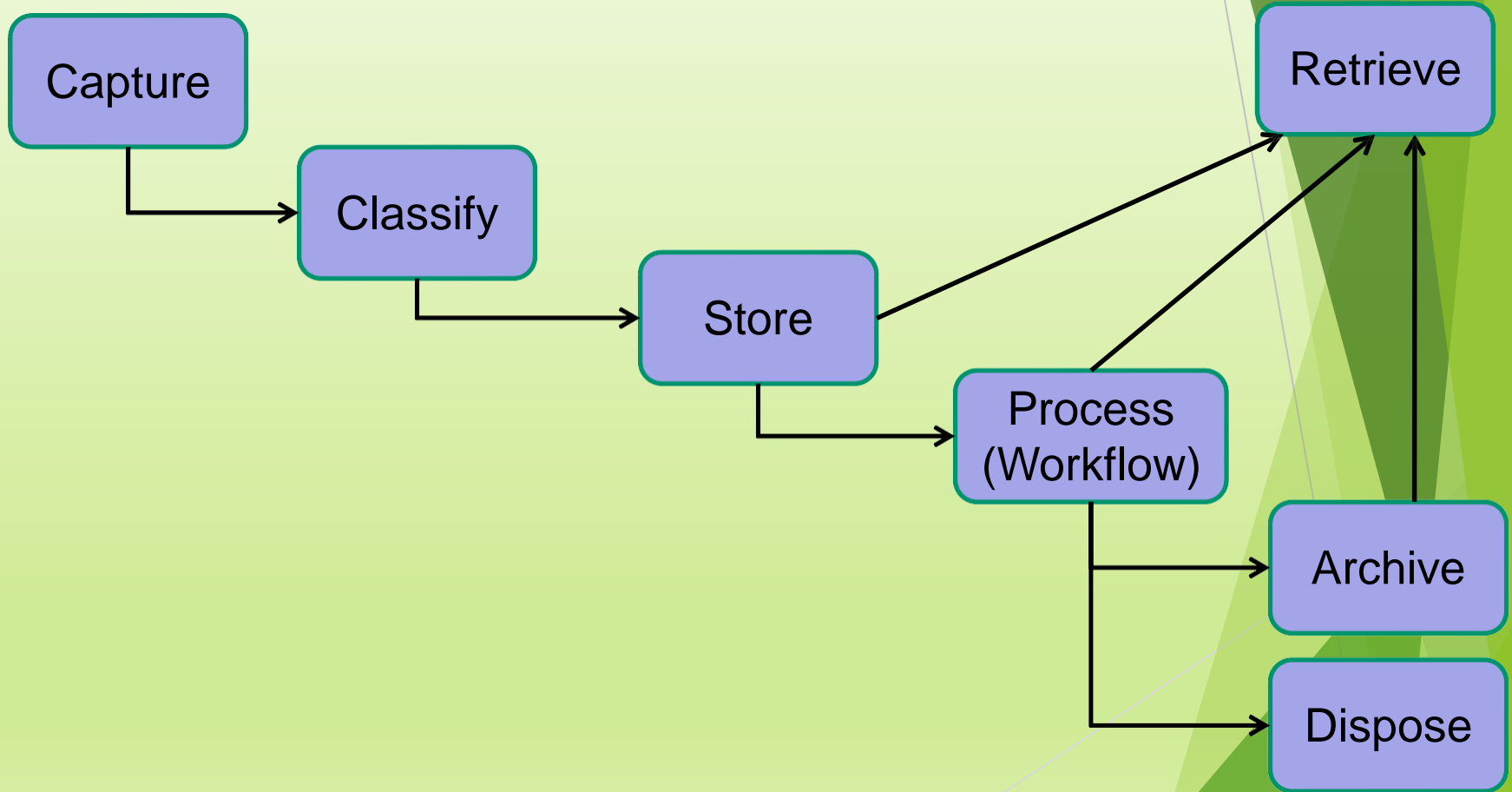- *ISO 15489: 2001 International Standard for Records Management*

Why do Records Management?

- Compliance
- Reduce risk
- Reduce liability

What is An EDRMS?

- Electronic Document and Records Management System

- Manages documents and records throughout the information lifecycle

Functions

Information Lifecycle

EDMS

ERMS

Can you use an EDRMS for Document Control?

- EDRMS
  - Whole lifecycle
- Not focused on tracking individual documents
 - But could adapt
- Wider scope
  - Fileplan

What's different to Document Control?

- Document Control focuses on controlling individual documents

- Document Control not always applied to all documents.

- DRM manages all information, not just controlled documents

- DRM will deal with groups of documents and records

Can you use an EDRMS for Document Control?

- Distribution workflow
- Not specifically provided
- Often have a workflow product/module

EDRMS?
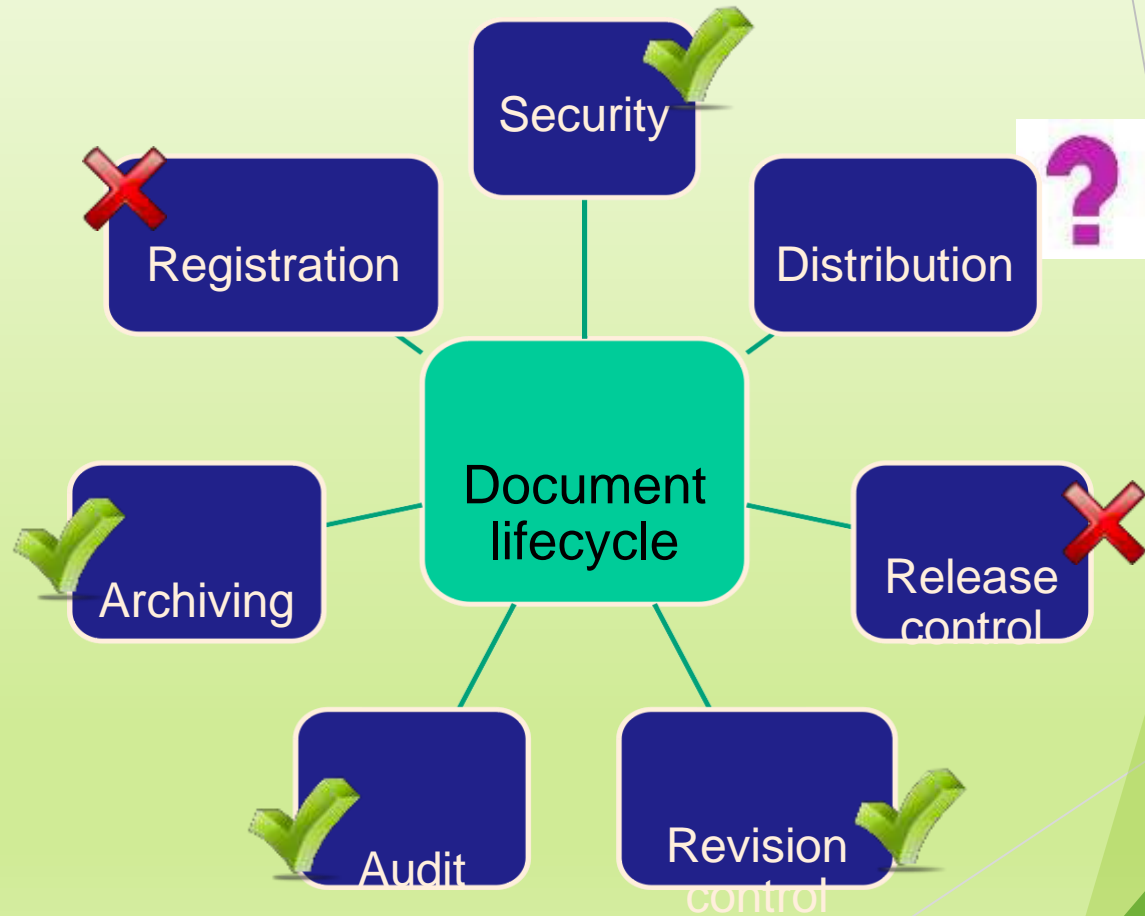
So?

- Could consider using EDRMS
  - If you have already one
  - If need Document Control and to improve overall information management
- May need configuring
- May need additional modules
- Be requirements driven

Thank you