

Business Process Primer – *Core Concepts and Practical Techniques*

Prepared and presented for ING Belgium by
Adept Events & Clariteq Systems Consulting Ltd.

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Developer/instructor background...



Alec Sharp, Clariteq Systems Consulting – asharp@clariteq.com

- 40+ years experience as an independent consultant:
 - *Business Process Change* – discover, model, analyse, and design/redesign processes
 - Concept Modelling (Business-friendly Data Modelling)
 - Application Requirements Specification
 - +
 - Facilitation & Organisational Change
 - Project Recovery

Process Business Process Modelling

Application

Use Case Modelling

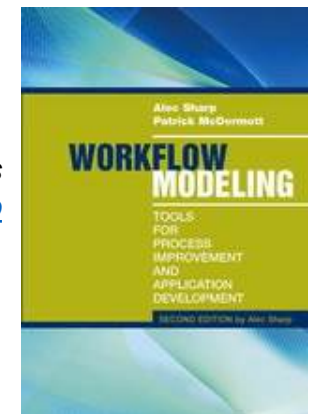
Service Specification

Data

Concept Modelling

- Consulting, teaching, speaking globally
- Awarded DAMA's global Professional Achievement Award for contributions to "human-friendly" data modelling
- Author of "Workflow Modeling"
 - best-selling book on process modelling & improvement
 - second edition – 2009 (sole author, complete re-write)

Check out the nice reviews
on Amazon - <http://amzn.to/dHun1o>



Clariteq – small, husband & wife company, global clients

ABB (ASEA Brown Boveri)
Aflac
American Honda
AMP (Australia Mutual Provident)
BackOffice Associates
Bank of Finland
Bellrock
Booking.com
Brisbane City Council (Australia)
Canadian Natural Resources Ltd.
City of Seattle
Civica UK
Clearwater Paper
Corvias
Dell
DHL Express
Dutch National Bank
Ericsson
Essity
Eurojust (European Justice Comm.)
European Central Bank
Fortum
GoFore
Helse Vest - Norway
HM Land Registry - UK
Home Depot
Idaho Transportation Dept.
Intel
ISO New England
ING Bank

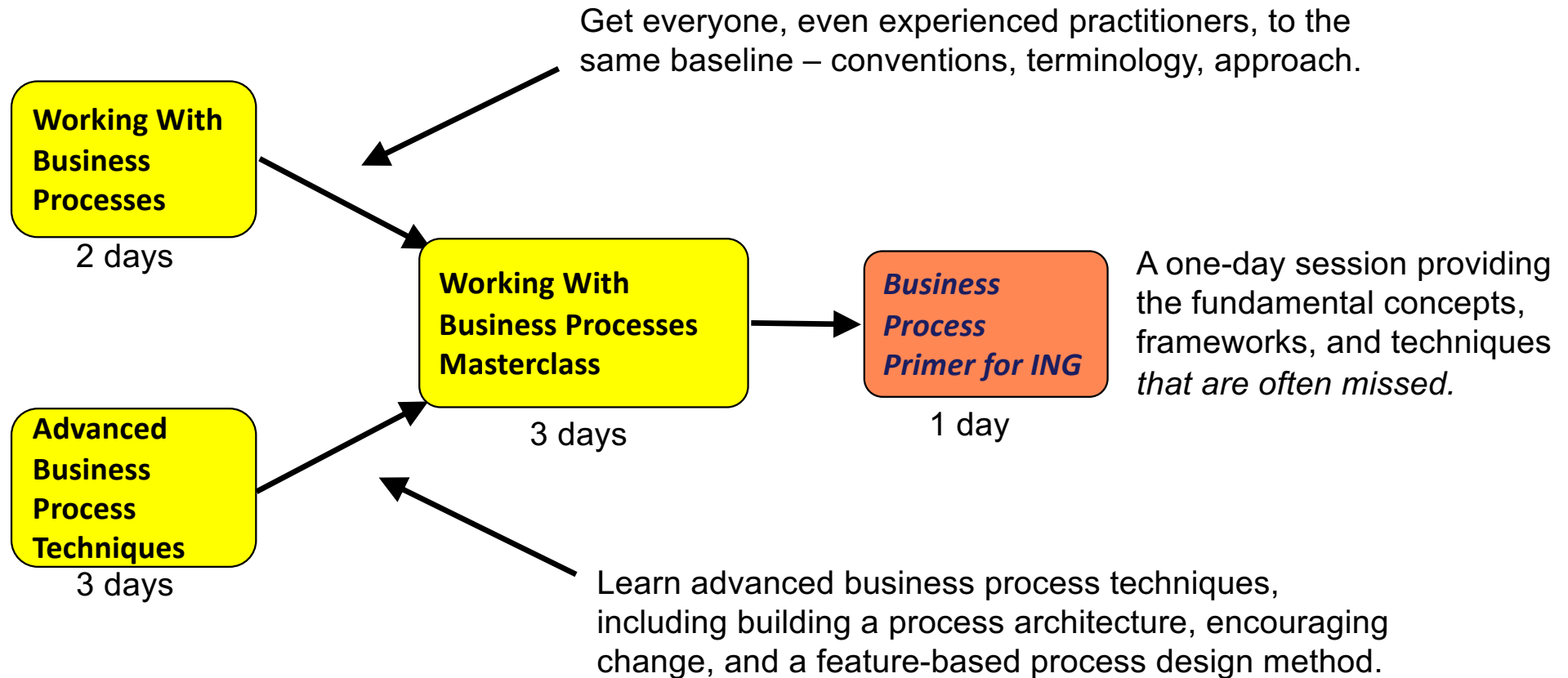
JP Morgan
Kal Tire
KONE
LGM Financial Services
Liberty Mutual
Livestock Improvement Corp.
MacDonald Dettwiler
Manitoba Public Insurance
Marathon Pipe Line
Microsoft
Ministry of Defence - UK
Ministry of Defence - NL
Ministry of the Interior - Slovakia
MTS Allstream
Nexen
Novo Nordisk
Nusenda Credit Union
OP Bank
Partner Reinsurance
Ritchie Brothers
Phillip Morris
Roche Diagnostics
Salt River Project
Saudi Aramco
Serco
Shell
Sparta Consulting
State Street Bank
SunGard
SVB (NL)

Synechron
Sysdoc
Talent Base
Teck
The MUSIC Group
The Seattle Times
UK Government
University Med Ctr Groningen
YIT(FI)
Washington Gas & Light

– Higher Education –
Carnegie Mellon University
Cornell University
Douglas College
Gonzaga University
Humboldt State University
The Jackson Laboratory
The Ohio State University
Portland State University
Salt Lake Community College
Southern NH University
University of Arkansas
University of British Columbia
University of the Fraser Valley
University of Maryland
University of Utah
University of Washington
Utah Valley University



Background for this seminar



Notes:

- This is very compressed, but you will learn techniques that are *immediately useful*.
- If you are serious about the Business Process space, there will still be value in attending the February *Working With Business Processes Masterclass*

Themes and overview...

Three main themes:

1. *Simple* techniques, *rigorously* applied, help us achieve *more* in *less time*.
2. *Communication with* and *engagement of* the people who *do* the work is essential.
3. A *holistic* not *technocratic* approach, including *human, social, & organisational* factors.

And finally... **YOU:**

- Name – how should I address you?
- Role / job title and organisation
- Brief description of your work
- A topic you are especially interested in?
- *Please keep your intro under 1 minute*

Section 1 – Fundamentals

- Four things you *need* to know about *business processes*
- A proven, agile methodology for *Business Process Change*

Sections 2 to 4 – Techniques

2. Identifying true, end-to-end, cross-functional *Business Processes*
3. Process modelling for *humans*
4. Overview of the transition from *as-is* analysis to *to-be* design

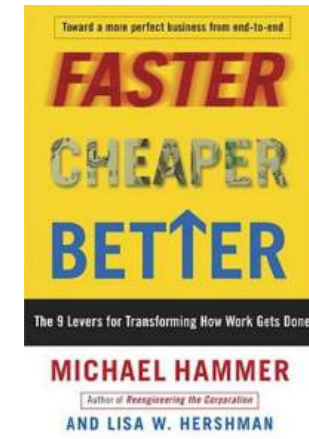
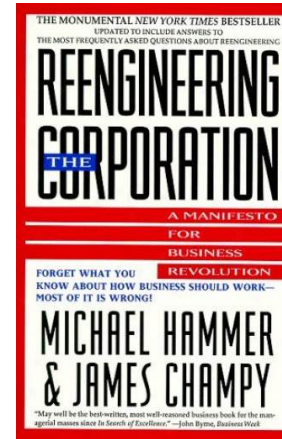
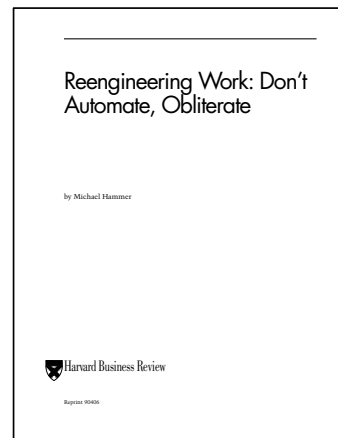
1 – Four things you need to know about Business Processes

1. It's essential to have clarity on what a *business process* really is
2. Existing performance measures are often *functionally aligned* and work *against* business processes
3. Success with business processes depends on taking a *holistic view* in which six *enablers* are considered – *it's not a technocratic undertaking*
4. Business processes can't be great at everything – a single *differentiator* or *strategic discipline* should be chosen

1. Confusion – what *is* a “business process?”

1. It is essential to have clarity on what a *business process* really is
2. Performance measures may be *functionally aligned* - work *against* business processes
3. Success with business processes requires a *holistic view* in which *six enablers* are considered
4. A business process can't be great at everything – a single *differentiator* must be chosen

In the early 1990s, Michael Hammer popularised the focus on *business process*



Introduced core terminology:

- end-to-end, cross-functional, functional silo, ...
- even *business process*

Still, people and organisations miss the point...

Lesson #1 – Never assume everyone agrees what a "process" is

We need some help with our *Product Lifecycle Management* process.

Not a single process –
it's a *family* of multiple
business processes
(a *process area* or
process domain)



I spend all day writing business
processes, like the process to
Revise Product Brochure Image.

Not an entire process –
it's a *procedure* providing
instructions for a single task
(SWI – standard work
instructions)

A whole *spectrum* of interpretations of *process*.

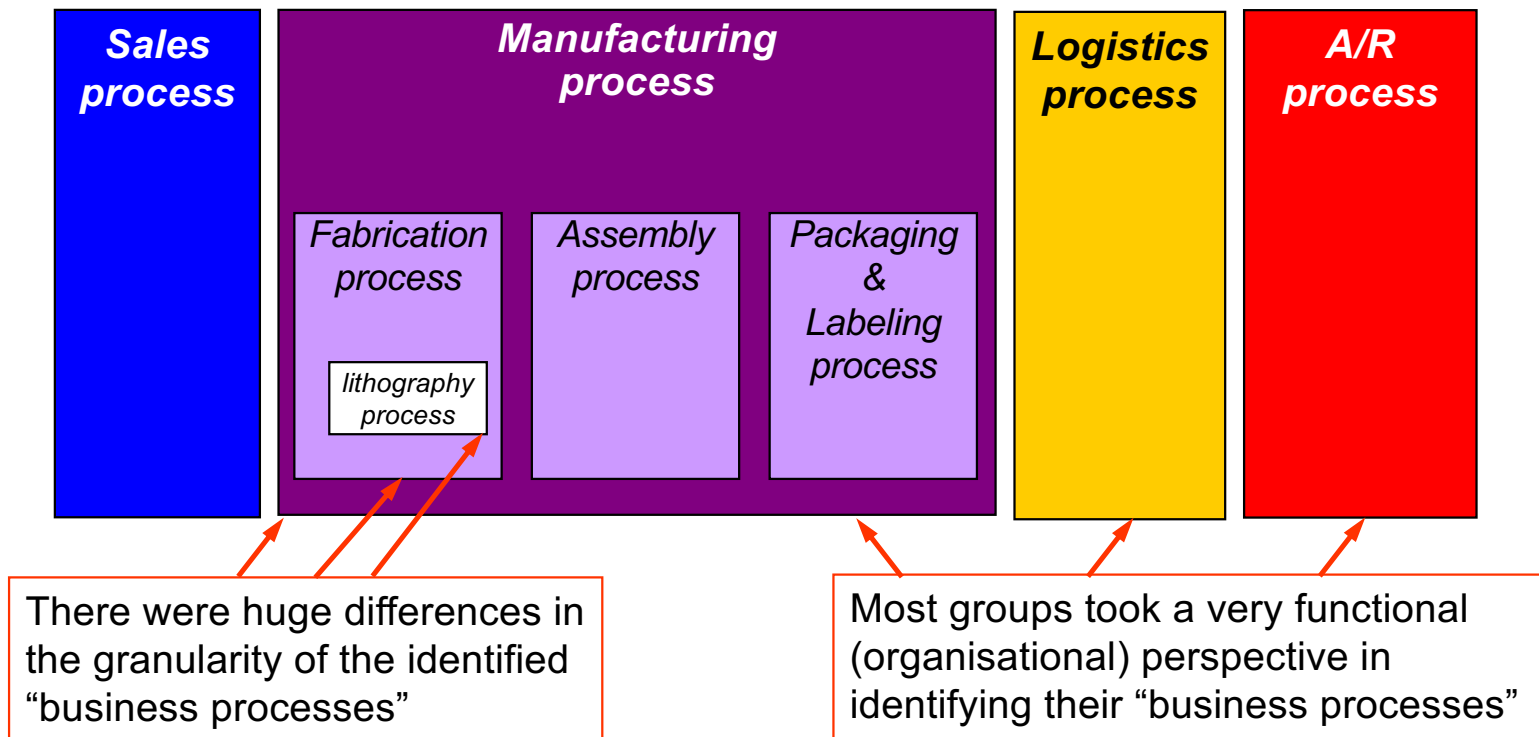
Seek balance –
a "business process"
lies between the extremes

Most people hear *process*
and think *procedure*!

The key issues – granularity and orientation

A real life (and expensive!) example

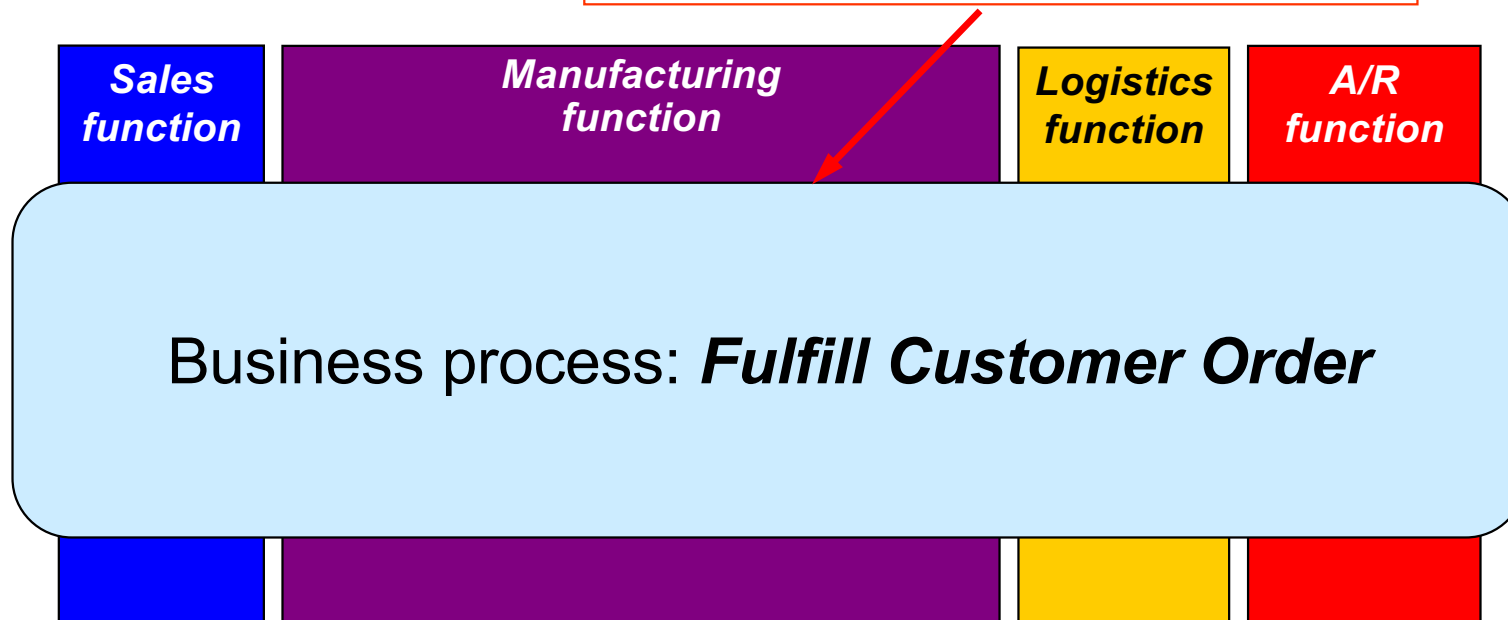
As part of a massive system implementation, a global manufacturer identified the *business processes* that were expected to improve:



The problem? *These aren't processes – they're functions!*

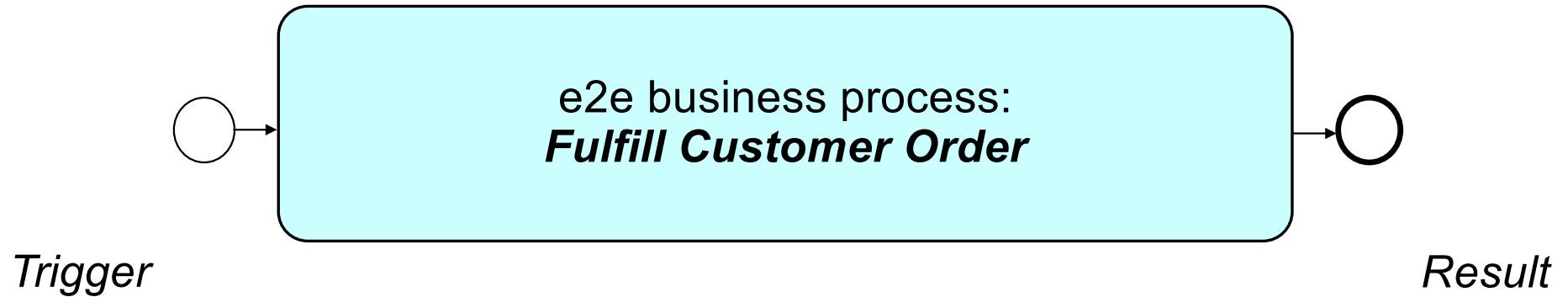
The “real” business processes were missed

Everyone confused “process” and “function.”
None of the actual end-to-end processes
were correctly identified.

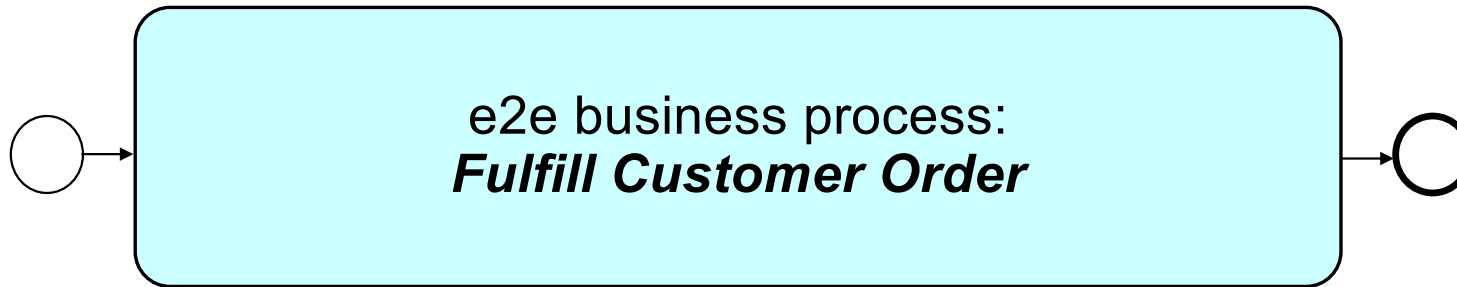


“Business Process” =
end-to-end, cross-functional, business process.
“Larger” than people think – from *initial* trigger to *final* results.

Discuss - what are the boundaries of the process?



What are the boundaries of the process?



Trigger

Order received? *No.*

Before that...

- Contract is Finalised
- Price & Schedule are Negotiated
- Specifications are Confirmed

And before that...

- Demand is Signalled. *Yes.*

Result

Order is Shipped? *No.*

Order is Received? *No.*

Order is Received, Tested,
and Accepted? *Yes.*

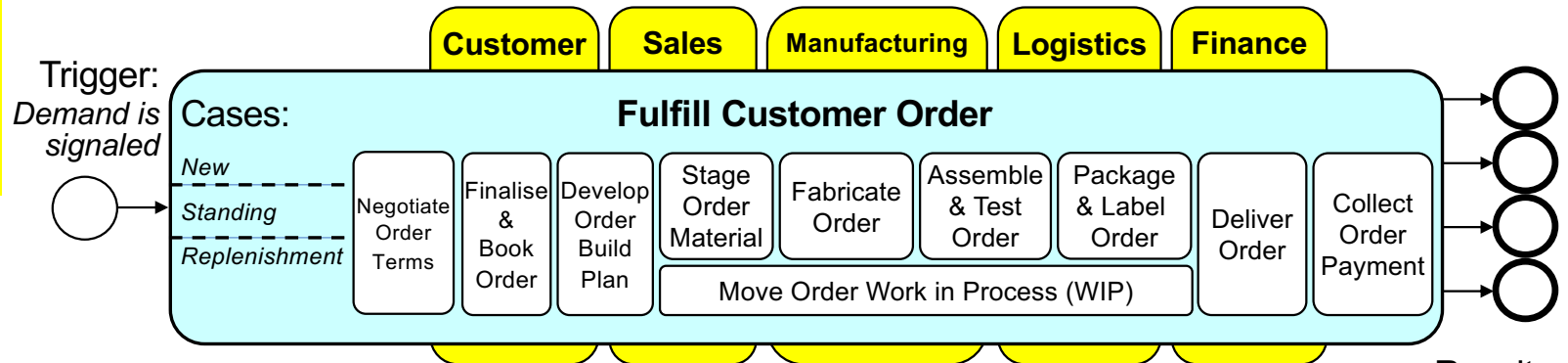
Any other results?

Yes, for other stakeholders.

*Always trace to the earliest trigger,
and to the final results for each stakeholder.*

Process Scope Model – “what” first, “who and how” later

I build a
Process Scope Model & a
Process Summary Chart on
~100% of Project Recovery
assignments -



“TRAC” –

1 – **Triggering event or events**

2 – **Results: final outputs**

- result(s) received by the process' primary customer
- result(s) for other stakeholders (performers, owner, supplier, regulator, ...)

3 – **Activities: 7 +/- 2 phases, milestones, or sub-processes**

- a phase achieves a significant intermediate result
- simply ask the participants for ~5 to 7 milestones within the process

4 – **Cases**

- main variations, e.g. “new order” vs. “standing order”
- verb – *qualifier* – noun

5 – **Functions or Organisation Units**

6 – **Actors and responsibilities**

7 – **Systems, data sources, other mechanisms**

↑ **essence of the process (“what”)**

↓ **as-is elements of the process, for clarification (“who and how”) (6 and 7 not shown)**

Results:

Customer:

Goods received, tested, & accepted

Owner:

Payment received

Performer:

Commission credited

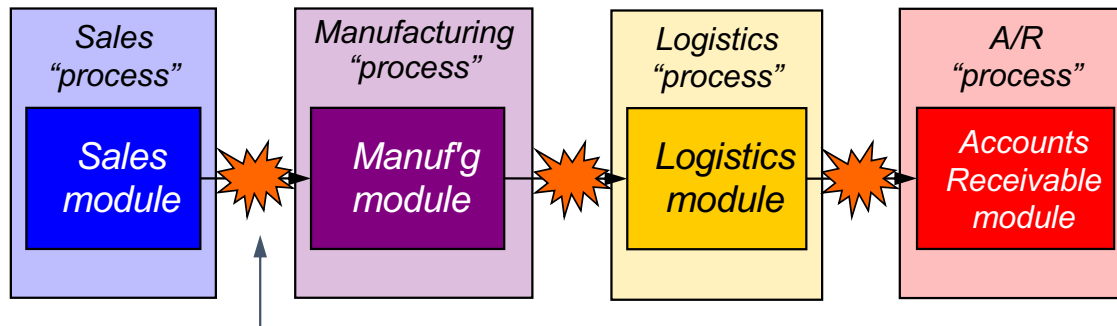
Industry Association:

Order stats reported

Always construct a
Process Scope Model & a
Process Summary Chart before
diving into Workflow Modelling /
Swimlane Diagramming

Resolving the situation

SAP was implemented without clarity on “process” –

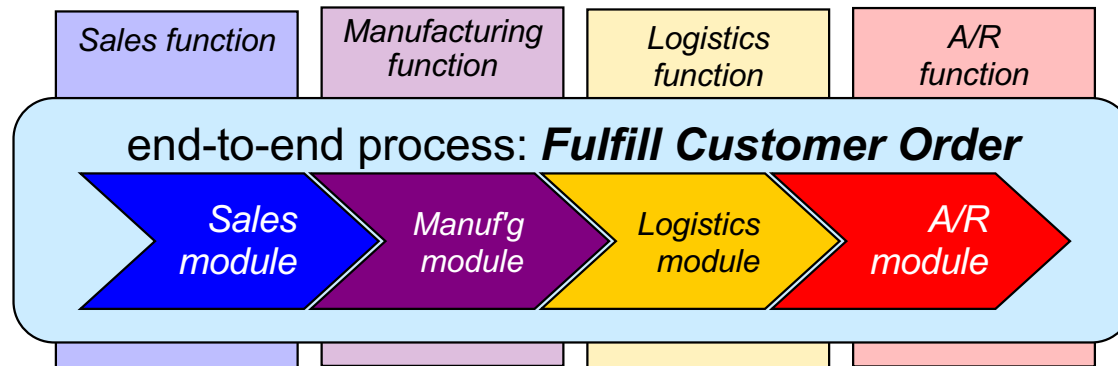


Conflicts: timing, coding, terminology, data formats, performance targets, ...



Poor performance

SAP re-implemented in a process-driven configuration –



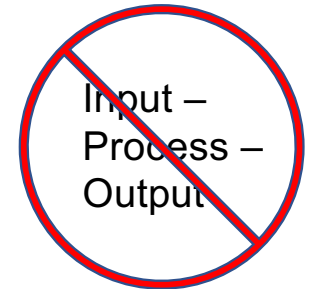
Great performance

Same software, radically different outcomes

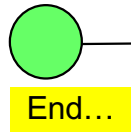
The essential framework

Business Process:

- a sequence (or set) of **activities** (steps and decisions,)
- initiated in response to a **triggering event**,
- that achieves a defined **result** for each process stakeholder

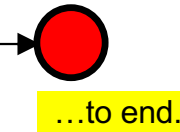


Triggering Event



A business process –
a sequence (or set) of activities
(steps and decisions)

Final Results



- Three types of events:
 - Decision-based (action)
 - Time-based (temporal)
 - Data-based (conditional)
- The *earliest* triggering event

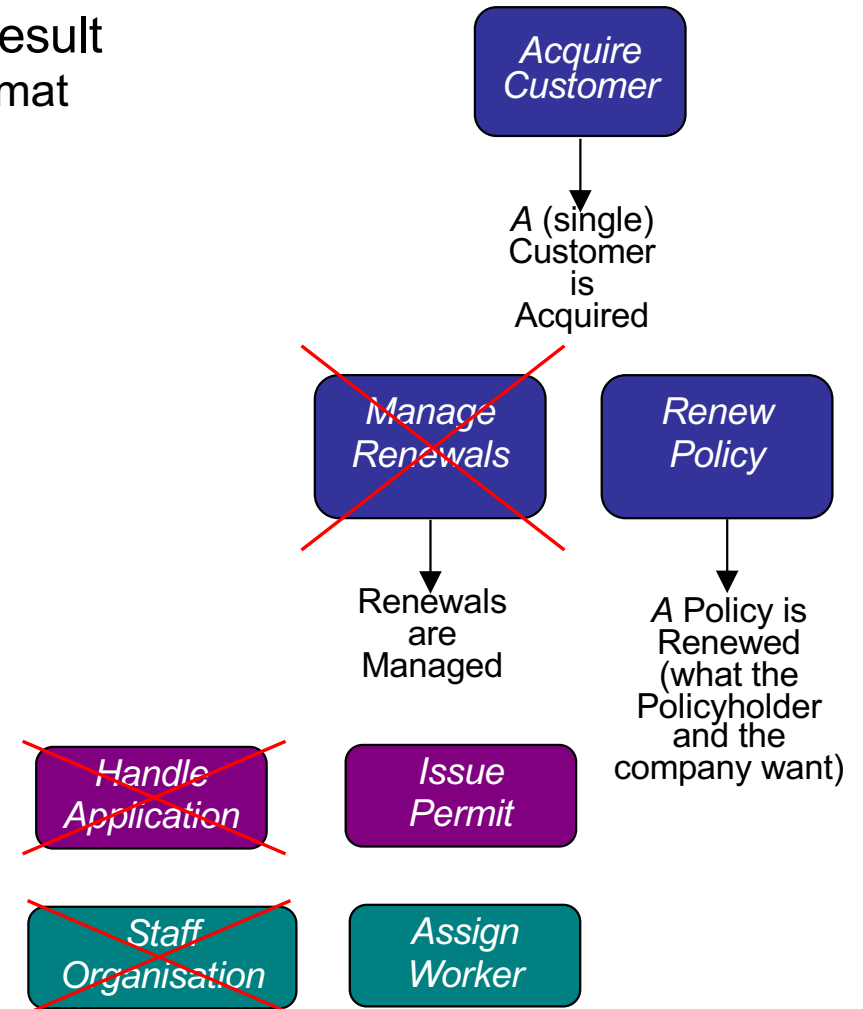
- Important processes are virtually always cross-functional and involve multiple actors / roles
- May be a defined *sequence*, or a more ad hoc *set* of activities
- First, identify “*what*” it includes – Trigger, Results, Activities, Cases (“TRAC”)
- Later, we add “*who and how*,” then map the process flow, if there is one

- Three types of results:
 - A service
 - A good
 - Information
- The *final* result

“What” before diving into the “who and how”

Naming conventions will make life easier

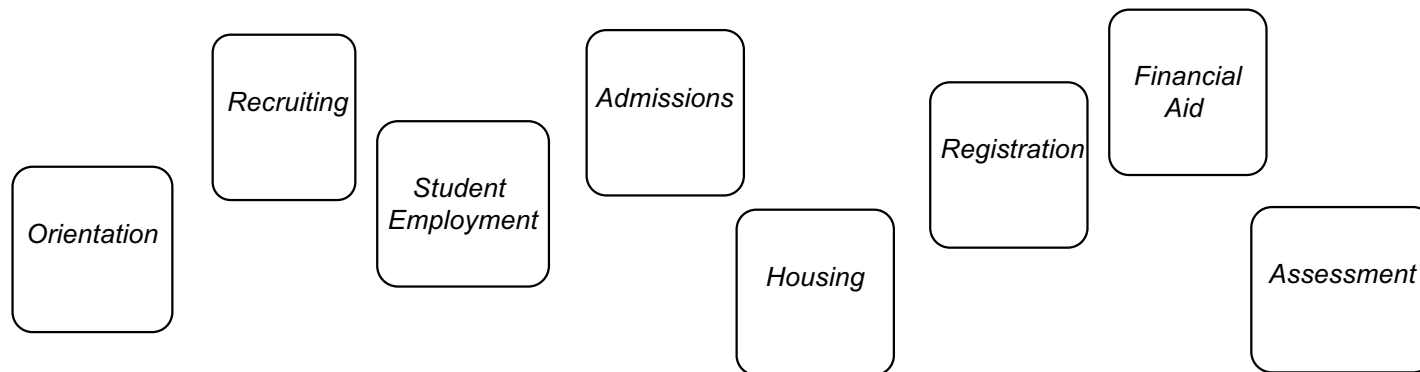
1. The process name **must** indicate the expected result
 - Name potential process in “active verb – noun” format
 - Restate that name as a result (“noun is verbed”)
 - Ensure this is the intended result of the process:
discrete, so results are *identifiable & countable*
 - **No mushy verbs:** manage, monitor, administer, handle, track, support, maintain, etc.
 - **Active verbs only:** *Evaluate Prospect, Acquire Customer, Fill Customer Order, Resolve Customer Issue, ...*
 - Applies to business processes, phases (subprocesses,) activities, steps, ...
2. Name process from customer's perspective (what do they want from the process?)
3. Name process in the singular



If there's time, an example from higher education

As part of a strategic initiative to address falling graduation rates, a university took a process-based approach to determine why they were failing to admit the most promising candidates...

The "processes" that were initially identified...

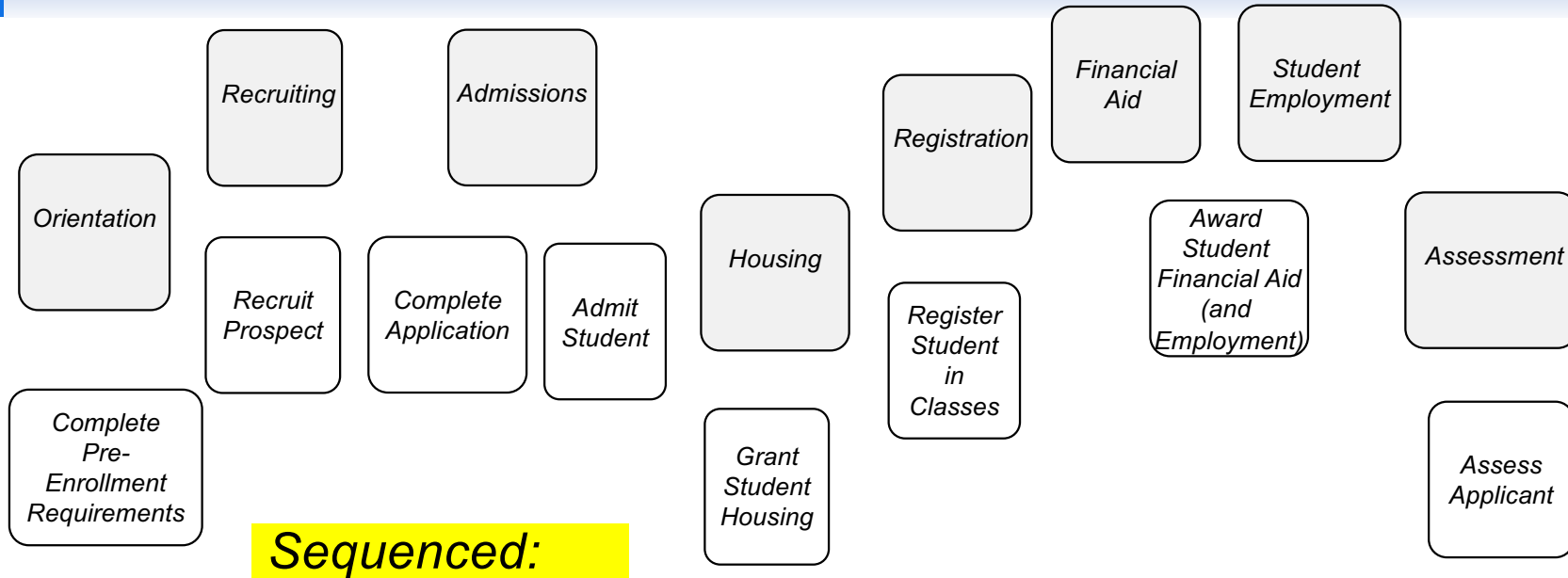


Are these good business processes? **NO!!!**

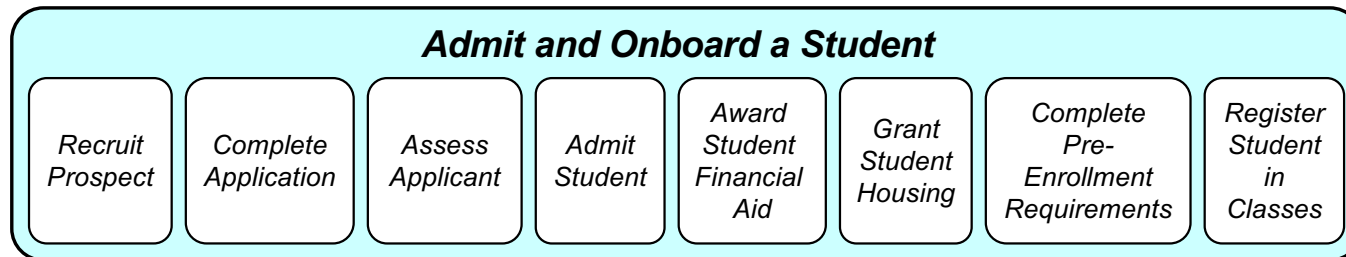
- not named with an "active verb and noun"
- each of these is a department or function.

We convened a facilitated session to determine the "real" process

Rename, reduce, refine, and sequence



Sequenced:

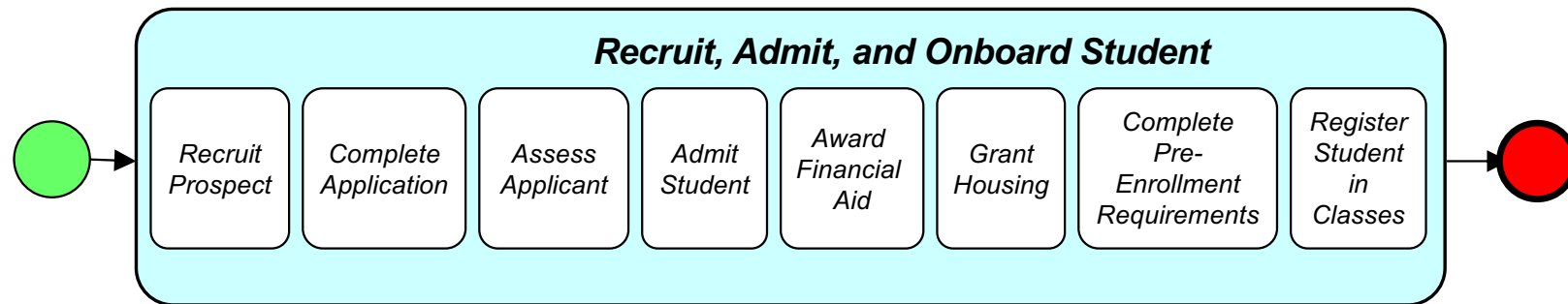


Token: A student,
from prospect to registered



19

The cleaned-up “Process Scope Model”



Triggering Events:

- Dept. targets prospect
- Suspect is identified or purchased
- Prospect self-identifies
- ACT scores come in
- Prospect applies
- ...

Cases:

- In-state undergrad
- Out-of-state undergrad
- ...

Final Results:

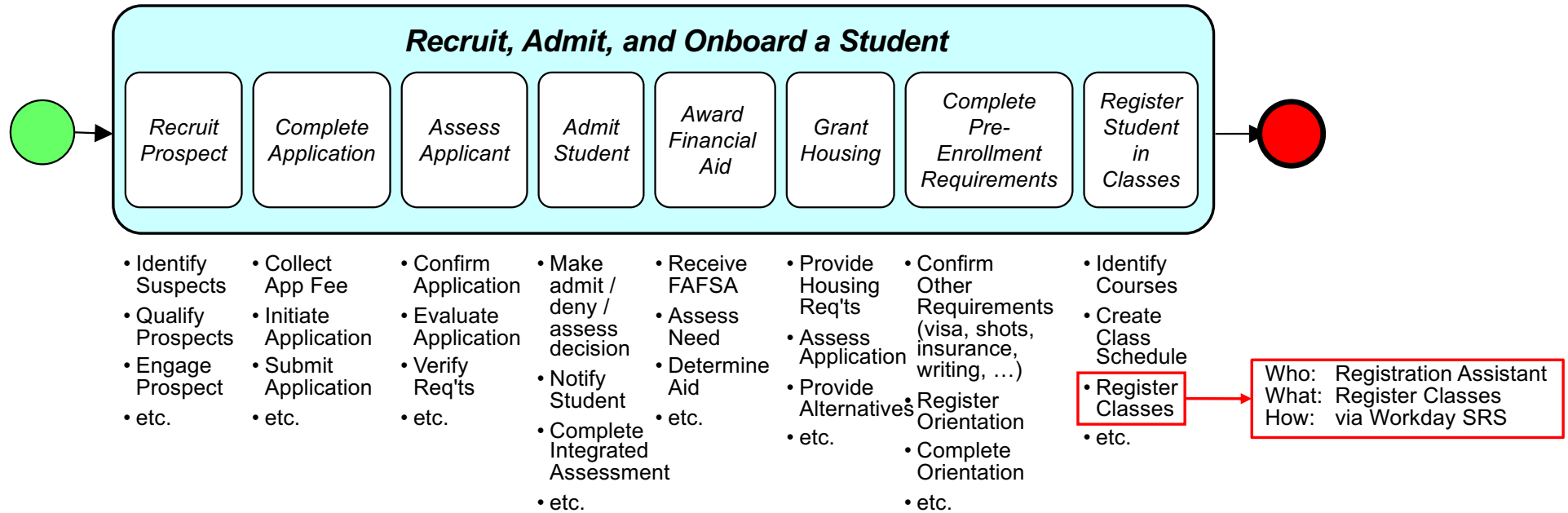
“Up and running,”
ready to attend classes:

- Student is:
 - admitted
 - oriented
 - registered
- Tuition is collected
- Student accommodation is arranged
- Financial aid is granted
- Employment is arranged
- ...

TRAC –

- Trigger
- Results
- Activities (~5-7 phases or milestones)
- Cases (major Variants)

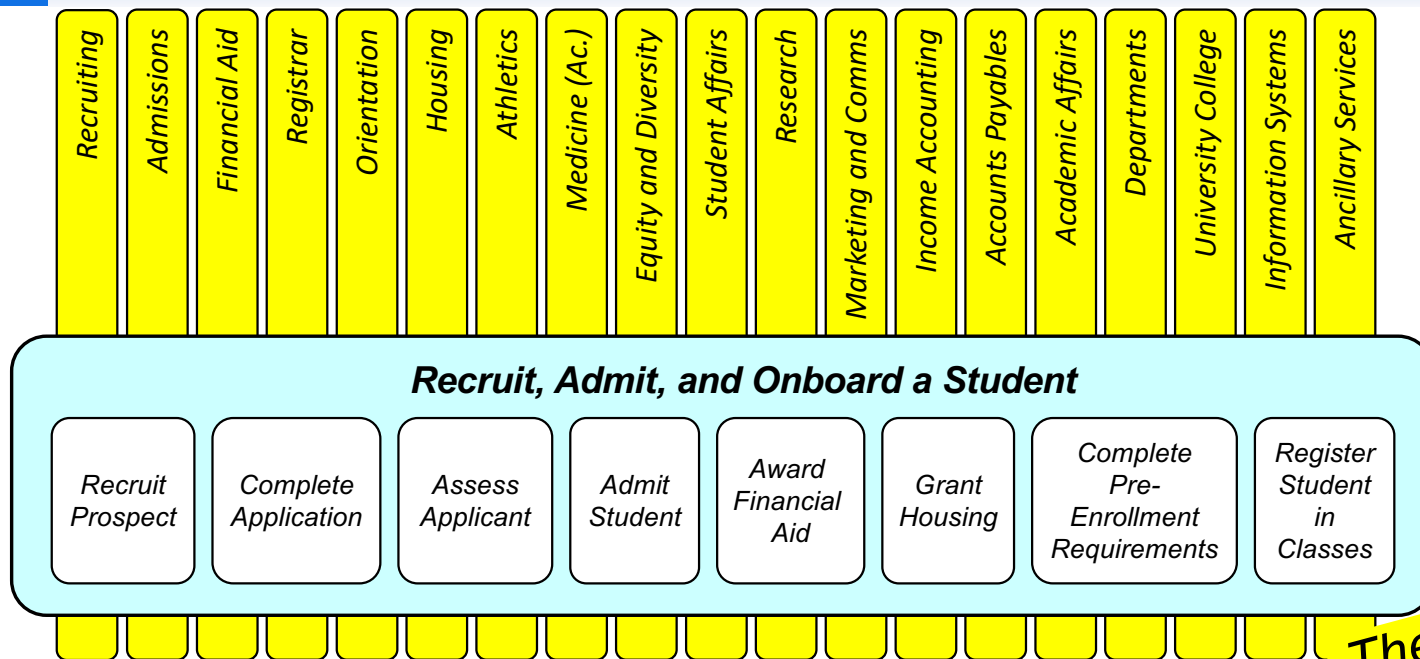
The cleaned-up “Augmented Scope Model”



Typically, 5 – 7 activities identified within each major activity.
Initially just “what” (verb – noun) – later, add “who and how,”
e.g., Registration Assistant (who) Register Classes (what) via Workday SRS (how)

Identifying the functional area responsible for each activity revealed the process was massively cross-functional...

Process Summary Chart shows an astonishingly cross-functional process



The point – the execs said
"Get on with it! There's no
need to burn up \$50,000
on a business case."

Without explicitly addressing the end-to-end process:

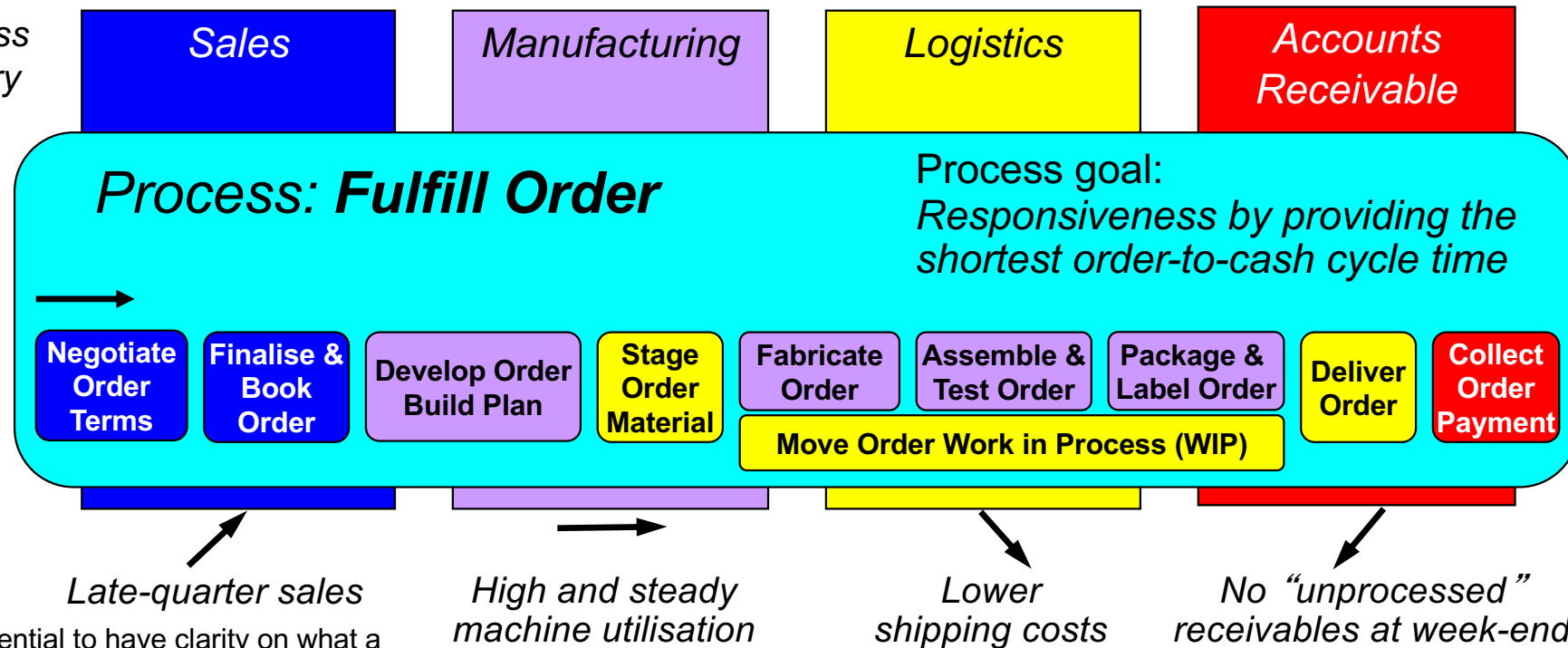
- almost no chance the student experience is positive
- very frustrating for the people doing the work
- almost no chance the university is going to meet its goals

Two key points:

1. Functions are doing their best to optimise their activities
2. A multitude of dis-integrated systems and data sources are being used

2. A common obstacle – misaligned performance measures

A Process
Summary
Chart



1. It is essential to have clarity on what a business process really is

2. Performance measures may be *functionally aligned* and work *against* business processes

3. Success with business processes requires a *holistic view* in which six *enablers* are considered

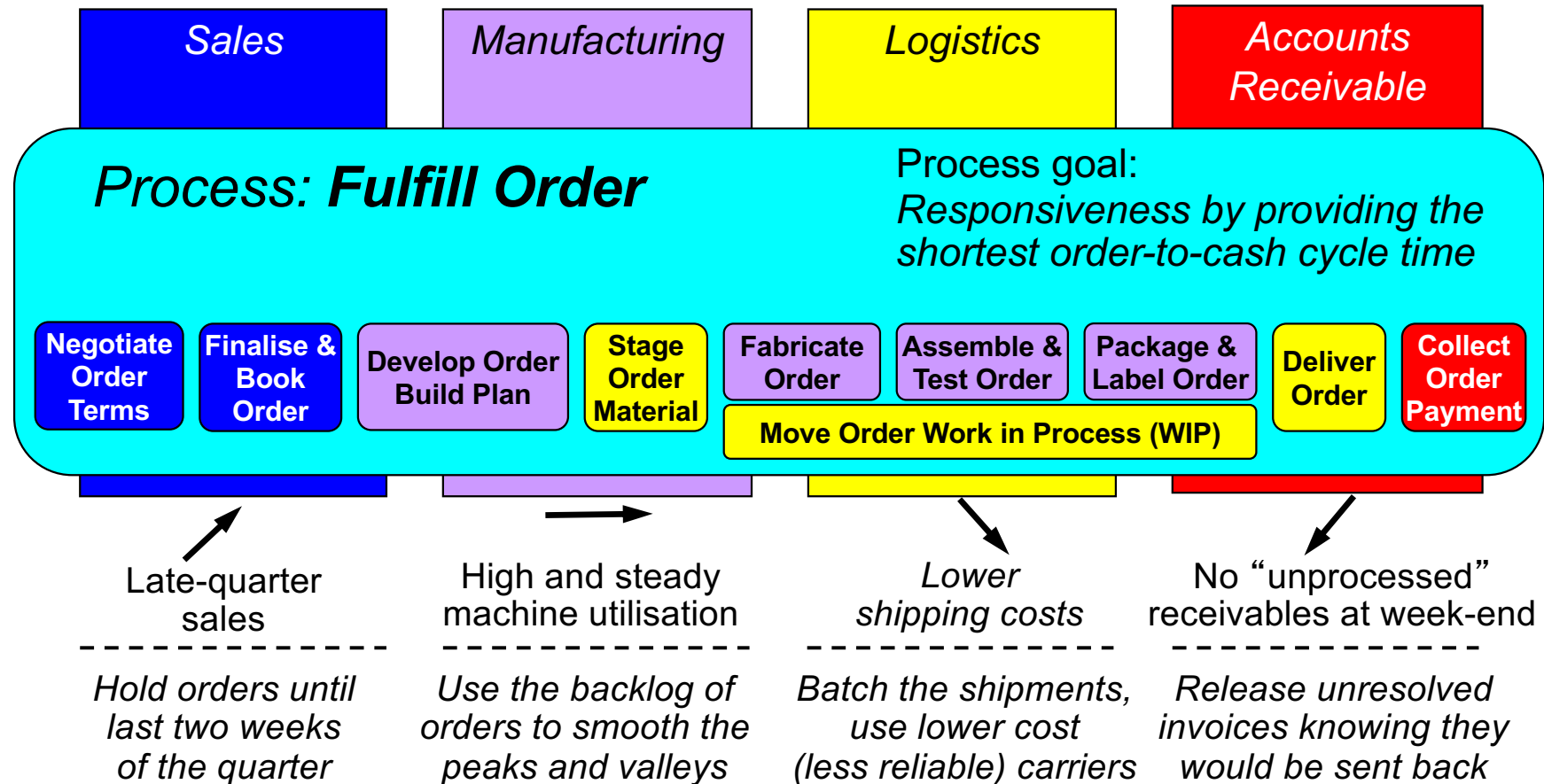
4. A business process can't be great at everything – a single *differentiator* must be chosen

But... performance measures were established *functionally*, before awareness of the *end-to-end process*

Discuss –

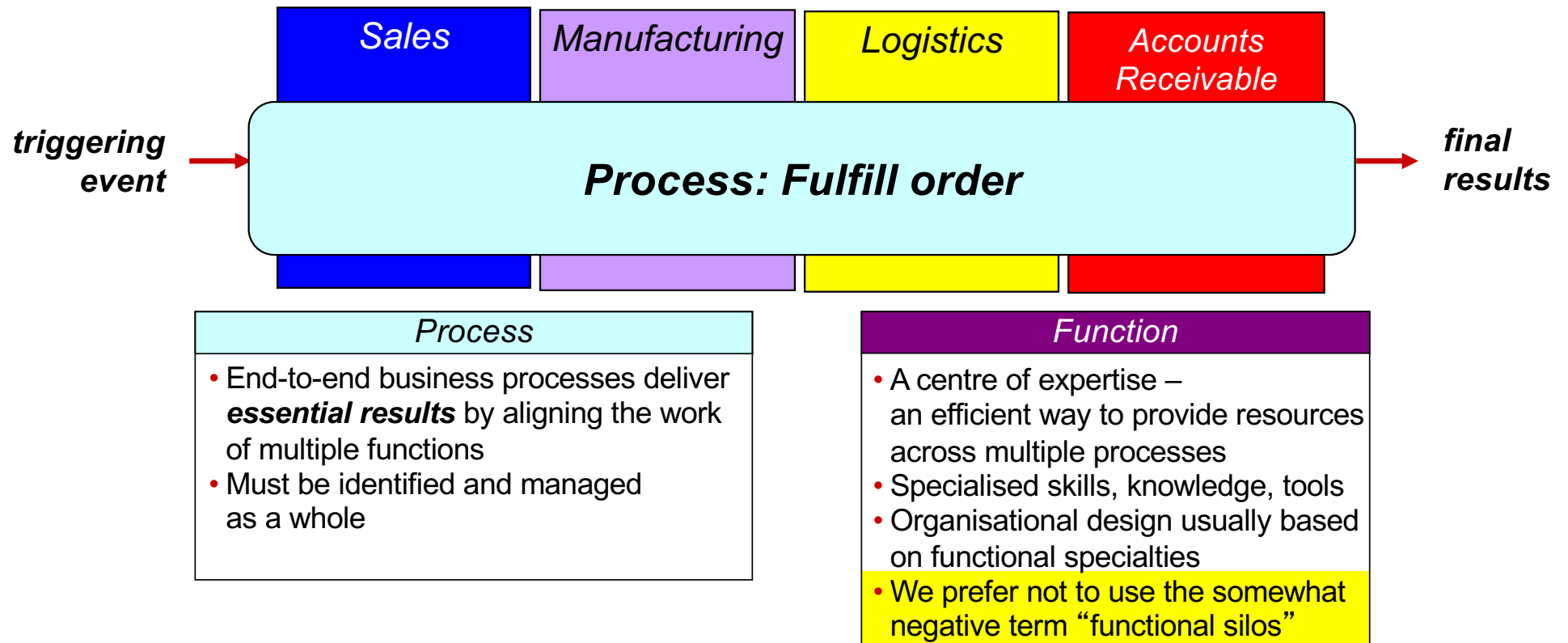
*What are the likely impacts of these performance goals?
What will the different functions do to meet the targets?*

Misaligned performance measures



Poor performance because each function was working hard to meet uncoordinated, functional targets

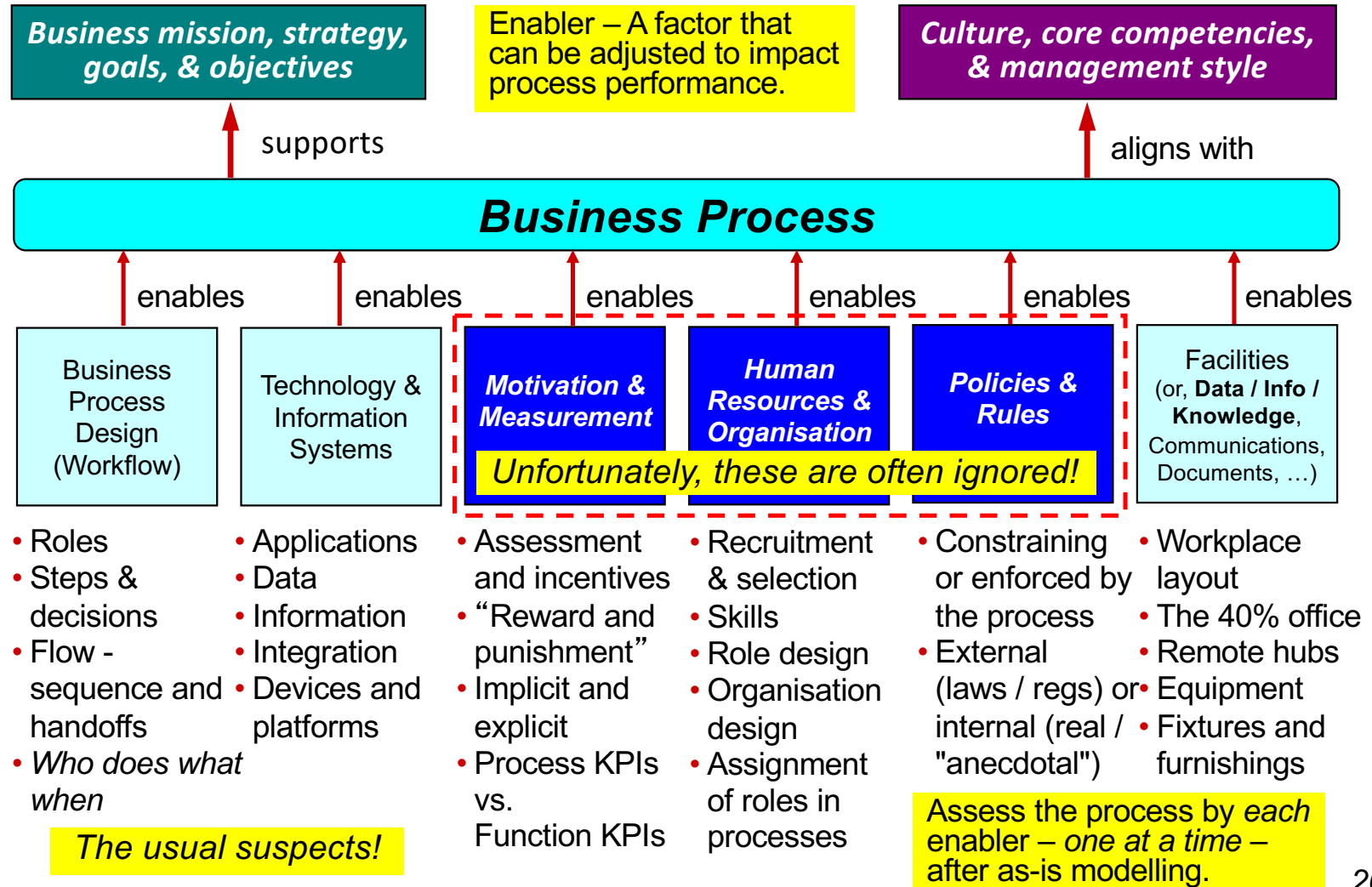
This doesn't mean functions are bad!



Ultimately, business processes are all about alignment

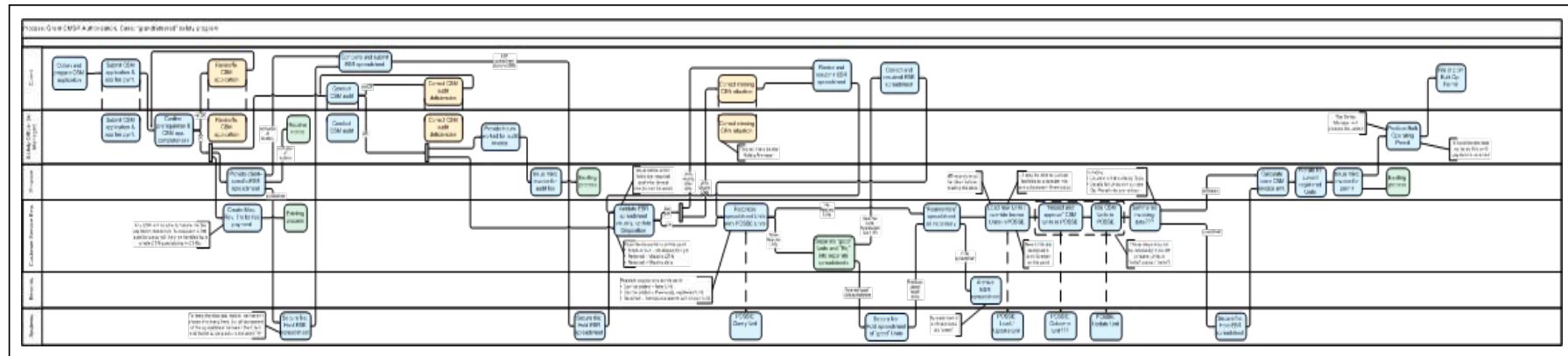
3. A holistic view for process analysis and design

1. It is essential to have clarity on what a *business process* really is
2. Performance measures may be *functionally aligned* - work *against* business processes
3. Success with business processes requires a *holistic view* in which six *enablers* are considered
4. A business process can't be great at everything – a single *differentiator* must be chosen



We model the as-is process to support assessment by enabler

As-is modelling maps *reality* – *who, does what, when.*



This supports a *fact-based* assessment of the *as-is* process by enabler.

Process Workflow Design:

Is each step adding value, placed at the right point in the process, sequential or parallel as appropriate, performed by the best role, etc.?

Information Systems & Technology:

Are the process, the steps, and the actors supported by the right systems and technology?

Motivation & Measurement:

How is the performance of the steps, the actors, the participating functions, and the process measured, and what are the consequences?

Human Resources & Organisation:

Are roles suitably broad, are organisations designed properly, and are roles & skills deployed well into the process?

Policies & Rules:

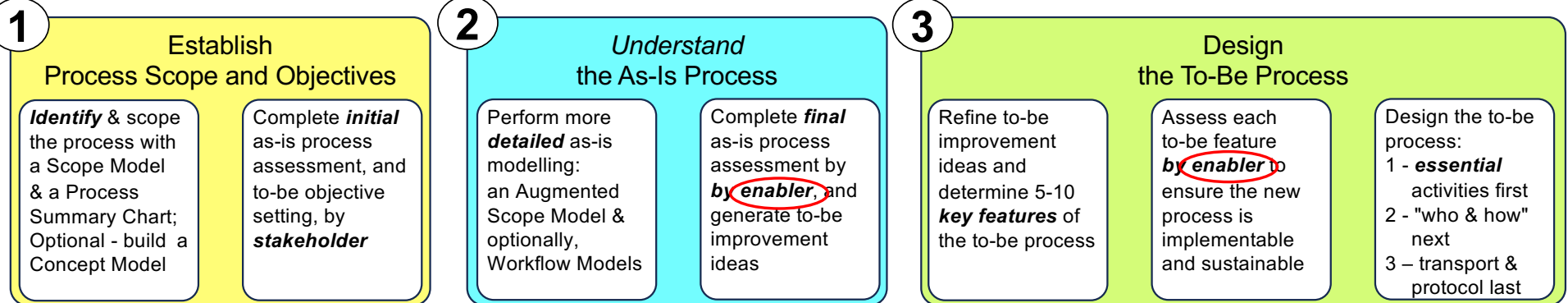
What policies or rules, whether internal or external, constrain or are enforced by the process, and what is their impact?

Facilities (or other):

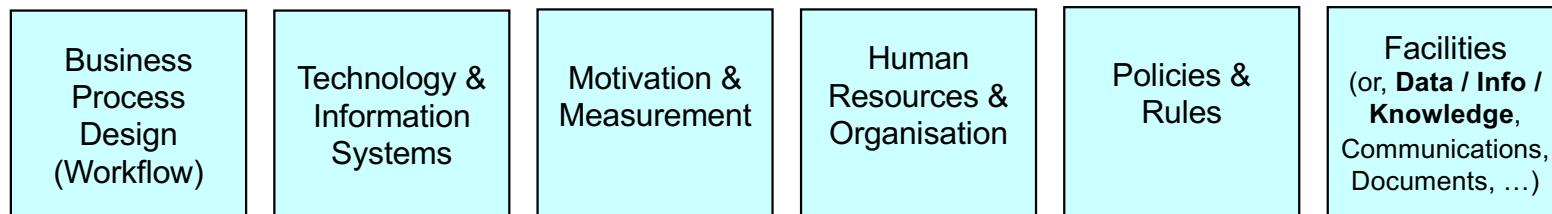
Are the layout & furnishings optimal or do they impede the process? (Many clients instead use this enabler to consider data, info, and knowledge.)

Enablers play a key role in phases 2 & 3

Our methodology for Business Process Change –



The six enablers –



- Focusing on the six enablers provides a holistic view – that is the key feature of our methodology (along with simplicity)
- The enablers help us make the *as-is* to *to-be* transition

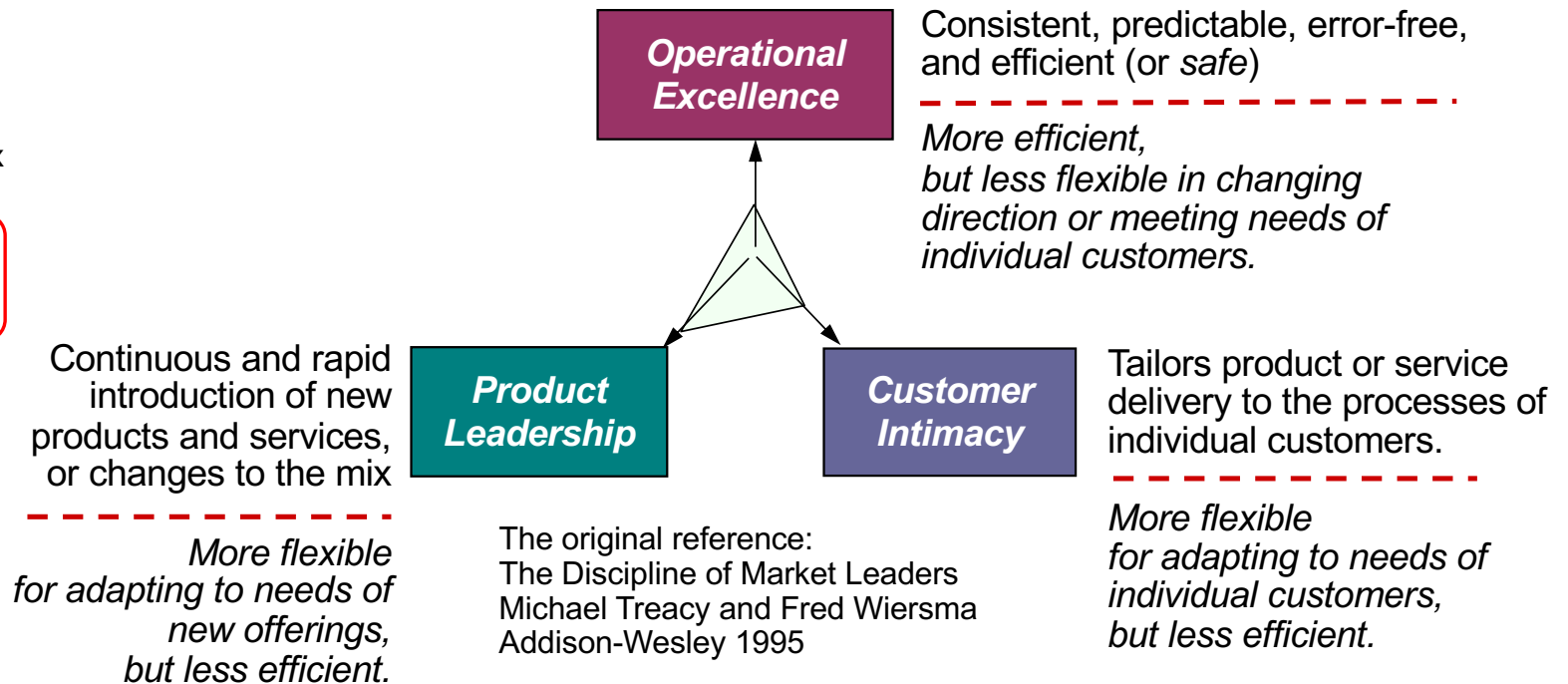
4. Process goals: know your “differentiator”

1. It is essential to have clarity on what a *business process* really is
2. Performance measures may be *functionally aligned* - work against business processes
3. Success with business processes requires a *holistic view* in which six *enablers* are considered
4. A business process can't be great at everything – a single *differentiator* must be chosen

As noted, this is one of the things I do on ~100% of *Project Recovery* assignments -

1. Build *Process Scope Model & Process Summary Chart*
2. Develop *Case for Action* – an *As-Is Assessment by Stakeholder*
3. Establish the *Differentiator*
4. (Optionally conduct an *As-Is Assessment by Enabler*)

Great processes don't try to be all things to all people – strive to be **great** at one differentiator, and **good** at the other two...

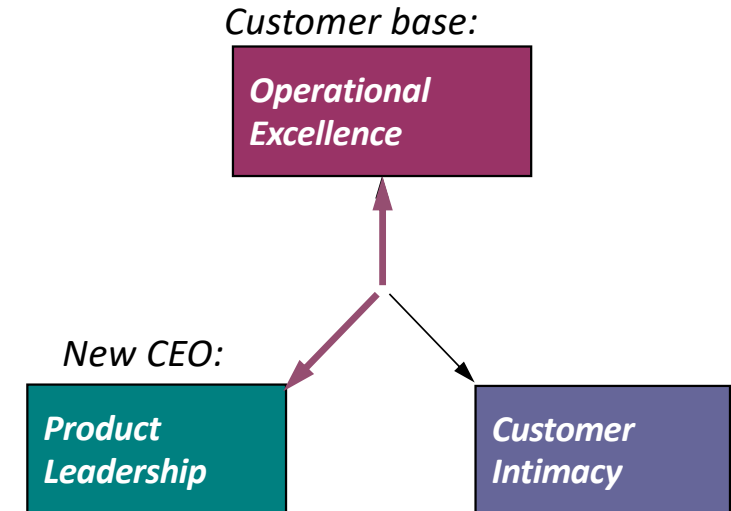


1. Concept developed for the entire enterprise, but great for individual process areas – a “signpost” for decisions on process changes.
2. Processes in an enterprise do not all have the same differentiator.
3. The Process Differentiator can change over time – *slowly!*

Common differentiator problems

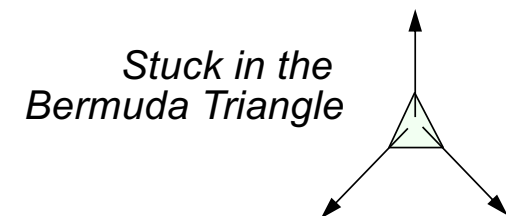
1. Focus on the wrong differentiator

- Insurance company recruits CEO from high tech industry
- New CEO decides “innovation is everything” – \$100M spent on process redesign and system development in support of “innovative car insurance products” – *Product Leadership*
- Total failure – customers wanted affordable, easy to understand, easy to buy insurance – *Operational Excellence (Op Ex)*



2. No differentiator or trying to excel at *multiple* differentiators – *stressed workforce* and *lower performance*

Operational Excellence – “We must be the low-cost provider!”
Customer Intimacy – “We must do what it takes for each client!”



3. Conflicting differentiators within functions of a process – *lower performance*

Business Process – part of the Clariteq Framework for Business Analysis

Framework Layer

Technique sample

What it covers

Goals

Business Objectives

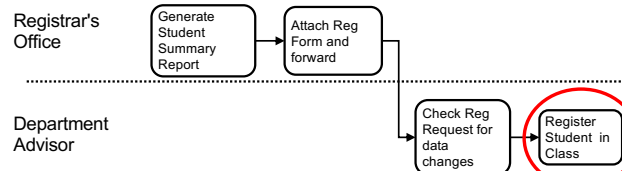
The university is initiating the “Strategic Enrollment” program to raise Student graduation rates in part by ensuring Classes are available for Student registration when needed.

✓ **Project Charter:** documents the rationale, objectives, scope, and success measures for the project

This is not a sequence!

Process

Business Process

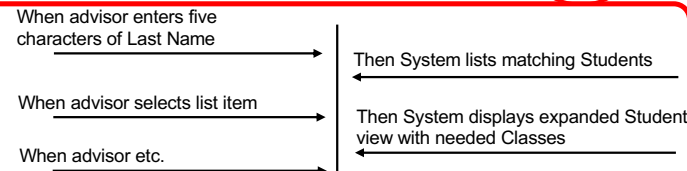


✓ **Process Model:** shows “what” in a Scope Model, then “who & how” in a Workflow Model – the steps done by the actors in the process

Business Process: gives great context for *Business Analysis*

Application

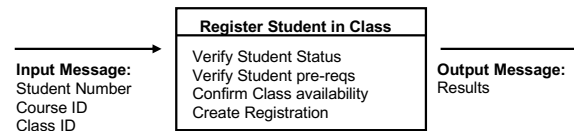
Presentation Services (user interface)



✓ **Use Case:** describes how an actor would like to interact with a system to obtain a service, typically to complete step in a process

Use Cases and Services: where we capture *Functional Requirements*

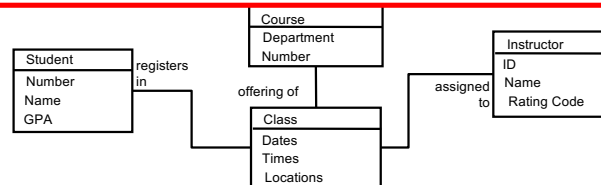
Business Services (rules & logic)



✓ **Service Specification:** describes a service – a package of rules and logic – that is triggered to complete or respond to a business event

Data

Data Mgmt. Services (databases)

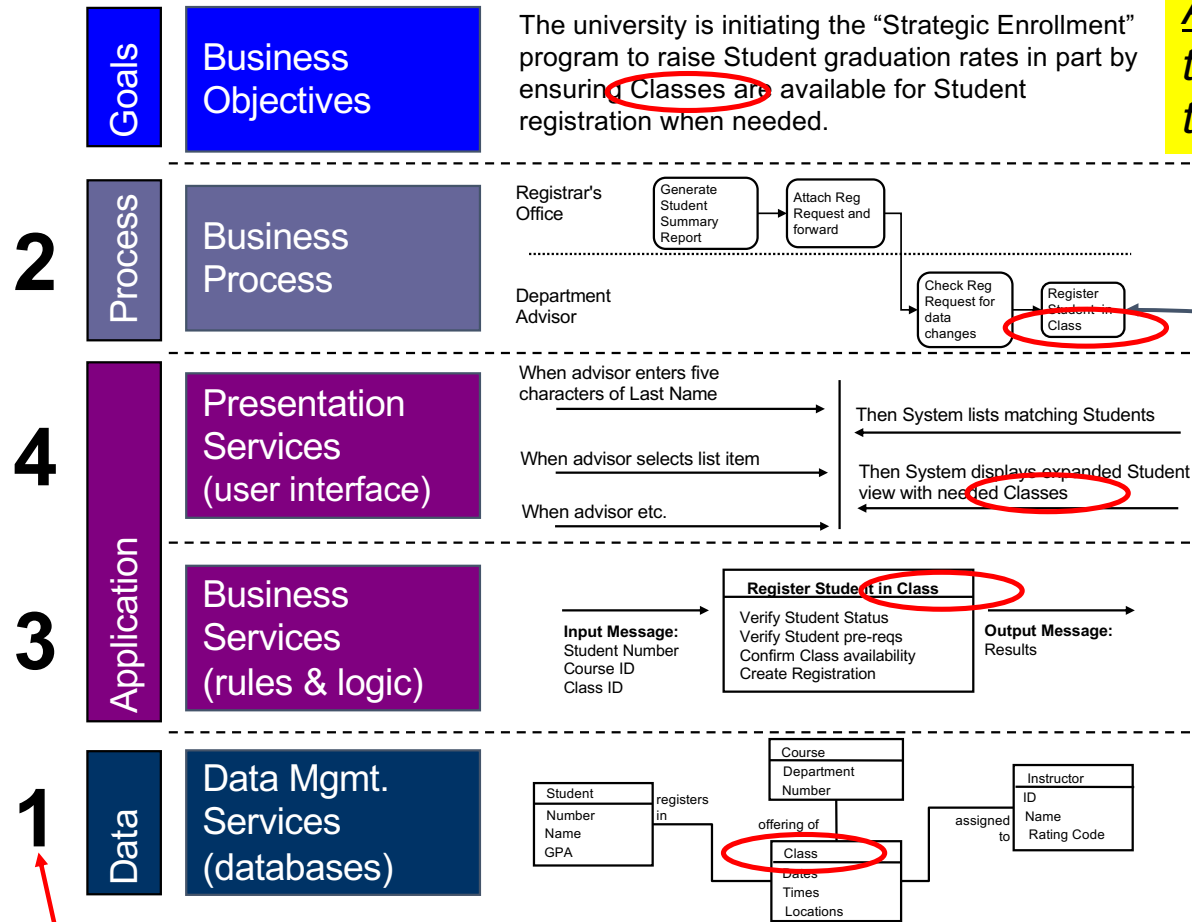


✓ **Concept Model:** depicts the things and the facts about things the organisation needs to record; the things (the entities) are what processes and solutions act on.

Concept Model: a great platform for *Business Analysis*

Only four types of models vs. 14 in the UML! (Unified Modelling Language)

Key point! Everything relies on the concept model



All use the language and constraints of the Concept Model (the "thing model") – the ultimate "what"

Use Cases/User Stories:
- Who (Actors) needs access to the Services, and how (Platform)?

Verb-Noun pairs:
- The Services (event-handlers) that are at the heart of a Service Oriented Architecture.
- Also "building blocks" of Business Processes

The core Nouns in your enterprise. Also known as Business Objects.

My usual sequence

Bonus – great starting point to discover your Events/Services and Use Cases/User Stories

Another key point! Different levels of detail for different purposes

Different models and levels of detail for different audiences and purposes.

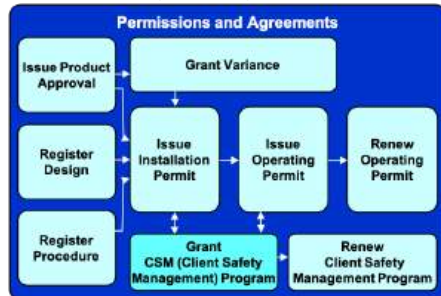
Also applies to Use Cases, Services, and Data Models

Scope – for Planning

Concept – for Understanding

Detail – for Specification

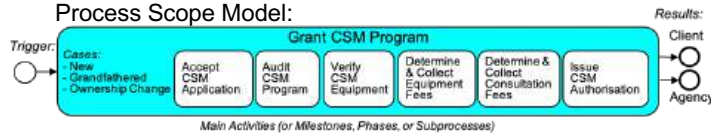
Process Landscape (optional):



- Augmented Scope Model showing next level activities: *who - what - how*
- “Business-friendly” (just boxes & lines) flow models to maximise communication and participation
- Two levels – *Handoff* and *Service*

- Detail for technical design, perhaps using full BPMN

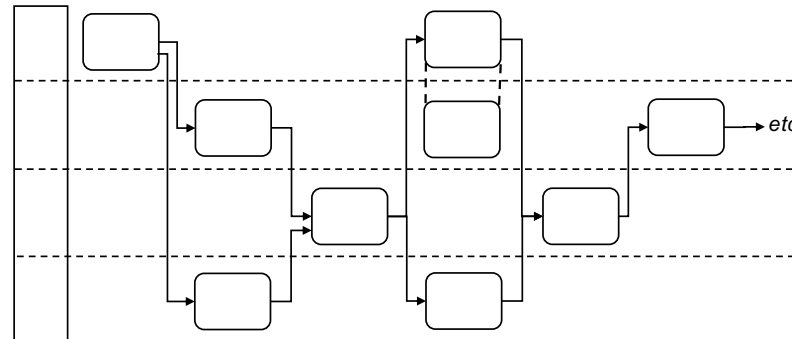
Process Scope Model:



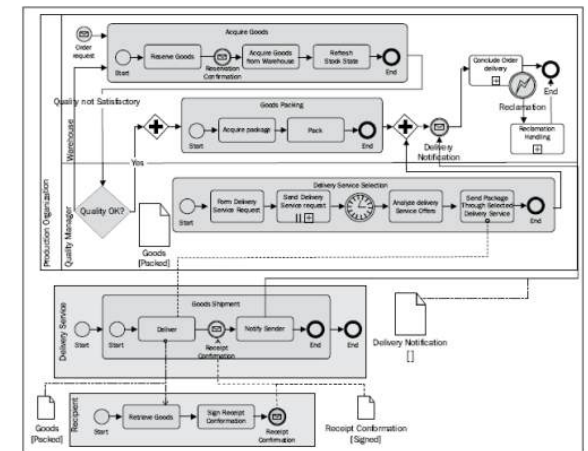
Process Summary Chart:



Boxes



Boxes & Lines



Boxes, Lines,
& MANY Symbols

Our three-phase methodology – proven, practical, & agile

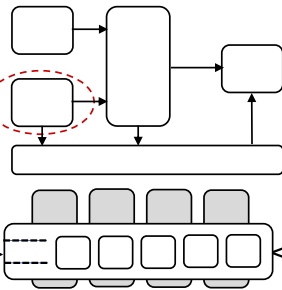
1

Establish Process Scope and Objectives

Identify & scope the process with a Scope Model & a Process Summary Chart; Optional - build a Concept Model

Complete **initial** as-is process assessment, and to-be objective setting, by **stakeholder**

Some goal or issue, not rigorously specified



- Customer
- Performers
- Owner
- others...

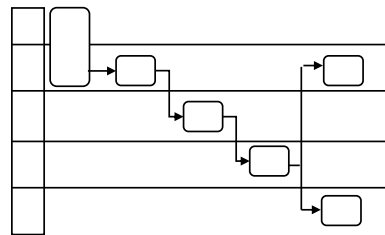
- ID processes & draw *Process Landscape* (Optional – only if you have a large scope)
- ID **Trigger**, **Results**, main **Activities**, **Cases (TRAC)** & draw *Process Scope Model* – focus on *what*, no reference to *who* or *how*
- ID involved functions & mechanisms (*who* and *how*) & draw *Process Summary Chart*
- Conduct *stakeholder-based assessment*

2

Understand the As-Is Process

Perform more **detailed** as-is modelling: an Augmented Scope Model & optionally, Workflow Models

Complete **final** as-is process assessment by **enabler**, and generate to-be improvement ideas



- Process
- IT
- M&M
- HR
- P&R
- Fac. or...

- Develop *as-is* models:
- *Augmented Scope Model* – add ~5 – 7 more detailed Activities for each main Activity
- (Optional) *as-is Workflow Models* – only enough detail to understand process behaviour
- Conduct *enabler-based assessment* and identify *potential improvements*

3

Design the To-Be Process

Refine to-be improvement ideas and determine 5-10 **key features** of the to-be process

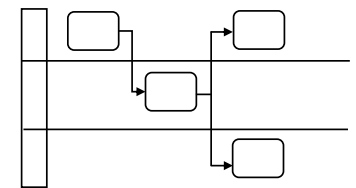
Assess each to-be feature **by enabler** to ensure the new process is implementable and sustainable

Design the to-be process:
1 - **essential** activities first
2 - "who & how" next
3 – transport & protocol last



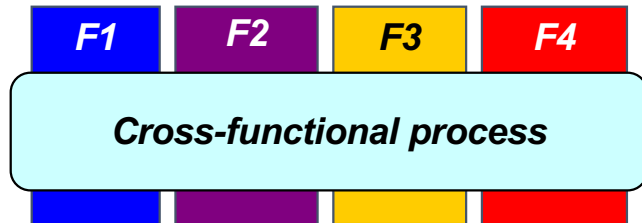
Re-think!

- Select key to-be *Features*

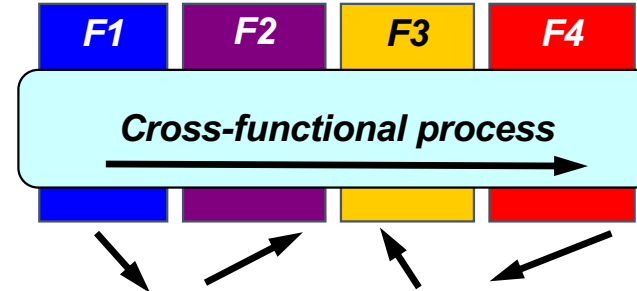


- Assess each key *Feature* by enabler
- Identify and sequence *essential* activities
- Develop *Workflow Models* for essential activities by adding *who* and *how*
- ...on to requirements definition and implementation

Five key points plus a BA framework plus a methodology



Processes:
"large" and X-functional



Misaligned measures

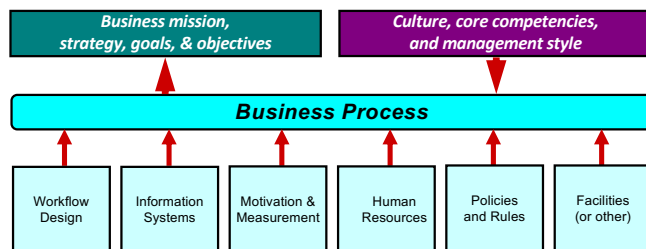
Model-driven
framework

Process
Modelling

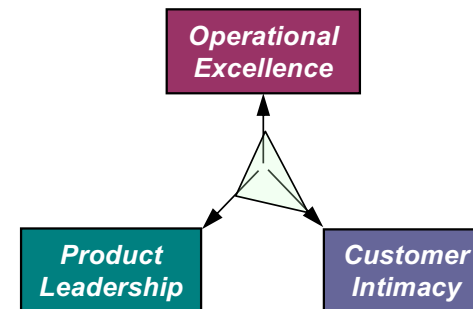
Use Cases

Service
Specification

Concept /
Data
Modelling

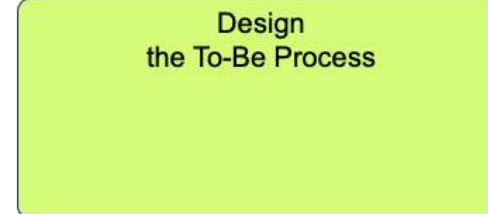
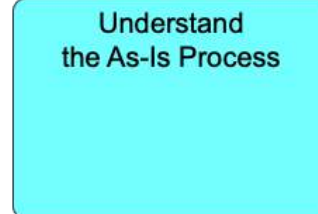
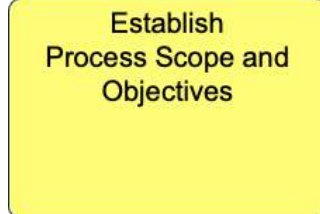


Holistic method



Differentiator

...and a proven
Methodology

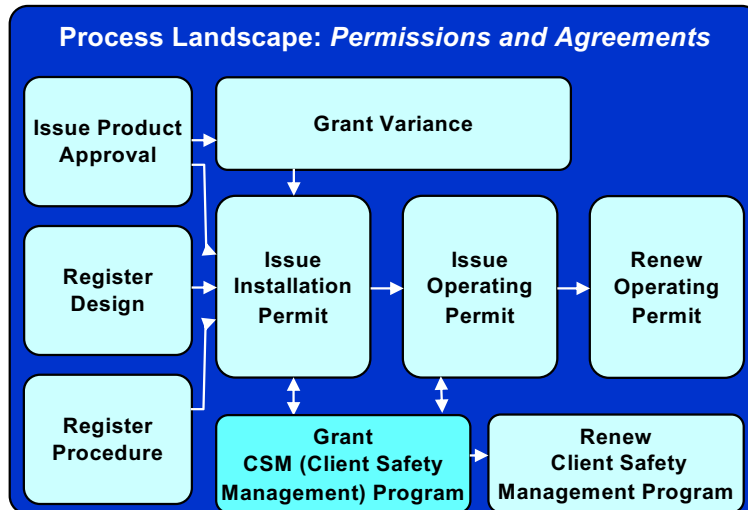
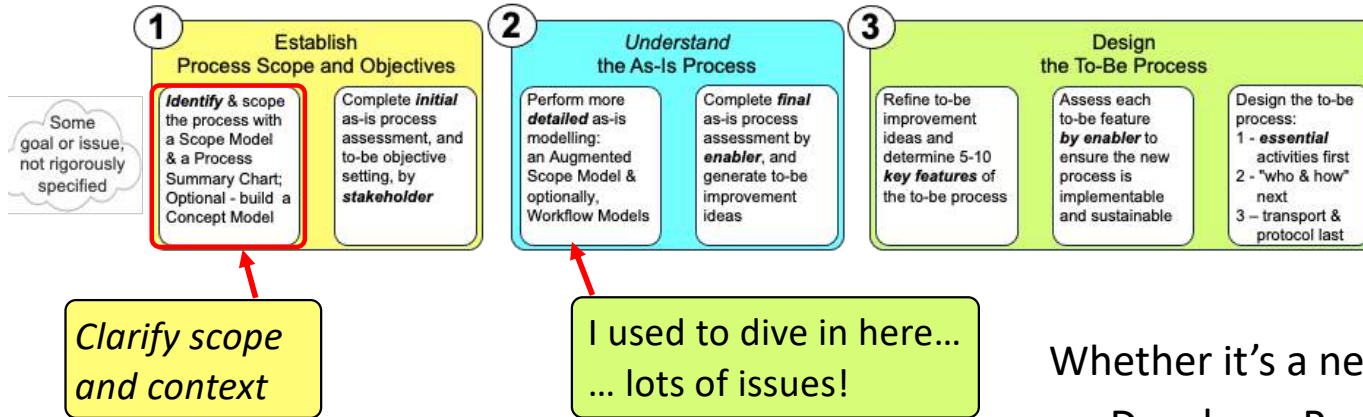


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Identifying and Scoping Business Processes

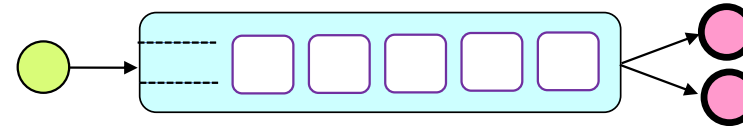
1. Four things you *need* to know about *Business Processes*
2. Identifying true, end-to-end, cross-functional *Business Processes*
3. Process modelling for *humans*
4. Overview –
the transition from *as-is* analysis to *to-be* design

Identify & scope process(es)

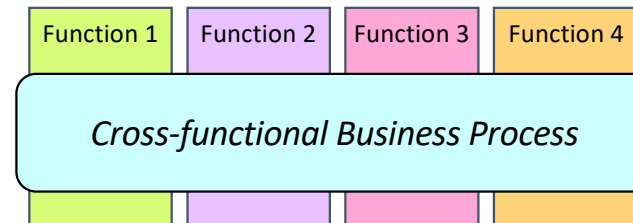


Whether it's a new initiative or "project recovery," **always:**

- Develop a Process Scope Model



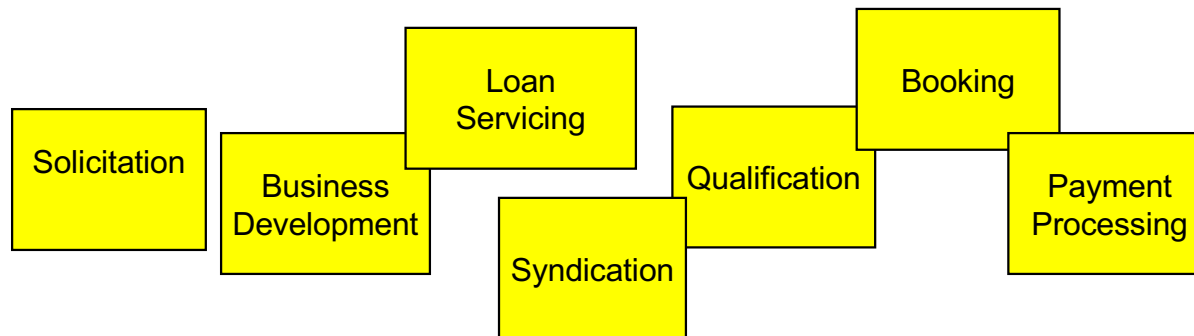
- Develop a Process Summary Chart



You *might* start at a higher level, with a **Process Landscape** –
a decomposition of a business area into a family of *individual business processes*

Process discovery example

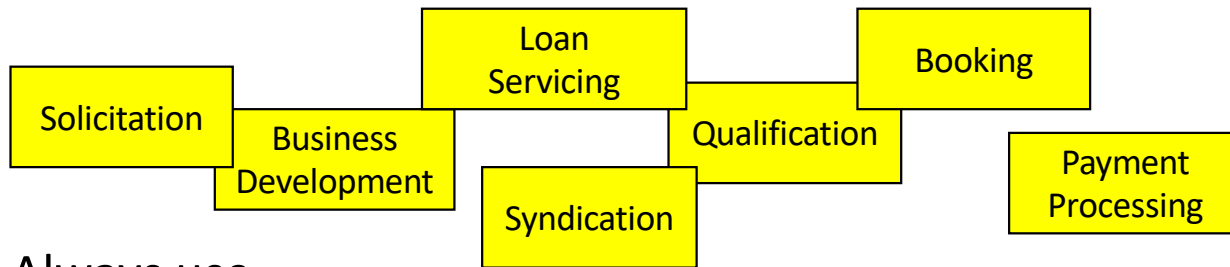
A bank believed they had identified the 12 *business processes* in their Commercial Loans Management area, including these 7:



Discuss:

- What is wrong with the names of these processes?
- Can you think of any questions to help improve these process names?

Bottom-up process discovery – example



Dubious “business processes”

Always use

“active verb – noun” naming
with no “who and how”

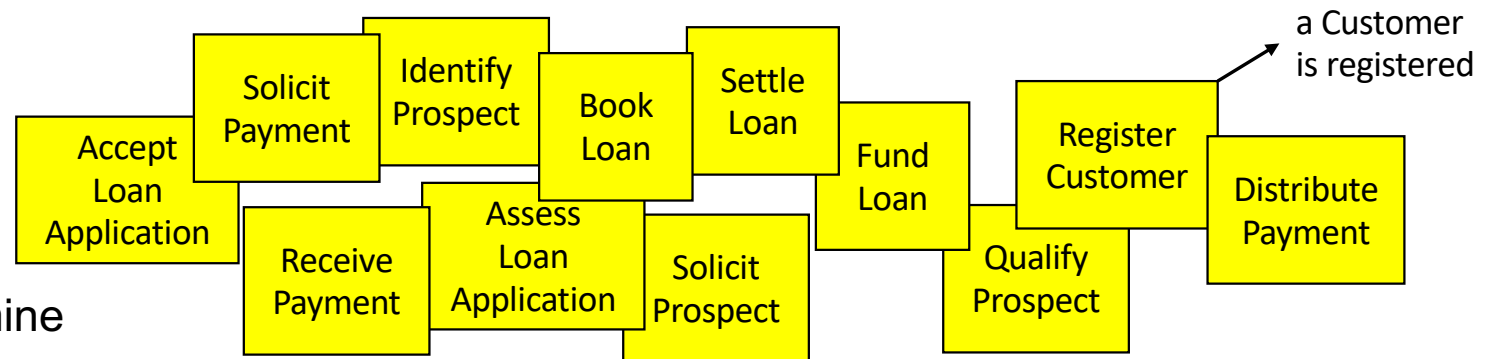
~~Solicitation???~~

Solicit...
what?

Solicit
Prospect

Solicit
Loan Payment

Client then identified *recognisable* activities, each producing an essential *result* (easy!)

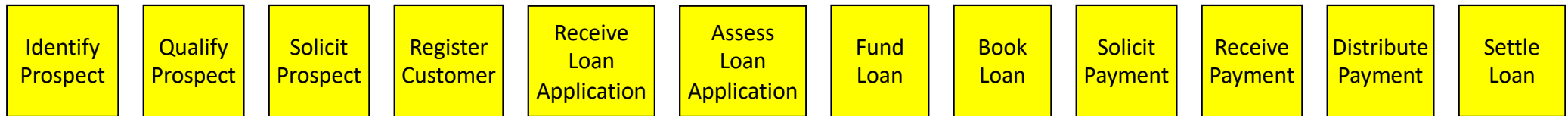


Let's put these
in sequence, then
use *TRAC* to determine
Business Processes.

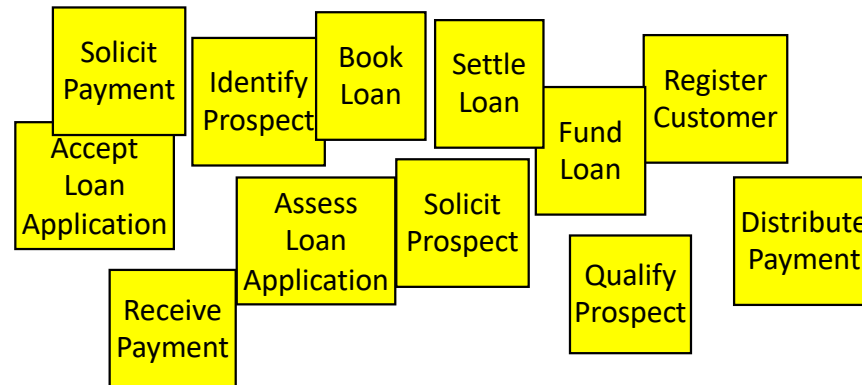
This was done in-person with Post-its and flipcharts
but tools like Lucidchart and Miro work well virtually

Summary – sequence activities

Not usually linear – parallel chains are typical



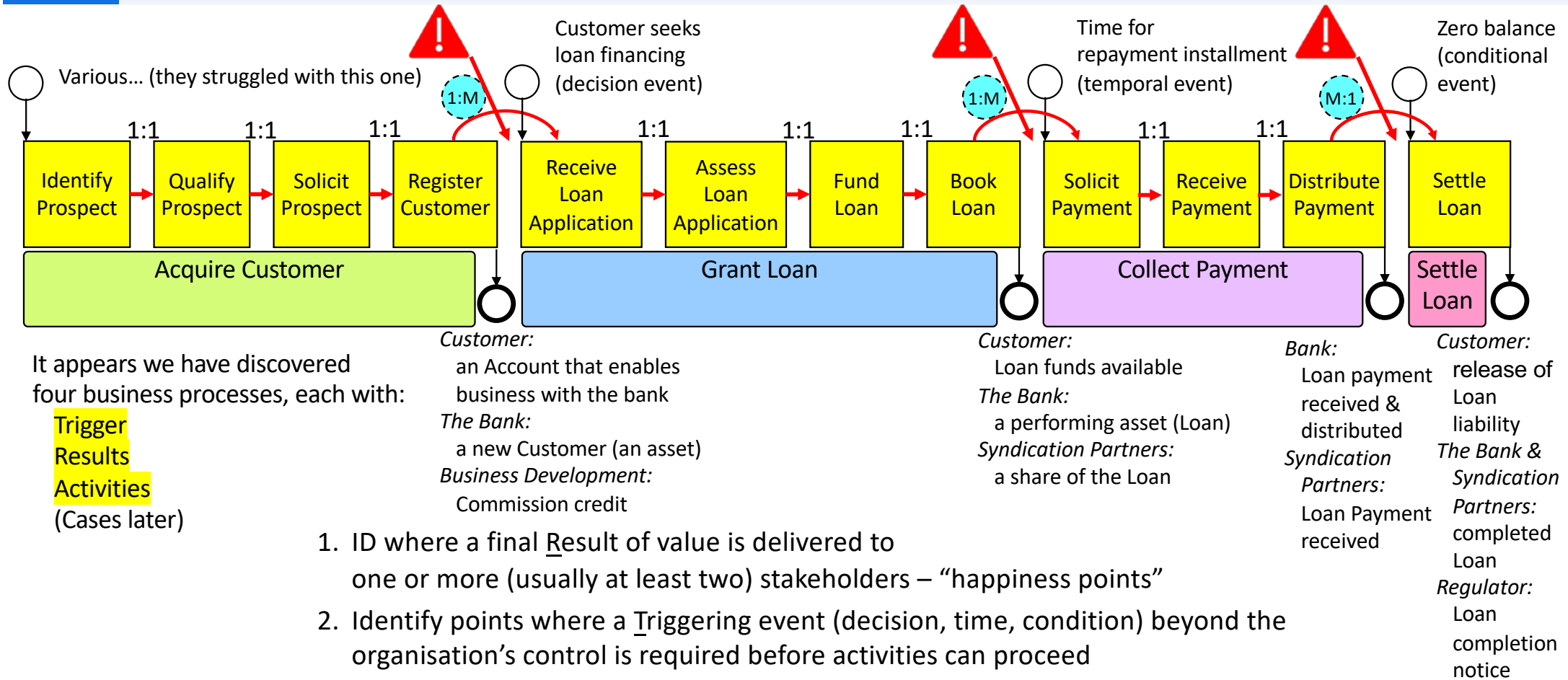
The clients arranged the activities in sequence:
- *easy!*
- *a learning experience!*



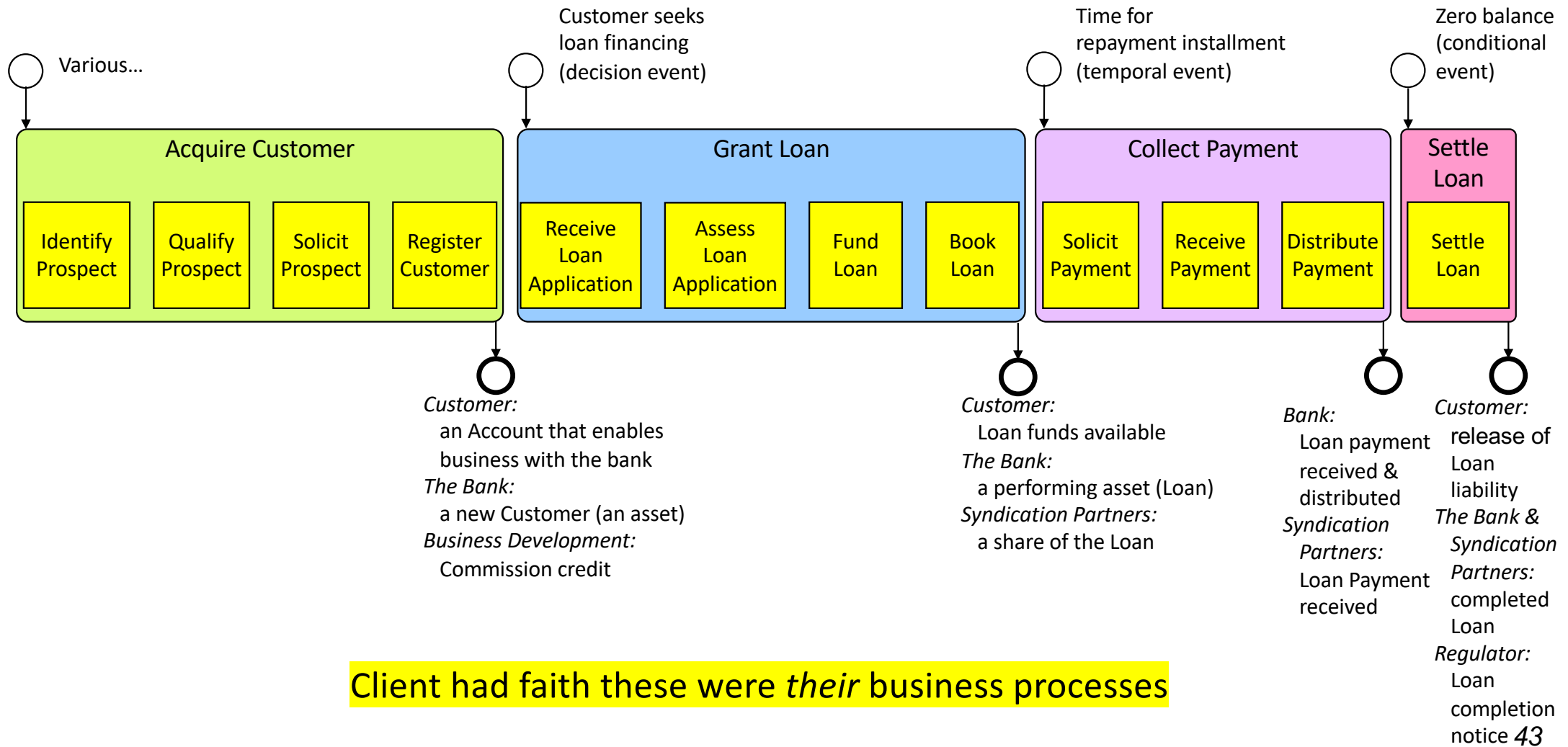
Now we'll use my "TRAC" framework for business processes –

- **Trigger**
- **Results**
- **Activities**
- **(Cases – later)**

Summary – use TRAC to discover business process boundaries

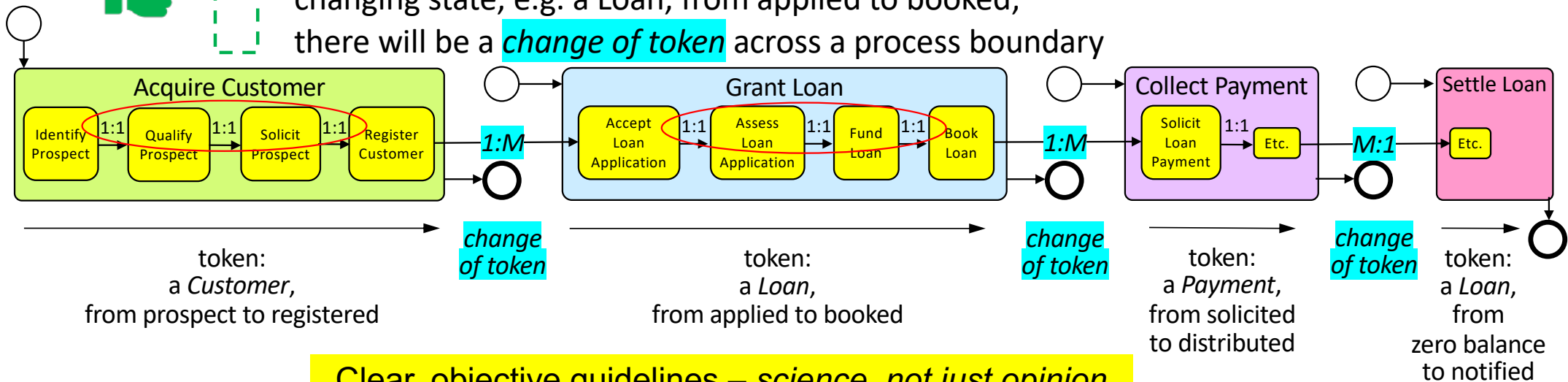


Four end-to-end business processes, objectively demonstrated

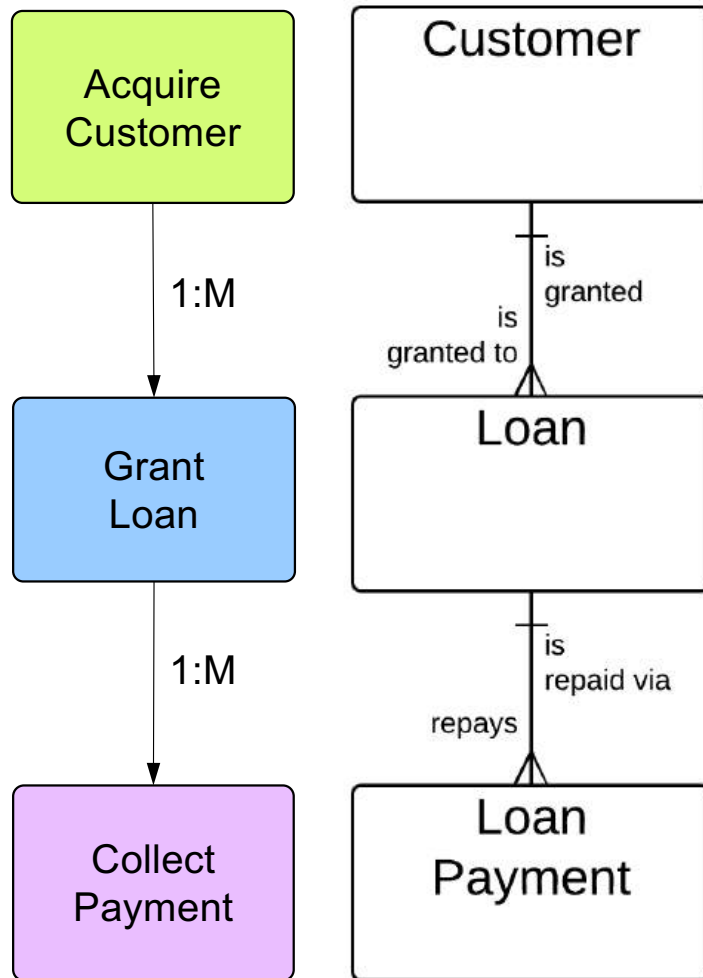


Six guidelines for well-formed processes, two clients really appreciate

1. “Active verb – noun” naming that indicates primary result
2. Triggered by an event (decision, time, data) outside process’ control
3. At the end are results that makes one or more stakeholders happy
4. In between are ~5 to 7 major Activities (phases, milestones, subprocesses, ...)
5. Activities linked **1:1** are probably part of the same process;
a **1:M** or **M:1** connection between activities is probably a boundary
6. The same **token** moves through the whole process,
changing state, e.g. a Loan, from applied to booked;
there will be a **change of token** across a process boundary

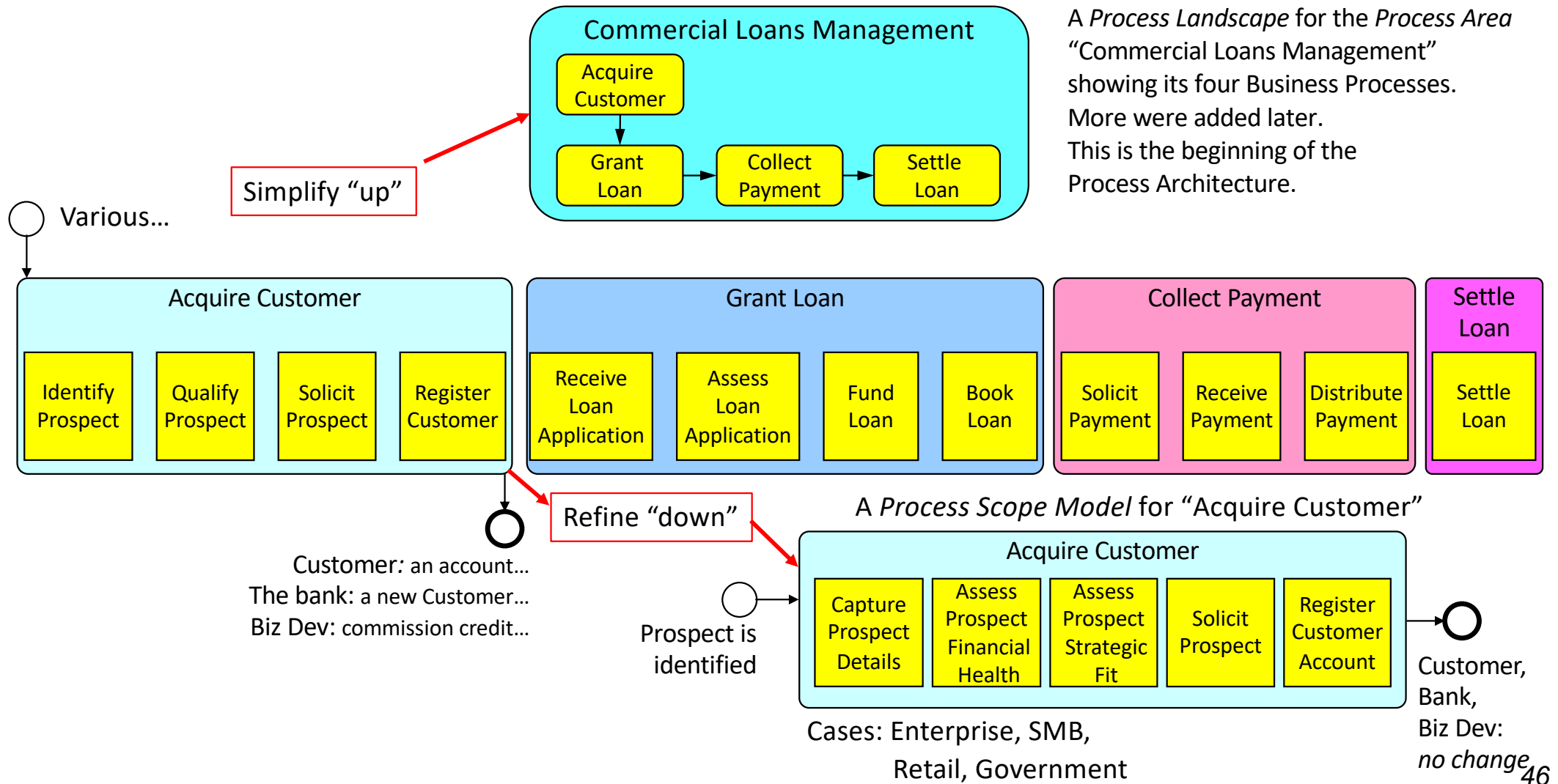


Correspondence to the Concept Model

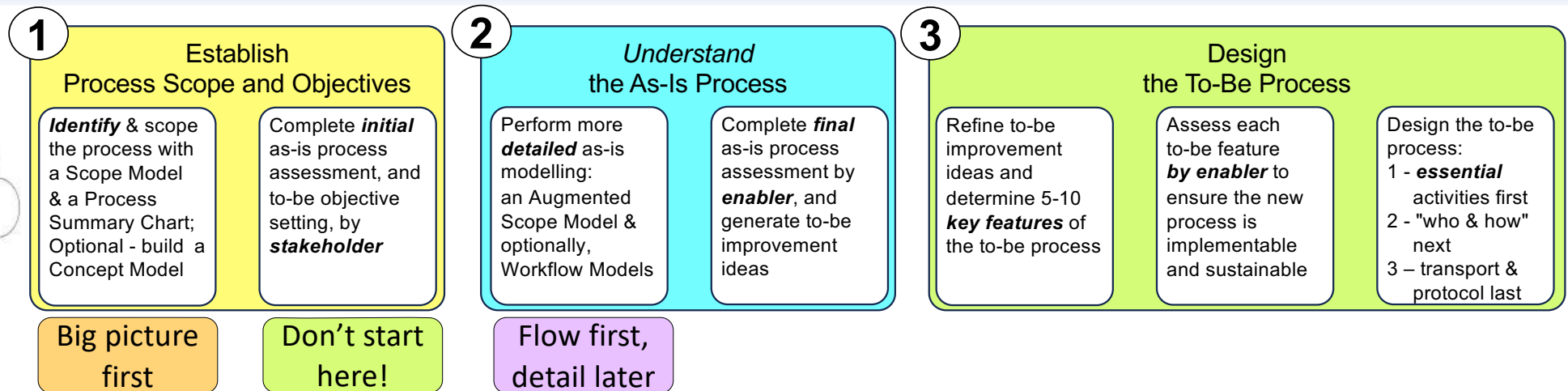


- The nouns in your verb-noun *Process* name are most often the *Entities* in your Concept Model, and each will usually have one primary *Process*
- The relative number of Process instances (e.g., 1:M or M:1) align with relationship cardinality
- This *does not* mean there is only one Process per Entity
 - Assess *Customer* Performance
 - Retire *Customer*
 - Merge *Loans*
 - Write Off *Loan*
 - ...

What next?



Our methodology – three responses to three common difficulties



My *hardest* assignments

1 – Premature diagnosis of the situation

Don't start with a problem statement!
There will be some goal or issue, but don't formalise it **yet**.
And remember... it may not be a "process" issue.

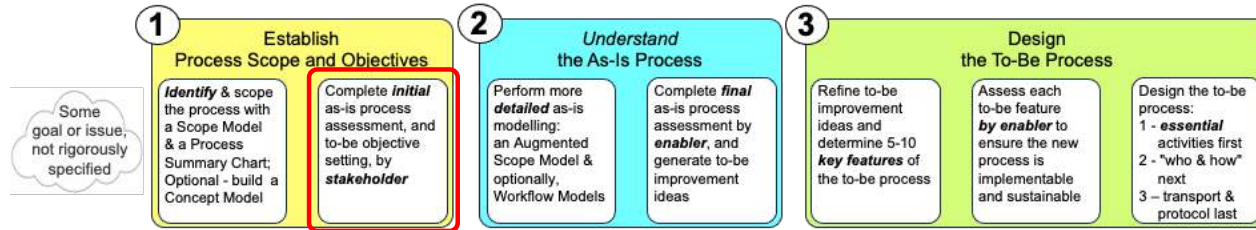
2 – Failure to identify true end-to-end processes

Rigorous techniques to identify real business processes – a Process Scope Model and a Process Summary Chart make scope and context visible.

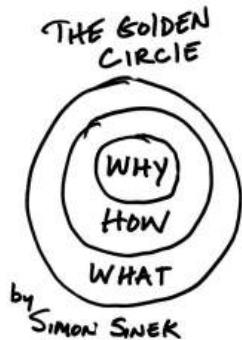
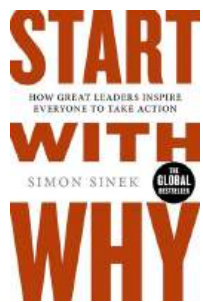
3 – A rapid descent into unhelpful detail

Clarify the big picture, then take a *controlled* descent with well-defined levels of detail.

Now that you have e2e context, perform initial as-is assessment



Why does this process need to change?



"People don't buy *what* you do, they buy *why* you do it."

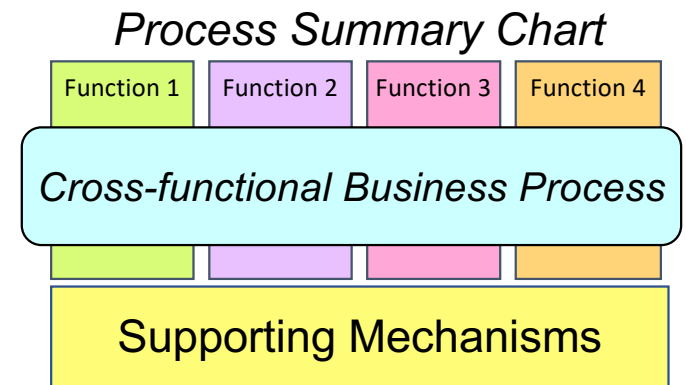
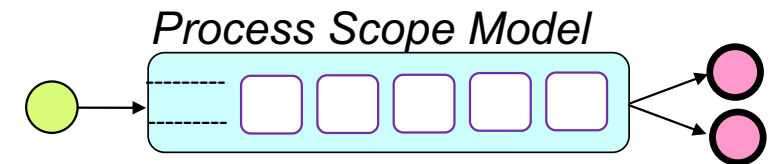
But for a process...

What first

Who & How next

Only then **Why?**

Why does this process need to change?
We'll answer that with a *Case for Action*
(a nuanced form of problem statement)



Now we have an end-to-end, cross-functional perspective.

My version of Michael Hammer's "Case for Action"

Simplified, re-sequenced, more stakeholder-focussed

1) *Stakeholder assessment* – makes it *real*

What are the concerns of *each* stakeholder group?

- Customer
- **Performers** 
- Owner/manager (the enterprise itself)
- Others (regulator, partners, ...) as needed



*We're not
that bad!*

2) *Context* – makes it *blame-free*

What changes in the environment since the process was “designed” have caused these issues to surface?



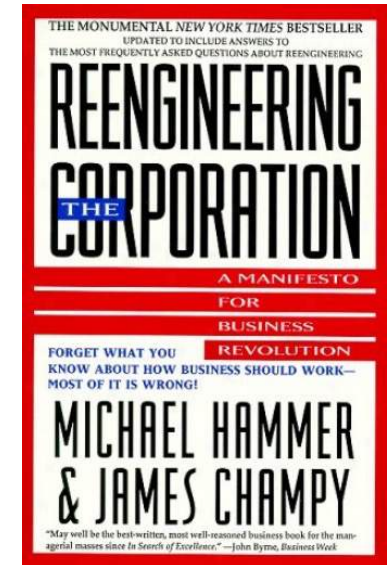
Yay – It's not our fault!

3) *Consequences of inaction* – makes it *compelling*

What will happen if the process is left as-is?



We'd better get on with it! 49



1. Stakeholder concerns

“You must communicate in a clear and compelling way why the process has to change by completing the initial assessment for the as-is process.”

Initial assessment – 3 components

Stakeholder assessment – makes it *real*

- Customer
- Performers
(*what's in it for me?*)
- Owner/manager
(the enterprise itself)
- Others, as needed

Initial assessment – typical questions

Customer:

- Are there too many interactions?
- Are rules, requirements, protocol reasonable?
- Can *your* work be located within the process?
- *Are you the process integrator – the human glue that connects the process steps?*

Performer:

- What are your major sources of frustration?
- Do you have the necessary tools and support?
- Are there redundant steps or steps that serve no purpose?
- Are problems caused upstream? Does the workload vary wildly?
- What would you change if you could?
- *Is there a documented process?*

Owner/manager:

- Does the process use resources you would rather re-allocate?
- Is it a net contributor or a source of problems?
- Does the process constrain innovation, growth, or opportunities?
- *Is it a source of customer or media criticism?*

2. Context – assessing changes in the environment

Context – makes it blame-free
*What changes in the environment
since the process was first
“designed” have caused these
issues to surface?*

Areas to consider:

- Regulatory change
 - Workforce changes (e.g., “recruiting and retaining” vs. “retiring”)
 - Emergent technology (AI, robotics, drones, BP Automation, SMAC ("Social, Mobile, Analytics, Cloud,") or current technology is EOL ("End Of Life"))
 - Changing customer expectations
 - Competition, especially new or emerging *Current "Top Five"*
-
- Economic conditions
 - Change in business volume (growth or contraction)
 - Change in business model (e.g., customised or standardised)
 - Change in business ownership (public, private,) M&A, divestiture
 - Change in business leadership / executives
 - Change in government (post-election fallout)
 - Changes in business operating locations
 - Socio-political change
 - Environmental (“green”) concerns

And many others
(see “PESTLE”)

3. Consequences of inaction

Consequences of inaction – makes it **compelling**

*What will happen if the process is left as-is,
and the status quo is maintained?*

For the individual:

- Unsatisfying work environment?
- Diminished opportunities?
- Reduced employment
or *loss of employment?*



For the organisation:

- Reduced performance?
- Reduced stature or reputation?
- Withdrawal from the market?



“Case for Change” example

Situation:

- Manufacturing firm redesigns core *Financial Reporting* processes prior to COTS selection
- No progress! – Project has descended into “the blame game”

Stakeholder assessment –

- *Customer* – financial markets / fund managers cannot get the info they need for investment decisions
- *Performers* – Finance staff spend all their time on assembling “the numbers” with no time for value-added analysis
- *Owner/manager* – CFO is under constant pressure and criticism from the financial markets and other executives

Client was very happy!

Alec, I'm so happy I could just kiss you!



That's not in my contract

Context –

- Firm recently divested from a huge conglomerate
- Financial reporting was formerly to Head Office, but now is to financial markets which the processes were *never designed to do*

Consequences of inaction –

- Planned acquisition of competitor will not go ahead due to lack of financial market support for new bond issue;
- *Firm likely to be acquired by the competitor. Uh oh... Finance staff quickly realised their employment was threatened and got on board!*

Then, establish process goals / improvement targets

“You must also provide a sense of direction by defining to-be process goals and objectives.”

Subjective goals

Give people a “feel” for direction:

- “Customers will love this process because...”
- “Performers will love this process because...”
- “The process owner will love this process because...”

Measurable objectives

Provide *specific targets*

Establish baseline to *prove success*

Format:

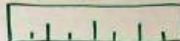
- Topic
(what will be improved?)
- Target
(what is the measurable objective?)
- Timeframe
(when will these results be realised?)



It may now be appropriate to introduce new process measures, metrics, and key performance indicators (KPIs) to establish baseline performance

Example from in-person workshop – assessment to goals

At this point, also think about the process' differentiator

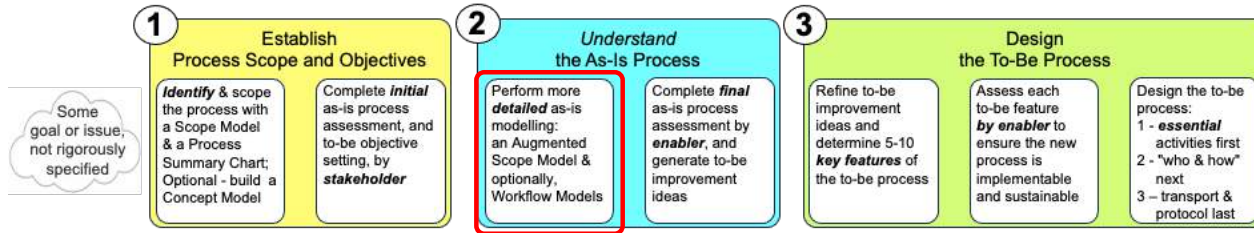
Stakeholder-based Initial Assessment of the as-is. ("Case for Action")	
1) Stakeholder concerns	
<u>Customer</u> : · excessively "high touch" (too many meetings) · long lead times from contact to publication · errors in ads and invoices	
<u>Performers</u> : · too many review meetings which cut into selling time <u>Sales Rep</u> : · overhead ("administrivia") in order submission procedure	
<u>Production</u> : · Monday to Wednesday crunch · too many cycles to obtain ad approval	
<u>Finance</u> : · redundant ad order data leading to errors · lack of pricing controls	
<u>Owner</u> : · ceiling on growth · lost revenue · staff frustration	
2) Context: growth, customer expectations, IT, competition.	
3) Consequences of inaction: Out of business!	
Stakeholder-based goals for the to-be	
Subjective 	Objective 
"Why will they 'love' the new process?"	"measurable"
fewer or no meetings	ads approved at first review / 80% / Q4 2017
shorter lead time	lead time / reduced from average of 10 days to 5 / Q4 2017
no errors in ads or invoices	invoice error rate / .3% / Q4 2017
fewer or no meetings	ad orders / week / +20% / Q1 2018 (or commission?)
relief from burdensome order submission	time spent on order submission / % / Q4 2017
level workload	daily workload / variation / ≤ 5% / Q4 2017
more ads approved on first review	ads approved at first review / 80% / Q4 2017
elimination of ad order data redundancy ("single source of truth")	page count / increasing at 15% per annum / Q1 2018
GROWTH	no lost revenue to excess
eliminate stress and friction	staff satisfaction score / ? / Q1 2018

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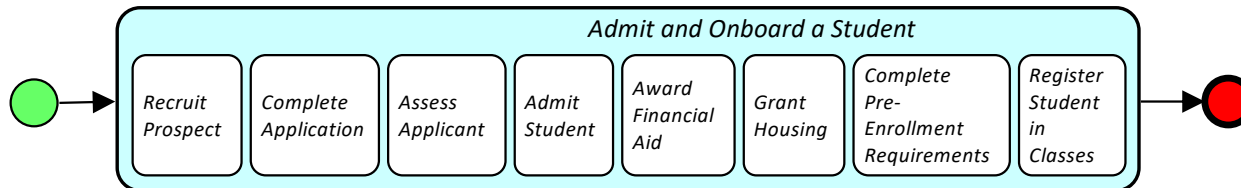
Making process modelling relevant

1. Four things you *need* to know about *Business Processes*
2. Identifying true, end-to-end, cross-functional *Business Processes*
3. Process modelling for *humans*
4. Overview –
the transition from *as-is* analysis to *to-be* design

3 – Complete additional as-is modelling



The goal is to *understand* the as-is process, not document it in *excruciating detail!*



- Identify Suspects
- Qualify Prospects
- Engage Prospect
- etc.
- Collect App Fee
- Initiate Application
- Submit Application
- etc.
- Confirm Application
- Evaluate Application
- Verify Req'ts
- etc.
- Make admit / deny / decision
- Notify Student
- etc.
- Receive FAFSA
- Assess Need
- Determine Aid
- etc.
- Provide Housing Req'ts
- Assess Application
- Provide Alternatives
- etc.
- Confirm Other Requirements (visa, shots, writing, ...)
- Register Orientation
- etc.
- Identify Courses
- Create Class Schedule
- Register Classes
- etc.

Who: Registration Assistant
What: Register Classes
How: via Workday SRS

- Optionally,
model initial Workflow –
- Simplicity – minimal symbols and detail
 - “Flow first, detail later!”

I always build an Augmented Scope Model –

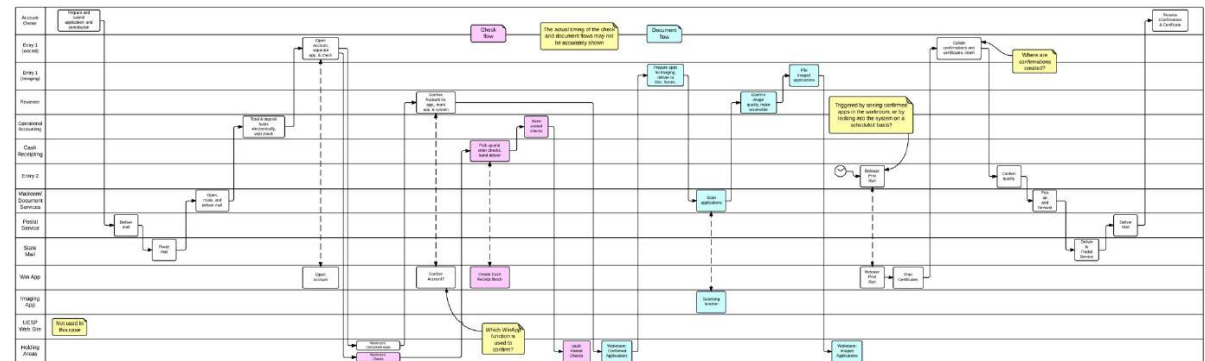
1. What the *detailed* activities are, e.g.

“Register Class” (verb + noun)

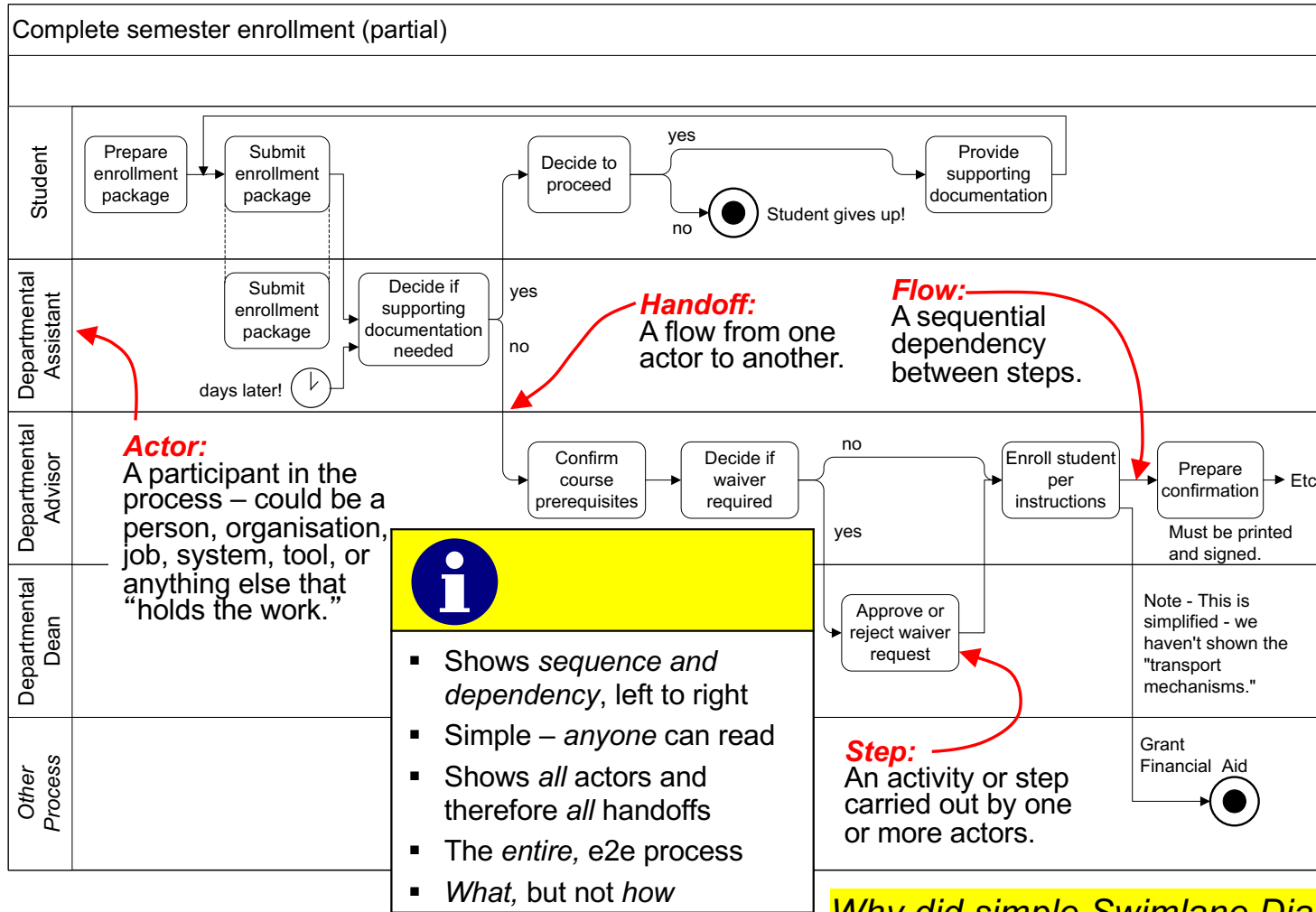
2. Add *who* and *how*, e.g.,

“Advisor Register Class via SIS”

This is often good enough! – no need for an as-is swimlane diagram / workflow model



Simple Swimlane Diagrams – maximise their strengths



Who – the actors

What – the steps

When – the flow

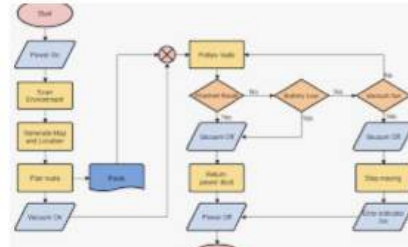
Other tools are better for capturing detail – *how* the steps are done:

- step-by-step procedures
- checklists
- decision trees
- use cases
- etc.

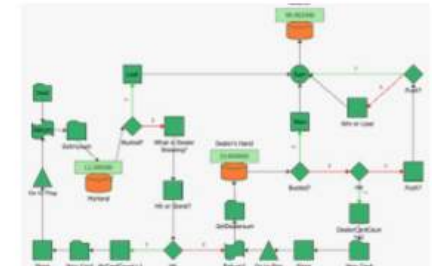
Why did simple Swimlane Diagrams become popular?

A quick Google Images search on "swimlane diagram" reveals...

... lots of diagrams I might draw differently.



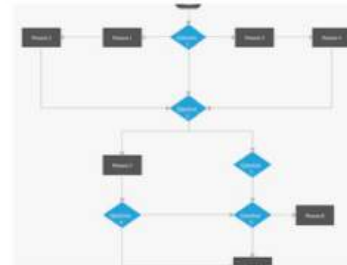
Dota 2 Flow Chart ...
reddit.com



complex RENO flowcharts easier ...
weibull.com



Follow flowchart best practices without ...
cacoo.com



Flowchart Tutorial (Complete Flowchar ...
creately.com



21 Creative Flowchart ...
visme.co



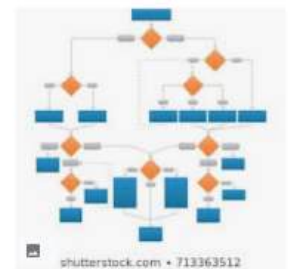
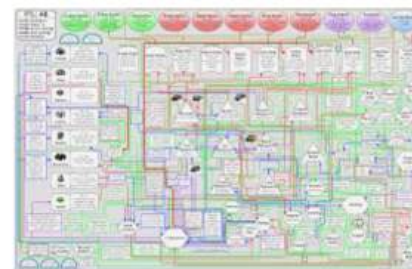
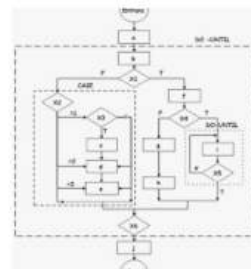
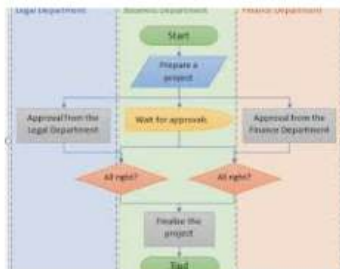
Flowchart Programming ...
conceptdraw.com



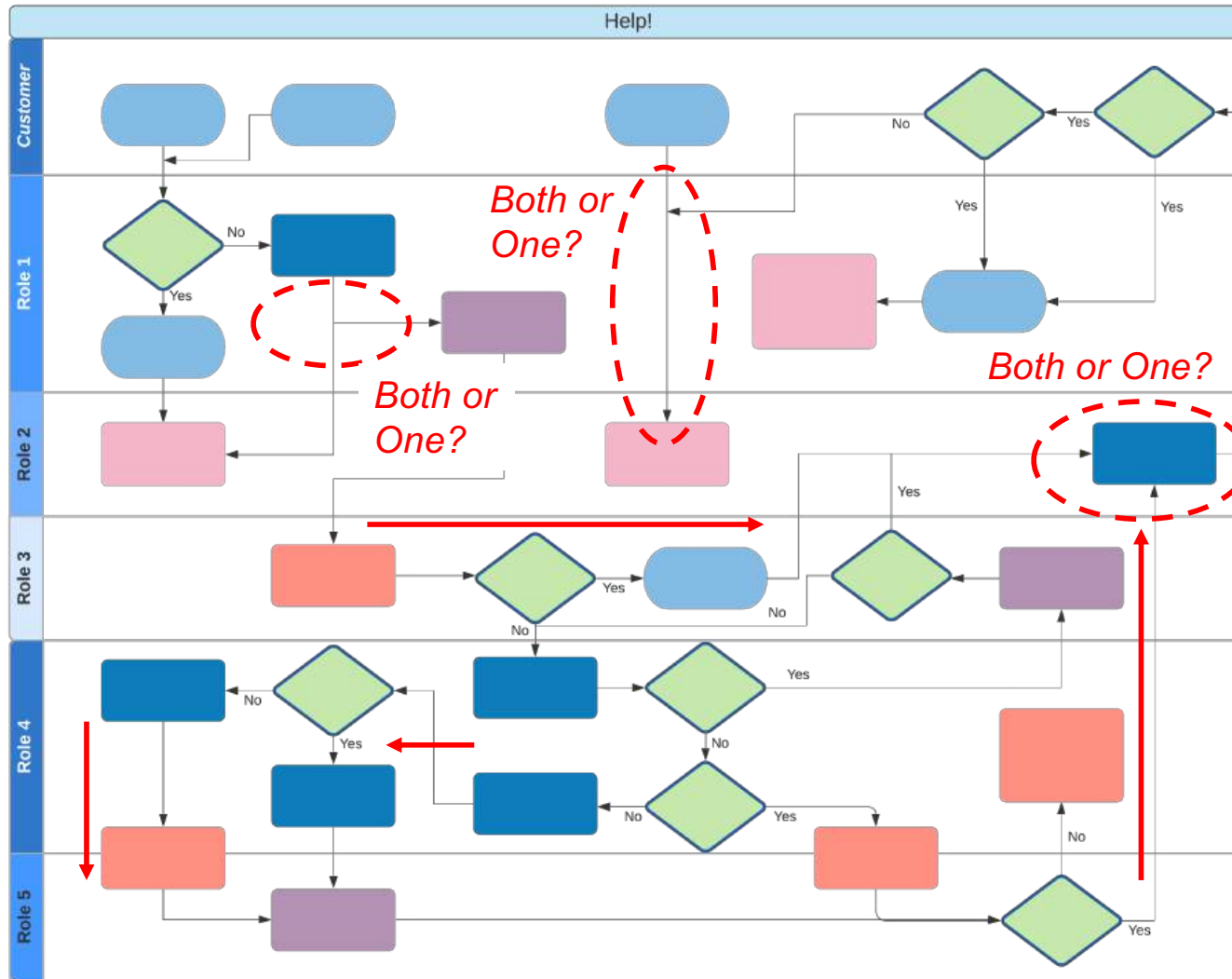
Free Flowchart Templates ...
gliffy.com



Flowchart Tutorial (with Symbols, ...
visual-paradigm.com



One example... "Chaos With Colours"



Probably accurate,
not too many symbols, but...

- do unexplained colours help?
- significance of multiple flows?
 - two separate flows inbound to a step
 - two joined flows inbound to a step
 - one outbound flow splitting
- but most of all...

flows in all directions!:

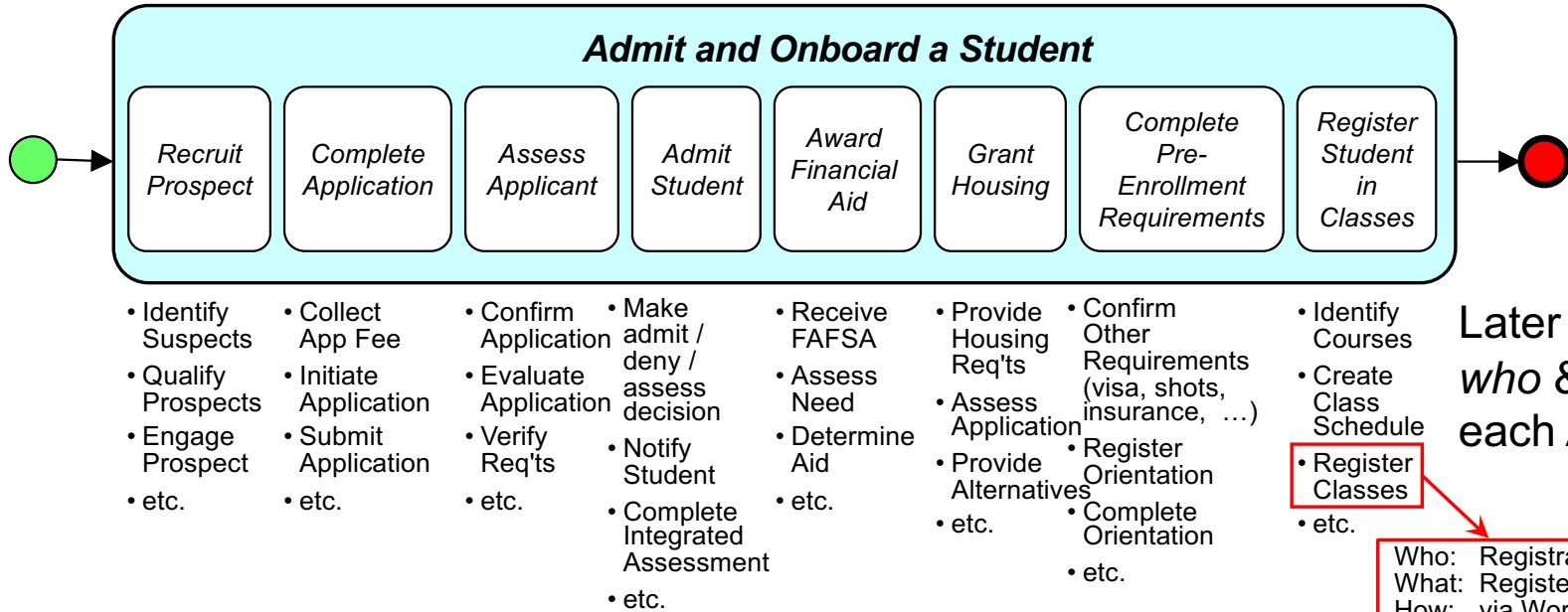
- left to right
- right to left
- top down
- bottom up

Why???

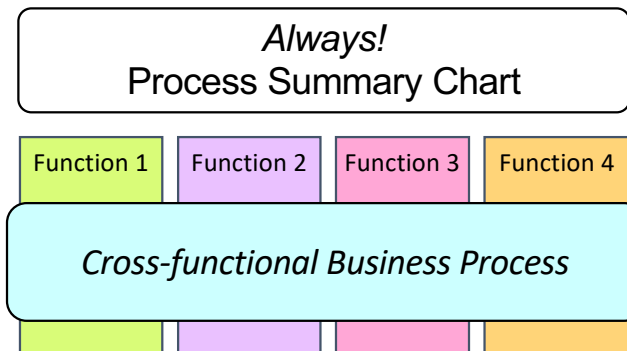
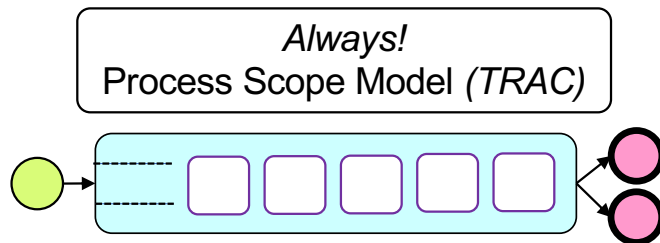
Forcing it into a "one-pager" defeats the graphic power of the diagram.

If you need a one-pager draw an Augmented Scope Model

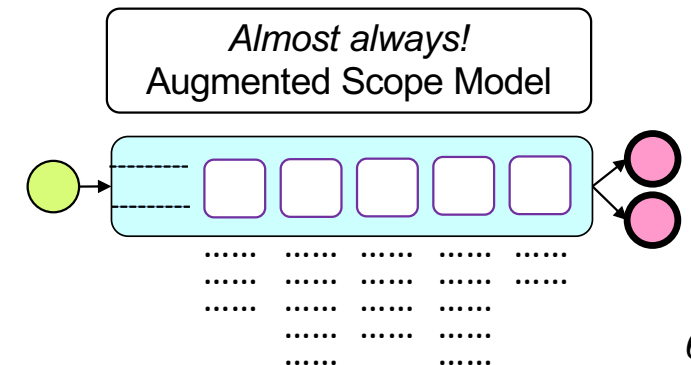
Add 5 – 10
Activities per
Major Activity



Before "swimlaning"...



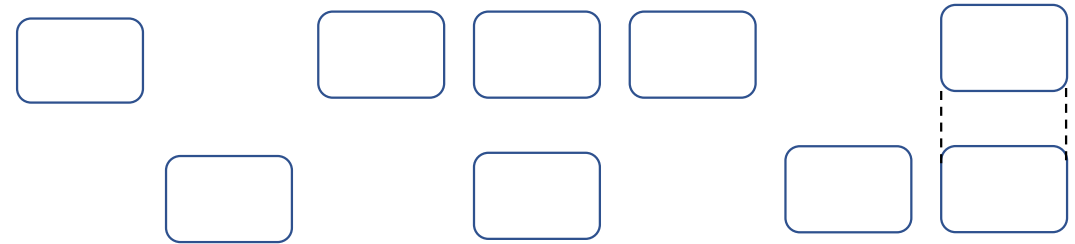
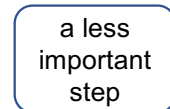
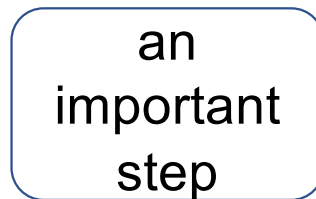
We're almost at swimlane level!



The Cognitive Psychology of diagramming

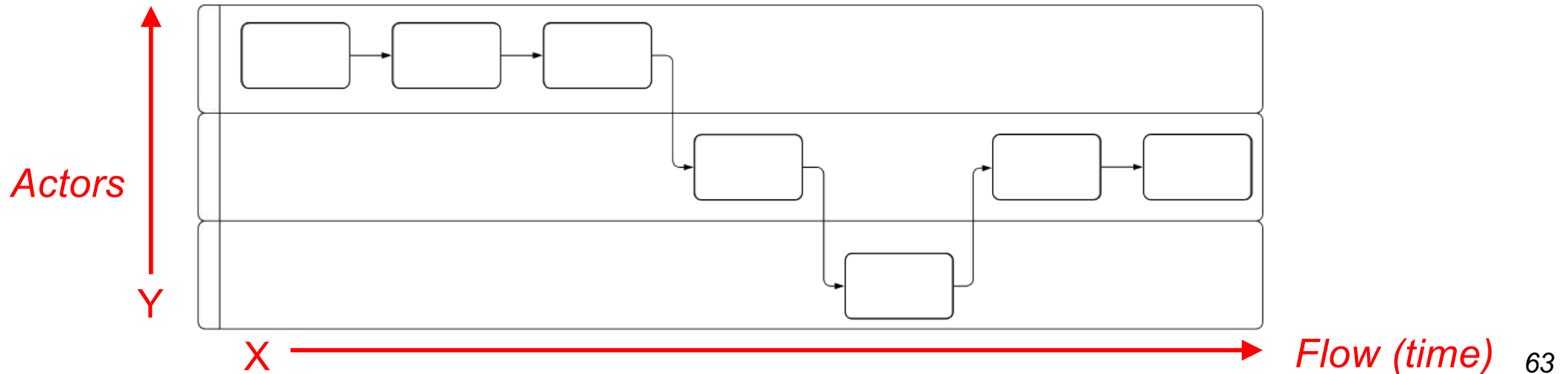
What do people first perceive on a diagram?

1. relative size

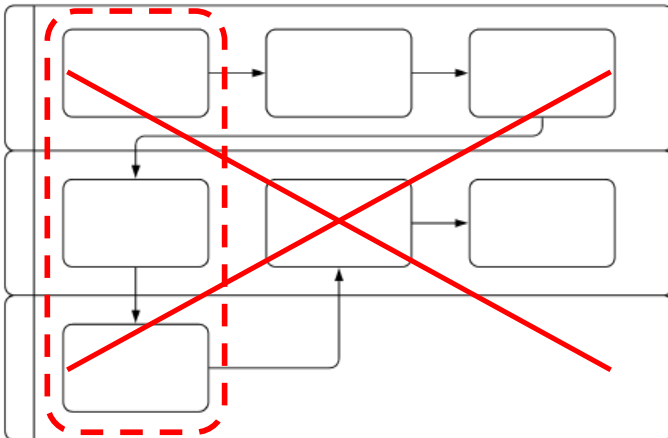


Make all the steps the same size,
unless you're trying to make a point

2. relative X-Y position



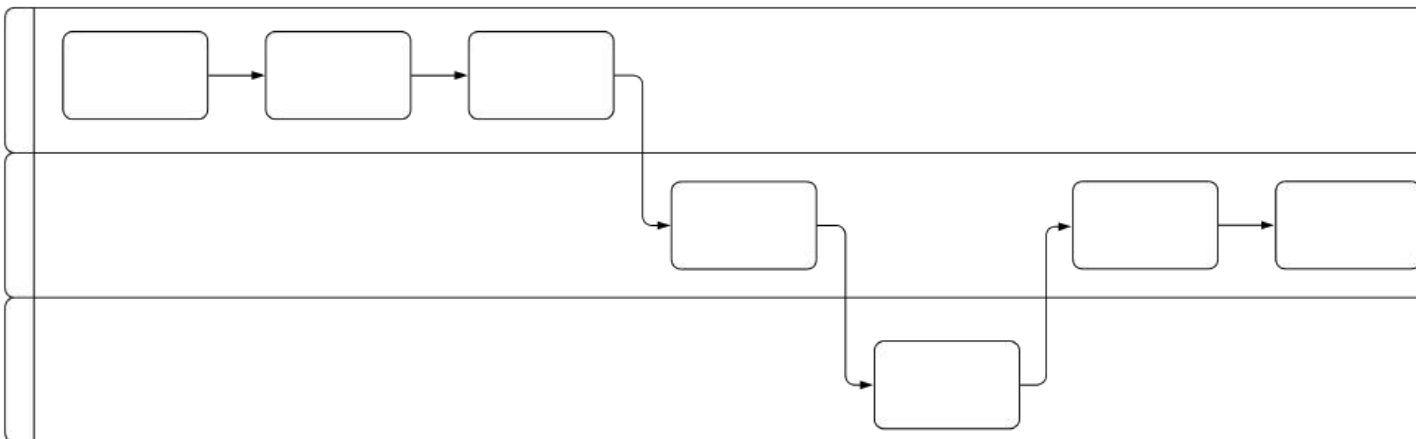
Don't conceal sequence and dependency



Steps perceived as happening in *parallel*, even though flow lines indicate *sequential*.

Critical in analysing a process:

- sequential vs. parallel
- dependent vs. independent



A simple guideline:
flow lines *only* leave
the right edge
and *only* enter
the left edge – never
the top or bottom.

"I think I know why our business partners don't want to review this..."

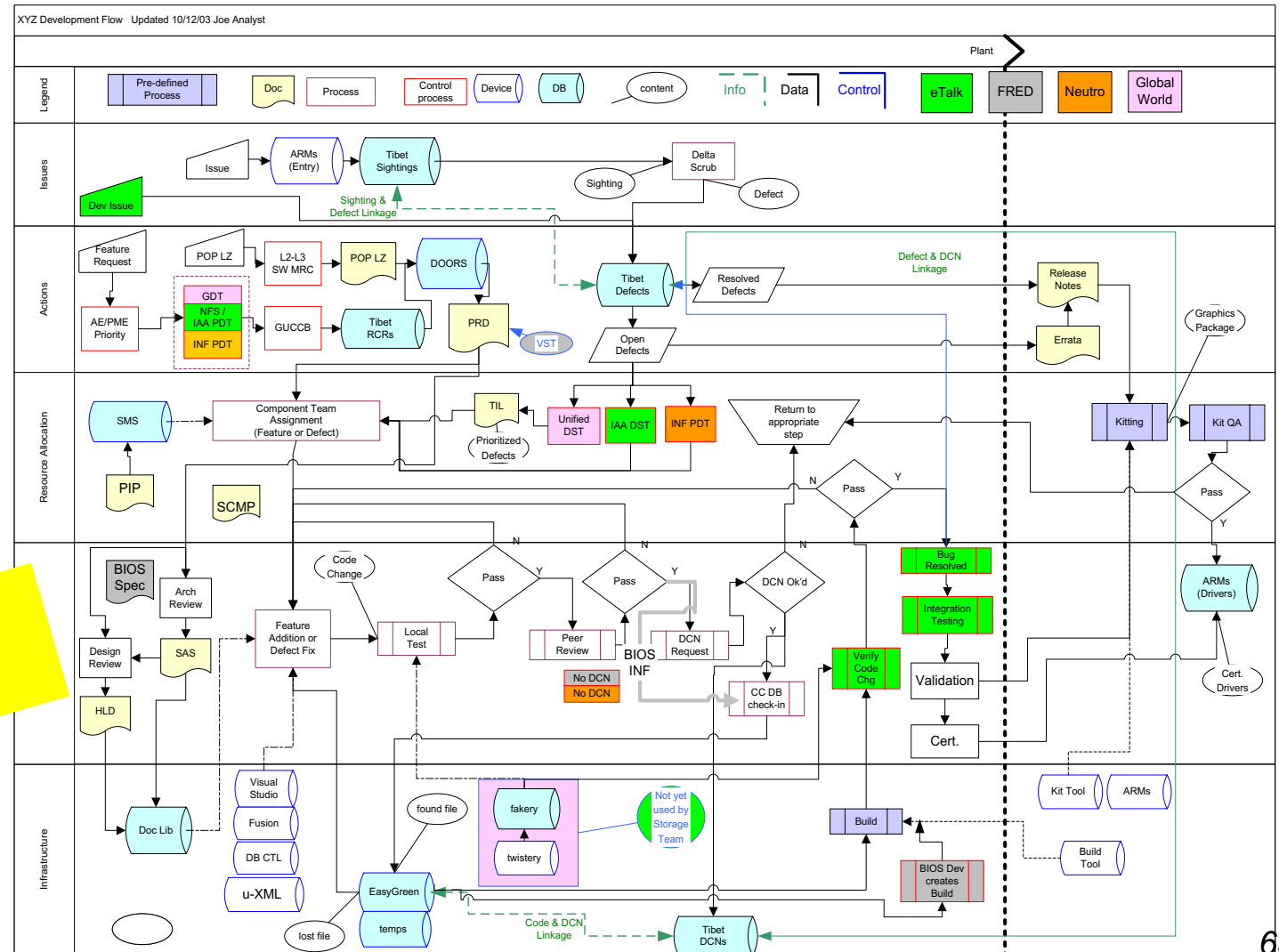
Probably a good DFD
(Data Flow Diagram)
useful to a technical
audience

Not a good
Process Flow Diagram,
useful to business
professionals, because...

- no obvious flow
- too many symbols
- cryptic acronyms
- lanes aren't actors
- ...

- lanes aren't actors
- ...

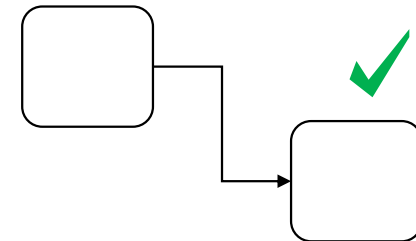
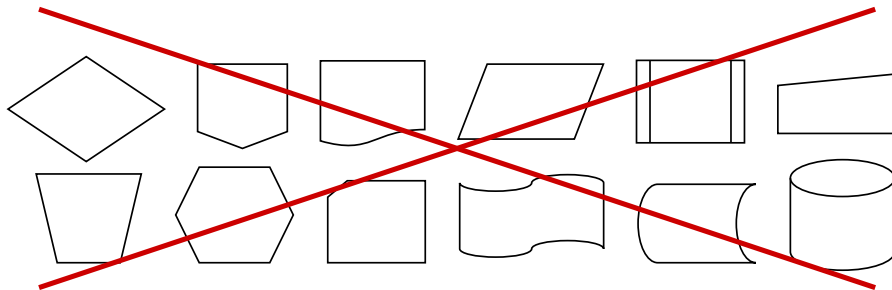
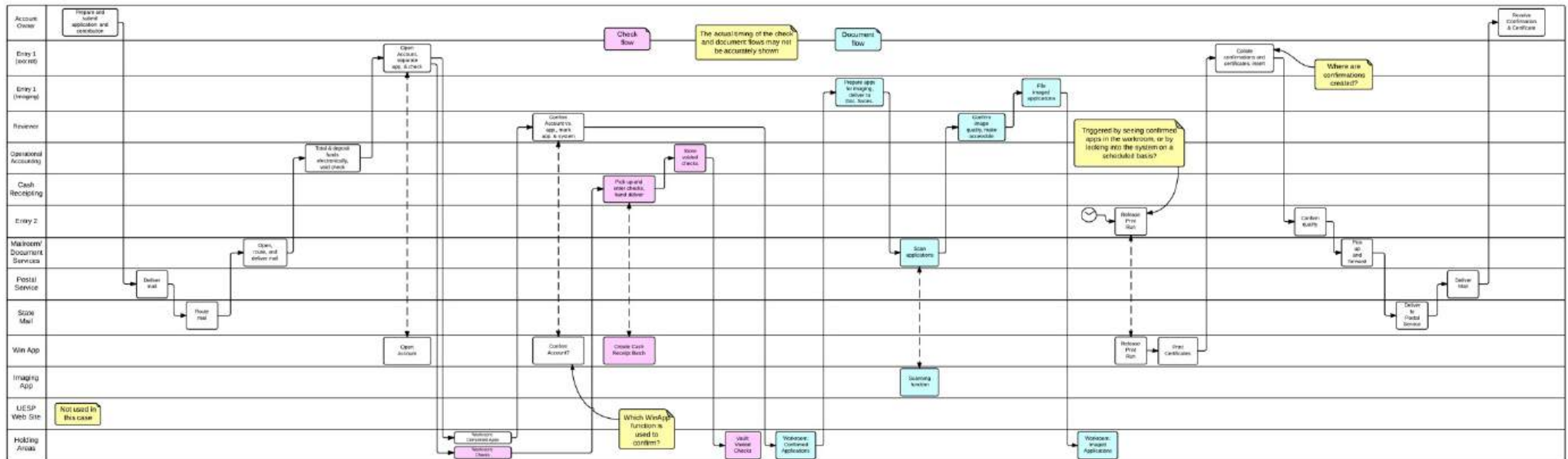
What's wrong with this diagram as a means of communicating with a business audience?



The image shows a whiteboard with a swimlane diagram. The swimlanes are labeled on the left: Cust., Core, External processes, Supporting, Sys., and Holding. The lanes contain various tasks and processes represented by sticky notes. For example, the Cust. lane includes 'Account Owner', 'Request submit app + cert', 'Entry 1', 'Entry 1 (imaging rotation)', 'Reviewer', 'Operation Accounting', 'Cash Receipting', 'Entry 2', 'Postal Service', 'State Mail', 'UESR Mailroom/Due Secured', 'Loan App', 'Imaging App', 'UESR Web Site', and 'Loanroom'. The Core lane includes 'Open Asset (1 separate app + cert)', 'Total + deposit funds also loan (app + cert)', 'Confirm - match 1 app', 'Share voided cheques', 'Pick up and enter cheques + bank advice', 'Release print form', 'Verify check', 'Confirm image quality + acceptable', 'Scan app', 'Print certificate', 'Imaging', 'Hold sample app', 'Cheque', 'Confirm app', 'Vault', 'Image app', and 'only mail -'.

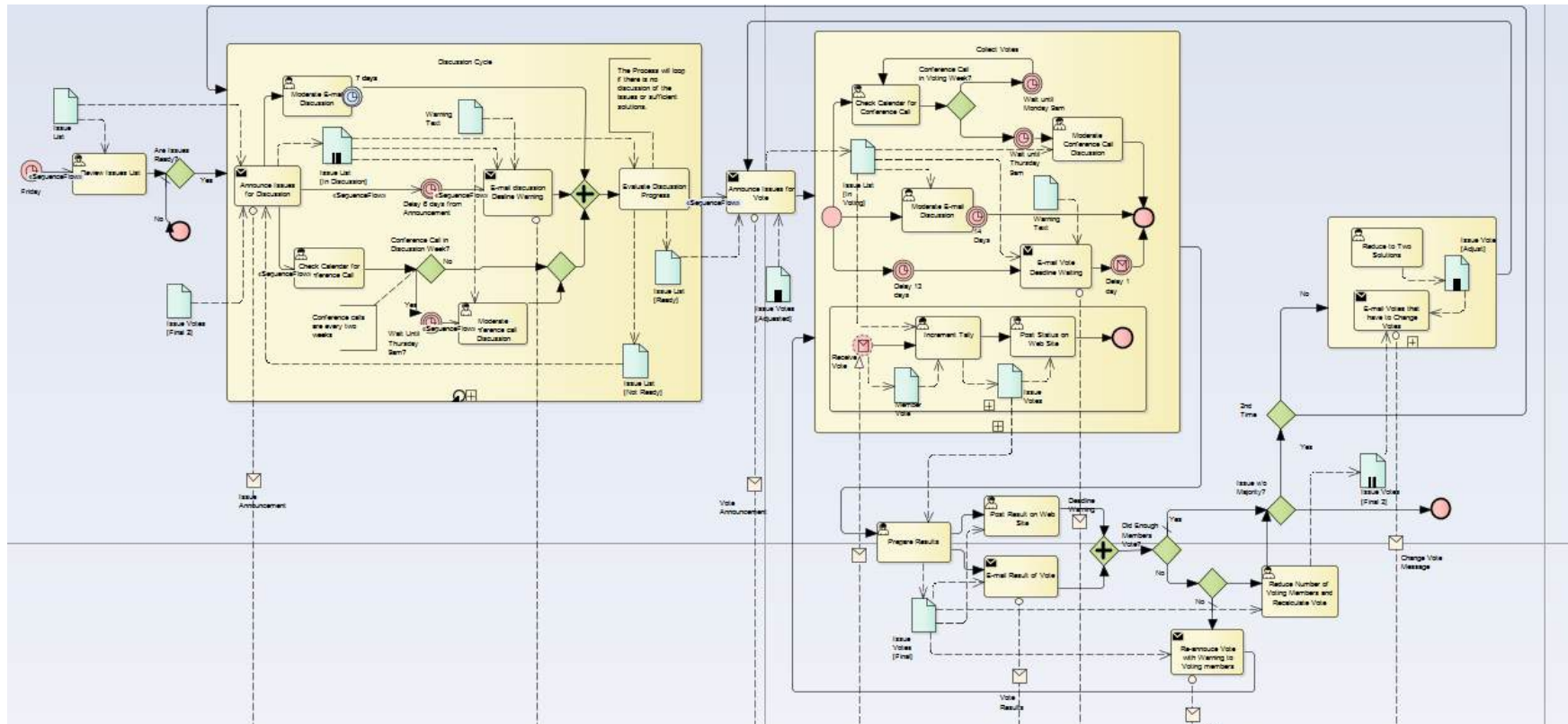
Minimal symbols

Later, redrew it with *Lucidchart* (www.lucidchart.com) – add rigour, but still focus on flow and simplicity.



Full BPMN* – not useful for business purposes

If you choose to use BPMN, use extreme restraint! Only use a few symbols such as Lanes, Tasks, Flows, simple Events, and optionally Gateways

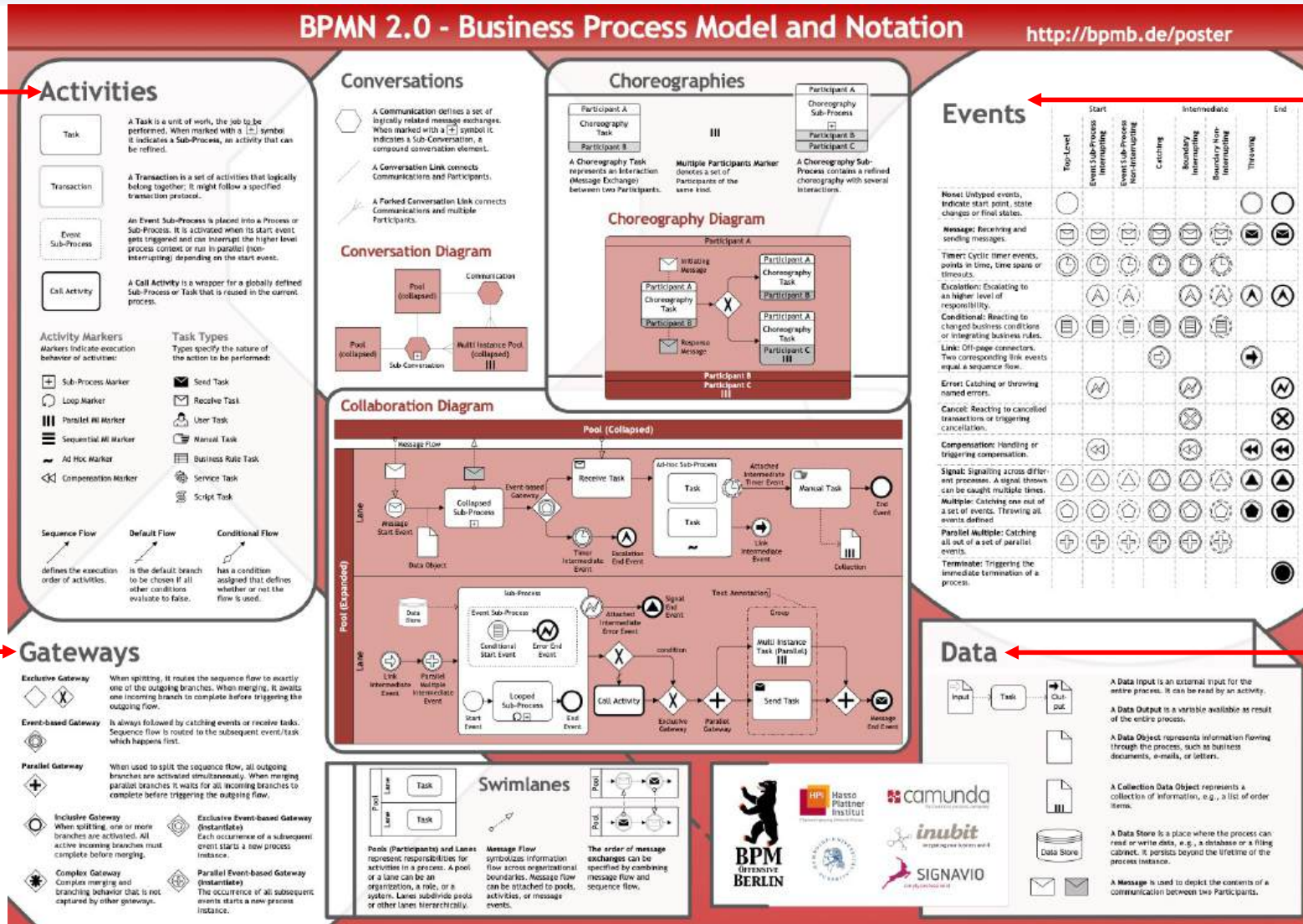


*Business Process Model and Notation, a standard by the OMG. BPMN was created to be a **visual programming language** for automating workflow, not for business modelling.

The full BPMN symbol set (why we use a subset)

4 kinds of
Activities
(plus
Markers &
Task Types)

7 kinds of
Gateways



63 kinds of
Events

6 ways to
represent
Data

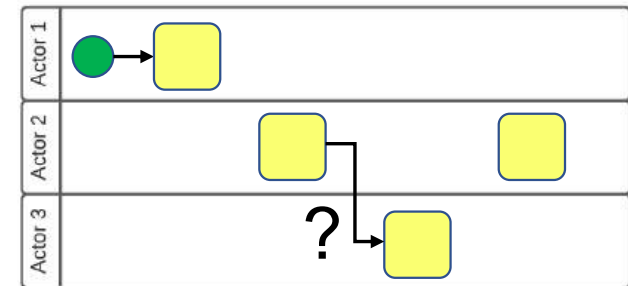
Three questions to develop your initial workflow model

Emphasis:

- keep you out of the details – focus on *flow*
- ensure the involvement of *every* actor is shown – it doesn't matter *how much* or *how little* they do, or whether they *add value*

Three simple questions:

1. “*Who* gets the work next?”
2. “*How* does it get there?”
– Often uncovers “transport” actors or systems
3. “*Who really* gets the work next?”
– Often uncovers additional actors

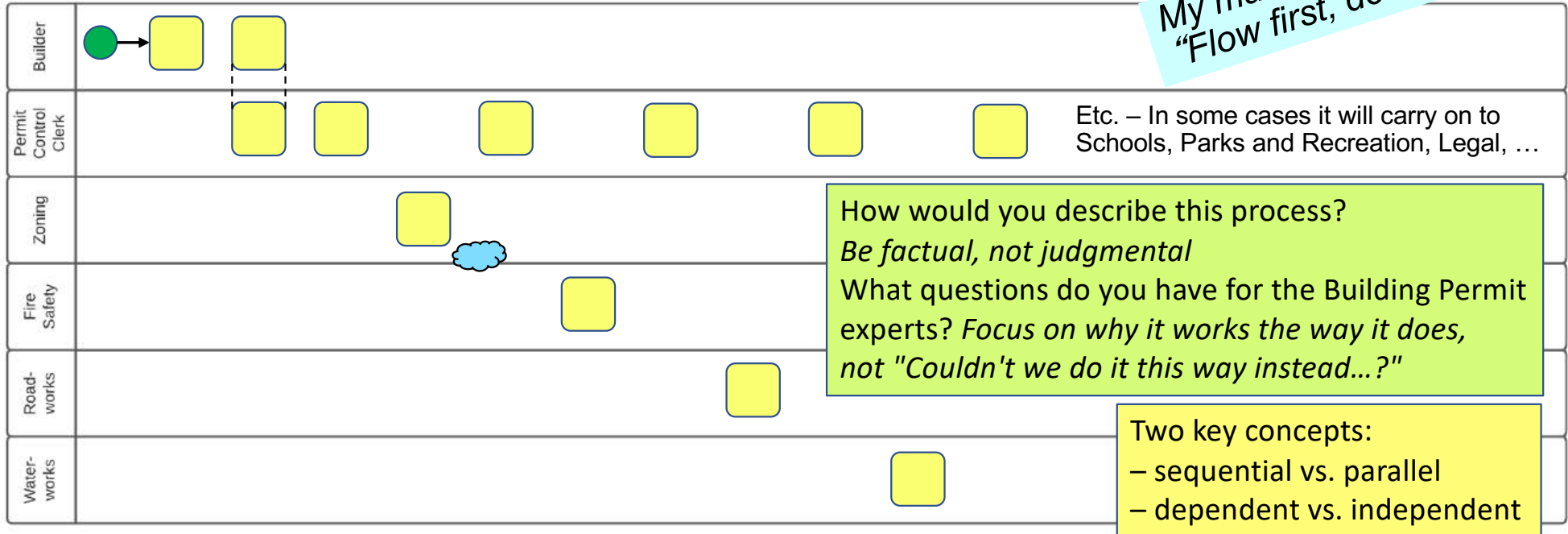


Guideline for the initial Handoff Diagram:
Whenever an actor *holds the work*, whether they do a *lot* or a *little*, draw *one* box (or post *one* sticky) and *move on!*
(And no value judgements – include *every* actor that holds the work!)

Question 1 – "Who gets it next?" traces overall flow

Process: Issue Building Permit
Case: Single Family Dwelling (SFD)

My mantra –
"Flow first, detail later"



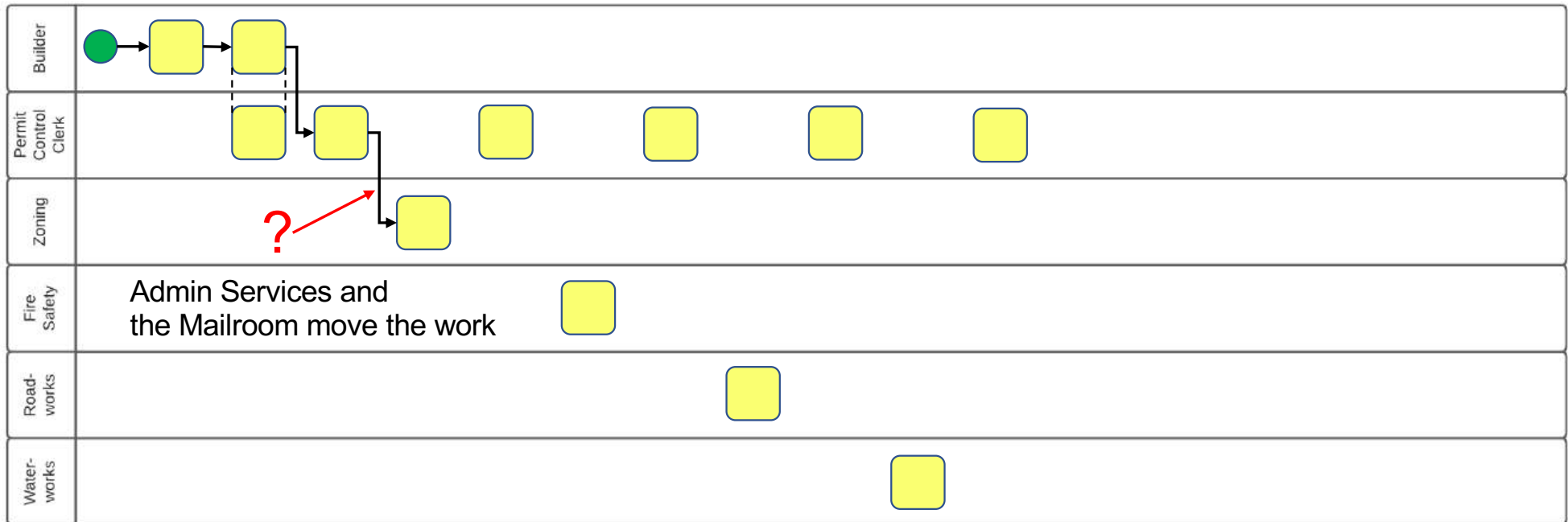
In scoping, you identified the trigger, the result, and the main actors. Now, starting at the triggering event, keep asking question 1 –

"Who gets the work next?"

- trace the flow of work through to the Customer's result, following one path only!
- at a decision or parallel flows, follow the main path, mark the other with a cloud, and return later
- **DO NOT** ask "What do you do?"

Question 2 – "How does it get there?" uncovers more actors

Process: Issue Building Permit
Case: Single Family Dwelling (SFD)

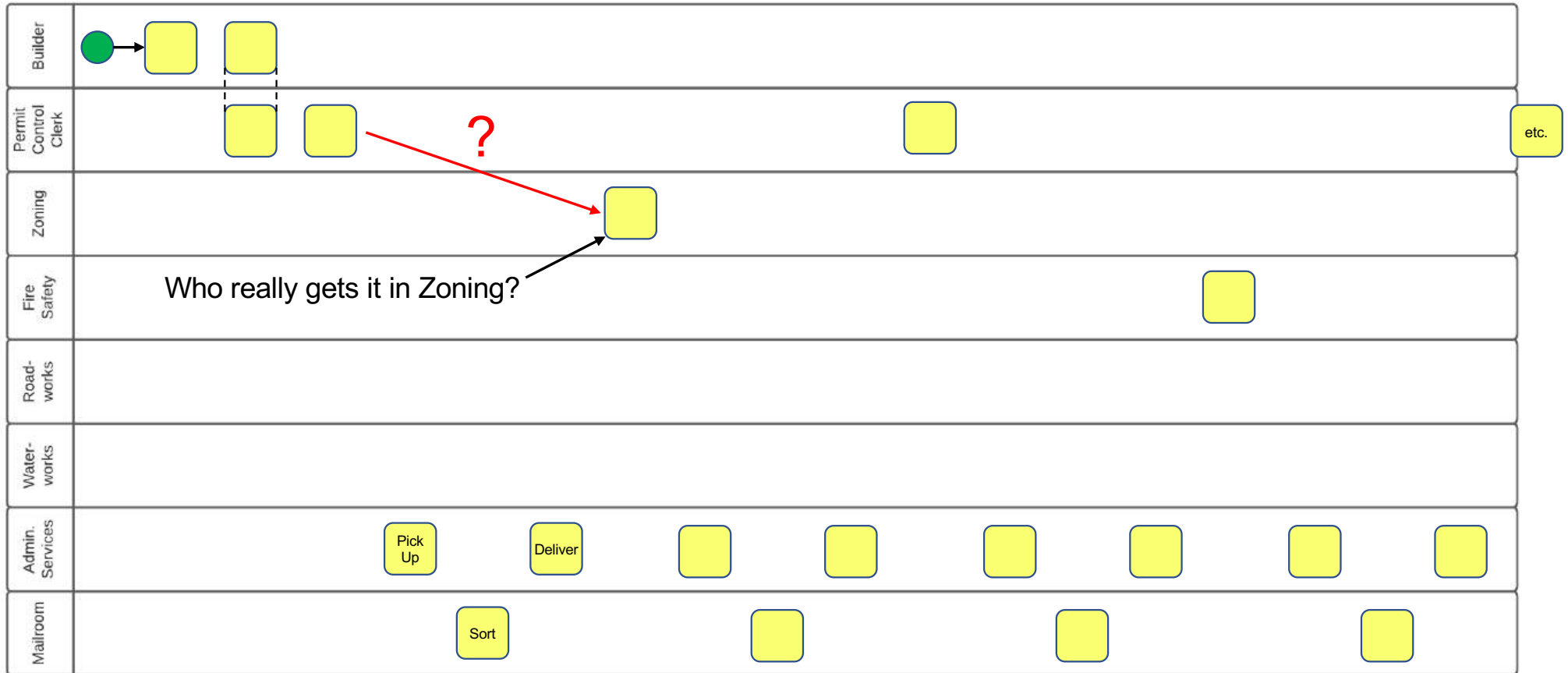


Next, at every handoff, ask question 2 –

"How does it get there?"

- uncovers *additional actors*, and therefore more handoffs
- a handoff is a potential source of *delay, error, or expense*

Question 2 revealed more actors and transport mechanisms

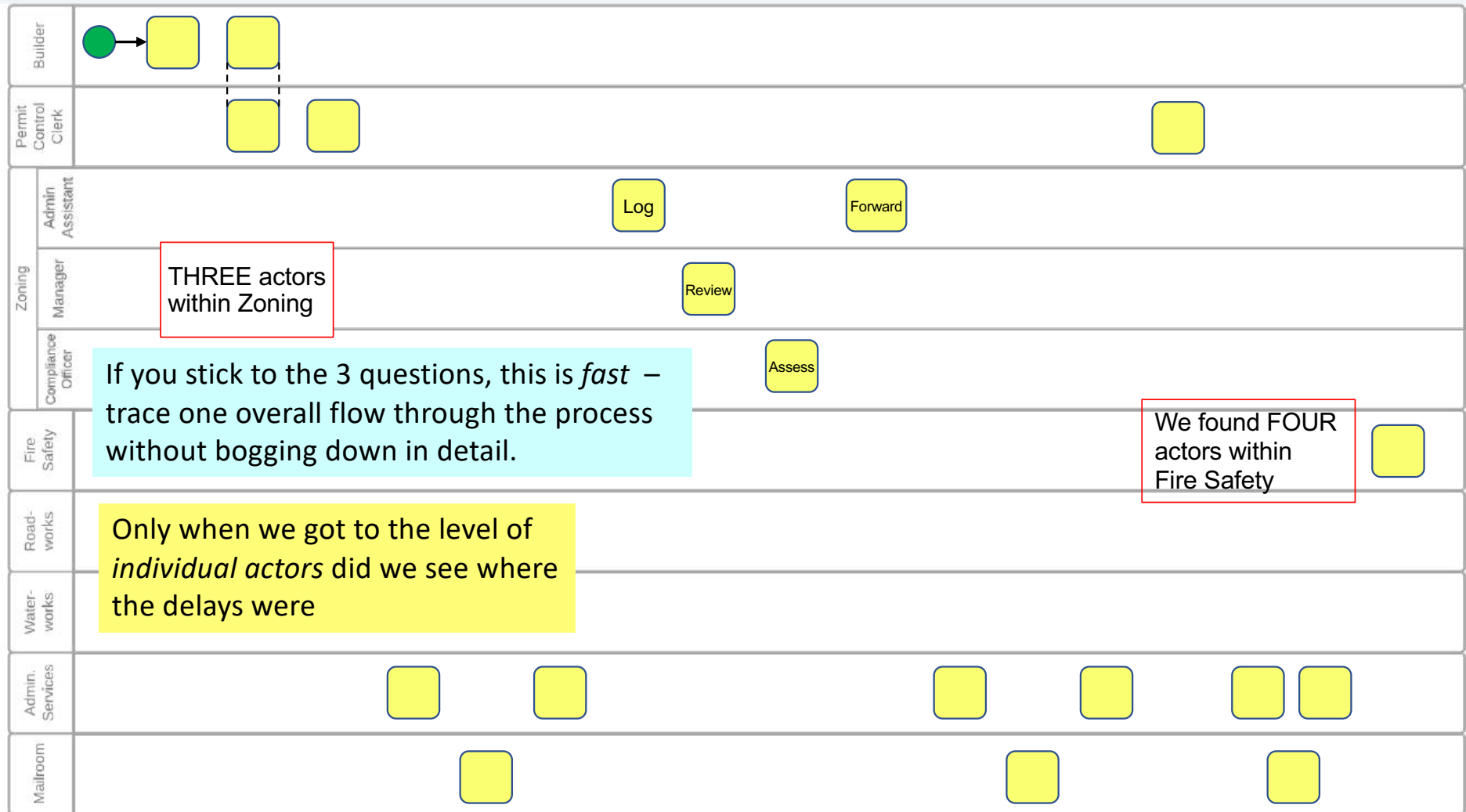


Now, inspect handoffs again, looking for missing actors, ask question 3 -

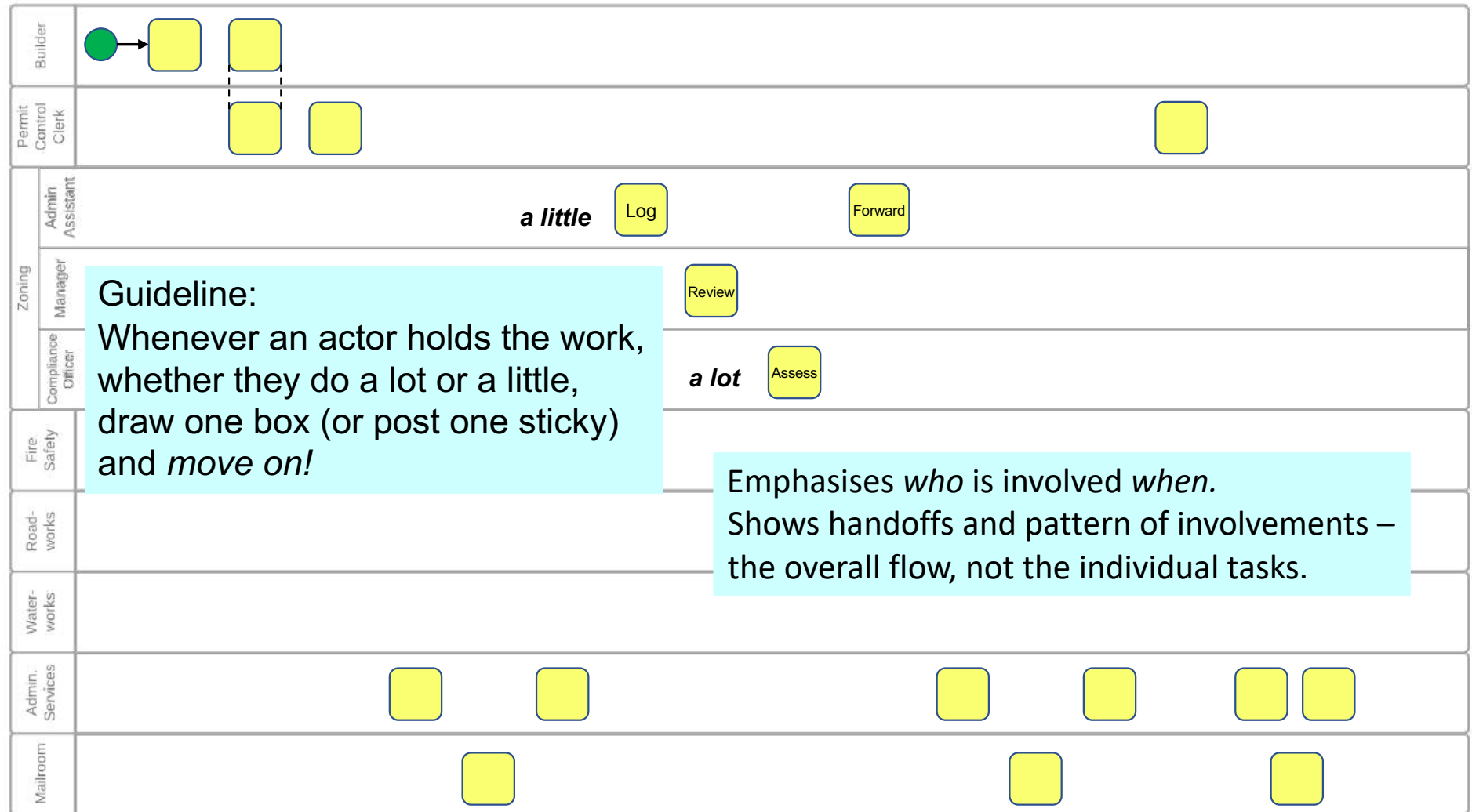
"Who really gets it next?"

- does it *really* go directly to the actor you first identified?

Question 3 – "Who really gets it next?" uncovers specific roles



We have started a "Handoff Diagram"

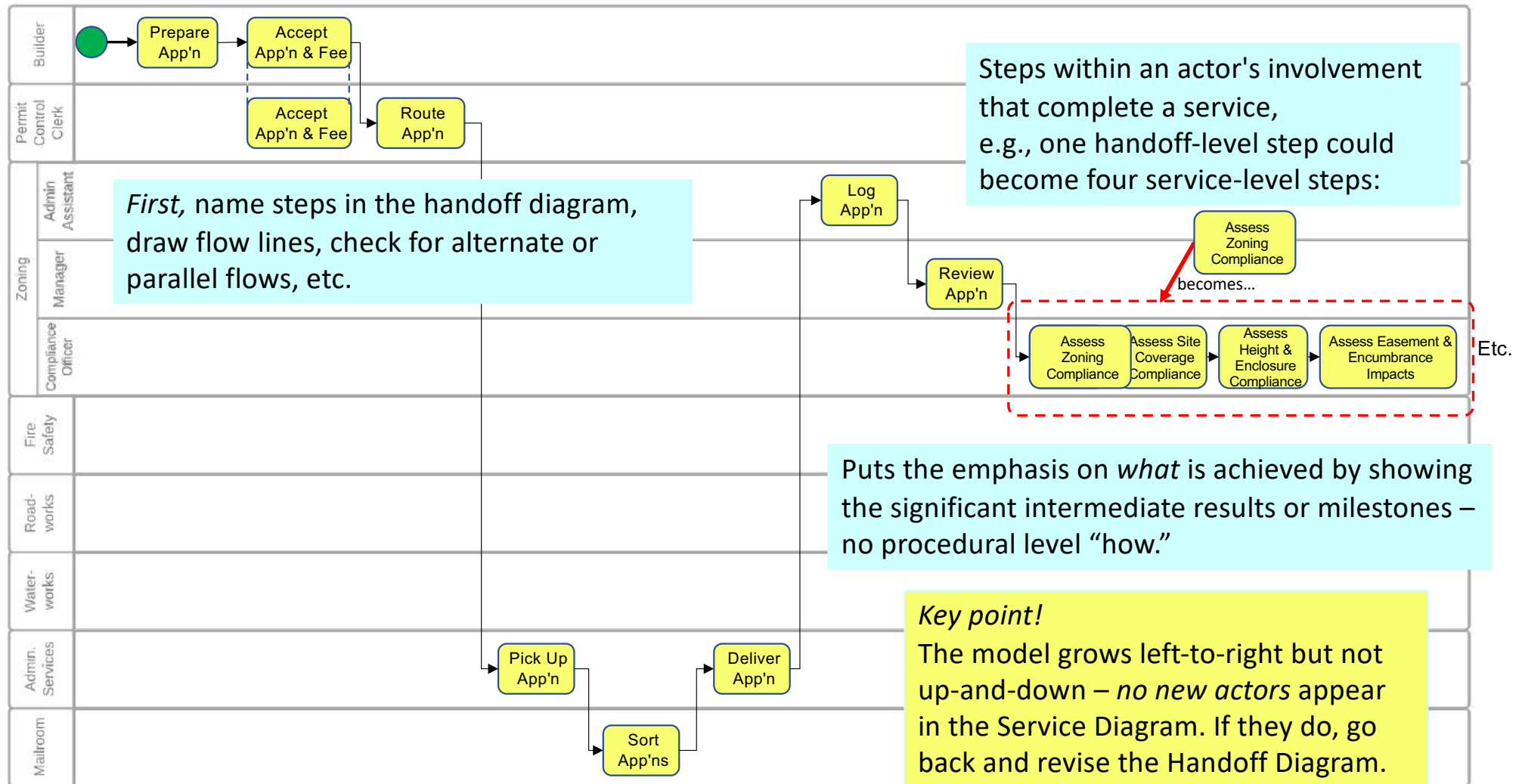


Guideline:

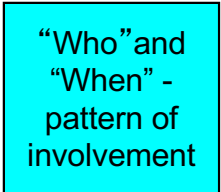
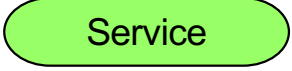
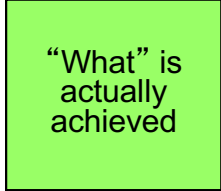
Whenever an actor holds the work, whether they do a lot or a little, draw one box (or post one sticky) and *move on!*

Emphasises *who* is involved *when*.
Shows handoffs and pattern of involvements – the overall flow, not the individual tasks.

Now develop a "Service Diagram"



Two levels of swimlane diagrams

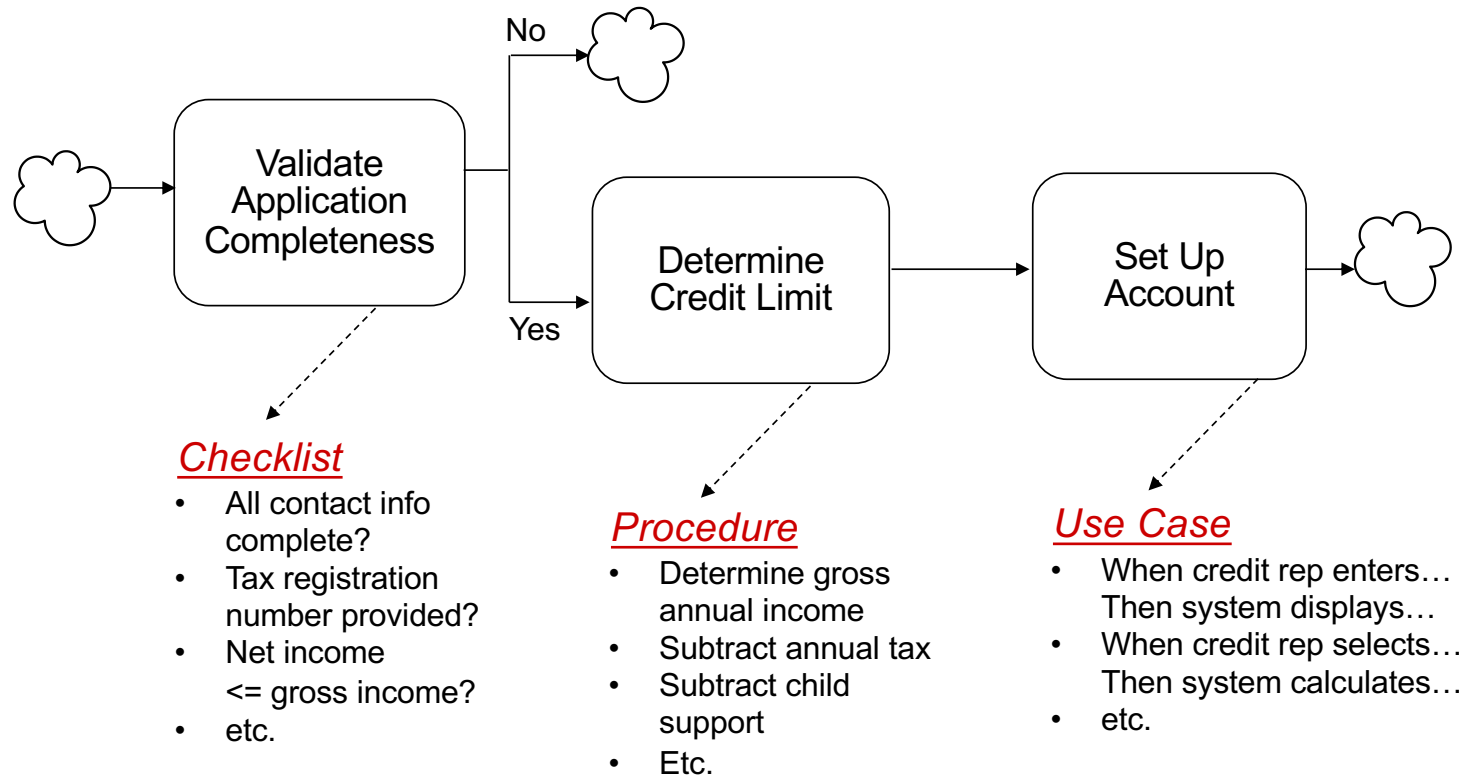
	Level	Definition	Emphasis	Notes
	1 	Draw one step (box) every time an actor continuously “holds the work,” no matter how much or little they do		Sometimes this level of detail is enough to understand As-Is process behaviour
	2 	Decompose handoff-level steps into discrete services, <i>as necessary</i>: one step each time actor achieves a significant result or state change		- Usually, we don't go any further than this for the As-Is process - Also called a “Milestone” diagram

The handoff-level diagram is critical – ensures we discover the overall flow before diving into detail.

Stop diagramming before you get into “how”

Stop workflow modelling when work isn't flowing.

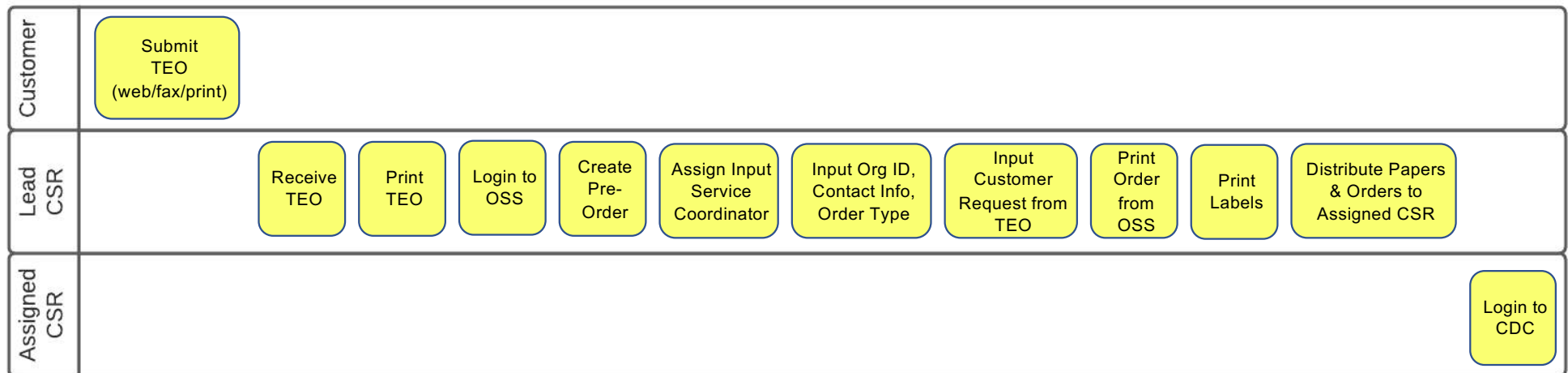
Do **not** use a workflow model to describe **how** an activity is done – that belongs in the activity description or in a linked document.



Knowing when you've gone too far

Do **not** use a workflow model to describe **how** an activity is done – that belongs in the activity description or in a linked document.

Handle TEO
(Telecom Equipment Order)



You've gone too far if:

- there are multiple steps in sequence by the same actor
- the steps include "how-to" instructions (procedural level detail)

Summary – where we've been, where we're going

Principles

The purpose of a *Workflow Model* is to show the *Flow of Work*

Simplicity is a virtue

Always do a Scope Model and a Summary Chart before flow modelling

Why they work

Flow (sequence & dependency) is clearly visible, left to right

Simple to read – the symbols are mostly boxes and lines

Shows all actors and their steps, and therefore all interactions and handoffs

Shows the entire, end-to-end process, from trigger to results

Shows "what" the steps are without diving into "how"

The most *common* errors

Concealing flow by drawing a convoluted diagram, usually in an attempt to make it a "one-pager"

Using a lot of symbols that regular folks don't understand

Omitting actors just because they play a minor part – *everyone* has an impact

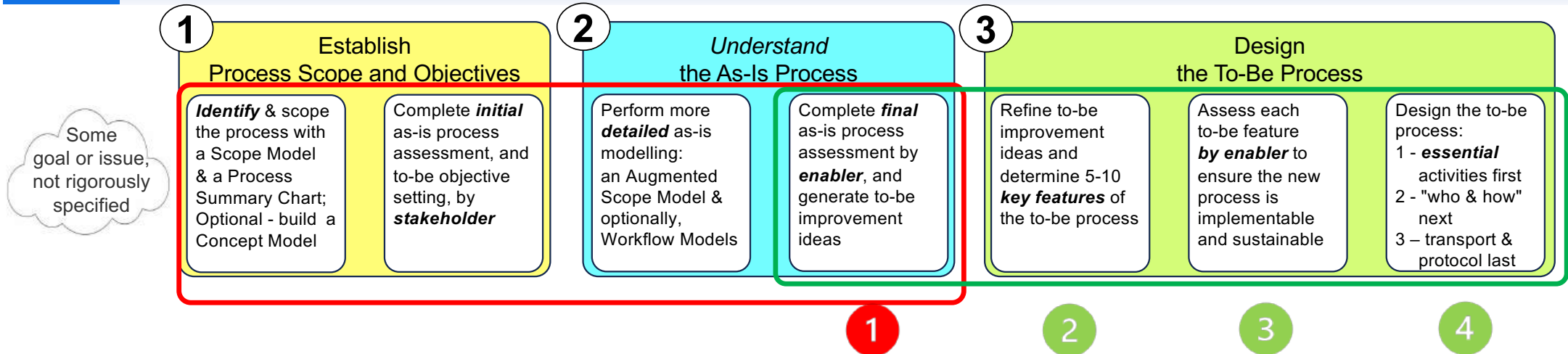
Cutting the diagram into one-page segments – the initial flow model should be continuous

Using a Workflow Model to document procedural level detail

Moving into *to-be* design

1. Four things you *need* to know about *Business Processes*
2. Identifying true, end-to-end, cross-functional *Business Processes*
3. Process modelling for *humans*
4. Overview –
the transition from *as-is* analysis to *to-be* design

The link between the As-is Process and the To-be Process



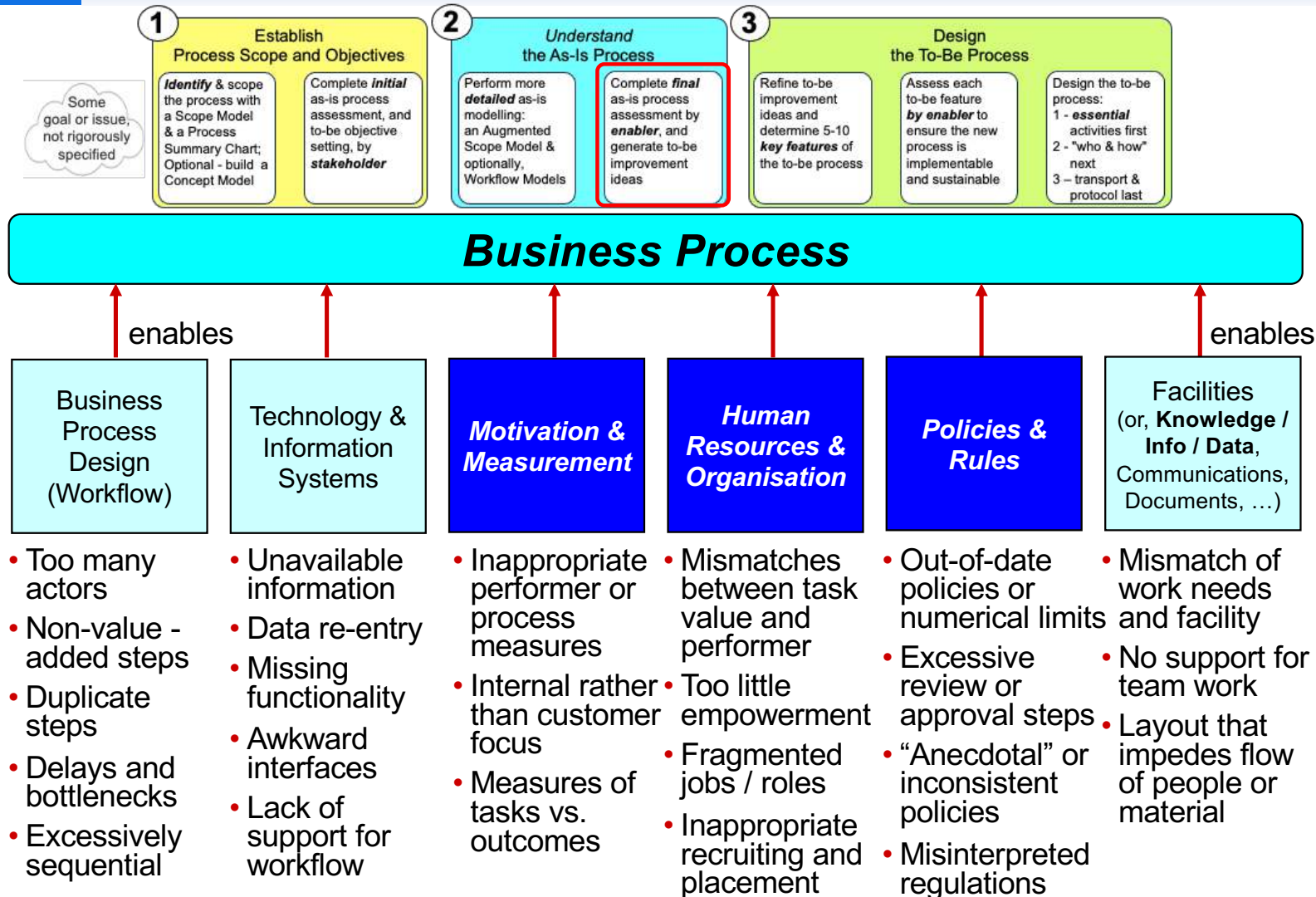
This activity (**1**) marks the pivot from as-is to to-be:

- we capture what we learned while studying the *as-is*
- we use this to generate ideas for the *to-be*
- three more activities (**2** **3** **4**) lead us to a new design

Key point!

Much of what we learn comes from discussions along the way, not from studying the swimlane diagram.

Complete final as-is assessment, generate to-be ideas



Considering all six enablers is at the heart of this methodology

This *always* uncovers issues that would have been missed otherwise and *always* generates ideas (potential *features*) for the to-be process

A few examples...



Workflow AND Technology

- Failing to rethink process design to take advantage of new technology...
- *The new "Settle Claim" process was still completely sequential after implementing a Workflow system because they copied the old paper-based workflow*

Motivation and Measurement

- What you measure is what you get...
- *Customer Service Representatives: measured on not exceeding 2 minute call time, so they hung up on Customers at 1:58 or 1:59*

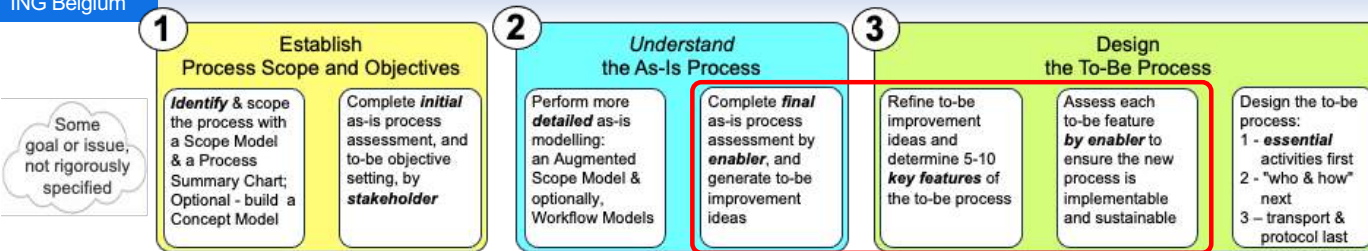
Human Resources

- Depressingly common...
- *Clerical, administrative, and support staff made redundant, so highly-paid professional staff do the work instead (and poorly)*

Policies & Rules

- Micromanagement...
- *Laboratory technicians: work had to be checked by a senior manager after every step, so the process was bogged down in pointless reviews*

Assess by enabler, establish 5-10 to-be features, assess each feature by enabler



A *feature* is a significant *change* or *improvement* to the process, or a significant *factor* in the design of an all-new process.

Enabler-based assessment of the *as-is* process generates ideas for the *to-be* process.

Assessment:		Features:	
Motivation & Measurement	Sales Reps motivated entirely by commission, with no motivation to return and submit Service Orders	Increase Rep's commission for early submission New Sales Assistant role to enter Service Orders	Rejected by execs. A <i>feature</i> .
Human Resources	Order Capture and Order Submission are not effective uses of a Sales Rep's time	Service Order entry directly by Customer New Sales Assistant role to enter Service Orders	Another <i>feature</i> . Same <i>feature</i> again.

Then, assess each Feature – what changes are needed, enabler by enabler, to make this feature work?

Feature	Process Design	Info. Systems & Tech.	Motivation & Measurement	Human Resources	Policies & Rules	Facilities (or other)	Feasibility & Notes
Direct Service Order entry by Customers	Need to get the Service Order from the server to the Engineering Supervisor for assignment, and then to Engineer for assessment Customer review?	Obviously, all the Web stuff Integrated Service Order DB Workflow functionality? What format for Customer sketches?	Commission? What impact on commissions for current sales force?	Displacement of current Sales Reps? What are expectations for freed-up Sales Rep time? Customer training?	Will all Customers have access to this?	Electronic orders may free up space currently used for bins, boards, etc..	Highly feasible. What will Customer and Sales Rep reaction be?

Avoids unanticipated consequences!

A bit more on assessing each to-be feature, enabler by enabler

Intent:

- Ensure each feature is *implementable* and *sustainable*
- Avoid *unanticipated consequences* through a holistic assessment

For each *feature*, ask...

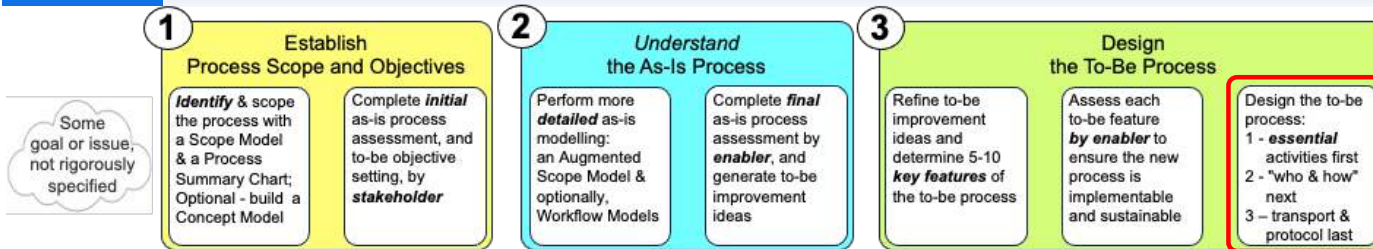
"What needs to change in *this specific enabler* to make this *feature* work?"

***Changes in multiple enablers are usually needed for each feature.

Feature	Process Design	Info. Systems & Tech.	Motivation & Measurement	Human Resources	Policies & Rules	Facilities (or other)	Feasibility & Notes
<i>Assign authority for higher-value work to Support Staff rather than having it all done by Senior Records Managers.</i>	Need to decide whether we can auto-route requests to the appropriate staff member, or if all should go to a Senior Records Manager for routing	Current systems are much too complex for most cases, especially the ones that would now go to Support Staff. Need to isolate and only display essential functions	We MUST adjust the performance measures of Support Staff to ensure they are not penalised for taking on additional responsibility	Revise job descriptions for Support Staff as necessary. Provide additional training in Records Management functions and the RM System	Current policies dictate that all categorization and classification work be carried out by Records Managers – this will have to change. Some regulations may be a factor	Some Support Staff will be moved closer to Records Managers, but this is a minor change	Highly feasible if we can resolve Policy issues. Support Staff are very positive about the opportunity, and Records Managers look forward to more time for high-value work.

This feature required change in *all six* enablers, especially M&M and P&R!

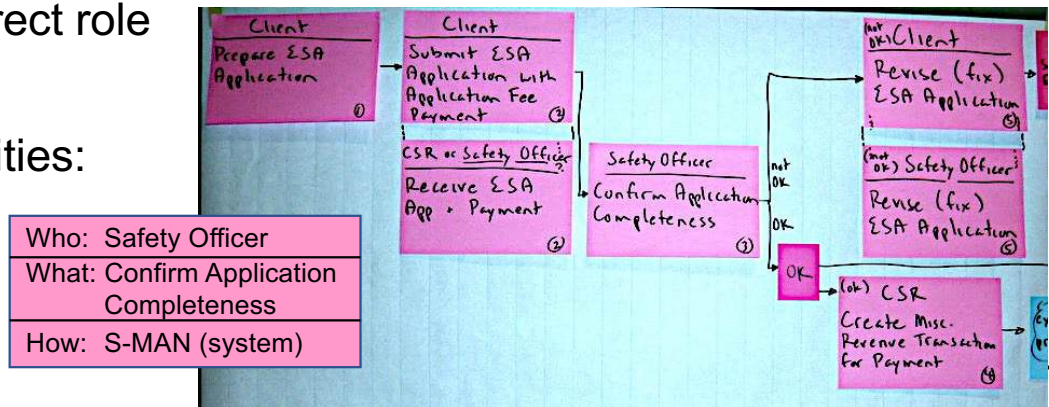
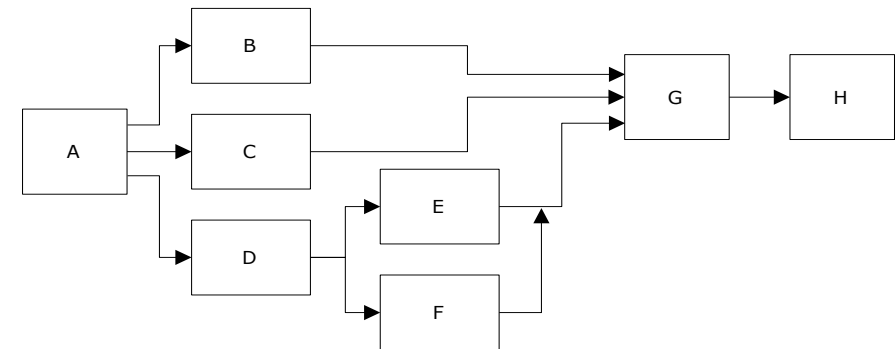
Design to-be process – overview (beyond scope of Primer)



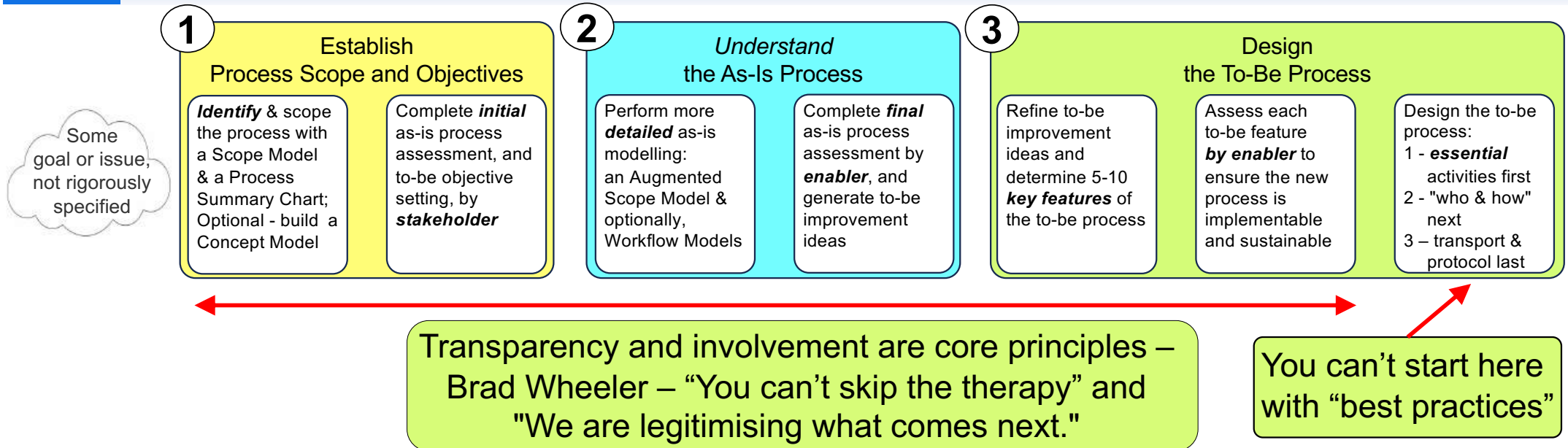
Key points:

- As with the as-is process – *"What first, who and how later"*
- Design around *essential* steps, not *administrative steps*

- Use an Augmented Scope Model to determine what the essential activities are
- Next, factor in who will perform each activity, then how
 - a person as a manual activity
 - a person interacting with a system, e.g. a use case
 - a system, e.g., RPA (Robotic Process Automation)
- Link essential activities by dependency – a PERT chart
- Adjust – e.g., verify activity is assigned to the correct role
- Only then redraw as a swimlane diagram
- Finally*, add non-value-added but necessary activities:
 - transport, record keeping, notification, etc.
 - ensure any approval steps are *really* necessary ("Don't confuse notification with approval.")



Remember – "It's a process!"



Making the new process sustainable:

- Alignment of *all* enablers, especially *Motivation & Measurement*, *Human Resources & Organisation*, and *Policies & Rules*
- Visibility of the process – the *whole* process, right down to *job aids*
- *Training* in the new process for current and new staff
- Time for *each feature* of the new process to *take hold* before more change – *continuous* change should mean *regular* but not *constant* change

Other courses for analysts by Alec Sharp

Working With Business Processes – Process Change in Agile Timeframes

2 days

Business processes matter, because business processes are how value is delivered. Understanding how to work with business processes is now a core skill for business analysts, process and application architects, functional area managers, and even corporate executives. But too often, material on the topic either floats around in generalities and familiar case studies, or descends rapidly into technical details and incomprehensible models. This workshop is different – in a practical way, it shows how to discover and scope a business process, clarify its context, model its workflow with progressive detail, assess it, and transition to the design of a new process by determining, verifying, and documenting its essential characteristics. Everything is backed up with real-world examples, and clear, repeatable guidelines.

Business-Oriented Data Modelling – Useful Models in Agile Timeframes

2 days

Data modelling was often seen as a technical exercise, but is now known to be essential to other initiatives such as business process change, requirements specification, Agile development, and even big data, analytics, and data lake implementation. Why? – because it ensures a common understanding of the things – the entities or business objects – that processes, applications, and analytics deal with. This workshop introduces concept modelling from a non-technical perspective, provides tips and guidelines for the analyst, and explores entity-relationship modelling at contextual, conceptual, and logical levels using techniques that maximise client involvement.

Working With Business Processes Masterclass – Aligning Process Work with Strategic, Organisational, and Cultural Factors

3 days

This 3-day interactive workshop combines the core content from two highly-rated classes by Alec Sharp – “Working With Business Processes” and “Advanced Business Process Techniques.” This structure is popular because it gets both new and experienced practitioners to the same baseline on Claritiq’s unique, agile, and ultra-practical approach to Business Process Change. First, it shows how to effectively communicate Business Process concepts, discover and scope a business process, assess it and establish goals, and model it with progressive detail. Then, it shifts to advanced topics – specific, repeatable techniques for developing a process architecture, encouraging support for change, and completing a feature-based process design. The emphasis is always on ensuring business process initiatives are aligned with human, social, cultural, and political factors, and enterprise mission, strategy, goals, and objectives.

Business-Oriented Data Modelling Masterclass – Balancing Engagement, Agility, and Complexity

3 days

Our most popular workshop! This intensive 3-day workshop combines the core content from two popular offerings by Alec Sharp – “Business Oriented Data Modelling” and “Advanced Data Modelling.” First, the workshop gets both new and experienced modellers to the same baseline on terminology, conventions, and Clariteq’s unique, business-engaging approach. We ensure a common understanding of what a data model *really* is, and maximising its relevance. Then, we provide intense, hands-on practice with more advanced situations, such as the enforcement of complex business rules, handling recurring patterns, satisfying regulatory requirements to model time and history, capturing complex changes and corrections, and integrating with dimensional modelling. Always, the philosophy is that a data model is a description of a business, not of a database, and the emphasis is on engaging the business and improving communication.

Model-Driven Business Analysis Techniques – Proven Techniques for Processes, Applications, and Data

3 days

Simple, list-based techniques are fine as a starting point, but only with more rigorous techniques will a complete set of requirements emerge, and those requirements must then be synthesised into a cohesive view of the desired to-be state. This three-day workshop shows how to accomplish that with an integrated, model-driven framework comprising process workflow models, a unique form of use cases, service specifications, and business-friendly data models. This distinctive approach has succeeded on projects of all types because it is “do-able” by analysts, relevant to business subject matter experts, and useful to developers. It distills the material from Clariteq’s three, two-day workshops on process, data, and use cases & services.

*** *Note: two-day in-person workshops are delivered virtually as three half-day sessions via Zoom.
Three-day in-person workshops are delivered virtually as five half-day sessions via Zoom.*

Thank you!



Alec Sharp, West Vancouver, BC, Canada

If you have questions or comments...
don't be shy, get in touch!

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- ig: @alecsharp01
- m: +1 604 418-3352