Processes and procedures

William Siemons

Processes and procedures

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- Process levels.
- Process description and procedures.
- Process documentation.
- Control in industry (example).
- Control in administration (with example).
- On top…
- Audits and reviews.
- Embedding.

Airplane turn around

Airplane turn around

Off board passengers	Off board crew	Off board luggage

Attach PSU	Fuel airplane	Clean airplane	Replenish catering

On board luggage	On board crew	On board passengers

Process or **Building block**

Airplane turn around

Sample – Replenish catering

Replenish catering			
Input Triggers	Approval to start from ground control. Trolleys with fresh food and drinks for next flight		
Output Results	Trolleys with trash previous flight. Report that catering is finished.		

Replenish catering

Roles & responsibilities		Ground control	Catering services
	Approve start	AR	I
	Log duration	AR	R
	Pick up trolleys		AR
	Deliver trolleys		AR

Performance indicator	How fast catering replenishes an airplane. Number of airplanes a day.
Resources	Truck, 2 staff, trolleys

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Airplane turn around

Sample – Replenish catering

Replenish catering

Ground control	Catering service
Authorize	Drive to plane
	Off board old trolleys
	On board fresh trolleys
Confirm & log	Report catering finished
	Drive back to catering offices

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Airplane turn around

Two views

KPI **Manage** **Roles and responsibilities**

Input **Output**

Resources
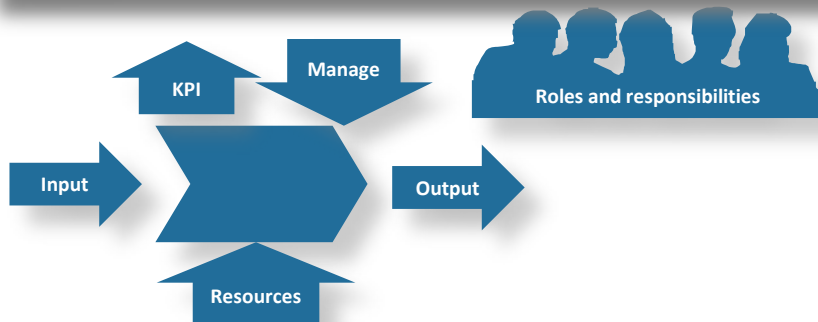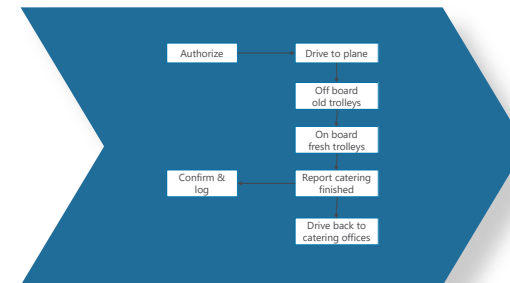
Outside (external) view / Black box

	Replenish catering	
Input Triggers	Approval to start from ground control. Trolleys with fresh food and drinks for next flight	

		Ground control	Catering services
Roles & responsibilities	Approve start	AR	I
	Log duration	AR	R
	Pick up trolleys		AR
	Deliver trolleys		AR

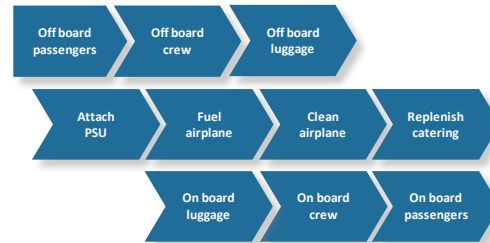|	
Output Results	Trolleys with trash previous flight. Report that catering is finished.
Performance indicator	How fast catering replenishes an airplane. Number of airplanes a day.
Resources	Truck, 2 staff, trolleys

Inside (internal) view / White box

Ground control	Catering service
Authorize	Drive to plane
	Off board old trolleys
	On board fresh trolleys
Confirm & log	Report catering finished
	Drive back to catering offices

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Process levels

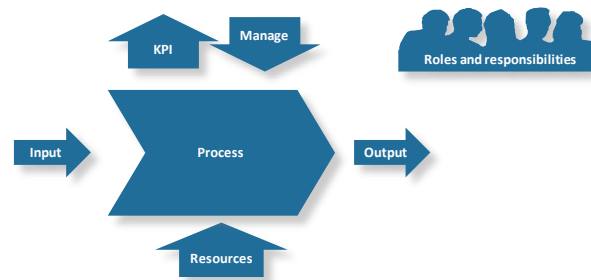Siemons.Info
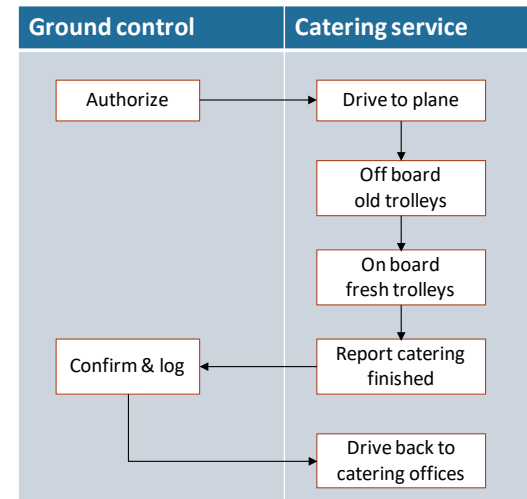
Process levels

Levels of detail

Level 1 – Process maps		Organisation
Level 2 – Process description		Organisation Unit
Level 3 – procedure(s)		Individuals

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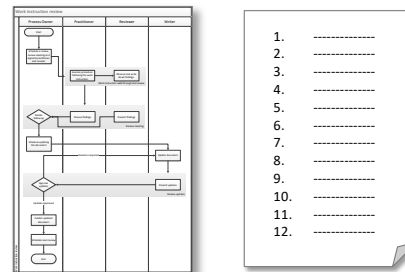
Process
and
Procedure…

Process and procedure

A **process** is a set of interrelated or interacting **activities** which transforms **inputs** into **outputs**   What
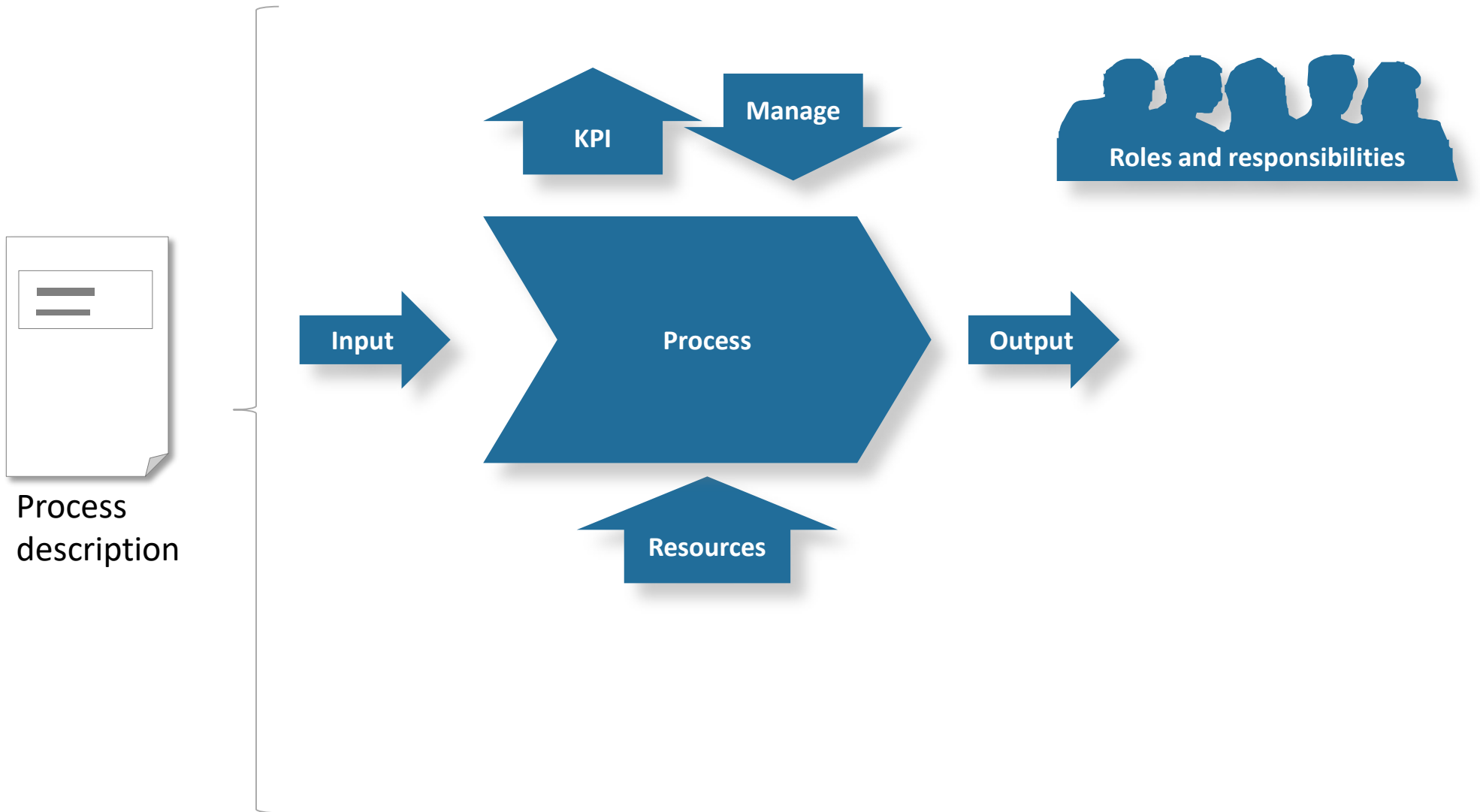
A **procedure** is specified way to **carry out** an activity (or a process)   How

(ISO9000)

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Process and procedure

Process description

Process description

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Process and procedure

Define inputs and outputs

- Start with defining a **list of outputs / results** that the process delivers.
- Derive the **list of inputs** that are required and **triggers** that initiate activities (like e.g. an incoming request).
- Commonly this is documented as a table with short names and descriptions.
- System is usually not a role in the RACI and not an originator or receiver from an input or output. (unless it is A.I.)

Process level

From	Input
Customer	Request form

Output	To
Fulfilled request	Customer

Activity level

In/Out/Update	What	From	To	Description
Input	Request form	Supervisor		The form the supervisor must fill in to request a laptop.
Register	Request form			The register of all pending and closed requests.
Output	Confirmation	Case manager	Supervisor	Confirmation to supervisor that request is approved.
Output	Rejection	Case manager	Supervisor	Feedback to supervisor that request is rejected.
Output	Deployment assignment	Case manager	Engineer	Assignment to deploy a laptop to the user.

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Process and procedure

Define activities: Verb and Noun

- Use **verb** (action word) and **noun** (things) to define actions.
  This allows for easy validation.

- Nouns that should have at least one action related to it:
  - Each output / result.
  - Each input.

- For a noun the activities listed should represent all required steps.
  By using verbs it is easier to detect any missing actions.
  Start usually requires a *stop*, an *open* requires a *close*.

- Report, Account for, Consult and Inform should translate to RACI and not activities.

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Process and procedure

Define roles

Role	Description
Process owner	Is accountable for ensuring the process is fit for purpose and process is performed as agreed and documented.
Process manager	Is accountable for operational (day to day) management of the process.
Process practitioner	Is responsible for carrying out one or more process activities.

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Process and procedure

Define responsibilities (RACI)

Activity	Role	Process Owner	Process Manager	Process Practitioner
Define	Strategy	AR		
Define	Process	AR	R	
Review	Process	AR	R	
Provide	Resources	AR	C	
Manage	Resources		AR	
Appoint	Roles		AR	
Define	KPIs (process performance)	AR		
Monitor & report	KPIs (process performance)	I	AR	
Carry out	Activities		A	R
Update	Records		A	R
…				

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Process and procedure

RACI

	Explanation	*Rules for a RACI table*
Responsible	Contributing to part or all of the work.	At least one or more persons are responsible (1 or more Rs per activity).
Accountable	Overall responsible and answering for the activity.	One and only one person is accountable. (Allways 1 A per activity)
Consult	Giving an opinion (which may be overruled by Accountable).	There may be one or more persons that must be consulted (0,1 or more Cs per activity)
Inform	People who need to be informed on progress/results.	There may be one or more persons that must be informed (0,1 or more Cs per activity)

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Process and procedure

Define Performance Indicators

- Volume.
  - Number of requests coming in.
  - Time spent per request.

- Quality
  - Percentage of requests fulfilled in time.
  - Percentage of requests without issues.

- Exceptions
  - Percentage of requests that had issues.

Good practice:
Focus on 3-5
Key Performance Indicators
to manage the process.

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Process and procedure

Procedure
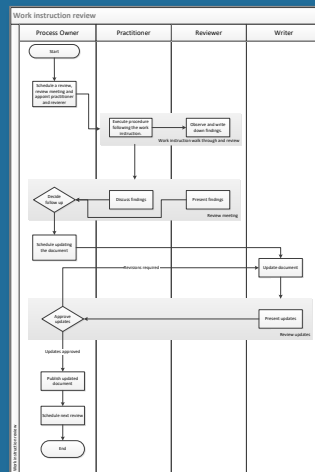
Flow chart

Work instruction

Write down how you (should) work.
Then work as you have written it down.

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Process and procedure

6 Ws

	Process (L2)	Procedure (L3)
Why	Goals, (control) objectives, maturity levels.	
What	KPIs Activities. Inputs and outputs	Inputs and outputs
Who	RACI Roles	Roles in swim lanes
When	KPIs / Service levels	Sequence in flow chart / steps
Where		In swim lanes / tables if applicable.
How		Tasks, actions in e.g. flow chart with steps in chronological order

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Process and procedure

Process description

KPI

Manage

Activity
Activity
Activity

Input

Process

Activity
Activity
Activity

Output

Resources

Activity
Activity
Activity

Activity

Activity
Activity

1. ----------------
2. ----------------
3. ----------------
4. ----------------
5. ----------------
6. ----------------
7. ----------------
8. ----------------
9. ----------------
10. ----------------
11. ----------------
12. ----------------
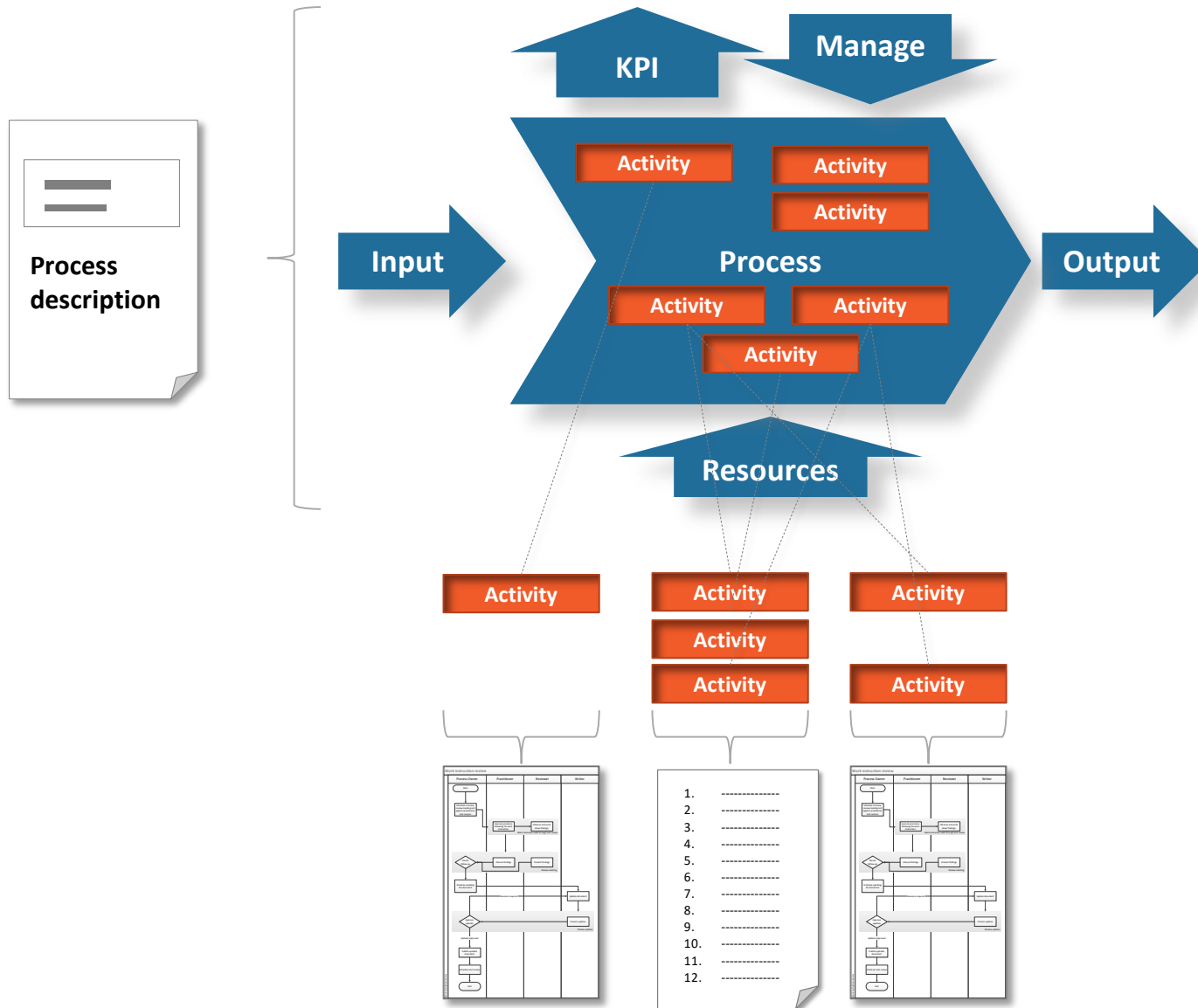
How to perform one or more (parts of) activities is described in a procedure.

The procedure describes e.g.:
- All the tasks for a department. (step-document).
- All tasks in an activity for roles involved (flow chart with swimlanes).

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Process and procedure

Impact of changes on process and/or procedure

Sample change	Change process?	Create new or change existing procedure?
Transition to a new computersystem	No	Yes
Open a new office / branche in another country	No	Yes (e.g. local language).
Outsource activities to another unit or company	No	Yes
Improve efficiency	No	Yes
Improve quality	No	Yes
New product or service (in existing family)	No	Assess
New product or service family	Assess	Likely

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Process documentation

Process documentation

Process description and procedures

Process
description

For activities

Flow chart(s)

Copy into

procedure(s)

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Process documentation

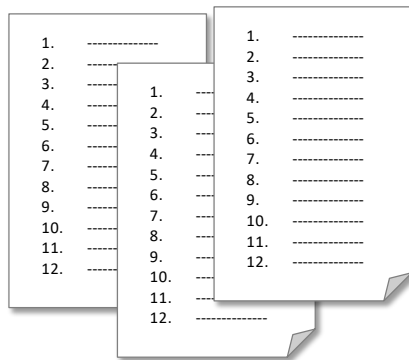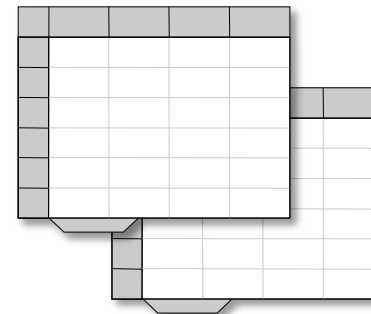## Forms, logs, registers, audit trails
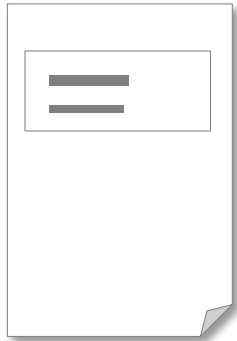
Process
description

Develop
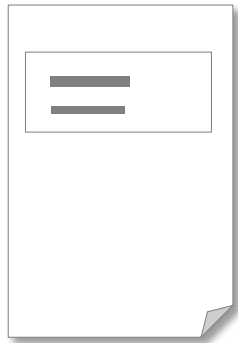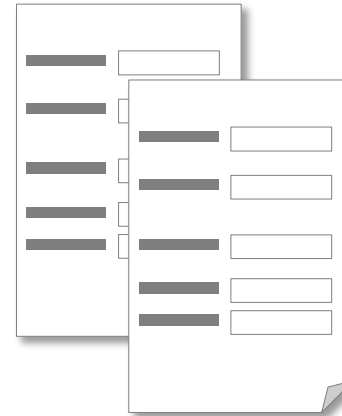
Forms

Procedures
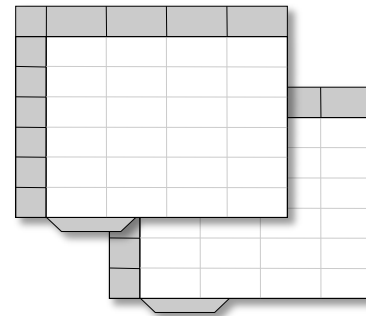
Registers and
logs

Process documentation

Reports and dashboards

Process
description

Develop

Reports and
dashboards

Procedures

Siemons.Info
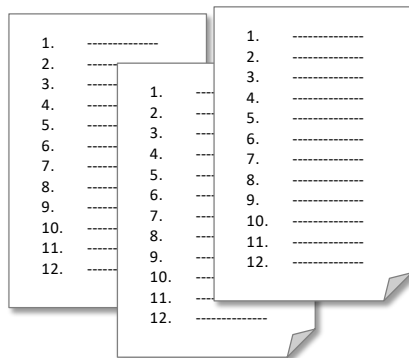
Process documentation

Staffing

Process
description

Develop
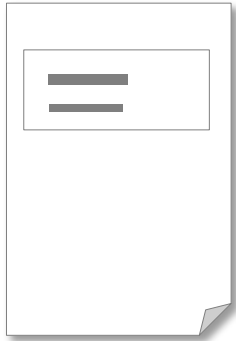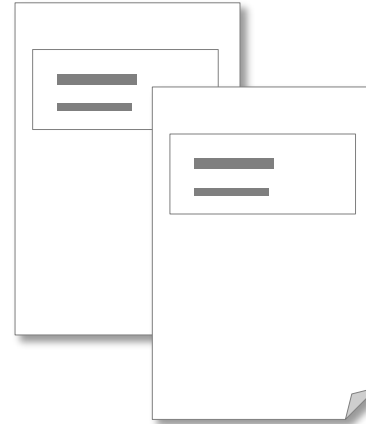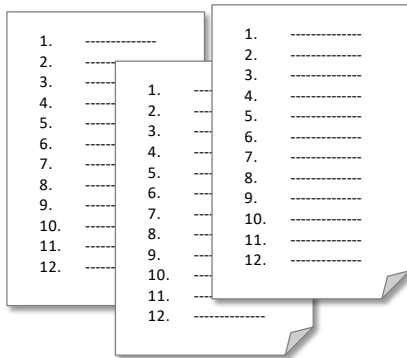
Job descriptons
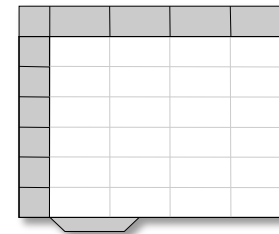
Procedures

Resource planning

Process documentation

Training collateral

Process
description

Forms

Develop

Presentation(s)
and training

Procedures

Registers and
logs

Reports and
dashboards

Siemons.Info
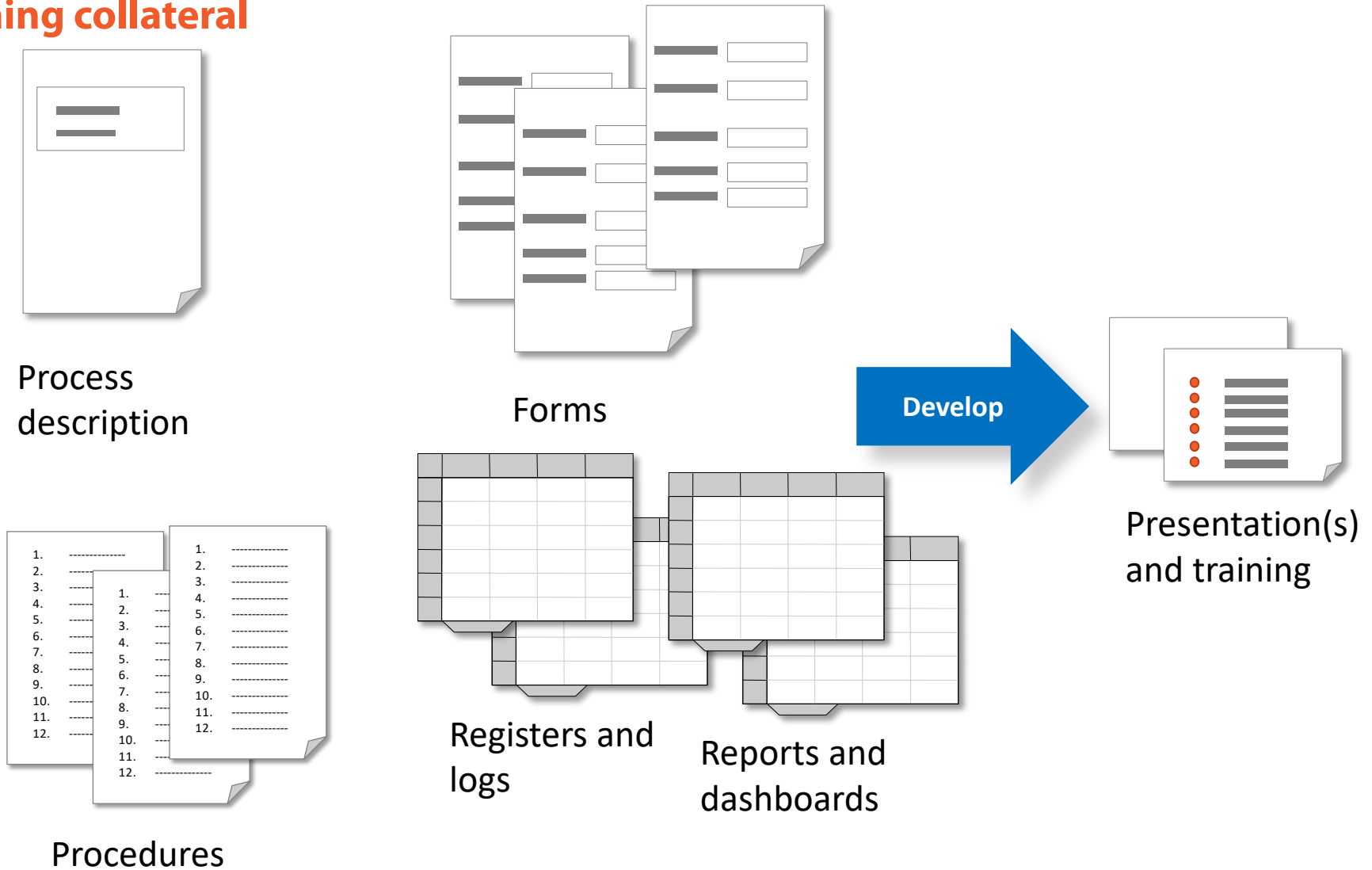
Process documentation

Summary
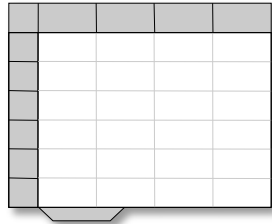
Process documentation register

Process description

Flow charts

procedures

Presentation(s) and training

Job descriptions

Forms

Reports and dashboards

Registers, logs.

Resource plan

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Controls in Industry (Example)

In control…

Control in industry sample
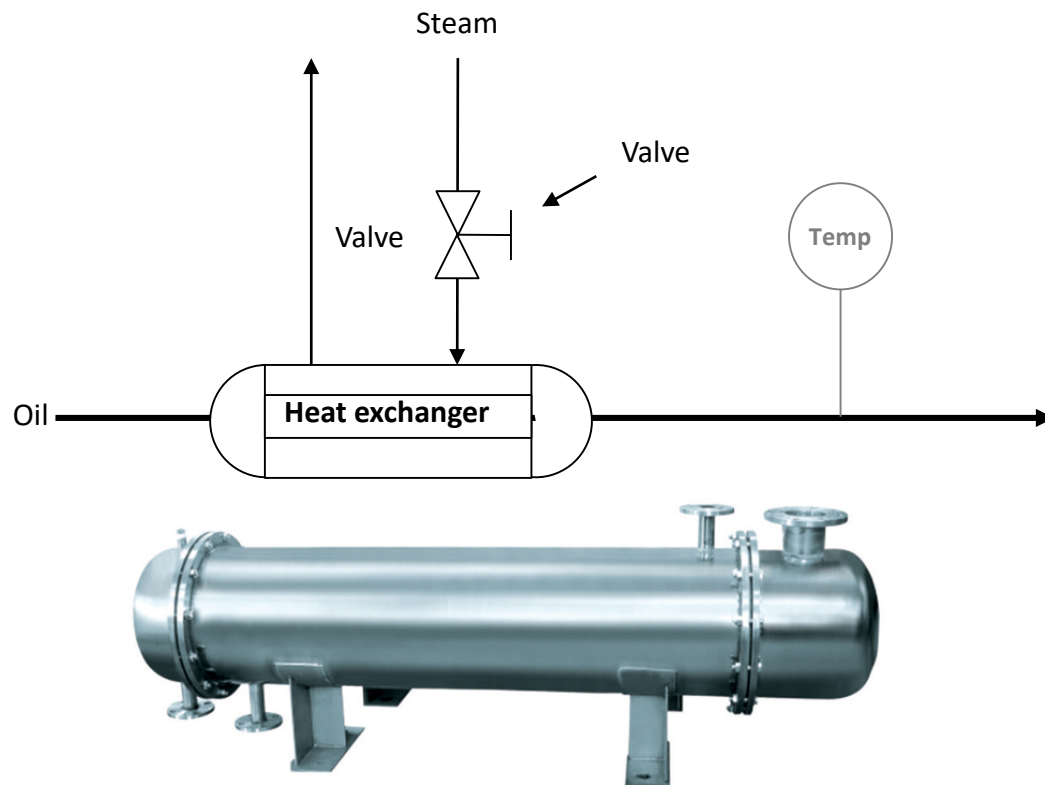
Main process flow:
- A heat exchanger heats up oil (for e.g. destillation).
- The valve controls the amount of steam entering the heat exchanger which influences the temperature.
- The thermometer measures the temperature.
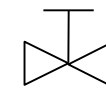
Valve (Manual)

Valve (Automatic)

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In control...

Control in industry sample

Steam

Oil — **Heat exchanger**
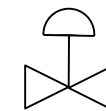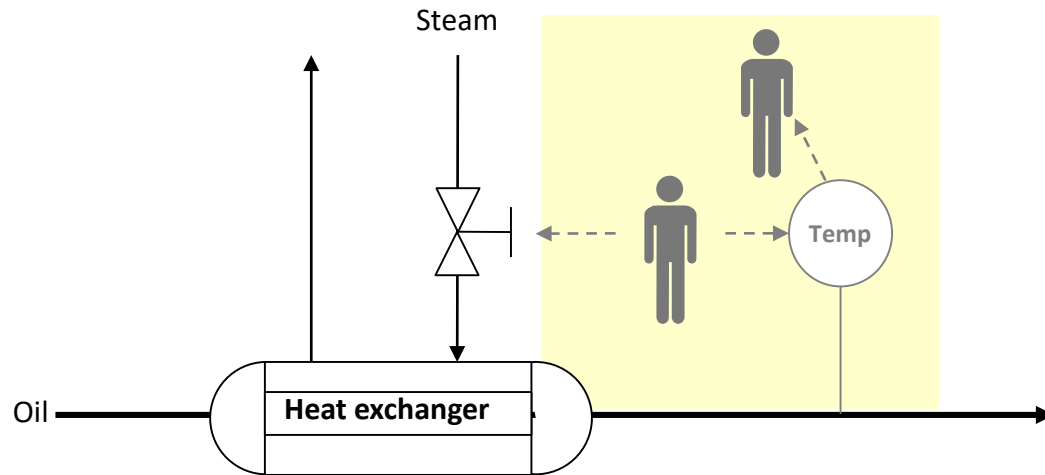
Temp

Manual process control (highligted):
- A temperature sensor measures the temperature.
- A person reads the temperature and operates the valve.
- Another person writes down the temperature at regular intervals.

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In control…

Control in industry sample

Steam

Printer

Con
trol

Temp

Oil

Heat exchanger
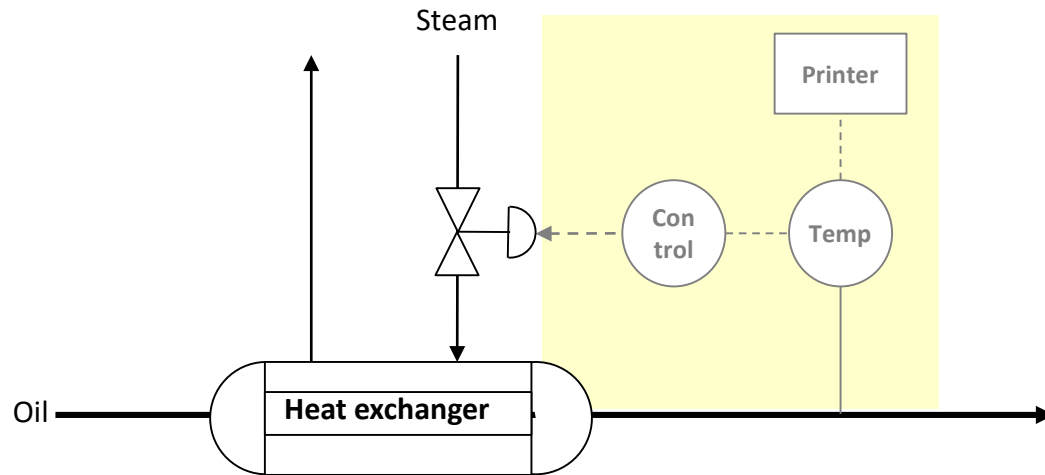
Automated process control (highligted):

- A temperature sensor
  measures the temperature.
- This temperature is forwarded
  to a control unit and print unit.
- The control unit operates the valve
  .

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In control…

Control in industry sample
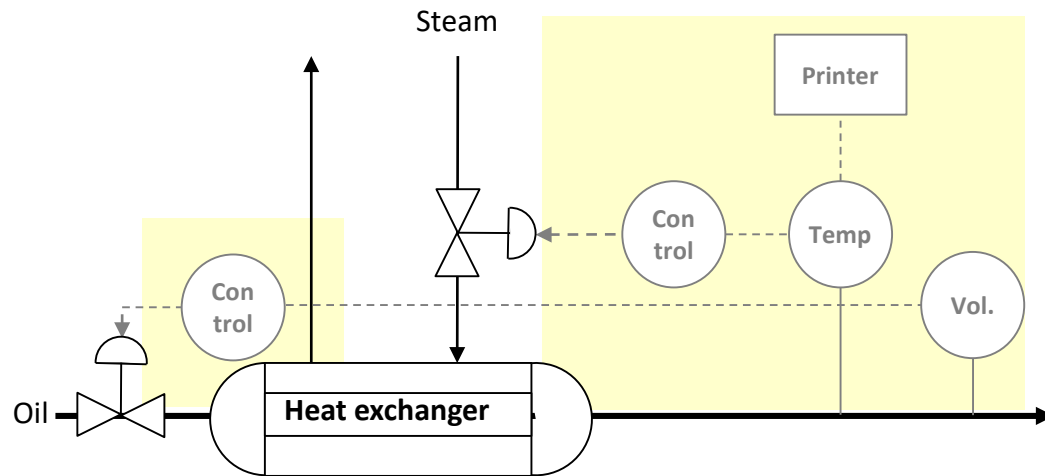
Note that processes can have multiple controls. E.g.:
- Safety controls (high pressure release valve).
- Flow control.

In control…

Analogy administration

In control…

Analogy administration

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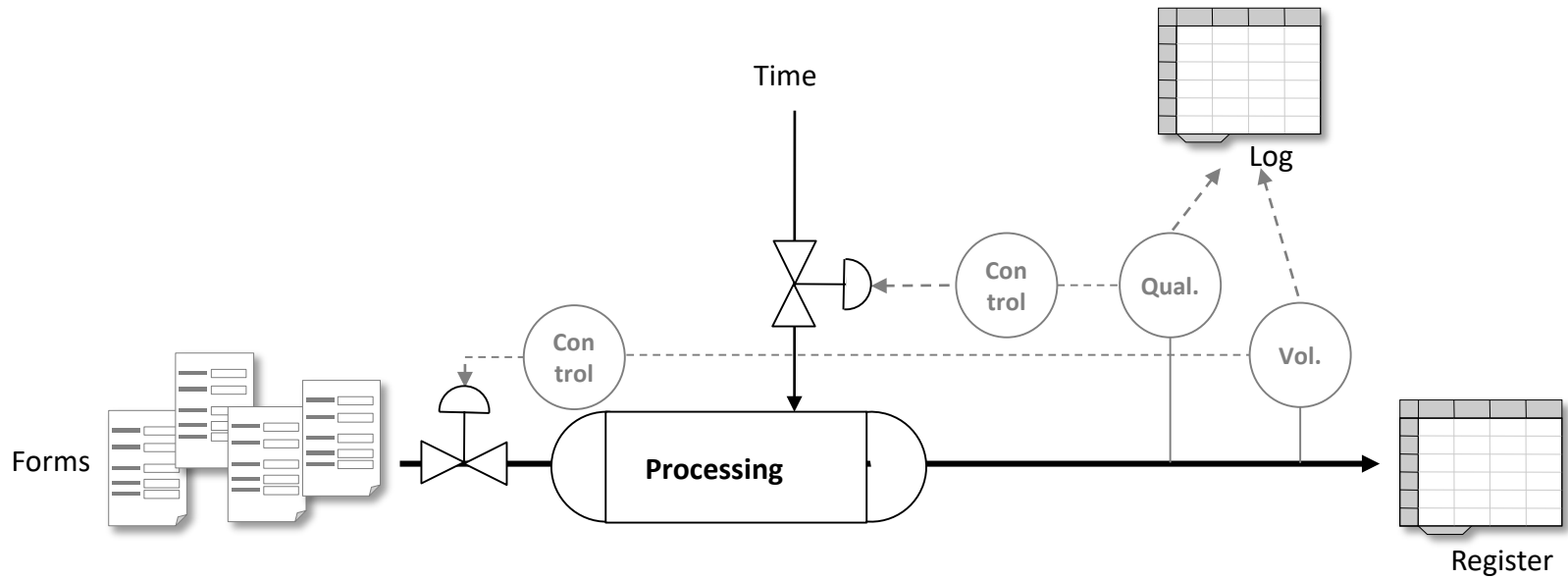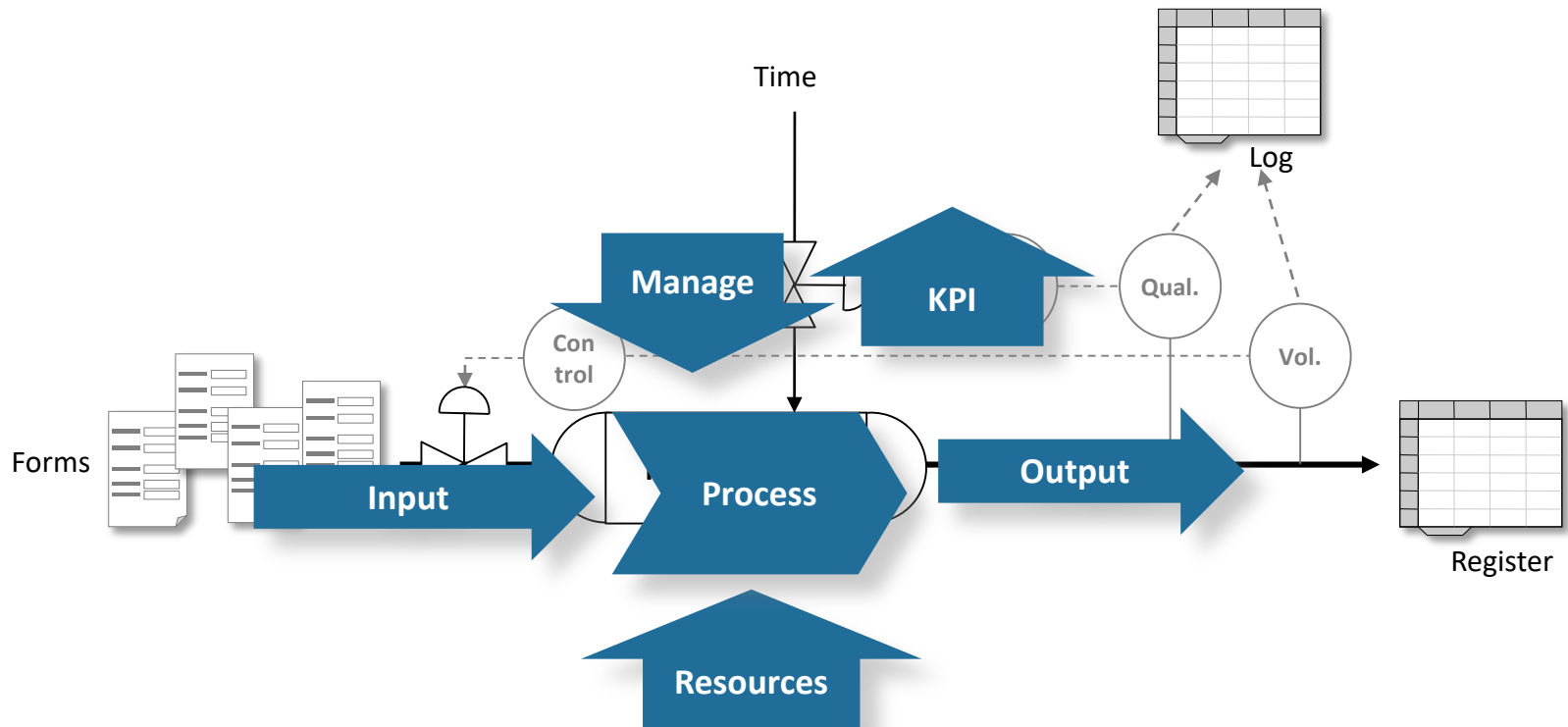
Controls in administration

In control…

Control sample administrative process

Main process:
- The staff picks up laptops from stock
  and issues the laptops to end users (office workers).

From stock

Engineer

End User

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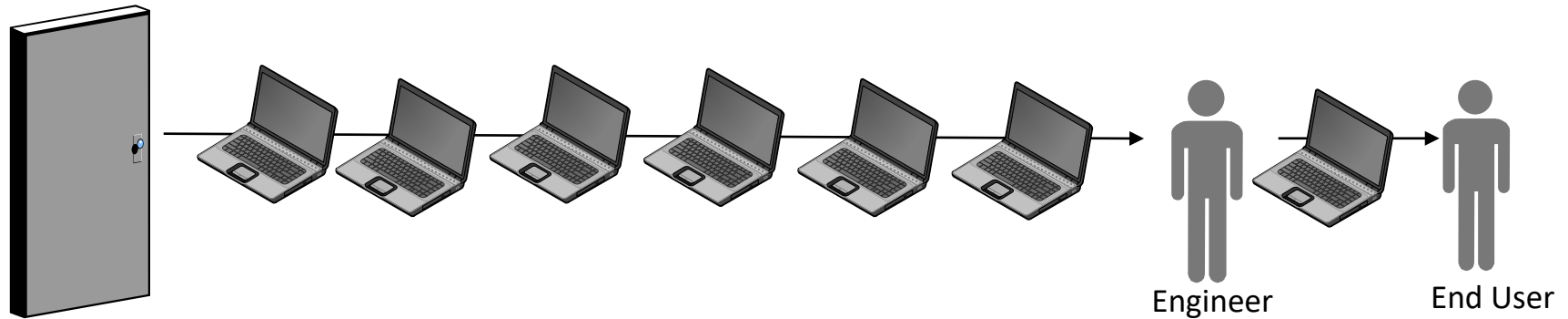
In control…

Control sample administrative process

Main process:
- For administration issuing forms are filled in
  for each issued laptop and collected by administration
  who will register the issued laptop and user.
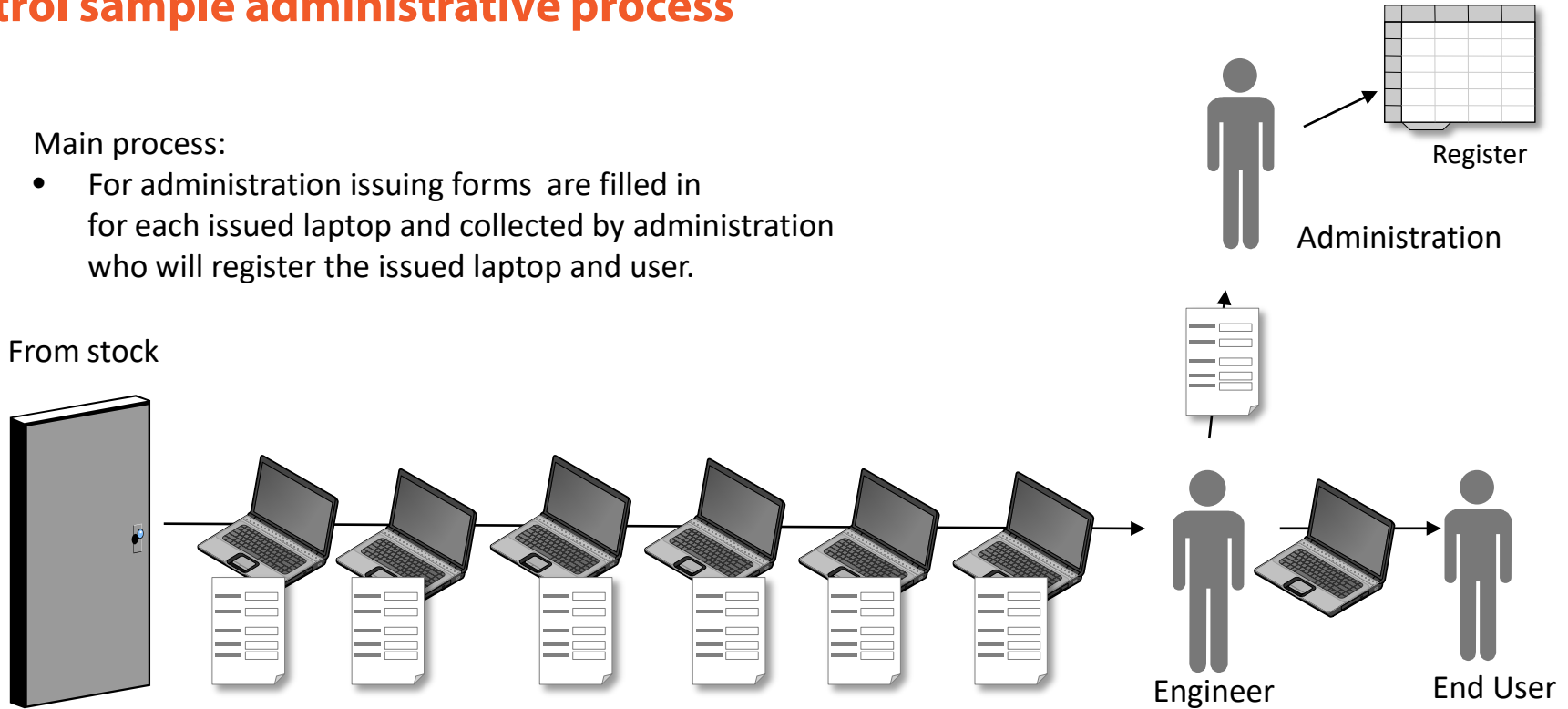
Register

Administration

From stock

Engineer   End User

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In control…

Control sample administrative process

From stock

Register

Administration

Engineer

End User

Siemons.Info
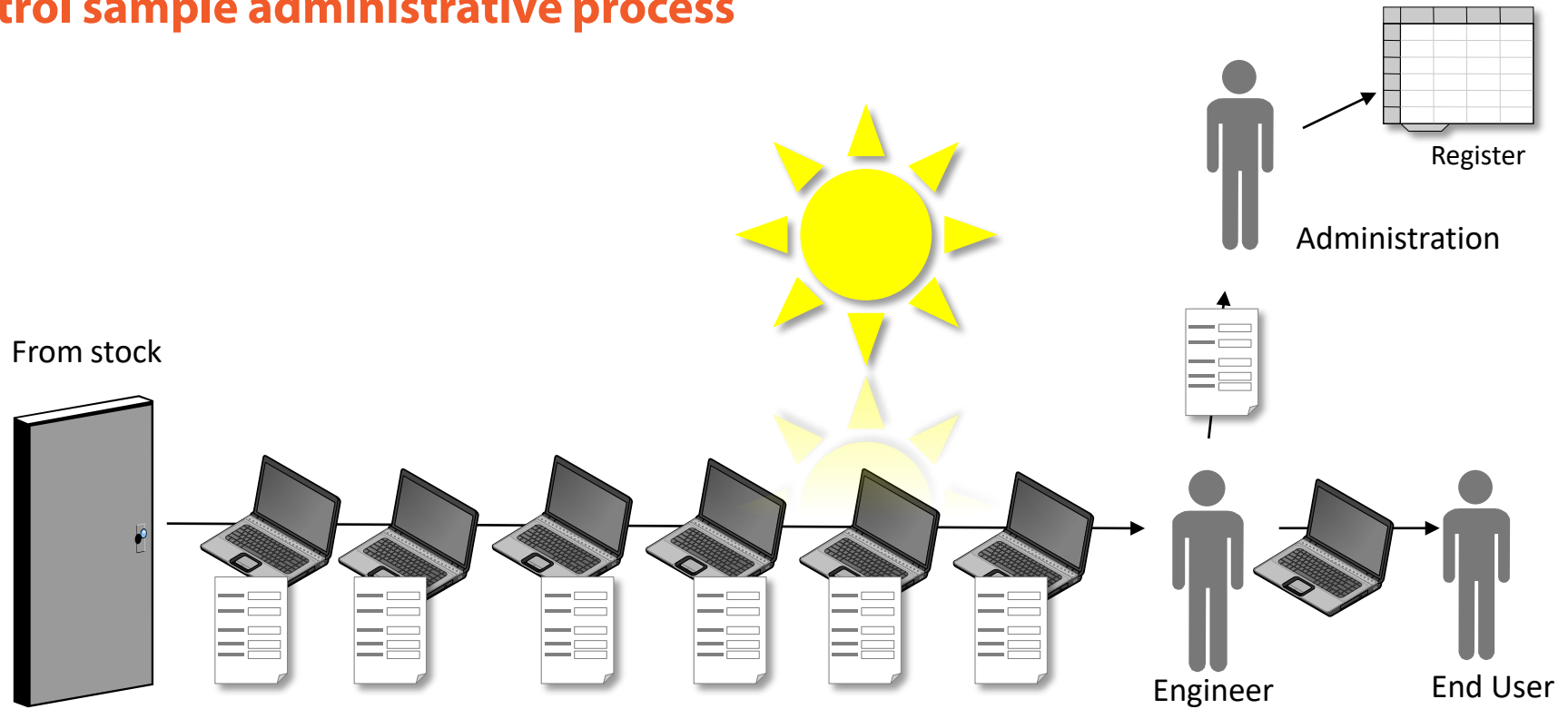
In control…

Control sample administrative process

But irregularities can and have a probability of occuring.
Accidental or on purpose.

Forgotten   **Mistakes**

Register

Administration

Incomplete

Forgotten   **Incorrect**

From stock

Engineer   End User

Returned without notification

Replaced without notification

Has left the company Has progressed to other dept.

Lost

Moved without notification

Moved without notification

Stolen

Siemons.Info
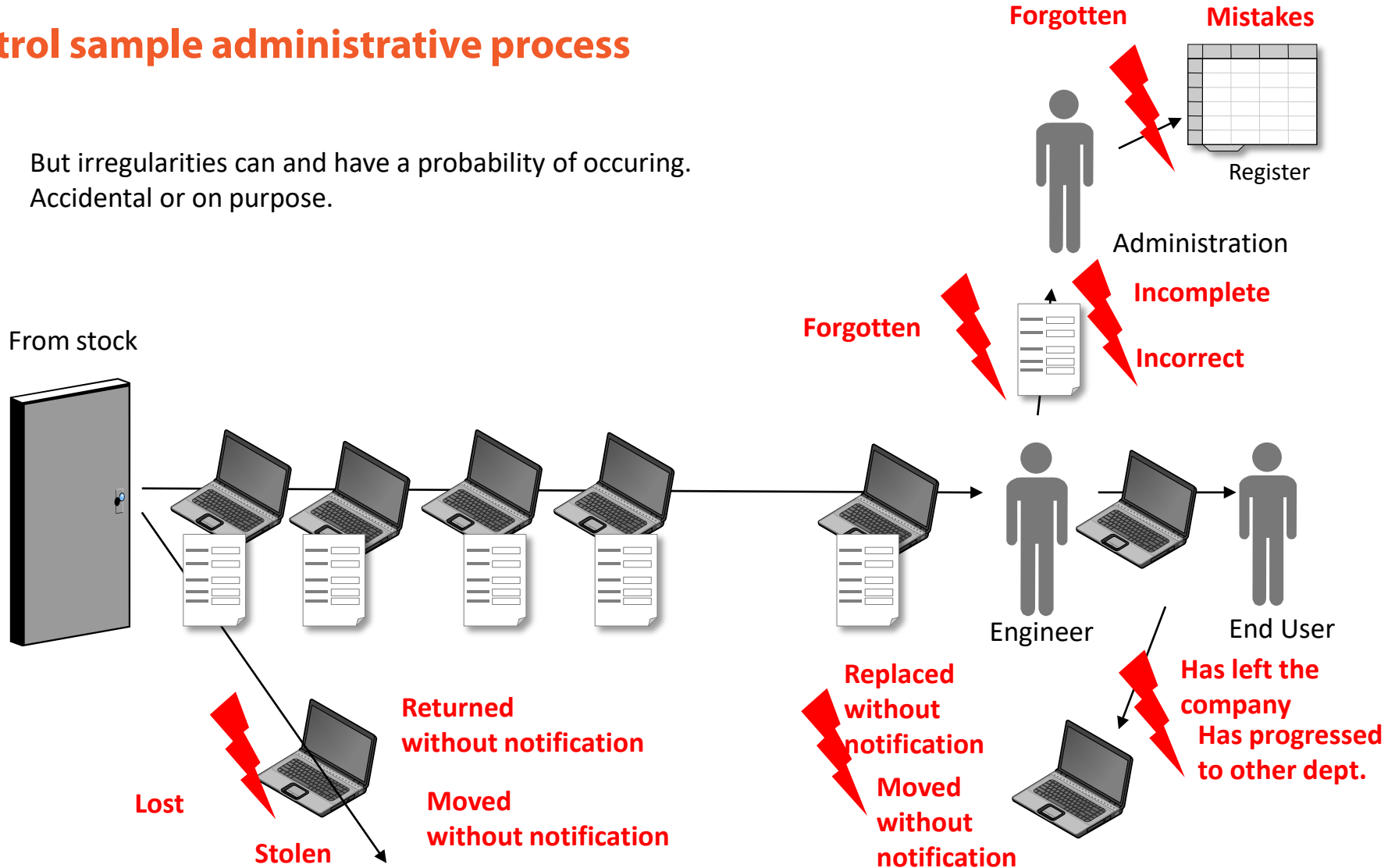
In control…

To detect or prevent irregularities…

- Forgotten

- Incomplete

- Incorrect

- Mistakes

- Replaced without notification

- Moved without notification

- Returned without notification

- Has left the company

- Has progressed to other dept.

- Stolen

- Lost

...we need controls.

Control — Measure.

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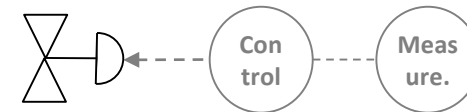
In control…

Types of controls

Type	Description
Detective	Find errors or irregularities, after they have occurred, e.g.: •Performance review. •Analyse data (e.g. reconcile). •Physical inventory. •Review, Audit. •Sample, check.
Preventive	Discourage errors or irregularities from happening, e.g.: •Segregation of duties (4-eyes, 2 persons). •Approvals, authorizations, validations, sign offs. •Restrict / secure access.

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In control…

Implementation

Tool	Description
Go / No Go (traffic light)	Formalization of the decision to go ahead. • Approvals, authorization, (input) validation. • access
Log	Tracking what happened (chronological). This allows for counting to determine e.g. work load, number of exceptions.
Audit Trail	A specific type of log in which updates to documents are tracked.
Register	A detailed description of the current situation.
Report	A report with summary and details of measuring and exceptions (issues).
Inspection	Planned or at random inspection of the quality of administration (e.g. phyisical inventory check).
Analysis	Collect, reconcile.

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In control…

Resolving issues without controls

Double check and investigate the entire adminstration and physical inventories.
Very time consuming and very costly.

Forgotten   **Mistakes**

Register

Administration

Incomplete

Forgotten   **Incorrect**

From stock

Engineer   End User

Lost

**Returned
without notification**

Stolen

**Moved
without notification**

**Replaced
without
notification**

**Moved
without
notification**

**Has left the
company
Has progressed
to other dept.**

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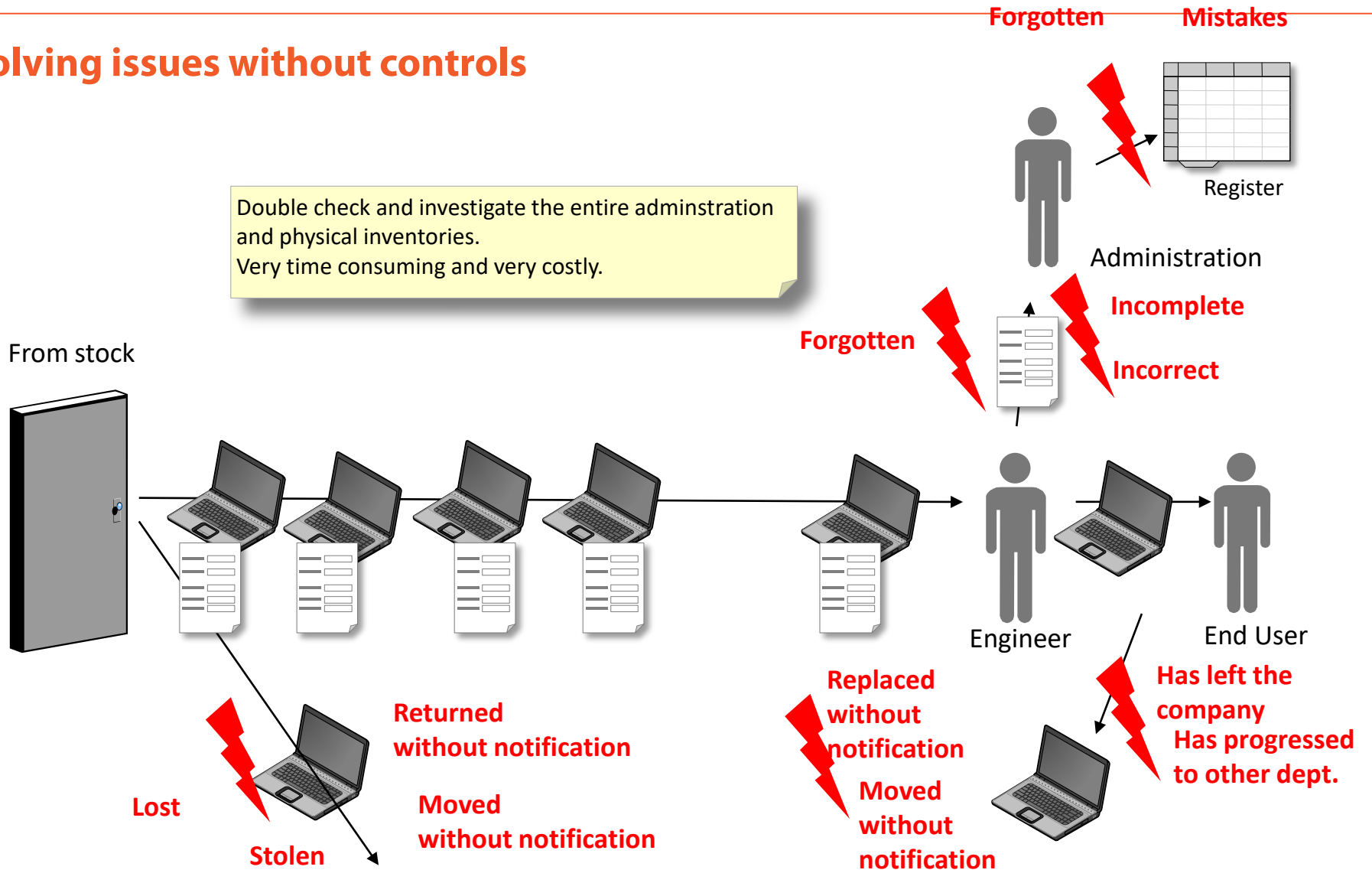
In control…

Applying <u>detective</u> (aka corrective) controls

Maintain a register and have engineers log everything that goes in and out.

Cross check logs and report exceptions.

Forgotten   **Mistakes**

Register

Administration

Incomplete

Forgotten   **Incorrect**

From stock

Engineer

End User

Returned without notification

Moved without notification

Lost

Stolen

Replaced without notification

Moved without notification

Has left the company Has progressed to other dept.

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In control…

Applying **preventive** controls

Assign a stock owner (approval, segregation of duties)

From stock

Maintain a register and a log of everything that goes in and out.

Log

Inventory register

Cross check logs and report exceptions.

Administration

Restrict access (lock on the door)

Stolen

Engineer

End User

Have end users sign off for receiving and agreeing to company policy.
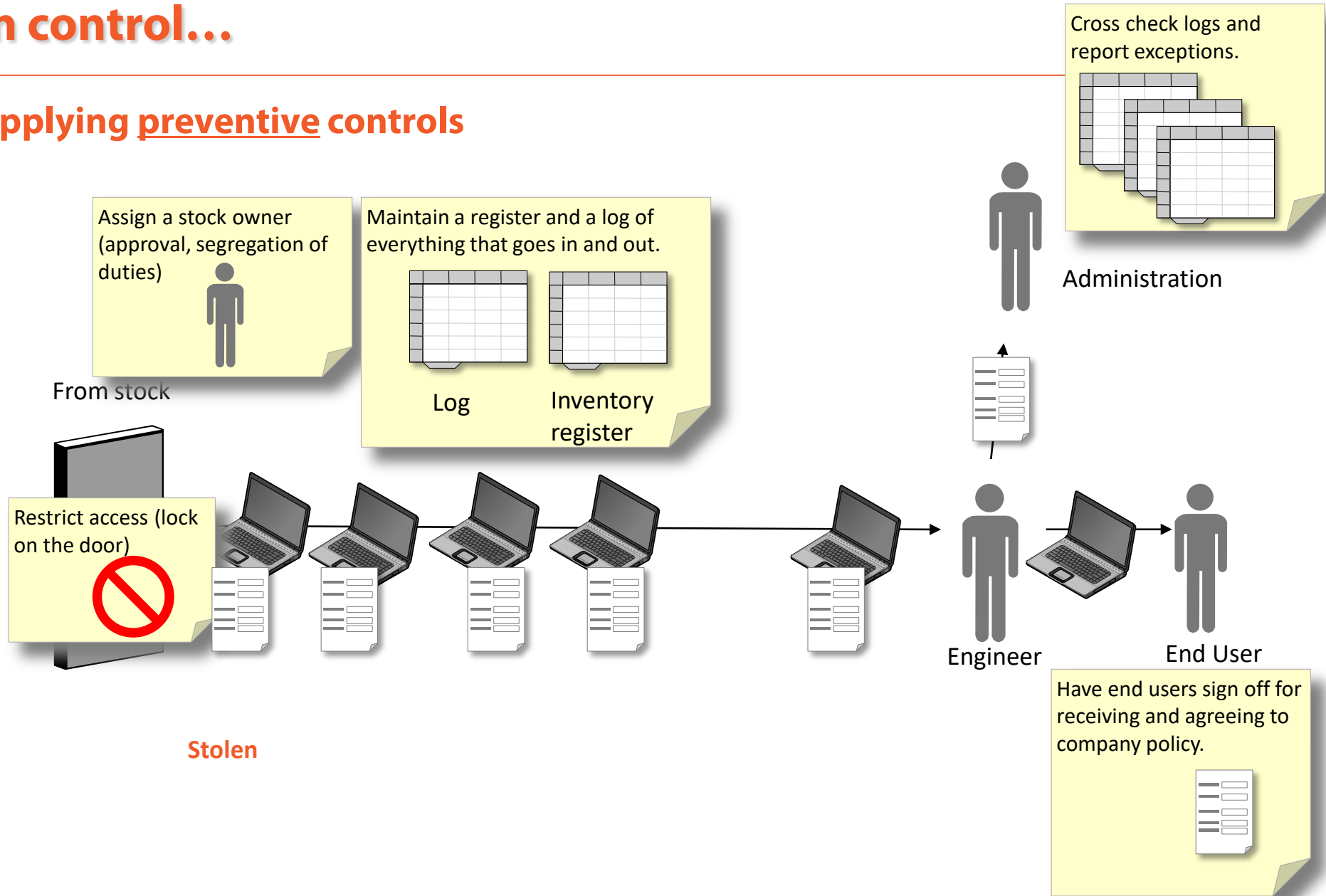
In control…

Recap

Controls:

- Are **extra measures** that are an integral part of the process.
- **Prevent risks** and releated **costs** of **non compliance** (like e.g. fines).
- **Prevent costs** of discovering, researching and resolving **irregularities**.
- Contribute to **higher efficiency** and **quality** of the process.
- Provide off course **better control** over the **process**.

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On top…

On top…

Management

- Set targets and measure actuals. Compare actuals with targets.
- Report performance to stakeholders proactively.
- Manage the process on KPIs, not (just) the exceptions.
- Conduct frequent reviews.

You can't manage, what you don't measure

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On top…

Measuring samples

What	Indicator(s)	How
Work load	Incoming requests.	Count
Production	Outgoing or updated results per time unit.	Count
Productivity	Production for amount of time spent.	Count
Efficiency	Percentage of time spent on core activities. Number of disruptions (issues).	Count / benchmark Count / categorize
Quality	Output quality. Quality issues.	Review /Survey Count complaints
Staff	Job satisfaction. Availability.	Survey Count

Audits and reviews

Audits and reviews

Evidence

An organisation must be able to **prove** internally and externally that the organisation is in control to meet requirements from law, regulations and obligations from commitments.

Prove is provided via **evidence** (logs, registers, reports, process descriptions, procedures and validation that these are *in place*).

Trust has nothing to do with proof:
If **evidence** is **lacking** that is interpreted as **not being in control**.

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In control…

## Sample questions and evidence

Question asked	Evidence to be provided
Is documentation up to date?	• Documentation register with history of reviews, revisions and approvals or a table in each document with a history of reviews, revisions and approvals.
Is the administration up to date?	• Strategy (to clarify and identify the scope of work). • Process description and procedures. • Registers, audit trails, logs and reports.
Is staff instructed?	• Job descriptions (for requirements). • Training policy/plan. • Training register. • Interview to have staff proof they have required knowledge.
Are controls in place?	• Description of controls or reference to sections in process description and implementation in procedures. • Proof of usage (audit trails, logs, registers, forms).
Is perfomance managed?	• Description of KPIs. • Reports with KPI's. • Evidence that measures are taken.

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Embedding

Embedding

Maturity
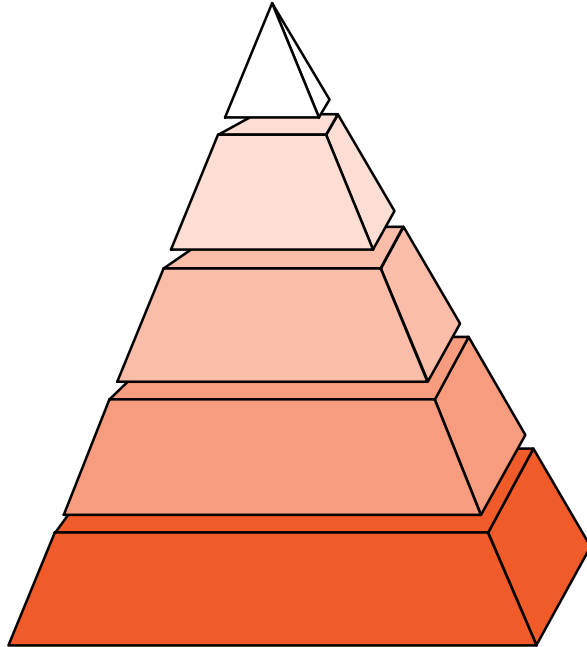
Capability	Description	Controls	Measure
Adapt	Proactive improvement and adapting to business change.	Constantly adapted	For improvement
Improve	Based on / triggered by **feedback** improvements are made (Reactive).	Improved when needed.	For validation and prioritization.
Manage	Activities are directed / managed based on **reports** (metrics) and monitoring.	Preventive	For reporting / controls.
Correct	The team **responds** to problems after they occur (reactive).	Detective	Ad hoc to detect irregularities.
Execute	The team executes tasks. Focus on content (not process). Problems are solved on the spot or not.		Hardly / not

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