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

Presented by
Adept Events and Clariteq Systems Consulting

Alec Sharp
Consultant
Clariteq Systems Consulting Ltd.
West Vancouver, BC, Canada
asharp@clariteq.com
www.clariteq.com

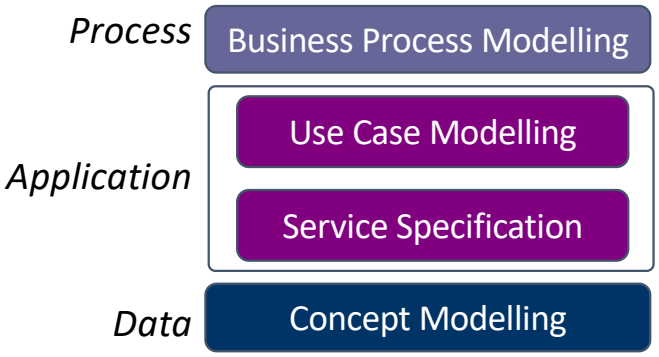
AdeptEvents
www.adeptevents.nl

CLARITEQ
www.clariteq.com

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

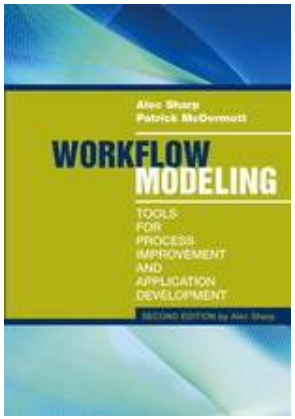


- Consulting, teaching, speaking globally

- Awarded DAMA's global Professional Achievement Award for contributions to "human-friendly" data modelling

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

- Author of "Workflow Modeling"
  - best-selling book on process modelling & improvement
  - second edition – 2009 (sole author, complete re-write)

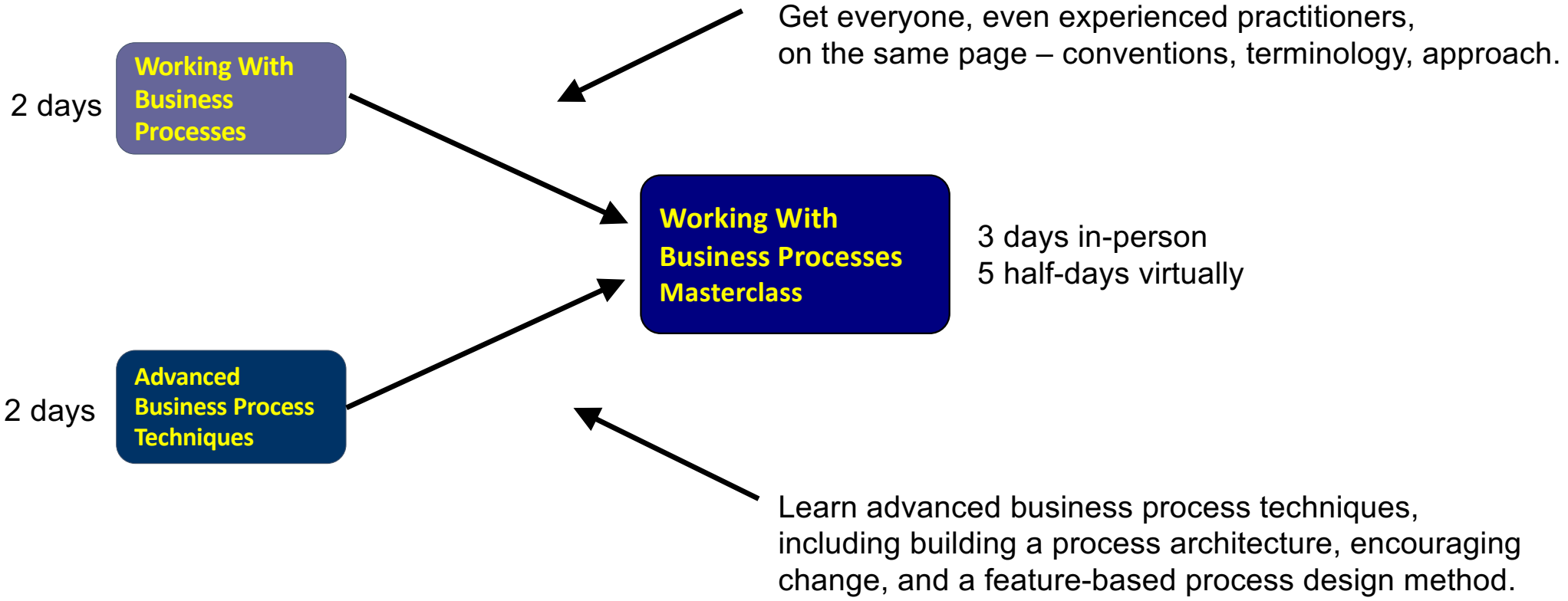


Clariteq – small, husband & wife company, global clients

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
Elisa
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/Pharmaceuticals
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 course



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*.
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

- Five things you need to know about *business processes*
- How *Business Process* fits into a framework for *Business Analysis:*
- A three-phase methodology for *Business Process Change*

Sections 2 to 6 – Techniques

2. Identifying true, end-to-end, cross-functional *Business Processes*
3. Developing a *Process Architecture* (including an interlude on *Concept Modelling*)
4. Seven ways to help people embrace *Process Change*
5. *Human-oriented* process modelling
6. A feature-based *Process Design* method – transitioning from *as-is* to *to-be*

Five central ideas

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. Enterprise system implementations *must* include a *business process* perspective

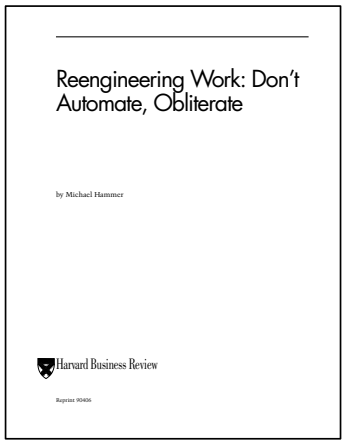
4. Success with business processes depends on taking a *holistic view* in which six *enablers* are considered

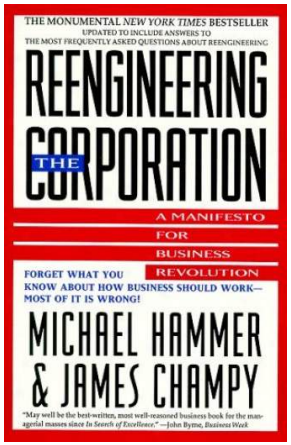
5. Business processes can't be great at everything – a single *differentiator* or *strategic discipline* should be chosen

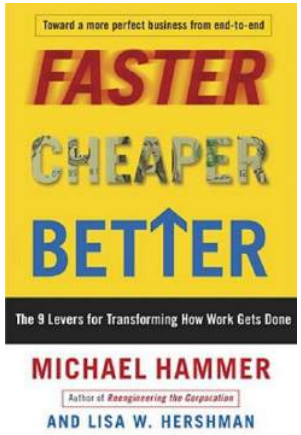
*1. Confusion – what **is** a "business process?"*

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. Enterprise system implementations *must* include a business process perspective (and a concept model, too)
4. Success with business processes requires a *holistic view* in which *six enablers* are considered
5. 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.

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

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

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

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

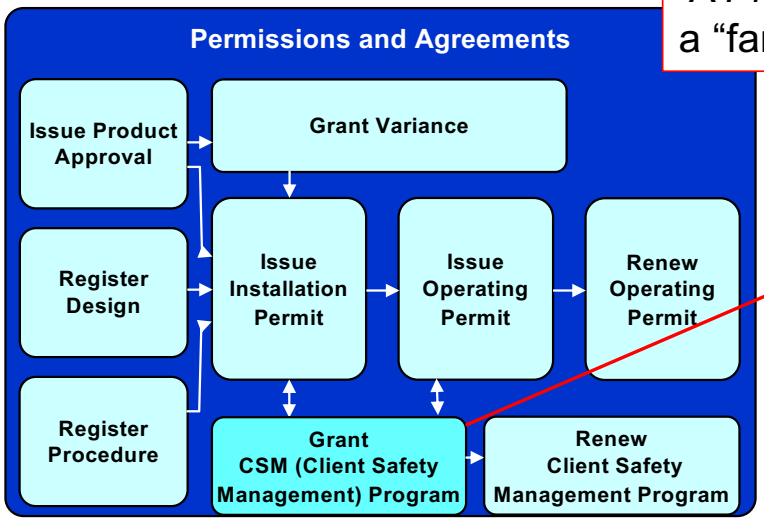
Seek balance – a "business process" lies between the extremes

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

The key issues – granularity and orientation

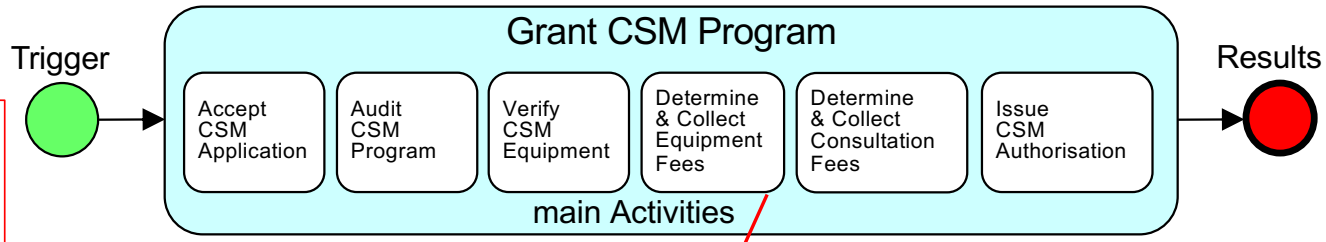
Taxonomy: a collection of processes vs. a process vs. a procedure

A *Process Area* or *Process Domain* –
a "family" of related Business Processes:



An *end-to-end process* – "Grant CSM Program,"
from *application* to *authorisation,*
involving many departments, external organisations,
participants, and procedures.

Business Process Scope Model (TRAC) – pure "what"…



Cases: New, Legacied, etc.

"how" to complete a task…

Business Process:
A sequence or set of *activities*
that delivers significant *results*
for the process' customer
and other *stakeholders*

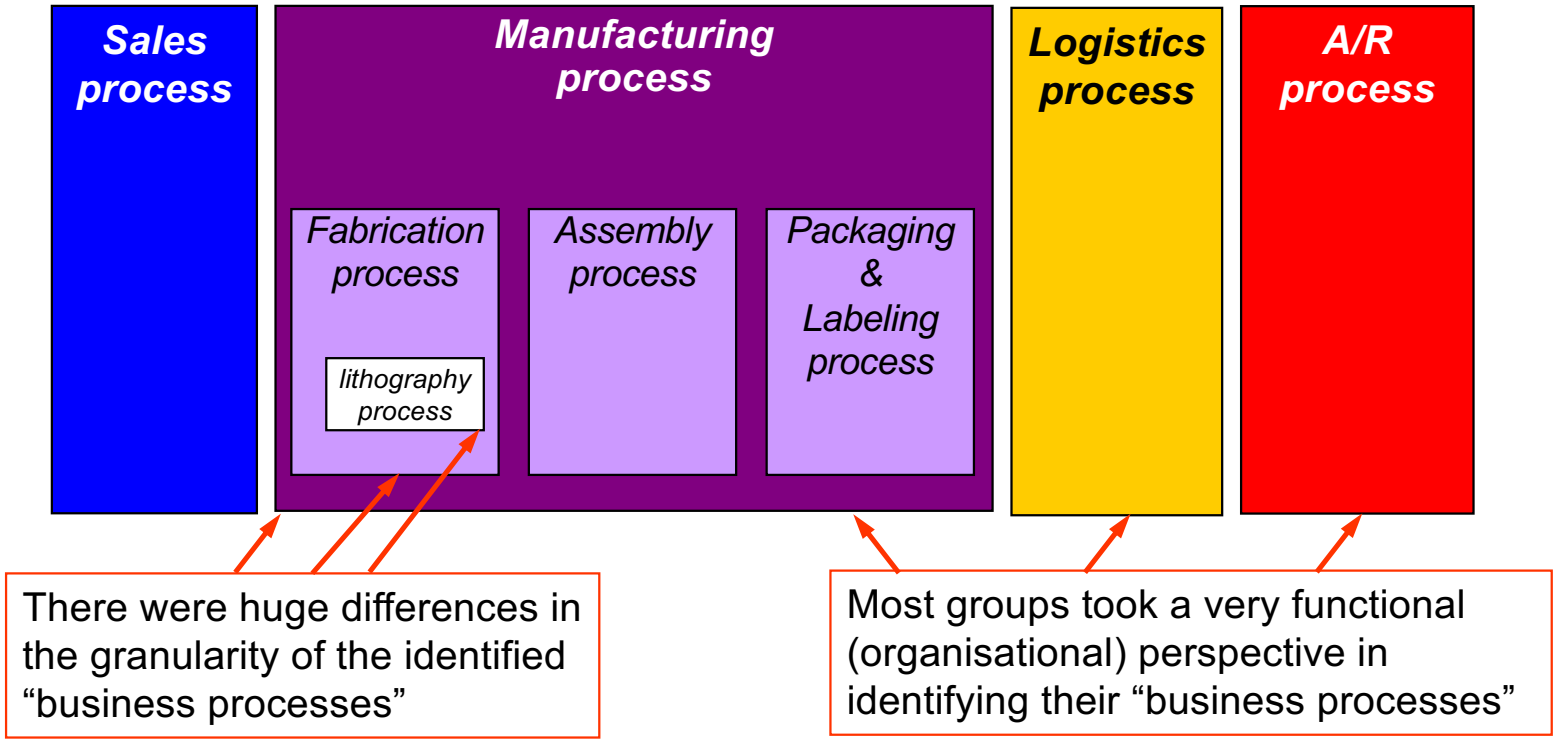
Procedure:
A set of step-by-step work instructions
(a job aid) for a specific task or activity
that will yield identical results every time

Procedure – Calculate Unit Registration Fees:
For each Unit:

- Determine Unit Type and Unit Risk Factor;
- Apply Registration Fee from Reg. Fee Table;
- Identify additional Inspection fees from…

A real life (and expensive!) example

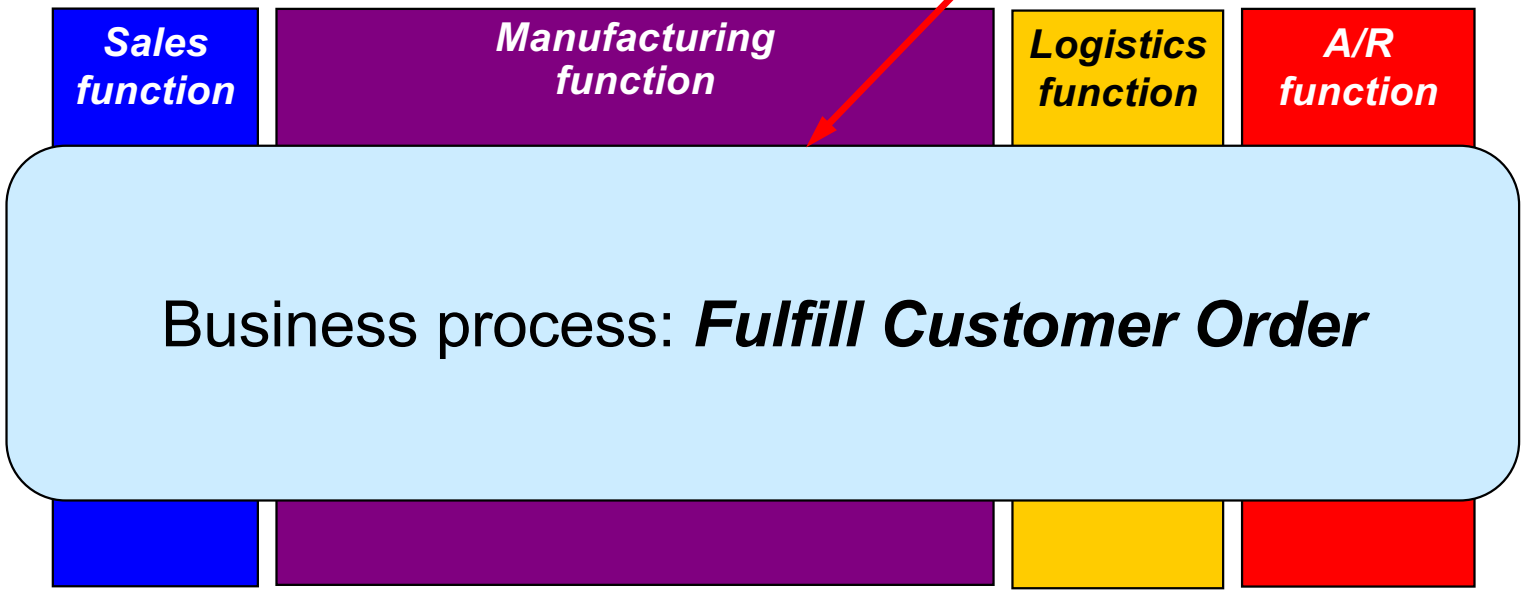
As part of a massive system implementation, a global manufacturer identified the *business processes* that were expected to improve:



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

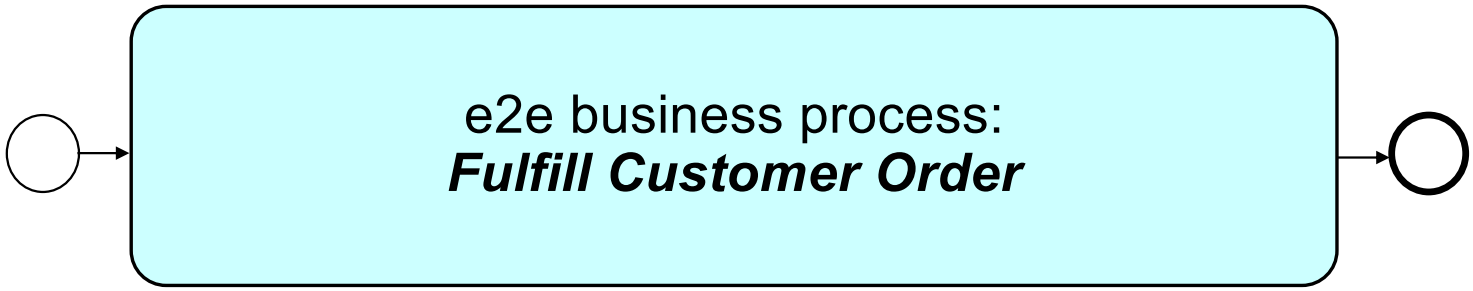
The "real" business processes were missed

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.

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.*

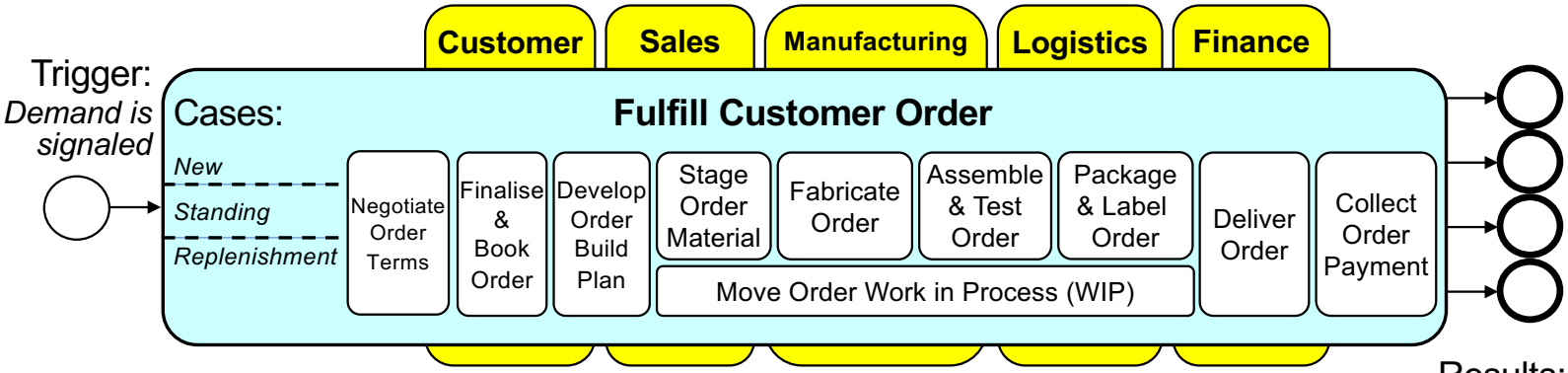
Order is Received, Tested, and Accepted? *Yes.*

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 – **T**riggering event or events*

*2 – **R**esults: final outputs*

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

*3 – **A**ctivities: 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 – **C**ases*

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

essence** of the process **("what")

5 – Functions or Organisation Units

6 – Actors and responsibilities

7 – Systems, data sources, other mechanisms

***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

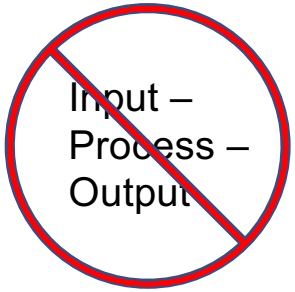
Industry Association:
Order stats reported

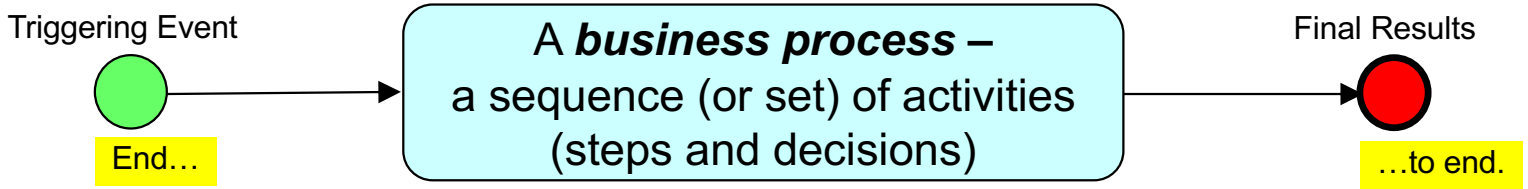
Always construct a *Process Scope Model* & a *Process Summary Chart* before diving into Workflow Modelling / Swimlane Diagramming

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





- 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

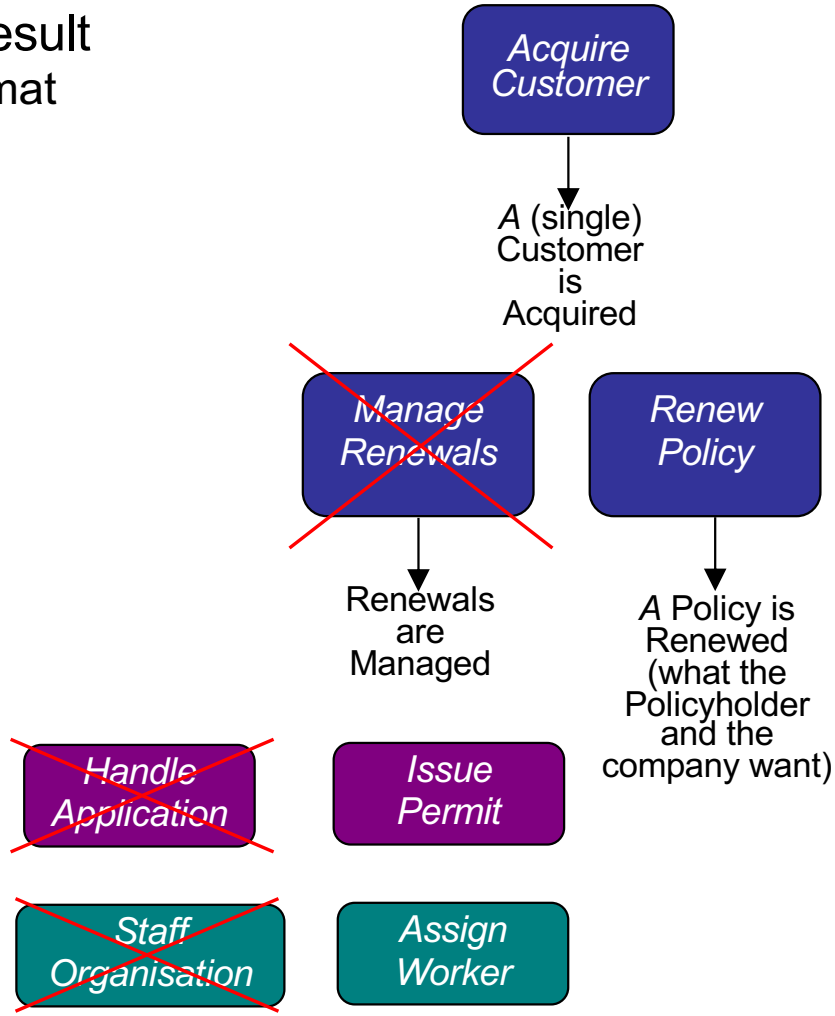
1. The process name ***must*** indicate the expected result
   - Name potential process in “active verb – noun” format
   - Restate that name as a result (“noun is verbed”)
   - Ensure this is the intended result of the process: *discrete*, so results are *identifiable* & *countable*

   - ***No mushy verbs:*** manage, monitor, administer, handle, track, support, maintain, etc.
   - ***Active verbs only:*** *Evaluate* Prospect, *Acquire* Customer, *Fill* Customer Order, *Resolve* Customer Issue, …

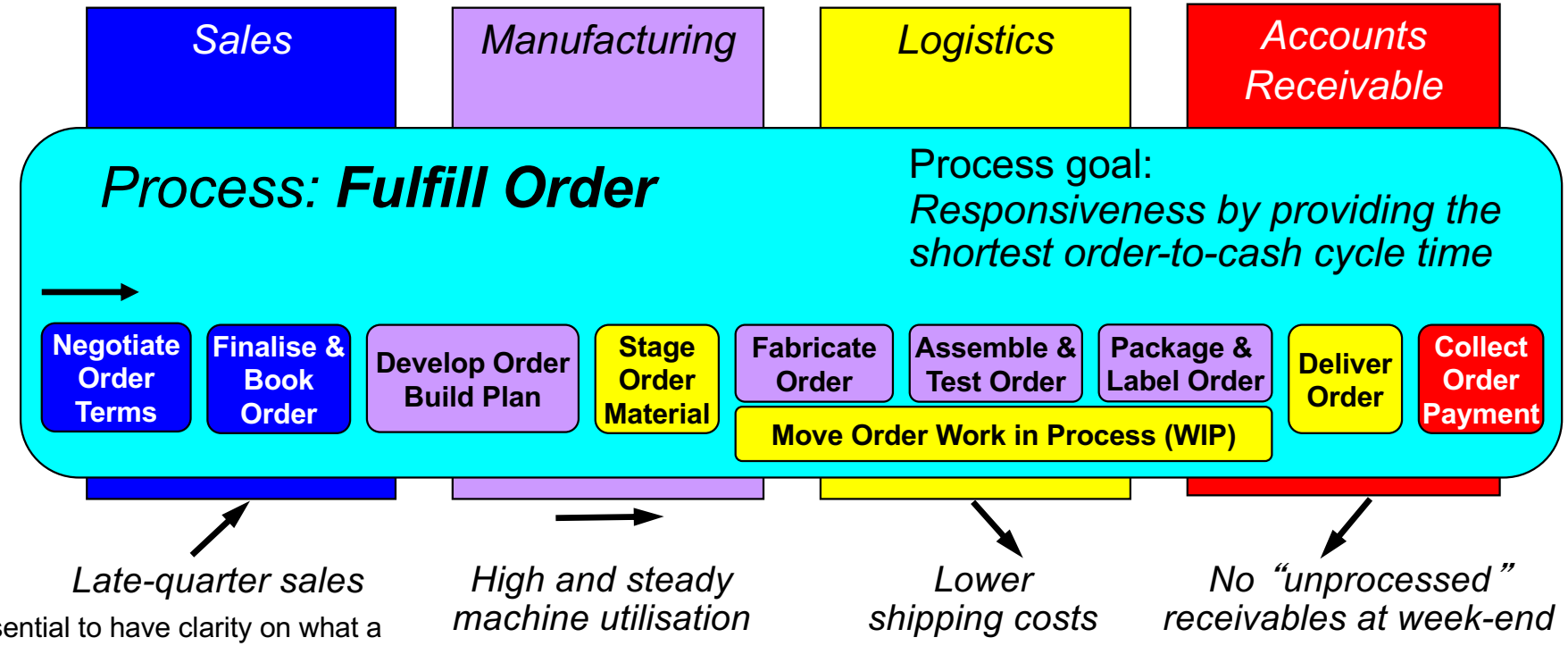
   - Applies to business processes, phases (subprocesses,) activities, steps, …

2. Name process from customer's perspective (what do they want from the process?)

3. Name process in the singular



2. A common obstacle – misaligned performance measures



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
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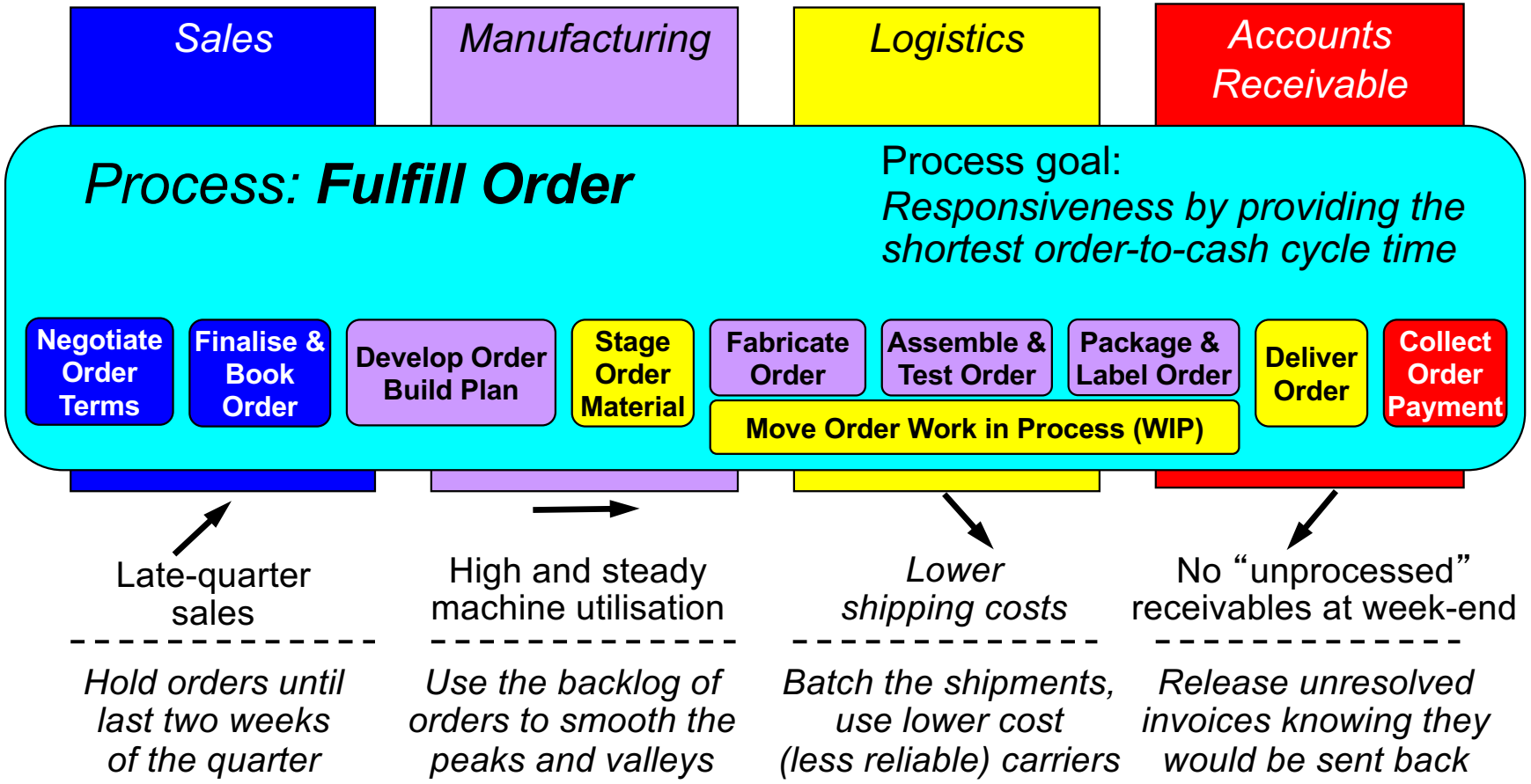
4. Success with business processes requires a *holistic view* in which six *enablers* are considered
5. A business process can't be great at everything – a single *differentiator* must be chosen

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

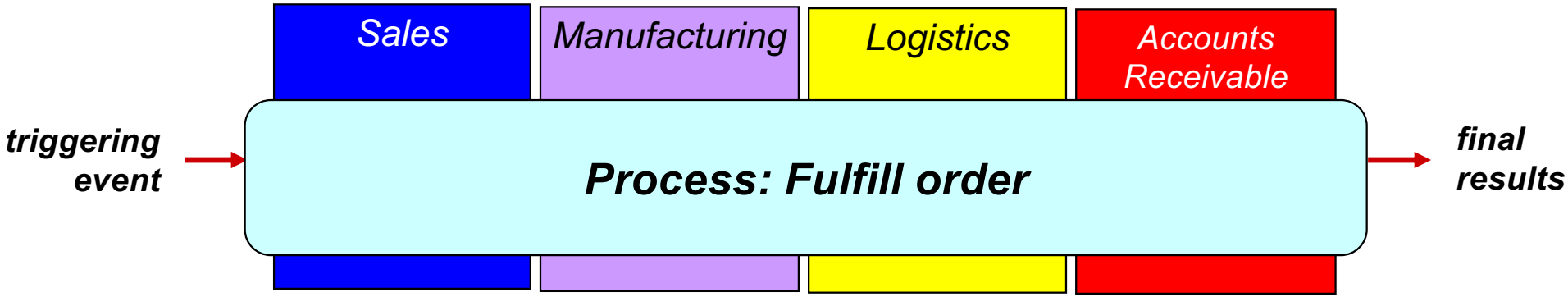
Discuss –
What are the likely impacts of these performance goals?
What will the different functions do to meet the targets?

Misaligned performance measures



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

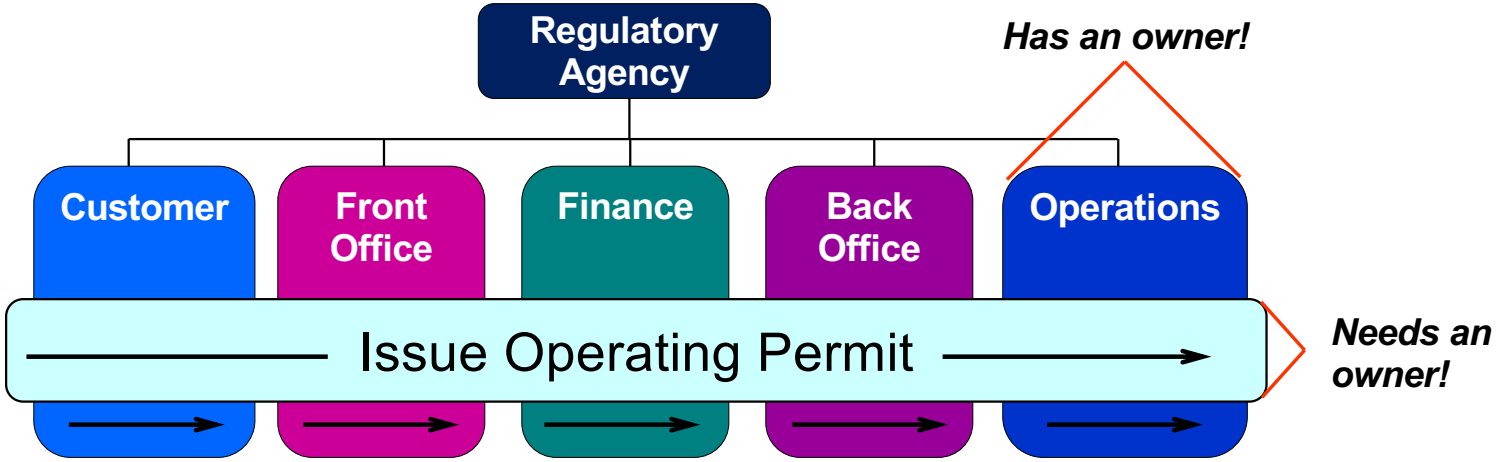
This doesn't mean functions are bad!



Process	Function
• End-to-end business processes deliver ***essential results*** by aligning the work of multiple functions • Must be identified and managed as a whole	• A centre of expertise – an efficient way to provide resources across multiple processes • Specialised skills, knowledge, tools • Organisational design usually based on functional specialties • We prefer not to use the somewhat negative term "functional silos"

Ultimately, business processes are all about alignment

Processes and functions – three key points



- The first step in managing processes is to *determine what they are* – they don't identify themselves
- Performance goals for the functions must *align with* (or be *balanced against*) the performance goals of the process
- Processes need an *owner / steward* to set direction, ensure alignment, and resolve conflict

It takes concerted effort – nothing happens by accident

3 – Processes and information systems

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4. Success with business processes requires a *holistic view* in which *six enablers* are considered
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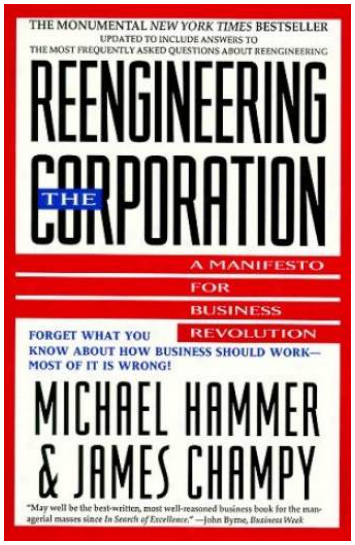
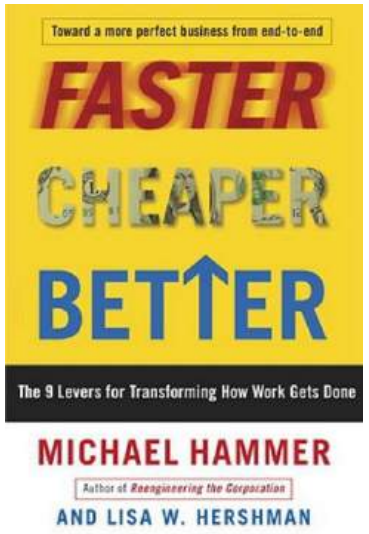
"Success with SAP Implementation"

Study by the late Michael Hammer, "godfather of BPR"



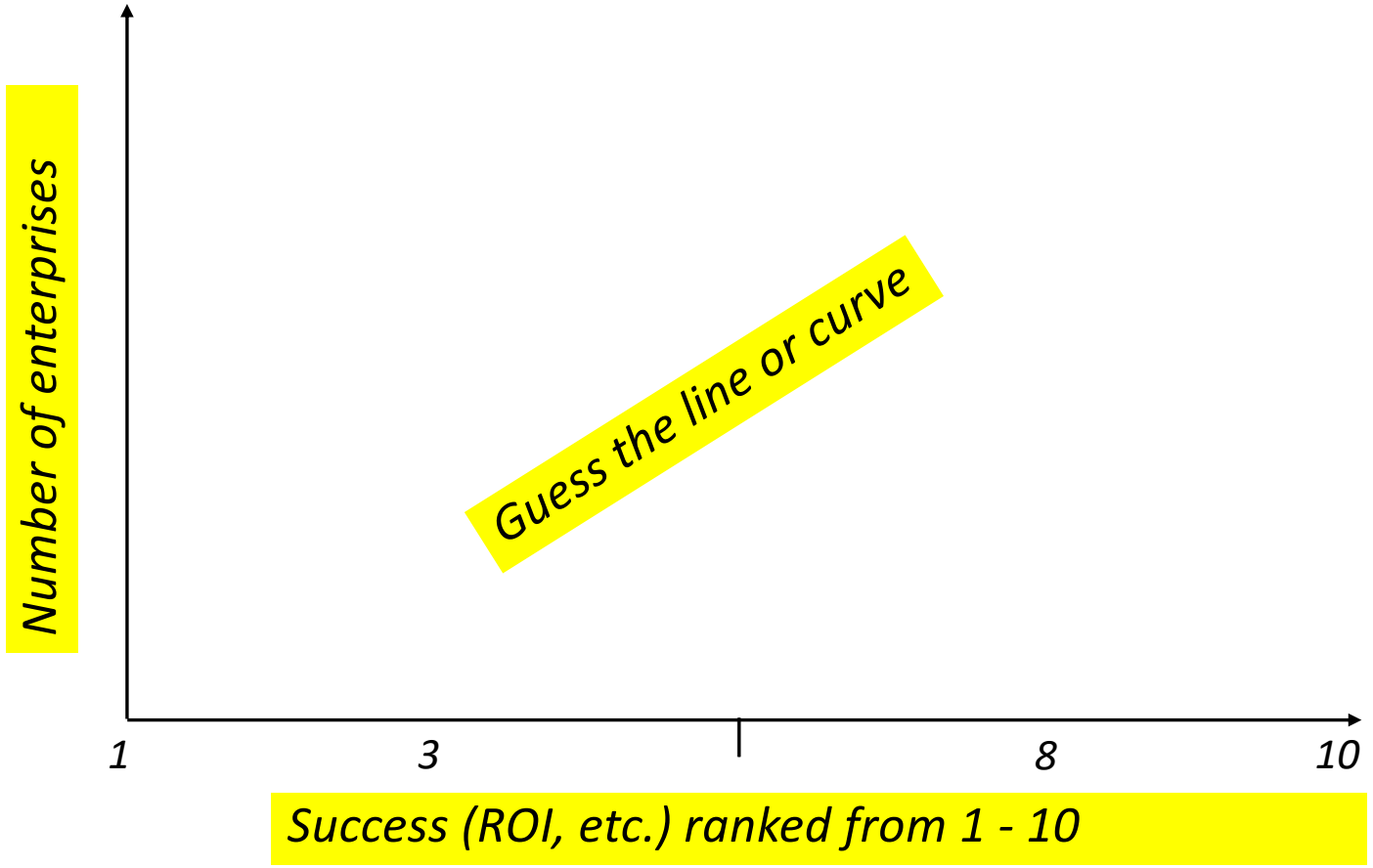


Observed that success of SAP implementations varied *wildly*

Worked with ~80 companies to assess their degree of success with SAP implementation

Success with SAP implementation

Hammer plotted the number of companies for each “success” ranking



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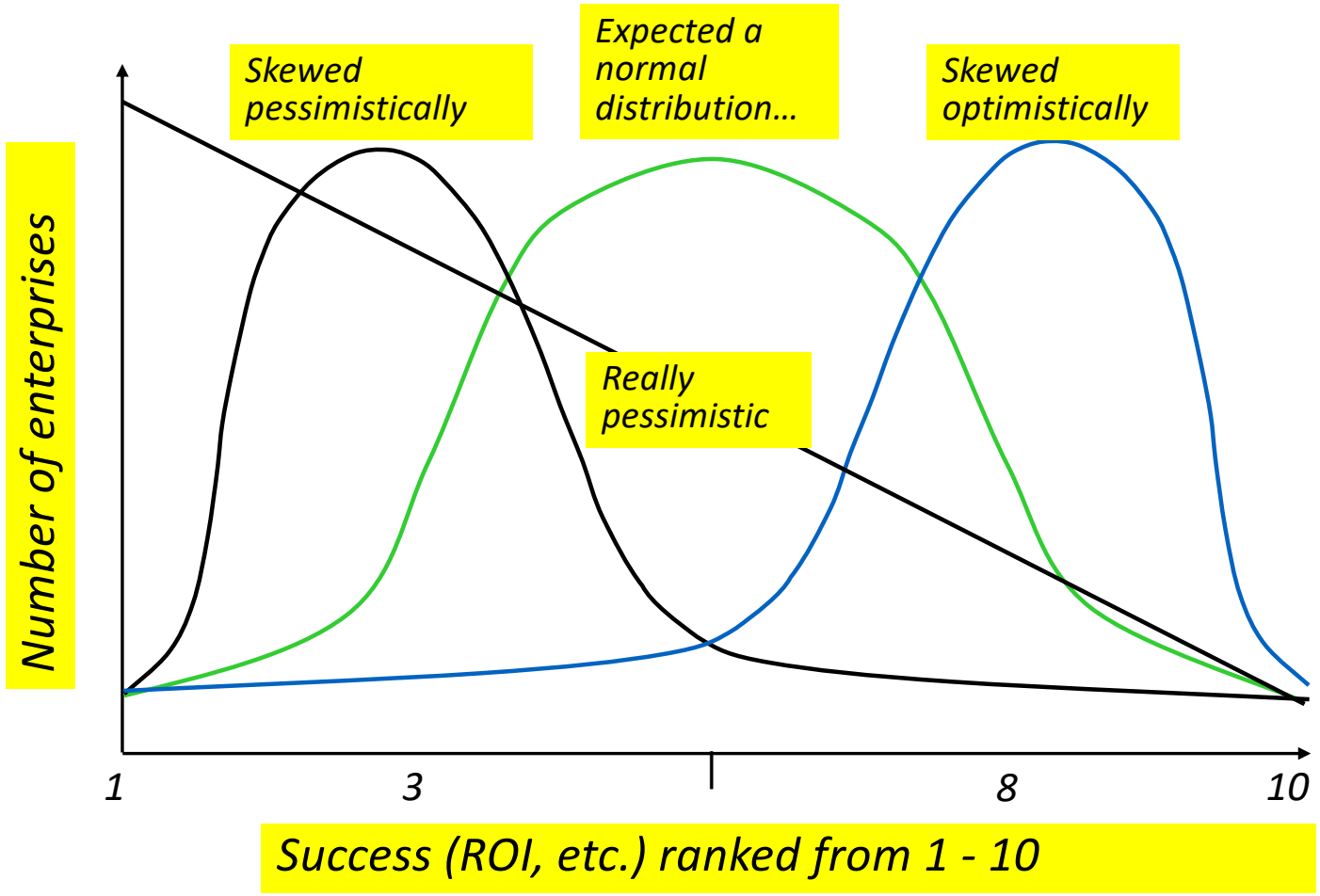
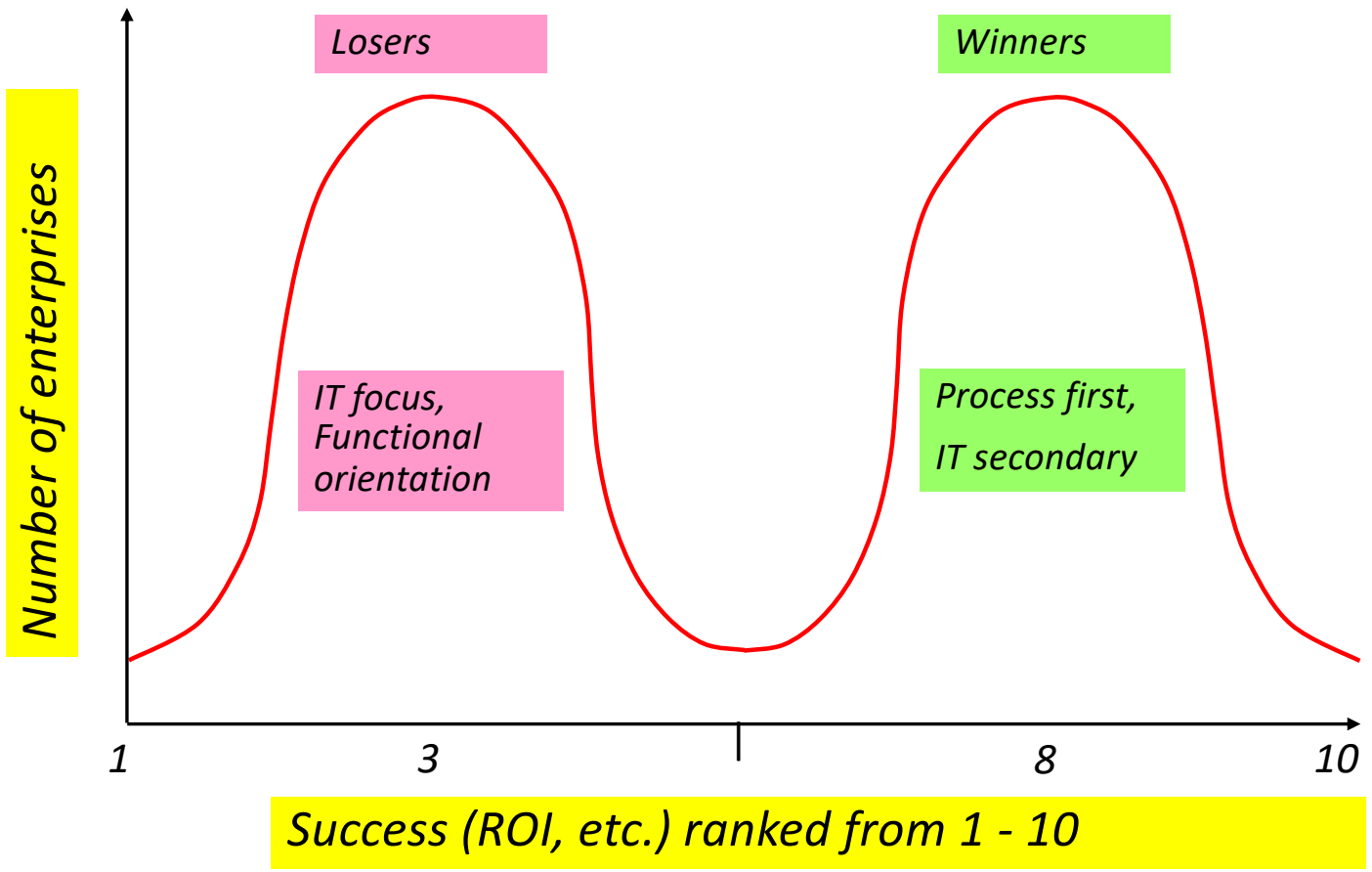
Hammer not sure what the outcome would be

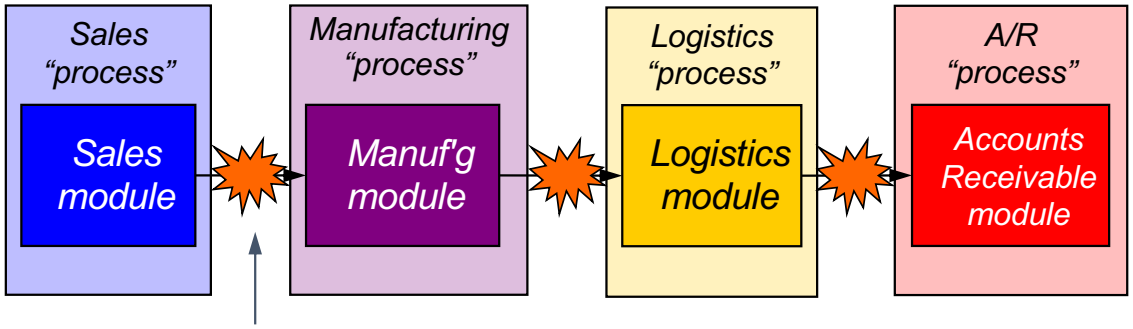


The surprising result



Returning to an earlier example

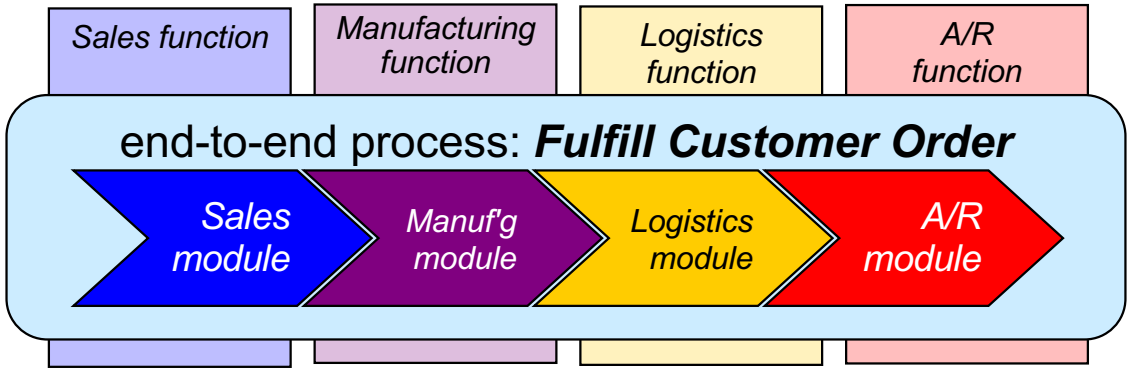
"Process-oriented" implementation began without clarity on "process" –



Poor performance

Conflicts: timing, coding, terminology, data formats, *performance targets*, …

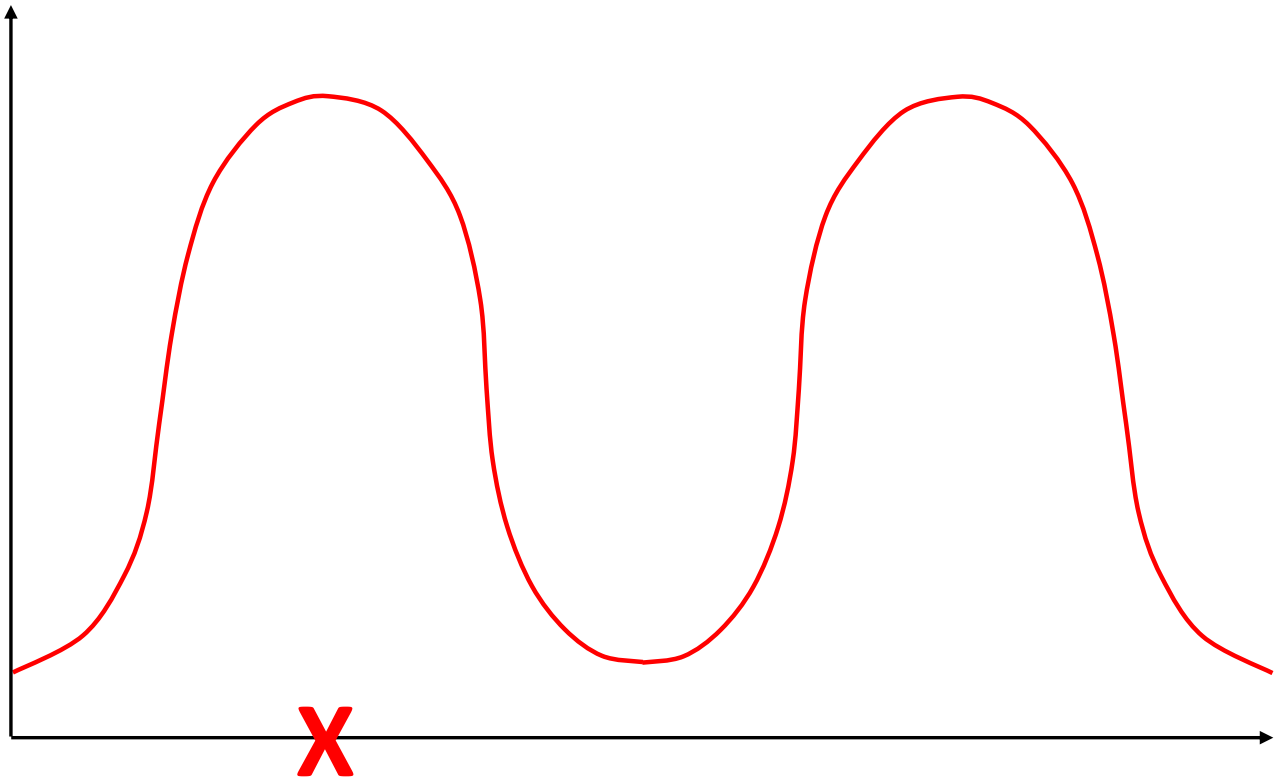
SAP re-implemented in a process-driven configuration –



Great performance

Same software, radically different outcomes

Staying "right" in an "entropic" environment



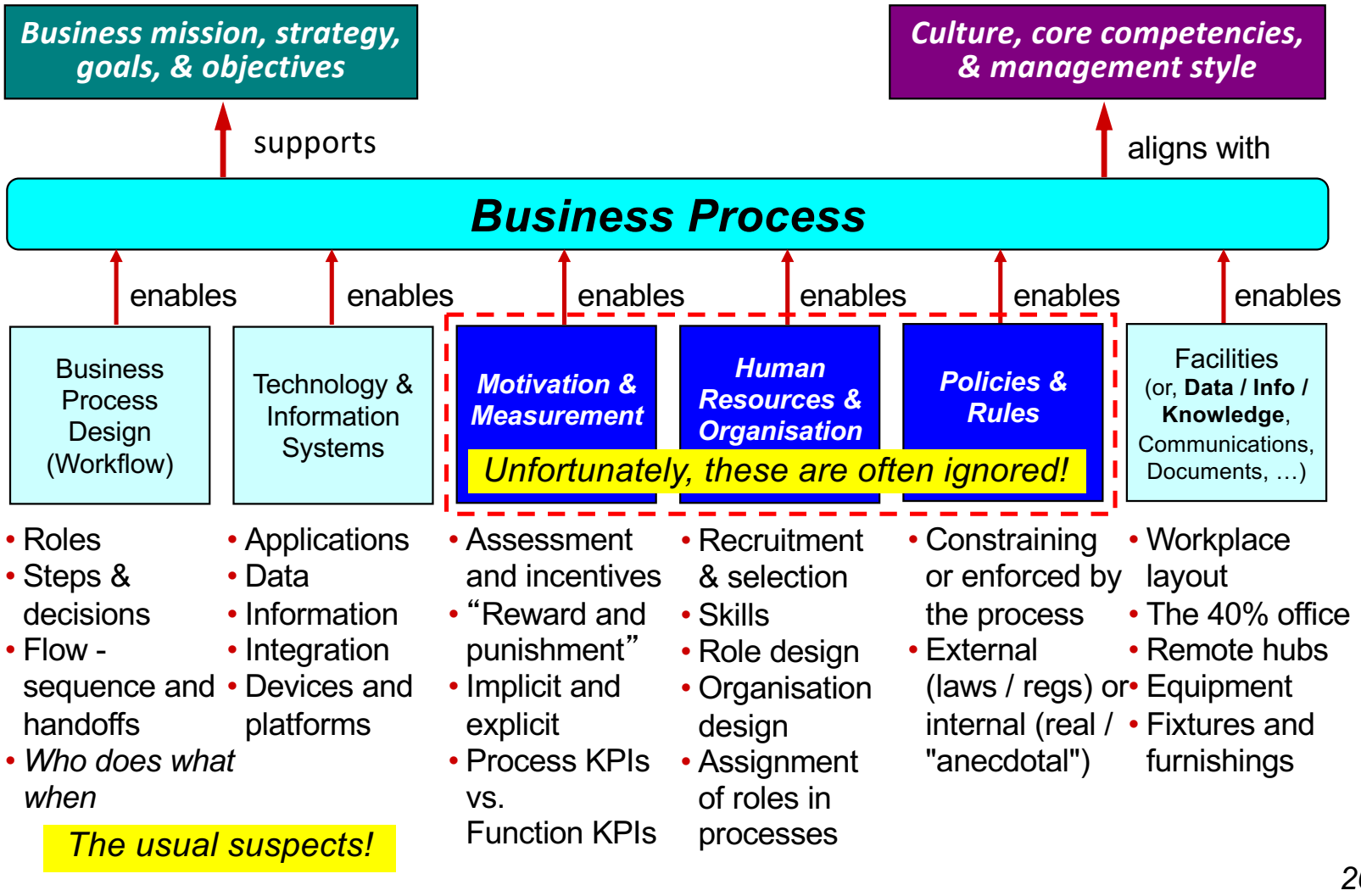
There will always be a pull back towards functional comfort

- *ongoing management of the process is critical!*
- *all enablers must be addressed for a sustainable process*

4. A holistic view for process analysis and design

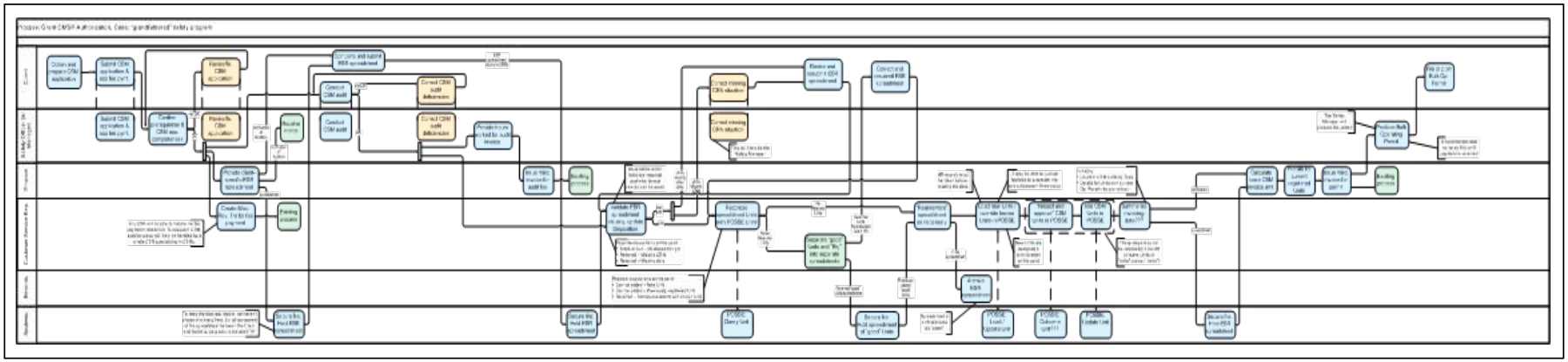
1. It is essential to have clarity on what a *business process* really is
2. Performance measures may be *functionally aligned* - work *against* business processes
3. Enterprise system implementations *must* include a business process perspective
4. Success with business processes requires a *holistic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

Enabler – A factor that is adjusted to impact process performance.



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

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



After as-is modelling, assess the process by *each* enabler, *one at a time.*
This provides a *fact-based* assessment of the *as-is.*

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.)

5. Process goals: know your "differentiator"

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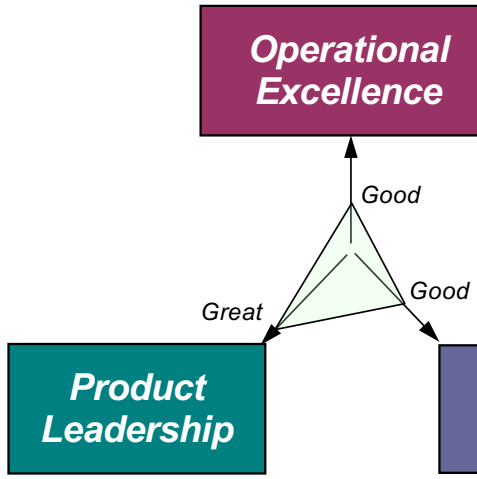
As noted, this is one of the things I do on ~100% of *Project Recovery* assignments -

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

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



Consistent, predictable, error-free, and efficient – focus on low cost (or safety, in some industries.)

More efficient, but less flexible in changing direction or meeting needs of individual customers.

Continuous and rapid introduction of new products and services, or changes to the mix

More flexible for adapting to needs of new offerings, but less efficient.

Tailors product or service delivery to the processes of individual customers.

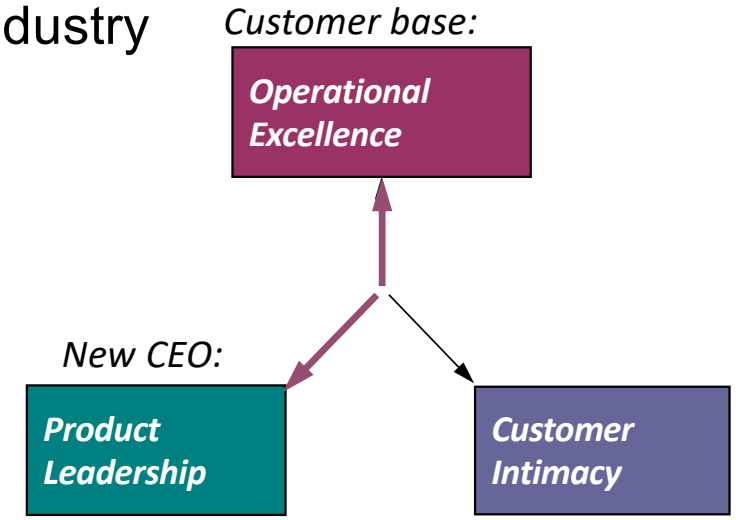
More flexible for adapting to needs of individual customers, but less efficient.

The original reference:
The Discipline of Market Leaders
Michael Treacy and Fred Wiersma
Addison-Wesley 1995

Example: "differentiator confusion"

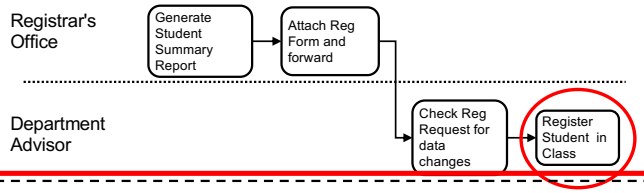
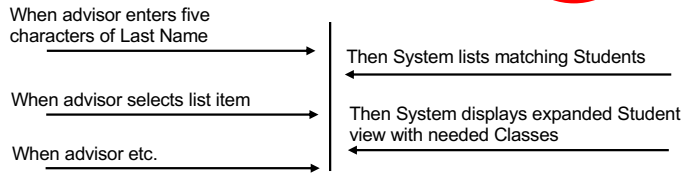
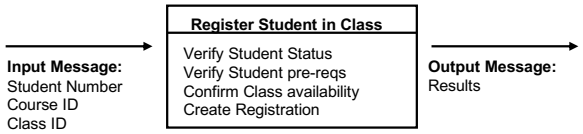
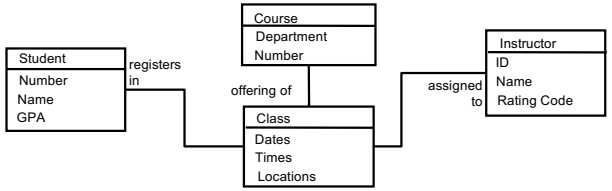
Getting it wrong can be *expensive…*

- 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)*



Business Process – part of the Clariteq Framework for Business Analysis

The Clariteq Framework for Business Analysis

Framework Layer	Technique sample	What it covers
Business Goals & 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
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
Presentation Layer (user interface)		✓ ***Use Case*** – models how an actor interacts with a system to obtain (trigger) a service, typically to complete a step in a process
Application Layer (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 Layer (data & storage)		✓ ***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.

This is not a sequence!

Business Process: gives great *context* for *Business Analysis*

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

Concept Model / Data Model: a great *platform* for *Business Analysis*

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

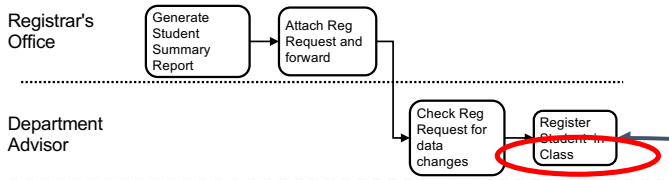
Everything relies on the Concept Model / Data Model

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

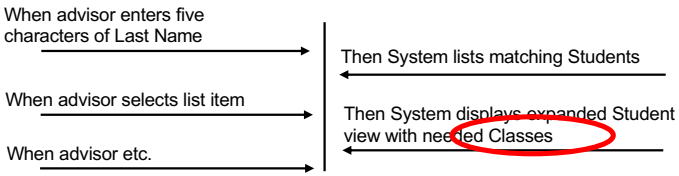
Business Goals & Objectives

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.

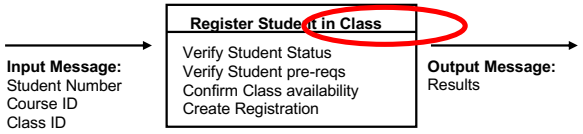
Business Process



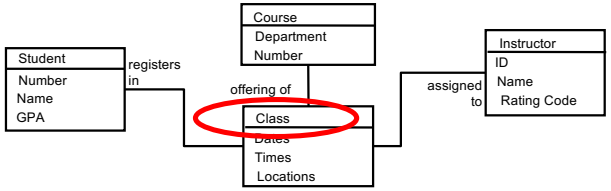
Presentation Layer (user interface)



Application Layer (rules & logic)



Data Layer (data & storage)



Use Case
actor + service + platform:
Advisor *Register Student in Class* via SRS

Service
verb + noun (+ noun):
Register Student in Class

Entity
noun:
Class

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 or* Things in your enterprise. Also known as *Business Objects.*

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

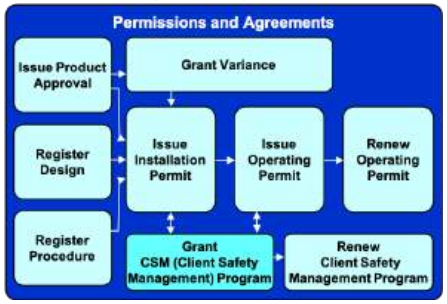
Another key point! Different levels of detail for different purposes

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

Also applies to Use Cases, Services, and Data Models

Scope – for Planning

Process Landscape (optional):



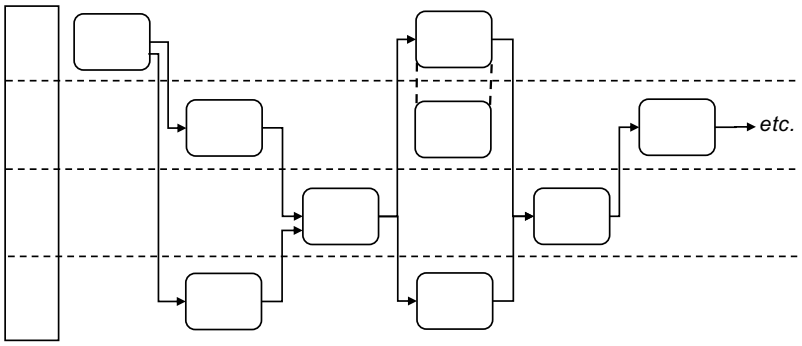
Process Scope Model:

Process Summary Chart:

Boxes

Concept – for Understanding

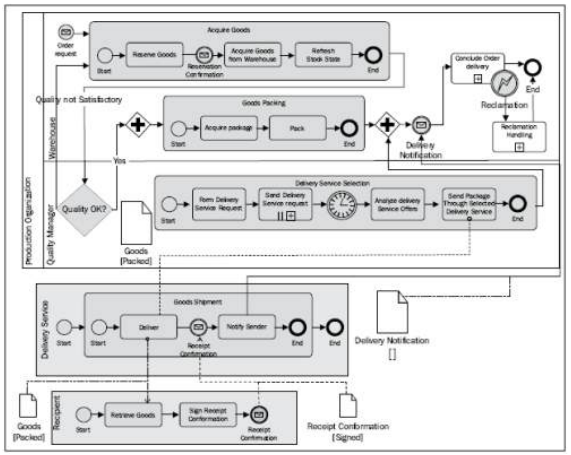
- Augmented Scope Model showing next level activities: *who - what - how*
- "Business-friendly" (just boxes & lines) flow models to maximise communication and participation
- Two levels – *Handoff* and *Service*



Boxes & Lines

Detail – for Specification

- Detail for technical design, perhaps using full BPMN



Boxes, Lines, & MANY Symbols

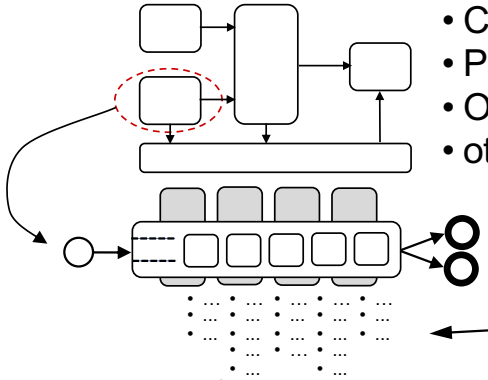
Our three-phase methodology – proven, practical, & agile

Some goal or issue, not rigorously specified

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***



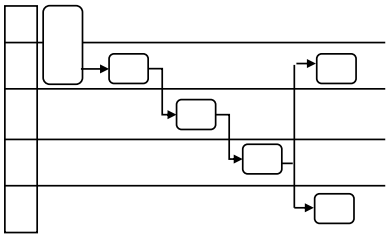
- Customer
- Performers
- Owner
- others…

- ID processes & draw *Process Landscape* (Optional – only if you have a large scope)
- ID **T**rigger, **R**esults, main **A**ctivities, **C**ases (**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*

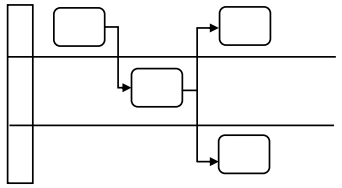
3 Design the To-Be Process

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

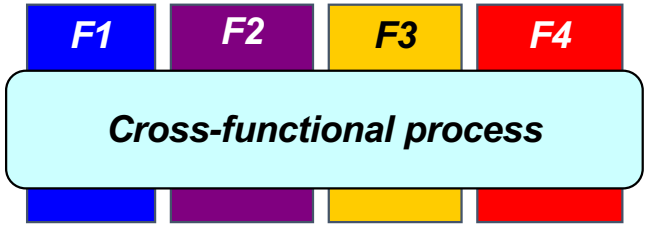
Design the to-be process:
1 - ***essential*** activities first
2 - "who & how" next
3 – transport & protocol last

- Select key to-be *Features*

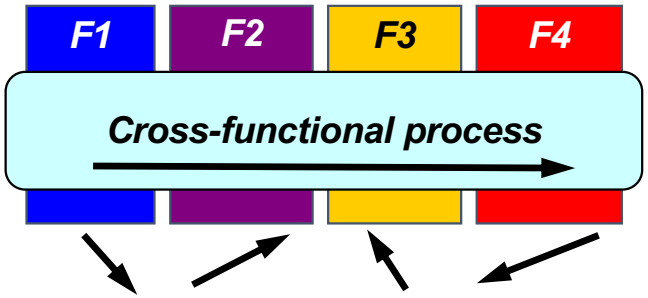


- Assess each key *Feature* by enabler
  - Identify and sequence *essential* activities
  - Develop *Workflow Models* for essential activities by adding *who* and *how*
  - *…on to requirements definition and implementation*

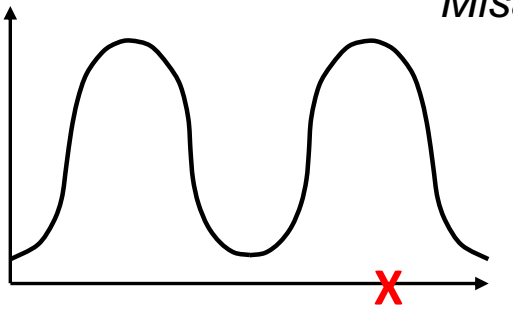
Five key points plus a BA framework plus a methodology



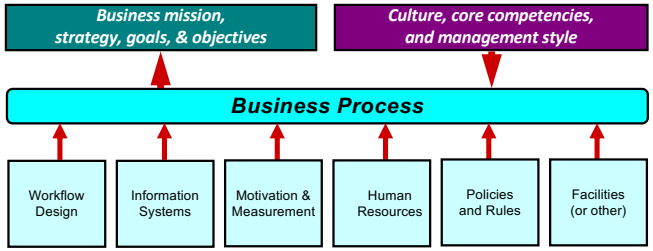
Processes: "large" and X-functional



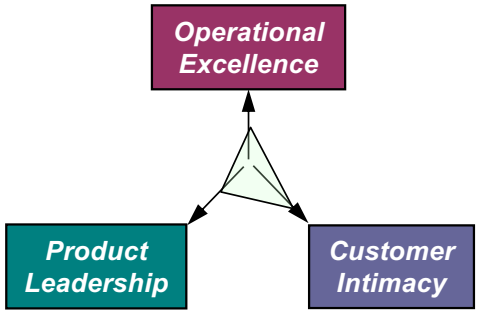
Misaligned measures



System success

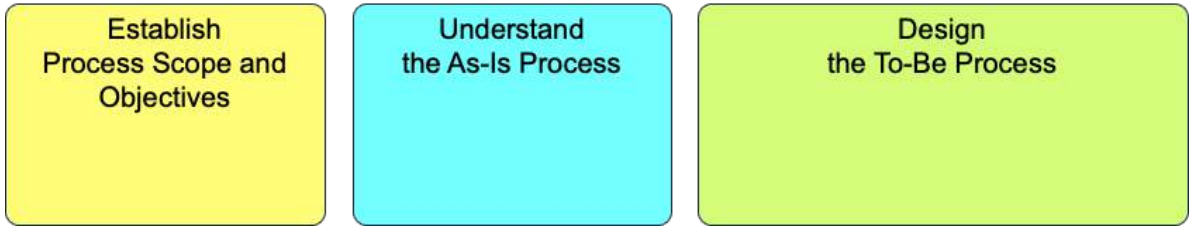


Holistic method



Differentiator

…and a proven Methodology



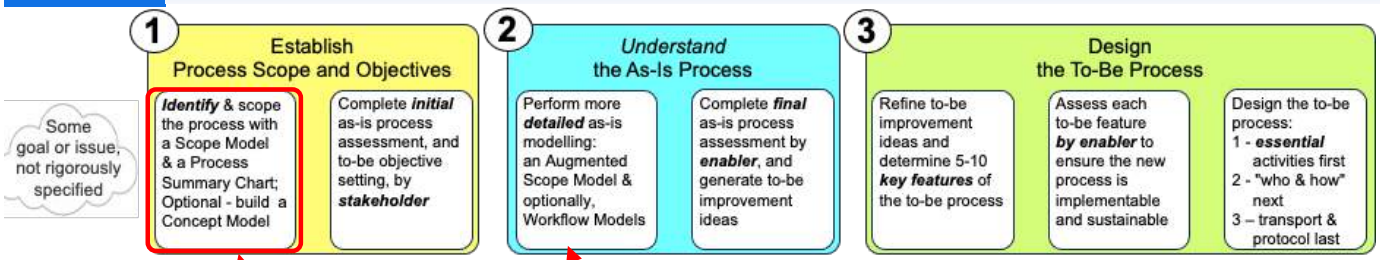
Model-driven framework

- Process Modelling
- Use Cases
- Service Specification
- Concept / Data Modelling

Identifying and Scoping Business Processes

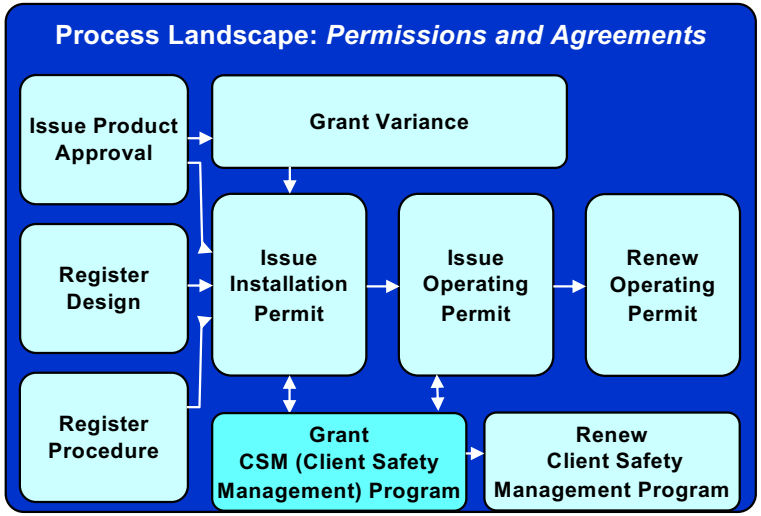
1. Five things you need to know about *Business Processes*
2. Identify true, end-to-end, cross-functional *Business Processes*
3. Developing a *Process Architecture*
4. Seven ways to help people embrace *Process Change*
5. *Human-oriented* process modelling
6. A feature-based *Process Design* method – transitioning from *as-is* to *to-be*

Identify & scope process(es)



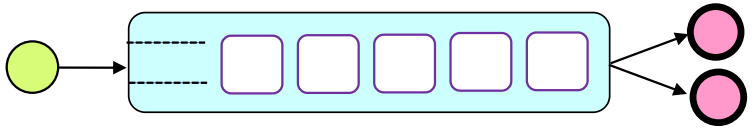
Clarify scope and context

I used to dive in here…
… lots of issues!

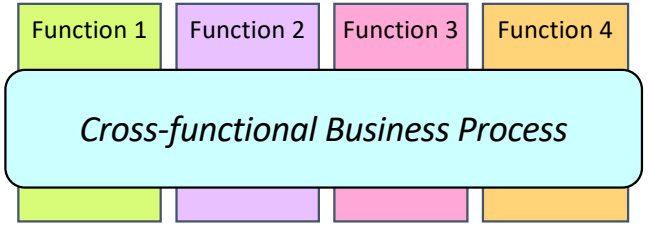


Whether it's a new initiative or "project recovery," ***always:***

- Develop a Process Scope Model



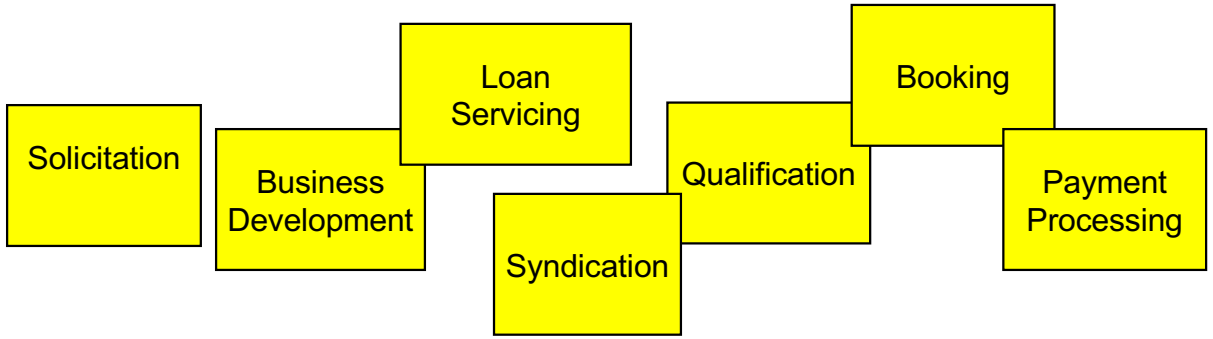
- Develop a Process Summary Chart



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

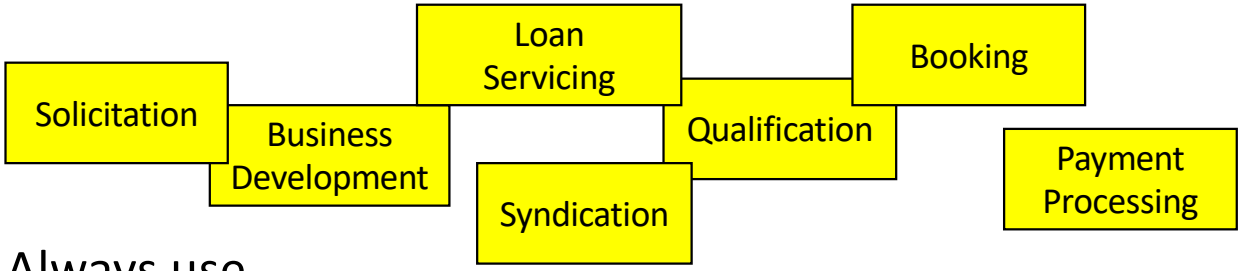
A bank believed they had identified the 12 *business processes* in their Commercial Loans Management area, including these 7:



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



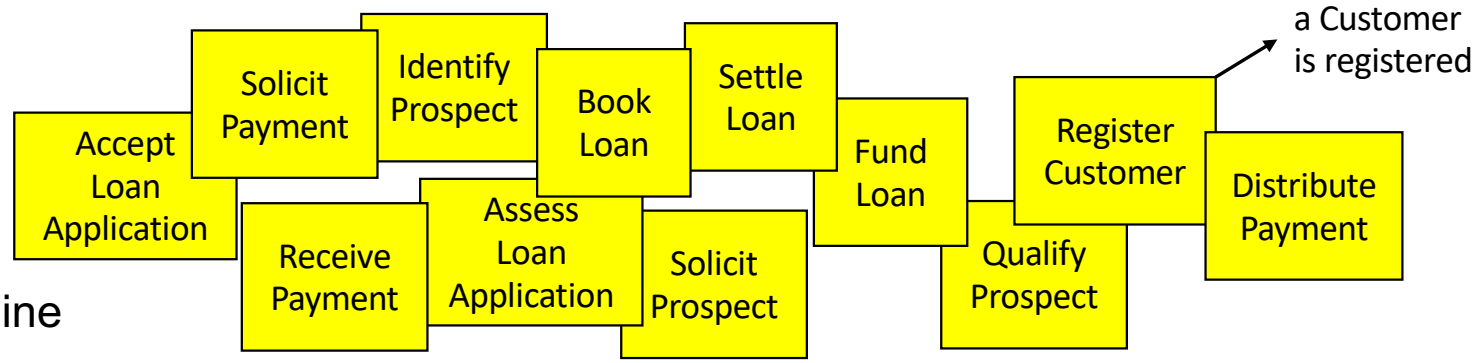
Dubious "business processes"

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!)

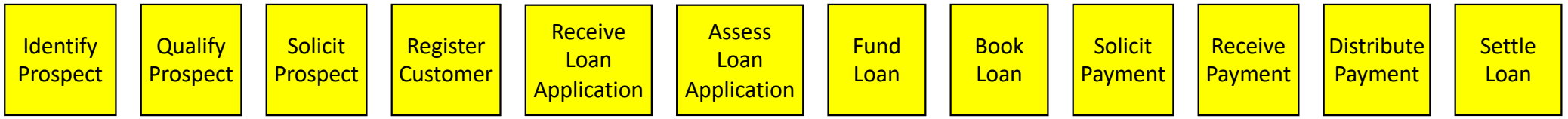
Let's put these in sequence, then use *TRAC* to determine *Business Processes*.



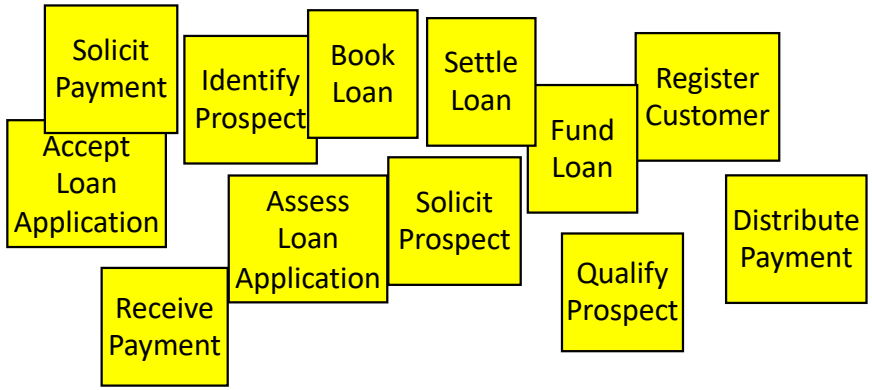
This was done in-person with Post-its and flipcharts but tools like Lucidchart and Miro work well virtually

Summary – sequence activities

Not usually linear – parallel chains are typical



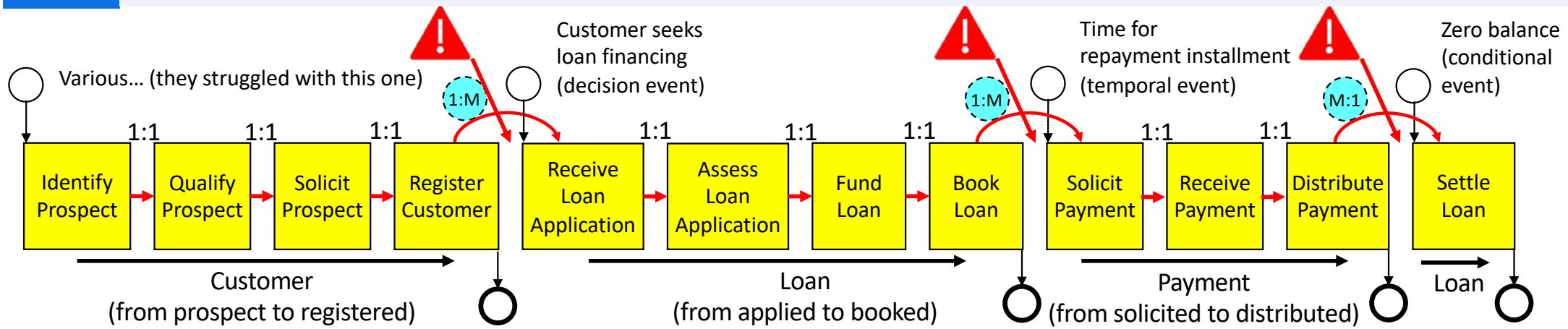
The clients arranged the activities in sequence:
- *easy!*
- *a learning experience!*



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

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

Summary – use TRAC to discover business process boundaries



It appears we have discovered four business processes, each with:

- Trigger
- Results
- Activities

(Cases later)

Customer:
an Account that enables business with the bank
The Bank:
a new Customer (an asset)
Business Development:
Commission credit

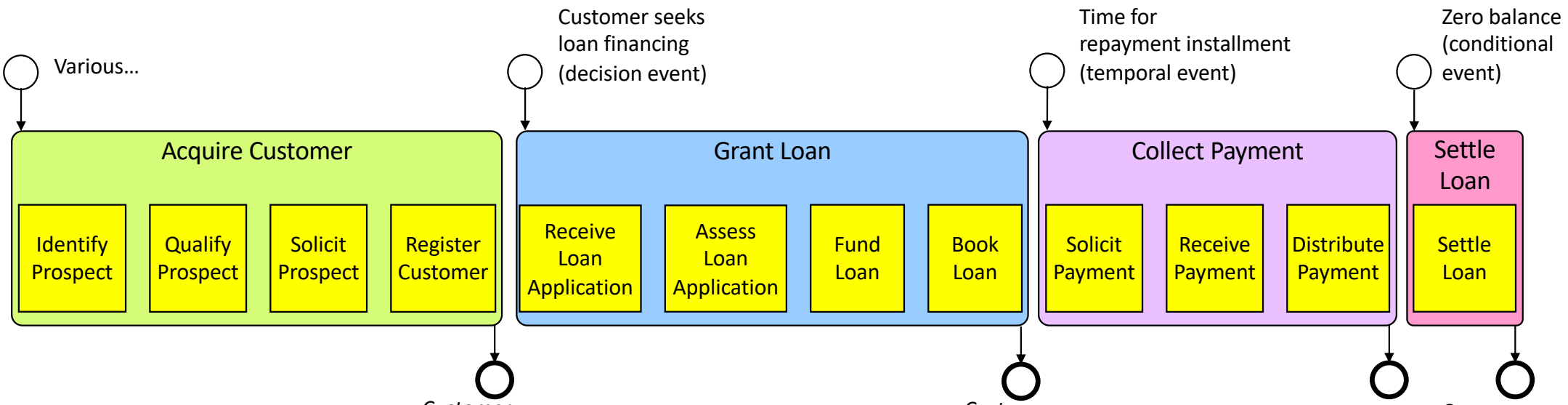
Customer:
Loan funds available
The Bank:
a performing asset (Loan)
Syndication Partners:
a share of the Loan

Bank:
Loan payment received & distributed
Syndication Partners:
Loan Payment received

Customer:
release of Loan liability
The Bank & Syndication Partners:
completed Loan
Regulator:
Loan completion notice

1. ID where a final Result of value is delivered to one or more (usually at least two) stakeholders – "happiness points"
2. Identify points where a Triggering event (decision, time, condition) beyond the organisation's control is required before activities can proceed
3. Identify "cardinality" of connections between Activities (1:1, 1:M, M:1)
4. Identify "tokens" flowing through the activities
5. Name business processes with active verbs and nouns (usually the tokens)

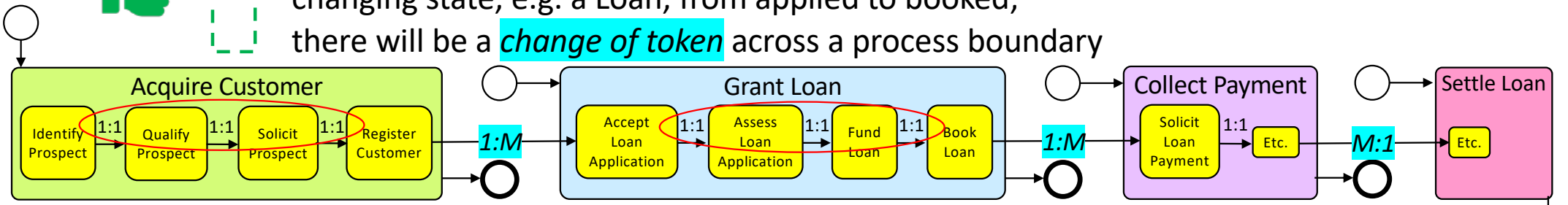
Four end-to-end business processes, objectively demonstrated



Client had faith these were *their* business processes

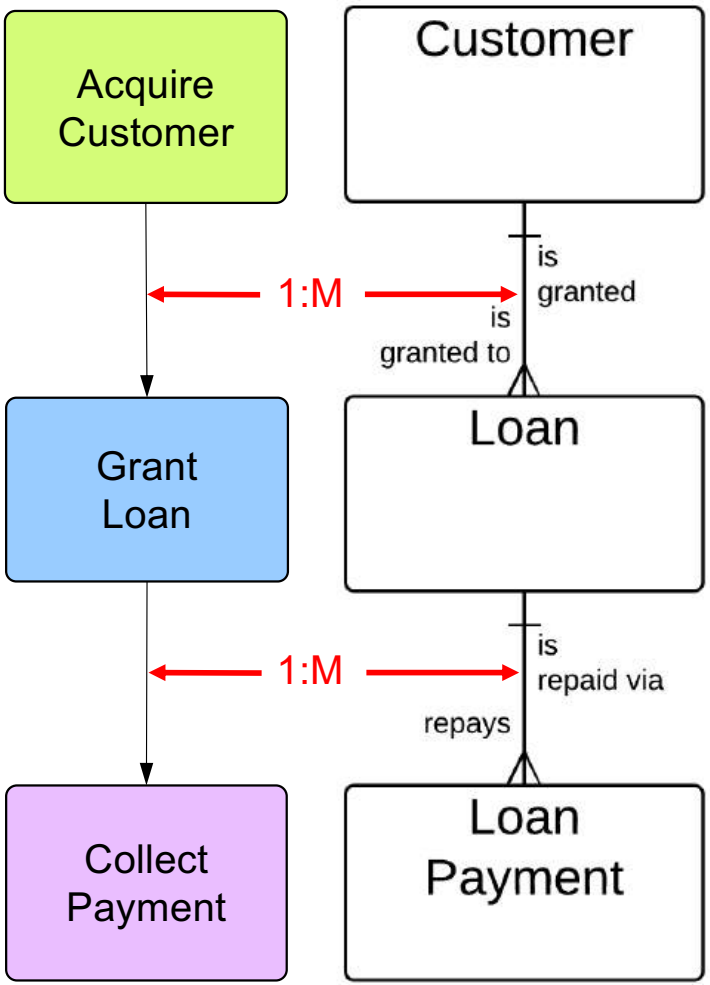
Six guidelines for well-formed processes, two clients really appreciate

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



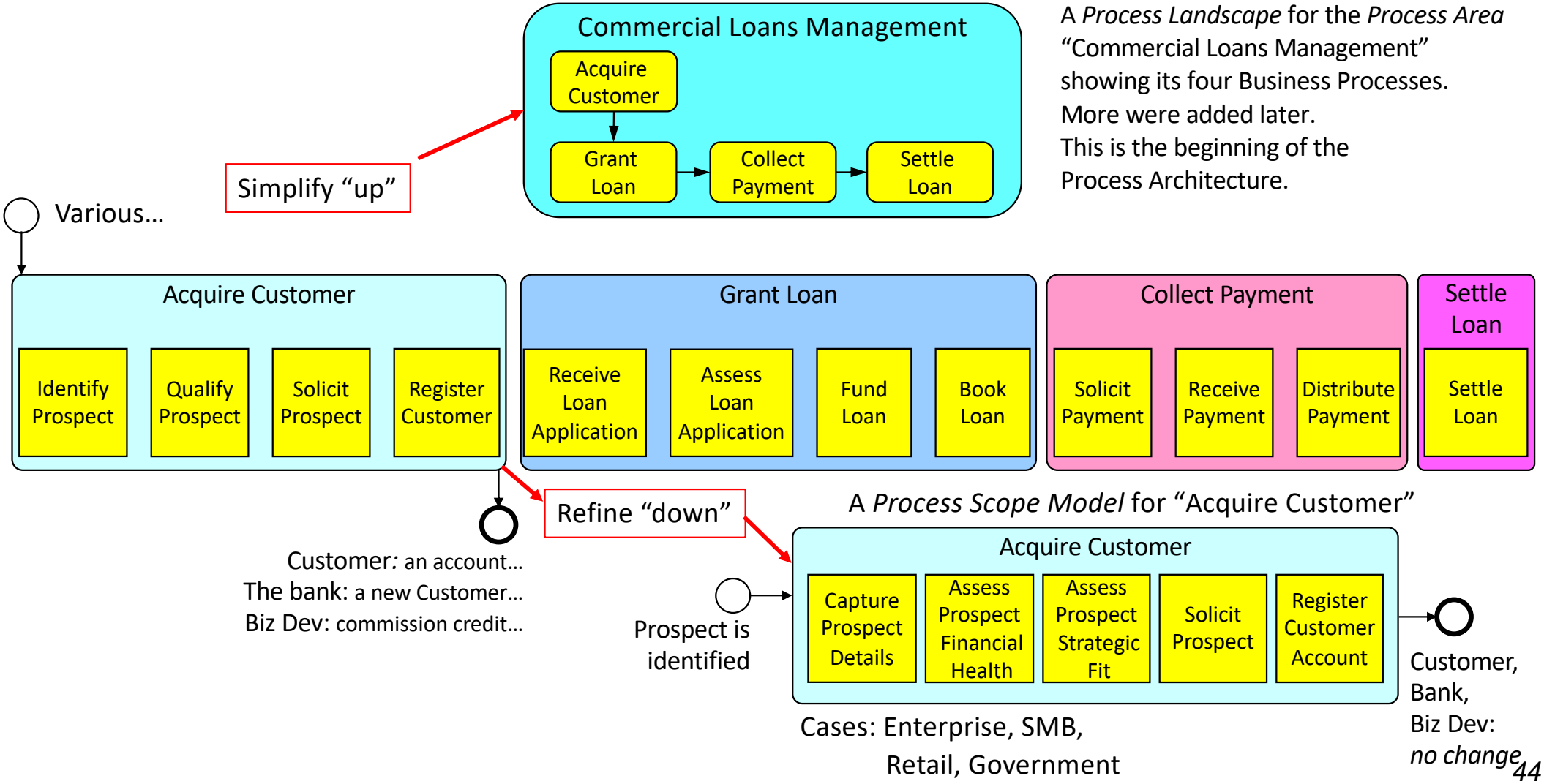
Clear, objective guidelines – *science, not just opinion*

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*
  - …

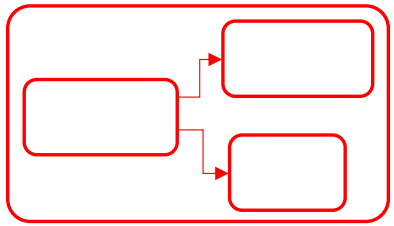
What next?



A *Process Landscape* for the *Process Area* "Commercial Loans Management" showing its four Business Processes. More were added later. This is the beginning of the Process Architecture.

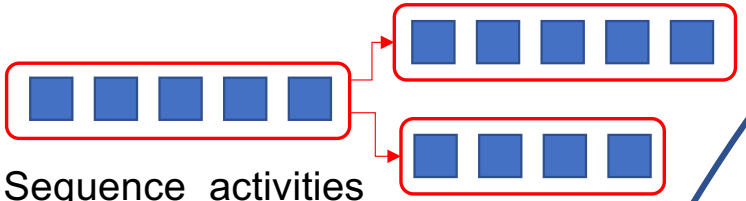
The arc of modelling and analysis

Start bottom-up to build overall framework – *Continue* top-down

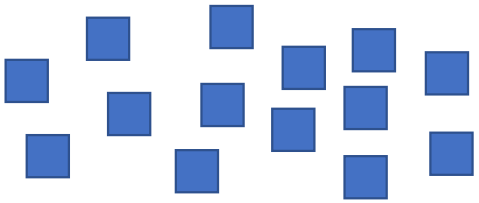


Draw a *Process Landscape,*
our overall framework

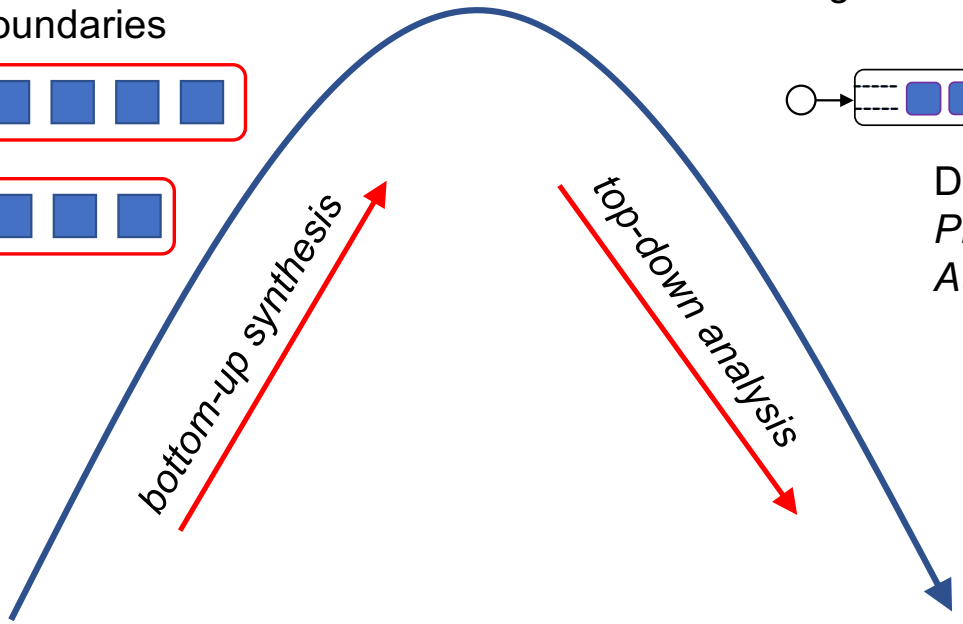
Use objective criteria to
identify process boundaries



Sequence activities
into “chains”

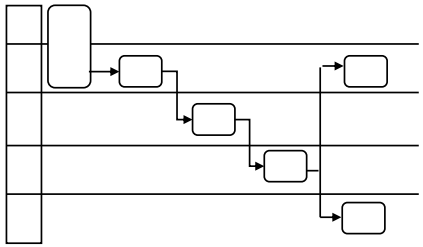


Granular activities
(real, recognisable work)



Progressive refinement and elaboration

Develop *Process Scope Model,*
Process Summary Chart, and
Augmented Scope Model



Develop *Initial Swimlane Diagram*

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Building a Process Architecture

1. Five things you need to know about *Business Processes*
2. Identifying true, end-to-end, cross-functional *Business Processes*
3. Developing a *Process Architecture*
4. Seven ways to help people embrace *Process Change*
5. *Human-oriented* process modelling
6. A feature-based *Process Design* method – transitioning from *as-is* to *to-be*

…including a bonus – material on Concept Modelling!

Case study – Process Architecture on a budget, non-invasively

Client –

- Regulatory agency ensuring the safe design, installation, and use of technical equipment
- Natural gas systems, electrical systems, boilers and pressure vessels, elevating devices, & many more

Goal –

- Use leftover budget at year-end to develop an Enterprise Process Architecture

Agreement –

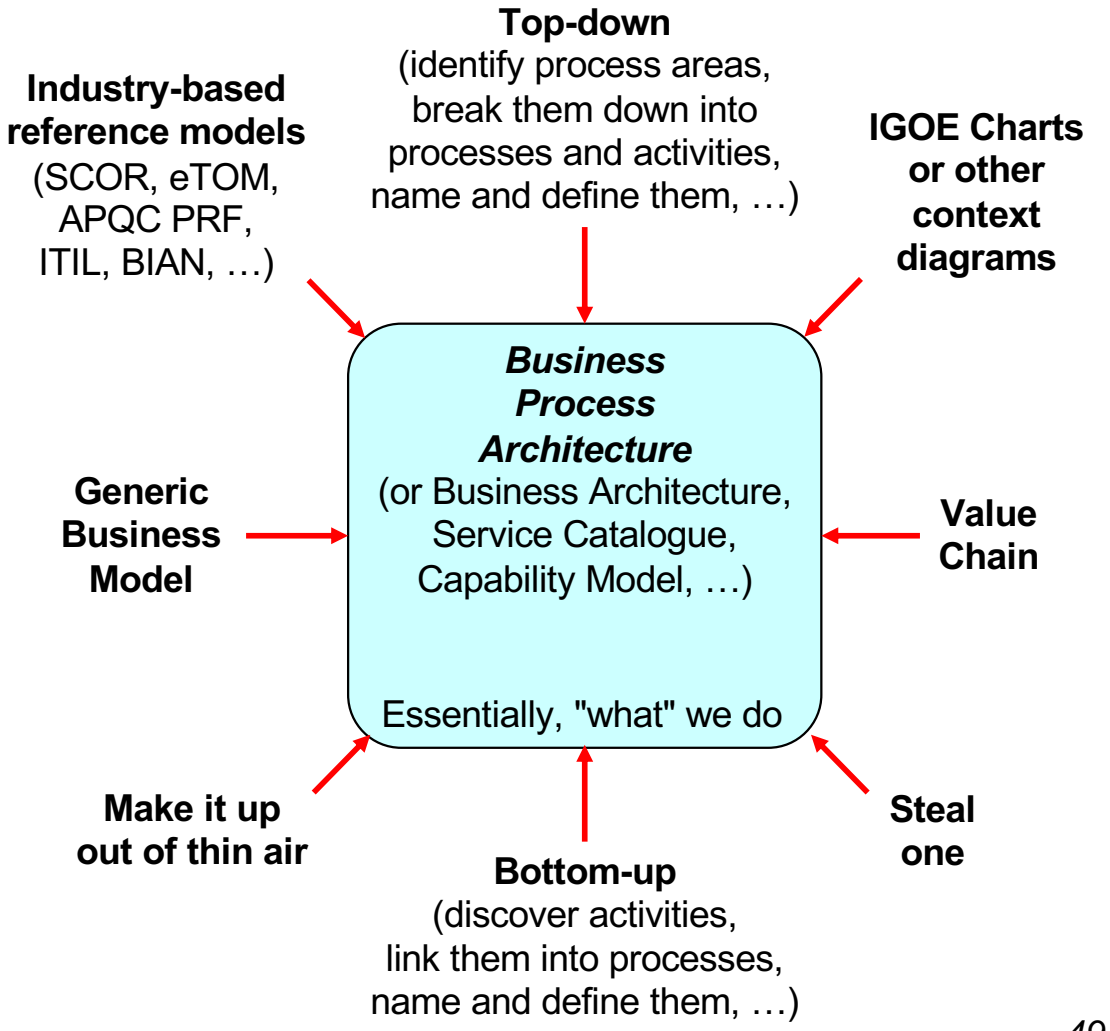
- We will experiment with novel approaches if we can use it as a case study
- Non-invasive – minimal interviews, no sessions
- Use available resources – existing models and *anything else we could find*
- Two experienced Business Process Analysts made available part-time

Many routes to the same end

Top-down discovery is often less effective than expected, yielding a view that is functional, organisational, or fragmented

Bottom-up discovery is often more effective at the *project* level – identify relevant lower-level activities, link to form complete processes – but can be overwhelming at large scale

We will employ a mix of techniques in a MITM approach - ***Meet-In-The-Middle***



Discovering processes at enterprise scale

Bottom-up techniques alone are impractical for the enterprise

"Classic" approach:

- Large project, core team of 5+ people, scores of interviews and sessions with many participants, over many months or even years
- "Boil the ocean" – expensive and time-consuming

Alternate approach (Regulatory Agency case study)

- Build first-cut (better than "draft") process architecture
- Small team, limited number of interviews and sessions
- Use available knowledge, e.g., Business Analysts
- Use other available resources, e.g., typical patterns and frameworks, organisation's training materials, job/role descriptions, reference models, industry texts, …
- Refine architecture over time, process by process

Business Process Categories – highest level of Process Architecture

These processes provide guidance to the enterprise on its mission, strategies, goals, and objectives, and coordinate interaction with external agencies and regulators. Also called *Directional* or *Steering* processes.

Governance & External Relations Processes

These processes deliver results that are the essence of why the enterprise exists – they are unique to a particular line of business and provide results that are visible to external stakeholders.

***Line of Business (LoB)* Processes (within scope)**

These processes deliver resources – people, facilities, systems, etc. – and services – accounting, risk mitigation, procurement, etc. – which enable the LoB processes to operate.

***Supporting* Processes (within scope)**

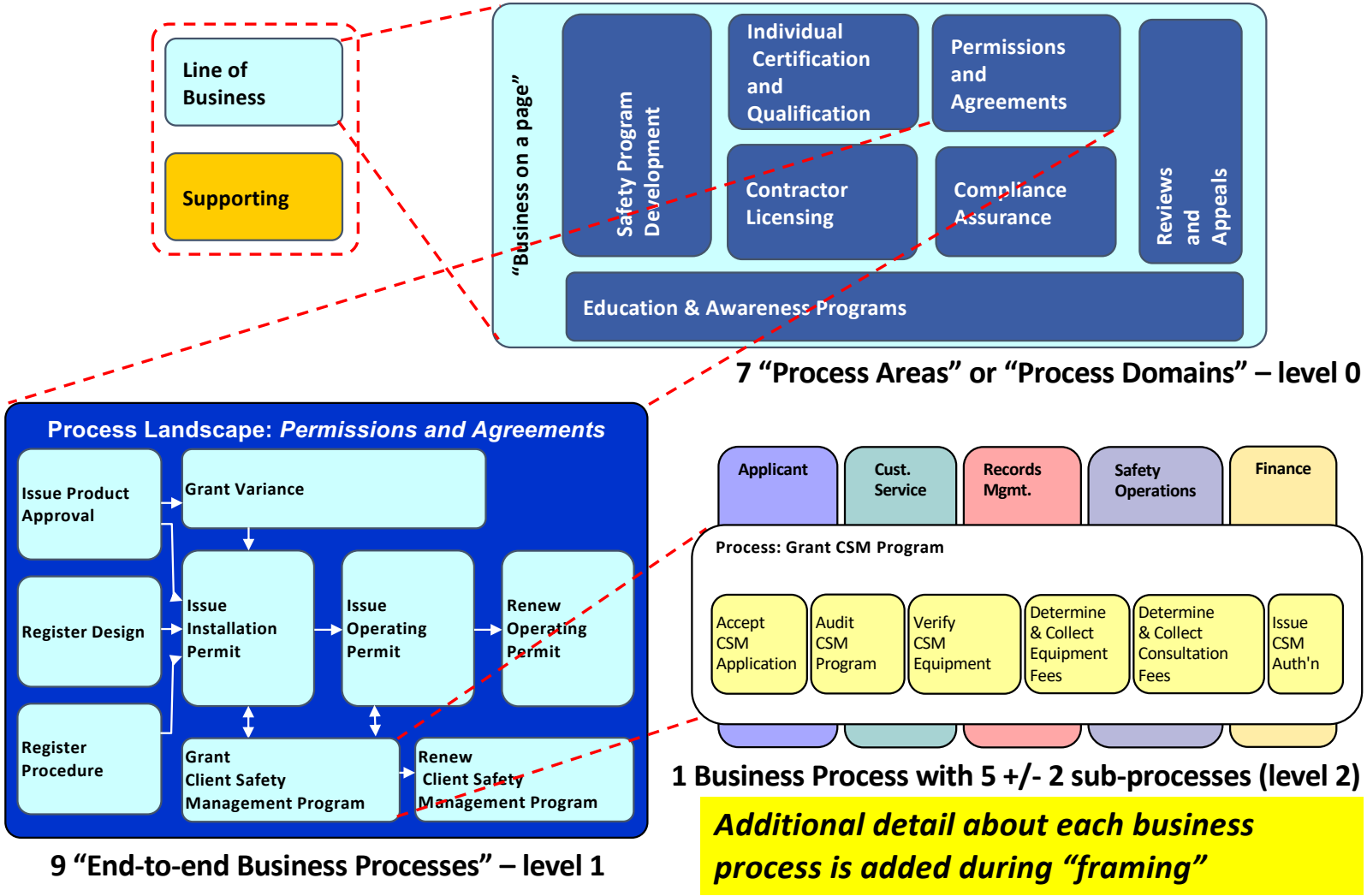
Sensitivities about naming

Line of Business ~~Core~~ **Processes**

Supporting ~~Non-core?~~ **Processes**

Supporting ~~Enabling~~ **Processes**

A look ahead – Business Process Architecture taxonomy



How to start – reference models?

Useful for… *reference!*

Not really "business processes," in our terms:

Functional orientation

Catalogues of *activities*

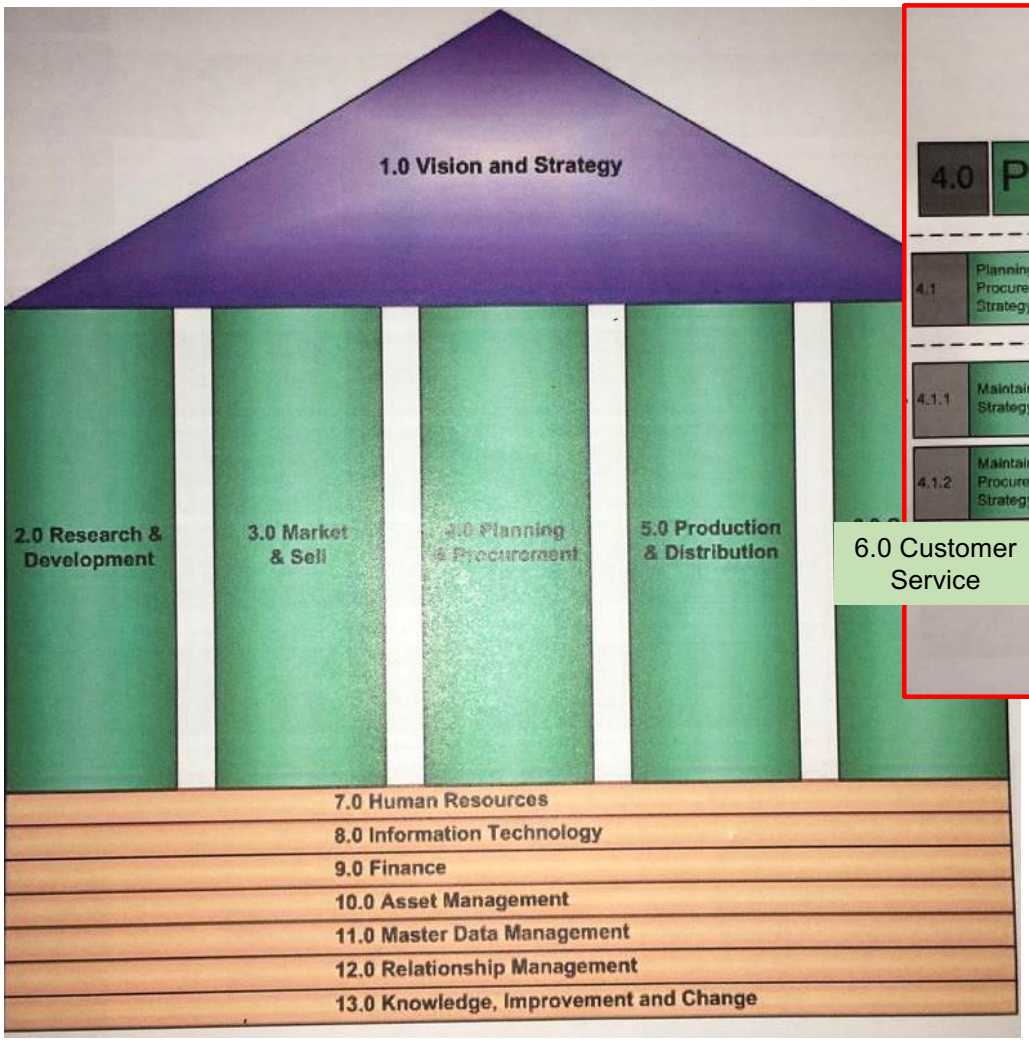
Extremely inconsistent *granularity*

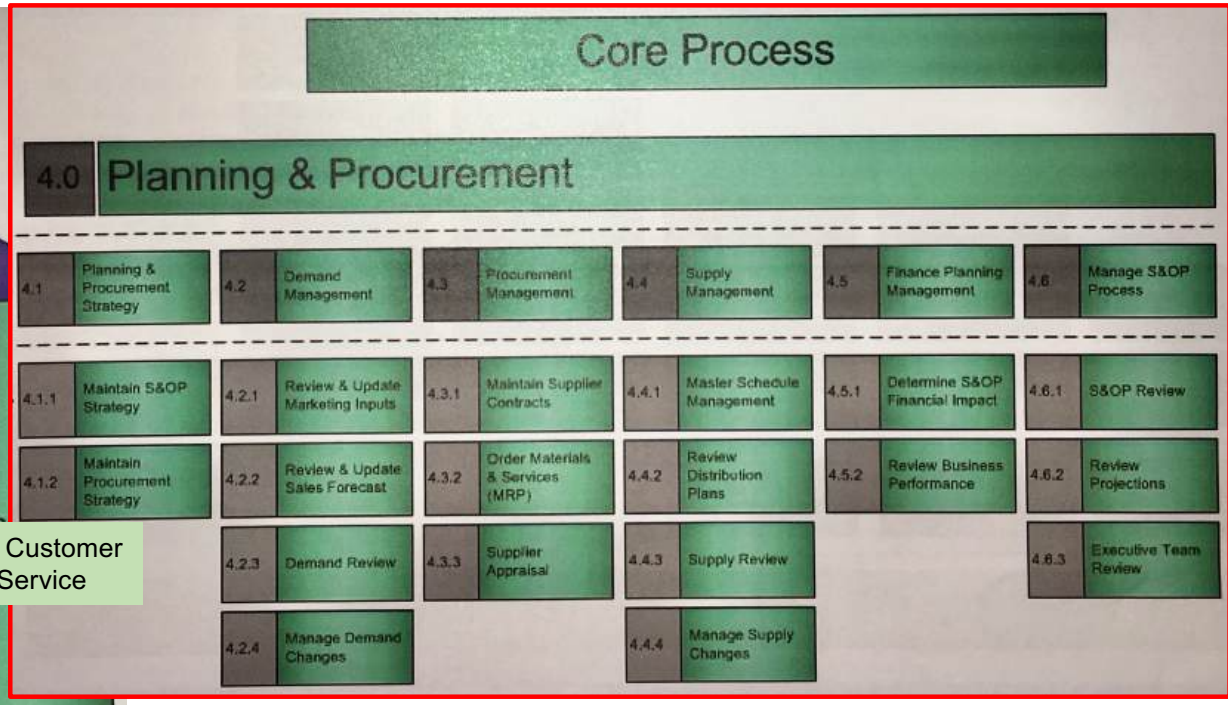
8.0 Manage Financial Resources (10009)

8.4 Manage fixed asset project accounting (10731)
- 8.4.1 Perform capital planning and project approval (10751)
  - 8.4.1.1 Develop capital investment policies and procedures (10844)
  - 8.4.1.2 Develop and approve capital expenditure plans and budgets (10845)
  - 8.4.1.3 Review and approve capital projects and fixed asset acquisitions (10846)
  - 8.4.1.4 Conduct financial justification for project approval (10847)
- 8.4.2 Perform capital project accounting (10752)
  - 8.4.2.1 Create project account codes (10848)
  - 8.4.2.2 Record project-related transactions (10849)
  - 8.4.2.3 Monitor and track capital projects and budget spending (10850)
  - 8.4.2.4 Close/capitalize projects (10851)
  - 8.4.2.5 Measure financial returns on completed capital projects (10852)

8.5 Process payroll (10732)
- 8.5.1 Report time (10753)
  - 8.5.1.1 Establish policies and procedures (10853)
  - 8.5.1.2 Collect and record employee time worked (10854)
  - 8.5.1.3 Analyze and report paid and unpaid leave (10855)
  - 8.5.1.4 Monitor regular, overtime, and other hours (10856)
  - 8.5.1.5 Analyze and report employee utilization (10857)
- 8.5.2 Manage pay (10754)
  - 8.5.2.1 Enter employee time worked into payroll system (10858)
  - 8.5.2.2 Maintain and administer employee earnings information (10859)
  - Etc. etc. etc.

A "stolen" process architecture

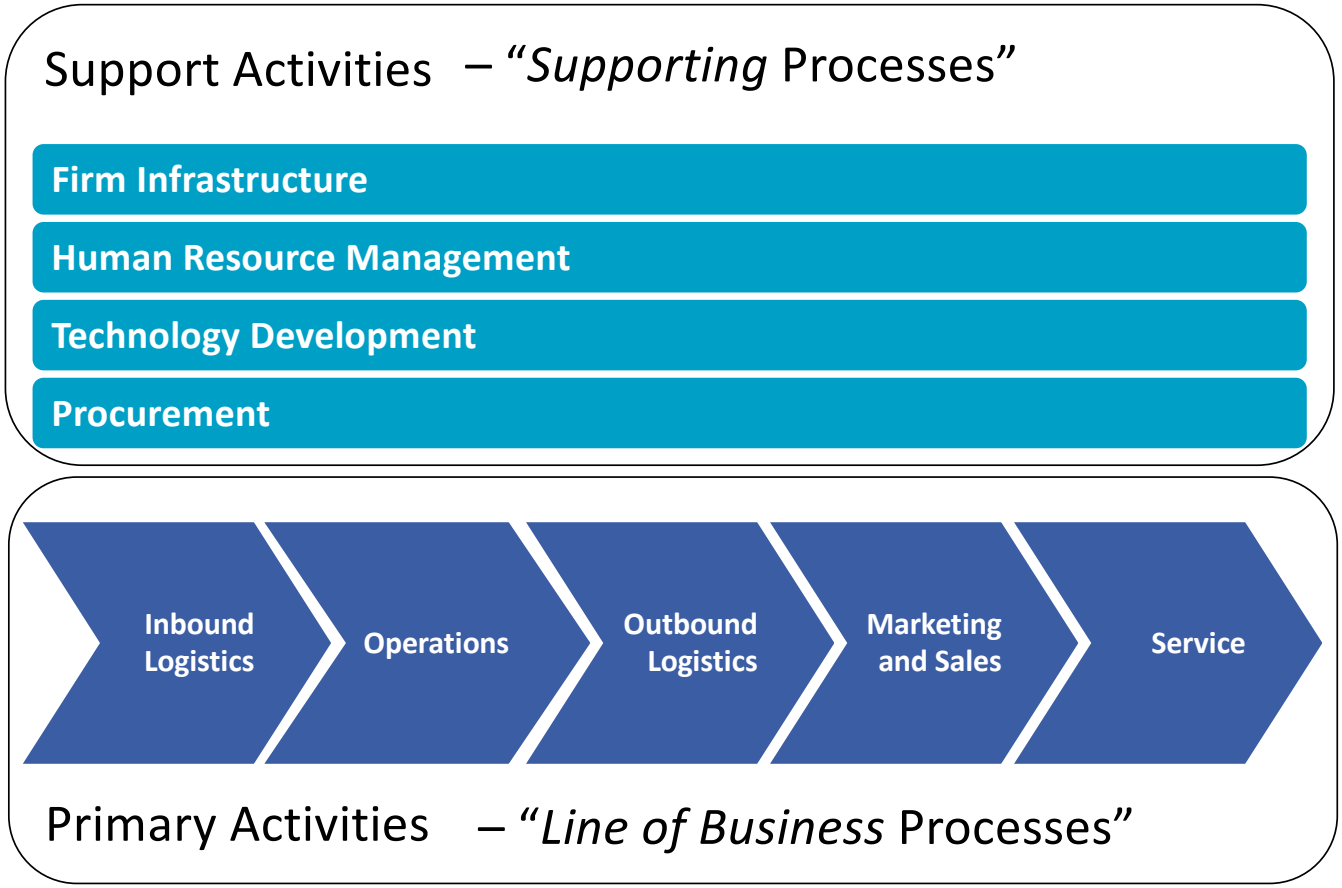




Background –

1. Client in a unique industry hired a consulting firm to develop a process architecture
2. They delivered an architecture developed elsewhere
3. Executives were very unimpressed
4. I was brought in for ½ day to help client understand why the executives not pleased. *Can you guess?*

How to start – Michael Porter's "Value Chain?"



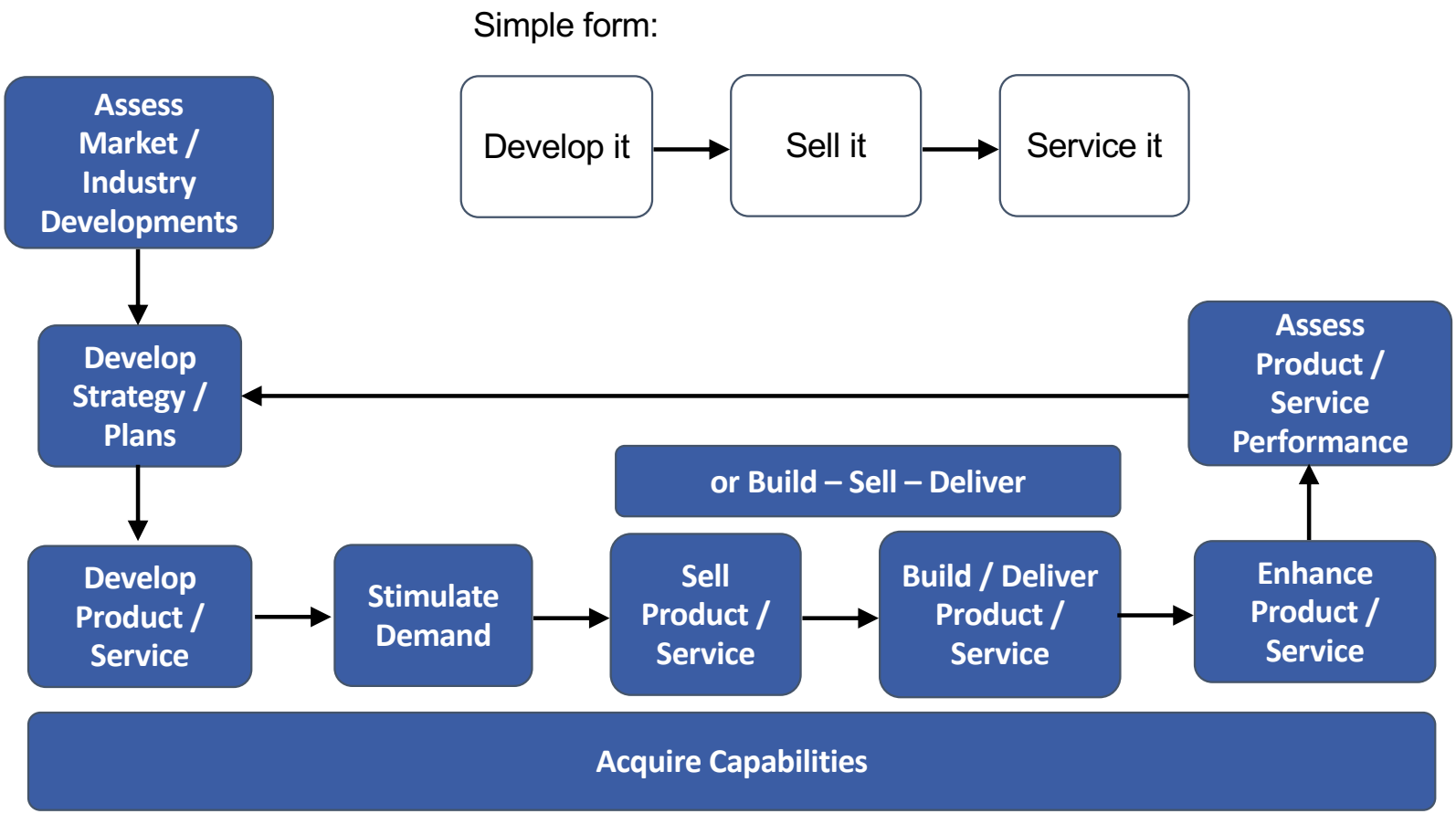
Sometimes it works, sometimes not.

We tried using Value Chain for first cut

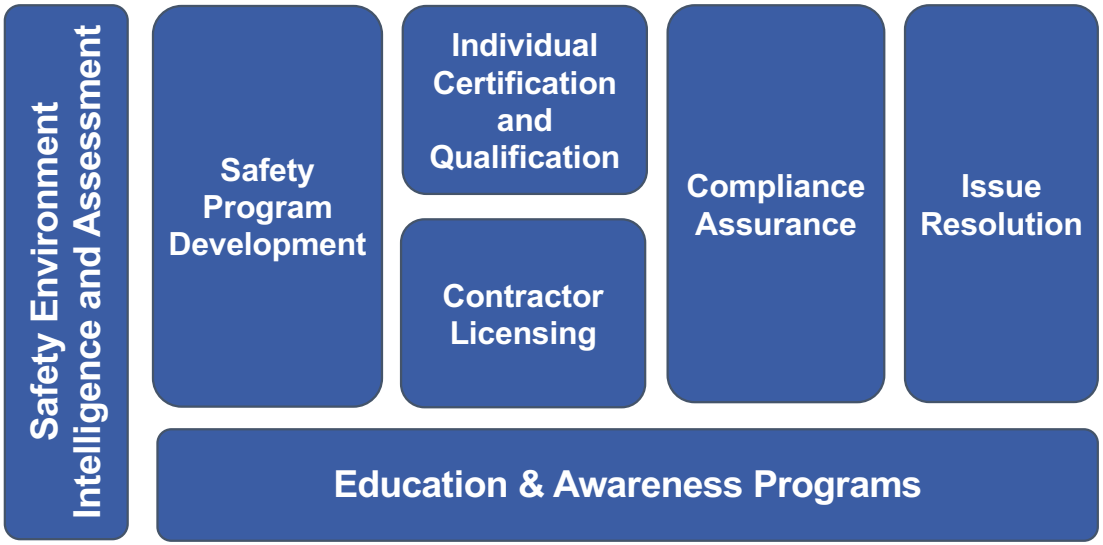
"JDFR" – Just Didn't Feel Right

"CBNC" – Close, But No Cigar

How to start – a generic business model worked better



Generic models worked – first-cut list of process areas



Not bad, but:

- Political issues (“Where's MY group…?”)
- Refined through bottom-up work

Generic model for asset management processes

Asset Management Life Cycle:

Starting point for supporting processes, shared resources:

People, Facilities, Fleet, Technology Assets, …

Supporting began with the usual suspects, which didn't last:

However, the Asset Management Life Cycle was a good starting point for each.

Service maps – a lucky find

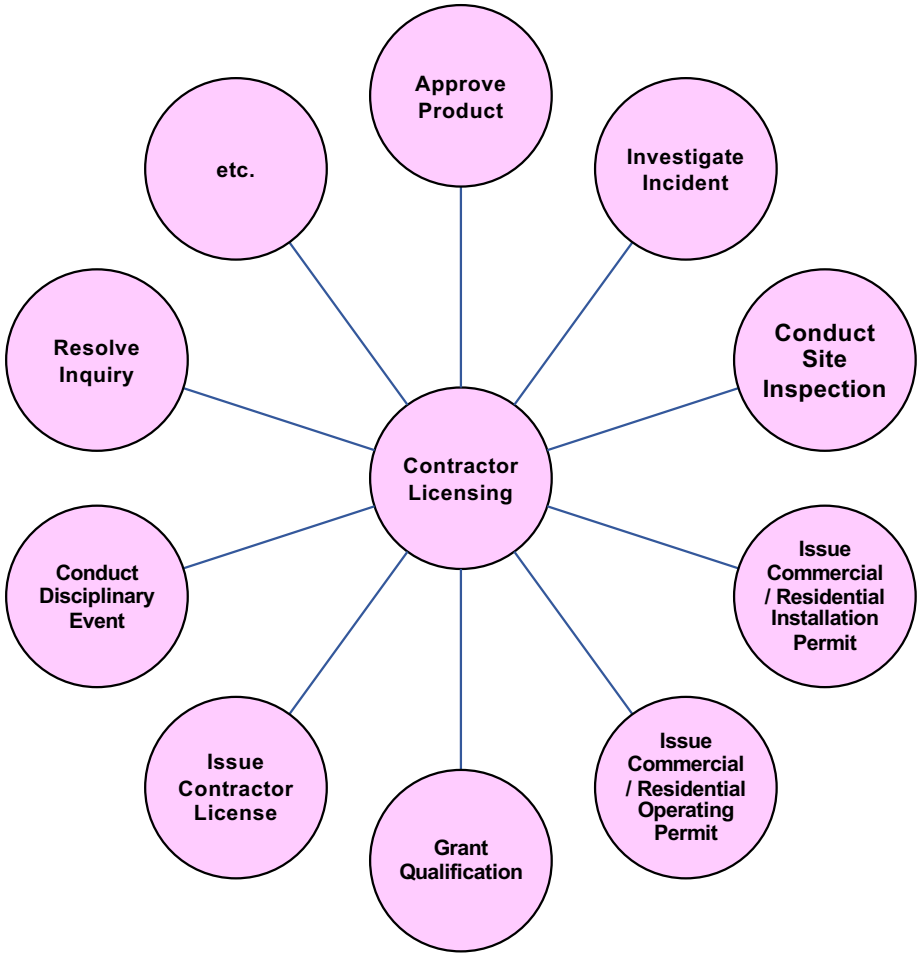
For a school project, BAs had catalogued the Services provided by each functional area.

We refined them, then validated them with functional experts – *it was easy!*

Discussion –
why did this layout work?

Services ranged from discrete Activities to nearly complete Business Processes.

Services (Activities) could be strung together into plausible Business Processes.



Another lucky find – role profiles (job descriptions)

Department: *"Market Awareness"*

Position Title: *Communications Officer*

Principal Accountabilities:

…

What they did (the essential activities)…

Develop Key Message

Develop Issues Message

Key Messaging: develop corporate key messages and issues messages aligned to the Strategic Plan to ensure that Agency staff, Executive, and Board consistently utilize strategic messaging in all internal and external documents and ensure marketing and branding initiatives align with strategic communications goals and messages.

Everything else was *why?*

Huh…?

Communications: …description of more responsibilities

Media Messaging: …description of more responsibilities etc. etc. etc.

Another example

Observation –
the further from core operational responsibilities,
the harder to decipher…

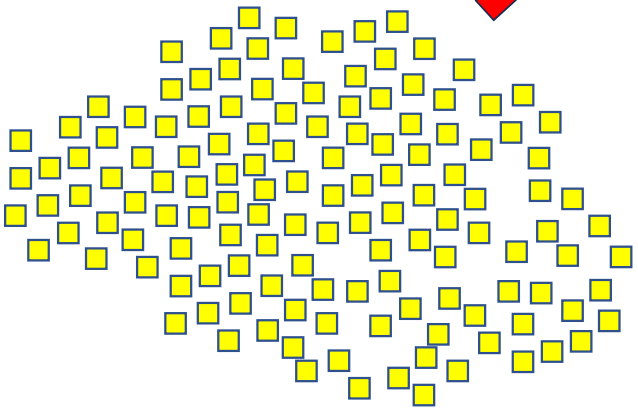
Role Profile –
"…in partnership with internal and external stakeholders, using the full range of traditional and new media along with an integrative framework, disseminates relevant content that will enable self-sufficiency among business and residential constituencies."

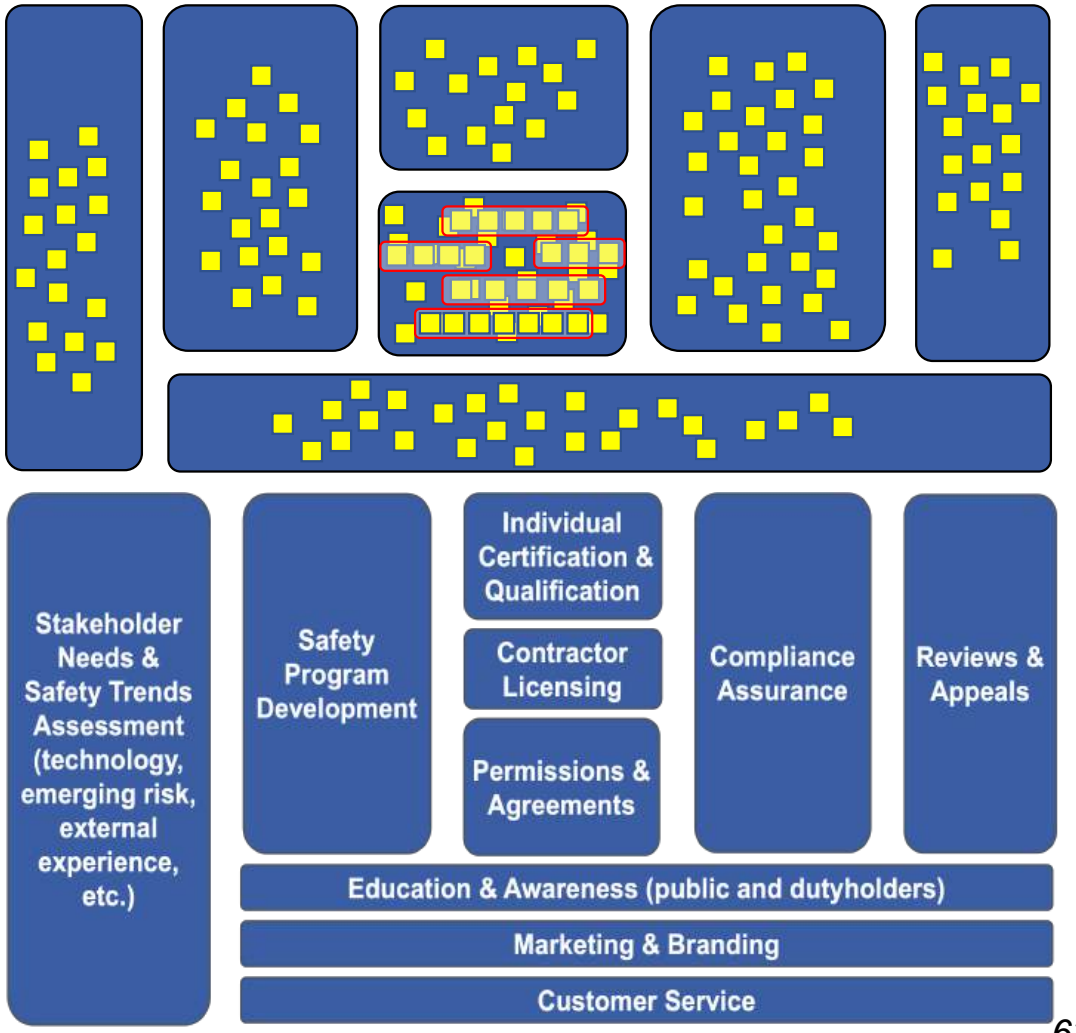
Translation – *"Publish procedures."*

It was a **lot** of work to massage role descriptions into discrete activities, but still a major time saving.

"Meet in the middle" approach to process discovery – overview

1. Identify high-level process areas top-down from Value Chain and Generic Business Model
2. Identify essential Activities from "massaged" Role Profiles and Service Maps
3. Map Activities to Process Areas (some activities mapped to multiple process areas)
4. Link Activities into e2e Processes, identify and name Business Processes
5. Refine Process Areas (7 in the original draft model became 10)





"Meet in the middle" approach to discovering processes – example

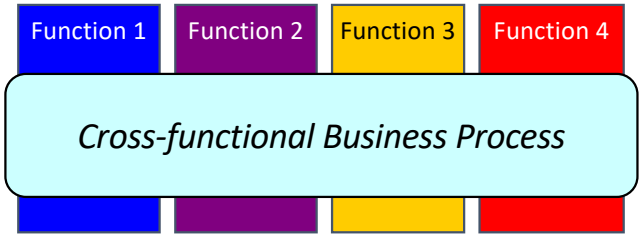
3. 4.

	Department	Role	Activity	Process Area	Process
152	Corporate Services	Assets & Supplies Coordinator	Arrange office renovation	Procure	"Configure" facility
124	Corporate Services	Leader, Facilities & Fleet	Negotiate accommodation lease (new and renewal)	Procure	Acquire Facility
125	Corporate Services	Leader, Facilities & Fleet	Identify office location	Procure	Acquire Facility
126	Corporate Services	Leader, Facilities & Fleet	Develop office space plan	Procure	Acquire Facility
127	Corporate Services	Leader, Facilities & Fleet	Arrange office move	Procure	Acquire Facility
128	Corporate Services	Leader, Facilities & Fleet	Arrange office reconfiguration	Procure	Acquire Facility
138	Corporate Services	Facilities Coordinator	Complete office move (coordinate w. project managers, designers and planners)	Procure	Acquire Facility
145	Corporate Services	Assets & Supplies Coordinator	Issue/revise/terminate security access	Procure	Acquire Facility
121	Corporate Services	Leader, Facilities & Fleet	Identify operational needs	Procure	Acquire Vehicle
129	Corporate Services	Leader, Facilities & Fleet	Acquire property management service (maintenance and security)	Procure	Service/Repair Facility
130	Corporate Services	Facilities Coordinator	Provide space planning advice	Procure	Configure Facility
118	Corporate Services	Leader, Facilities & Fleet	Develop facilities strategic plan	Procure	Develop Facilities Plan
119	Corporate Services	Leader, Facilities & Fleet	Develop accommodation strategic plan	Procure	Develop Facilities Plan
23	Finance	Leader, Performance Reporting	Determine replacement schedule of vehicle fleet.	Procure	Develop Fleet Plan
120	Corporate Services	Leader, Facilities & Fleet	Develop fleet strategic plan	Procure	Develop Fleet Plan
153	Corporate Services	Assets & Supplies Coordinator	"Liaise" with building maintenance	Procure	Service/Repair Facility
401	Legal & Policy	Legal Counsel	Retain external counsel	Procure	Obtain service

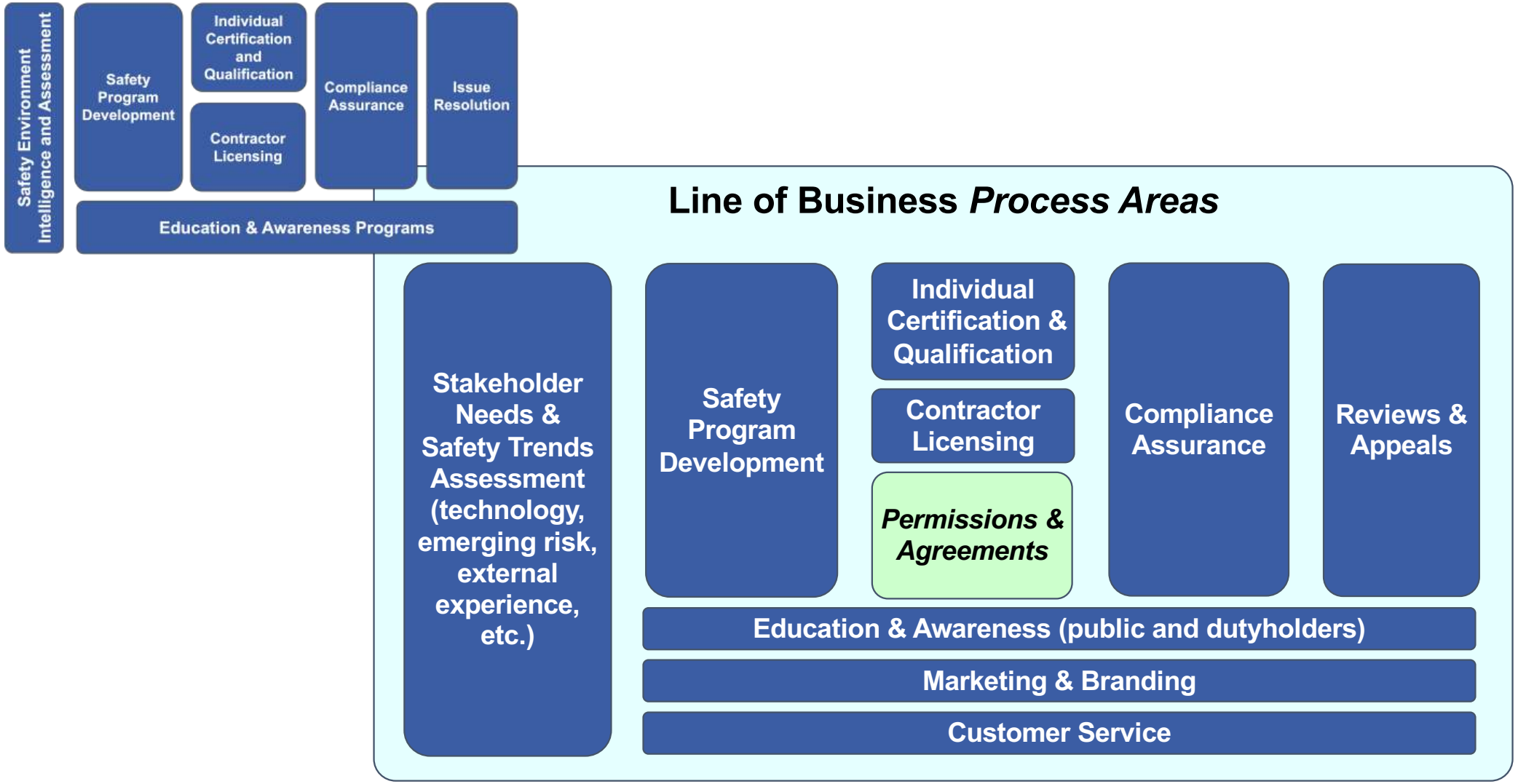
Activities Process Areas Processes

3. Map Activities to Process Areas (some mapped to multiple Process Areas)
4. Link Activities into Business Processes and name the Processes
5. Refine Process Areas (7 became 10)

Because each Activity was linked to its Department (Function) we had the information needed to produce the Process Summary:



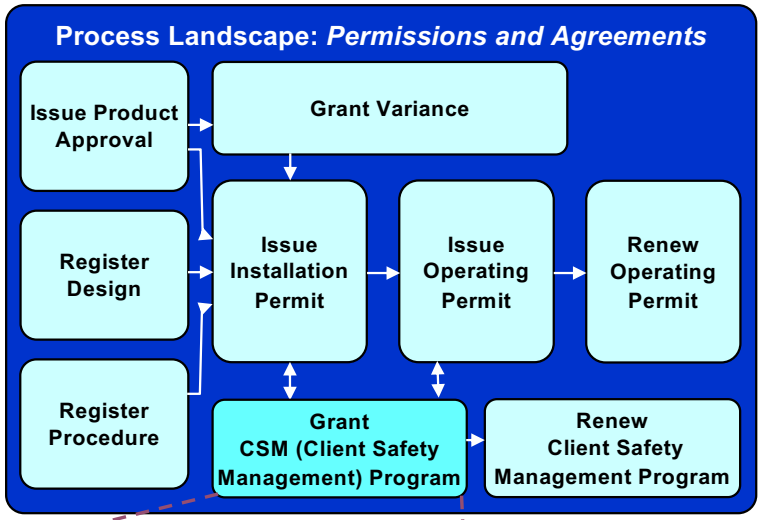
"Final" LOB Process Areas (or "Families" or "Domains")



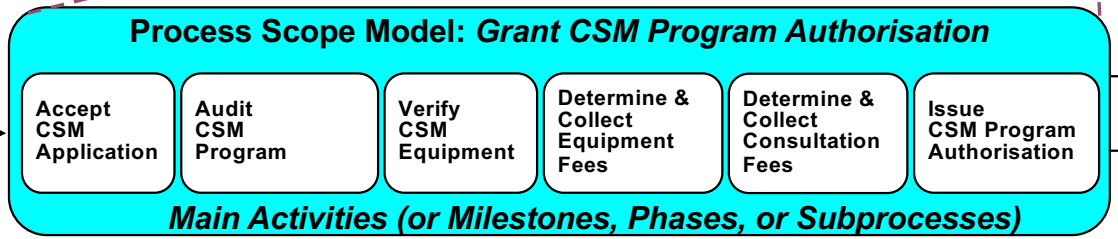
We progressively refined process scope starting with "what"

1) We depict the *scope and contents* of each ***Process Area*** with a ***Process Landscape*** – a decomposition of the ***Process Area*** into individual ***Business Processes***

2) Next illustrate the *scope* of a single ***Business Process*** with a ***Process Scope Model*** – a pure statement of "what" in terms of Trigger, Results, major Activities, and Cases *(**TRAC**)*



Trigger:
Client submits request to enter into a CSMP



Client Result:
Approval granted for a self-managed safety program.

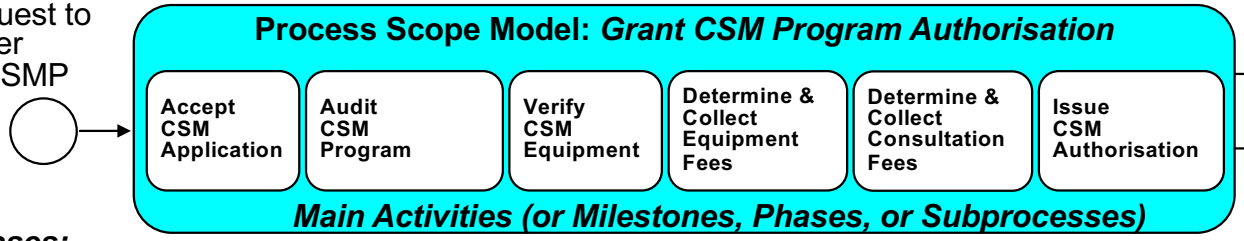
Agency Result:
Revenue collected.
New participant in CSMP; confirmation that regulations are satisfied

Cases:
- New
- Grandfathered
- Ownership Change

Always establish "what" (TRAC) first!

Now develop the Process Summary Chart

Trigger:
Client submits request to enter a CSMP

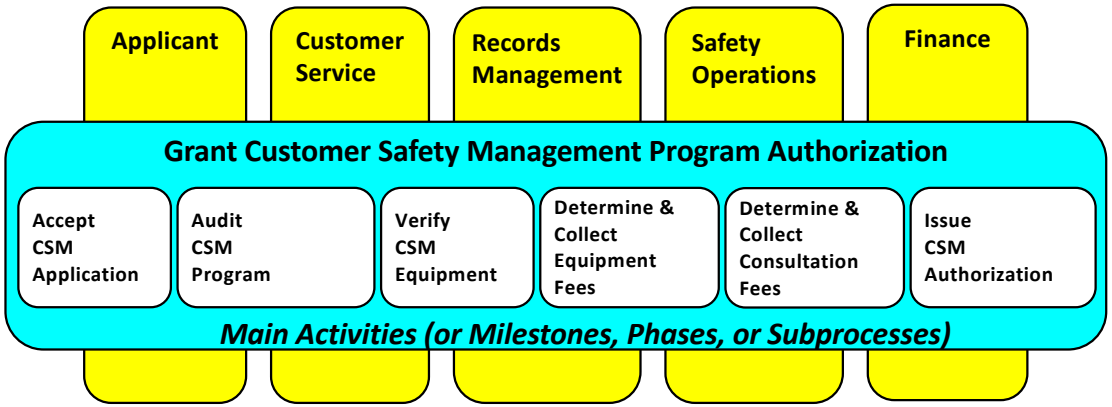


Client Result:
Approval granted for a self-managed safety program.

Agency Result:
Revenue collected.
New participant in CSMP; confirmation that regulations are satisfied

Cases:
- New
- Legacied
- Ownership Change

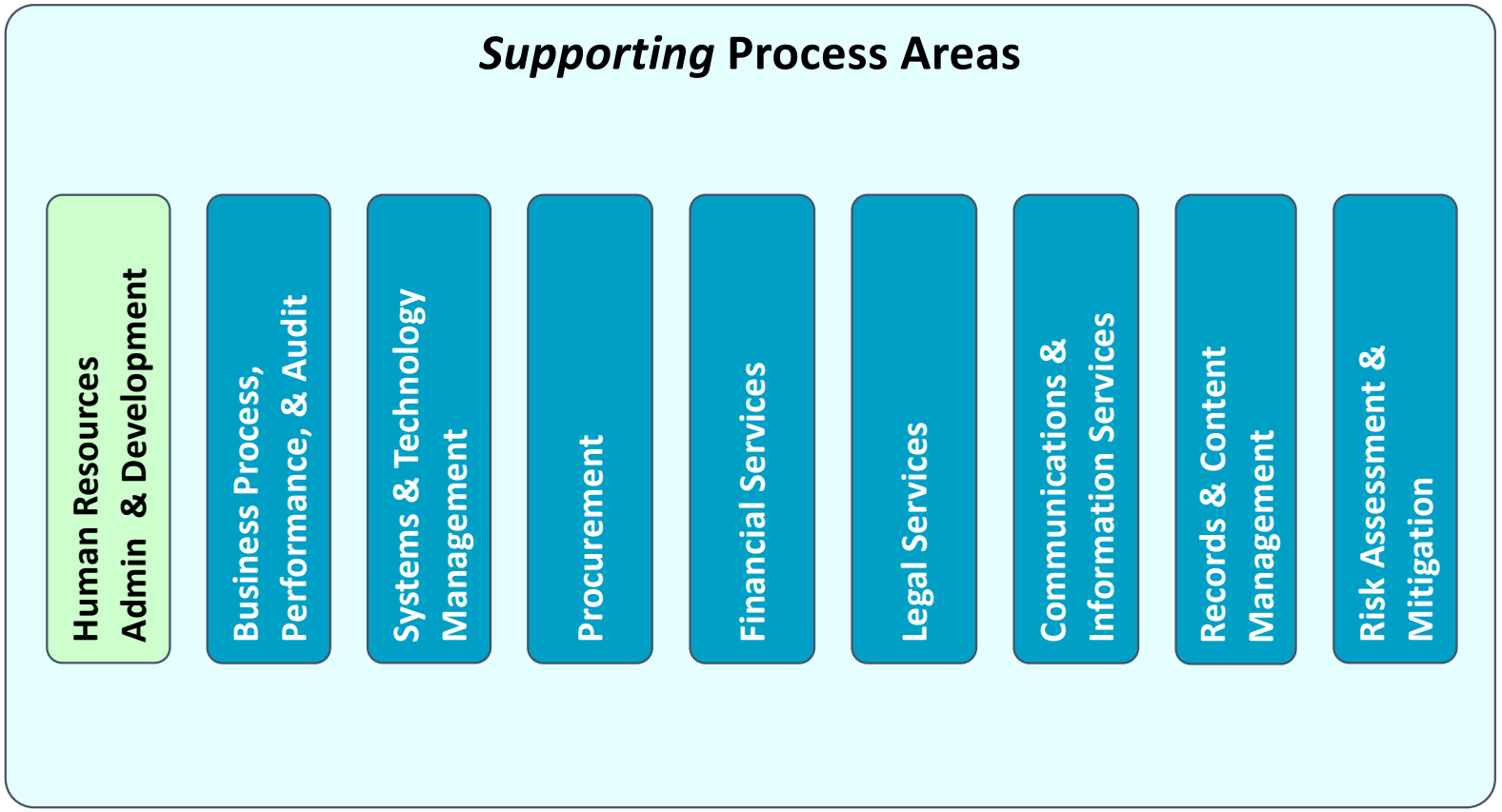
Process Scope Model – pure "what"…



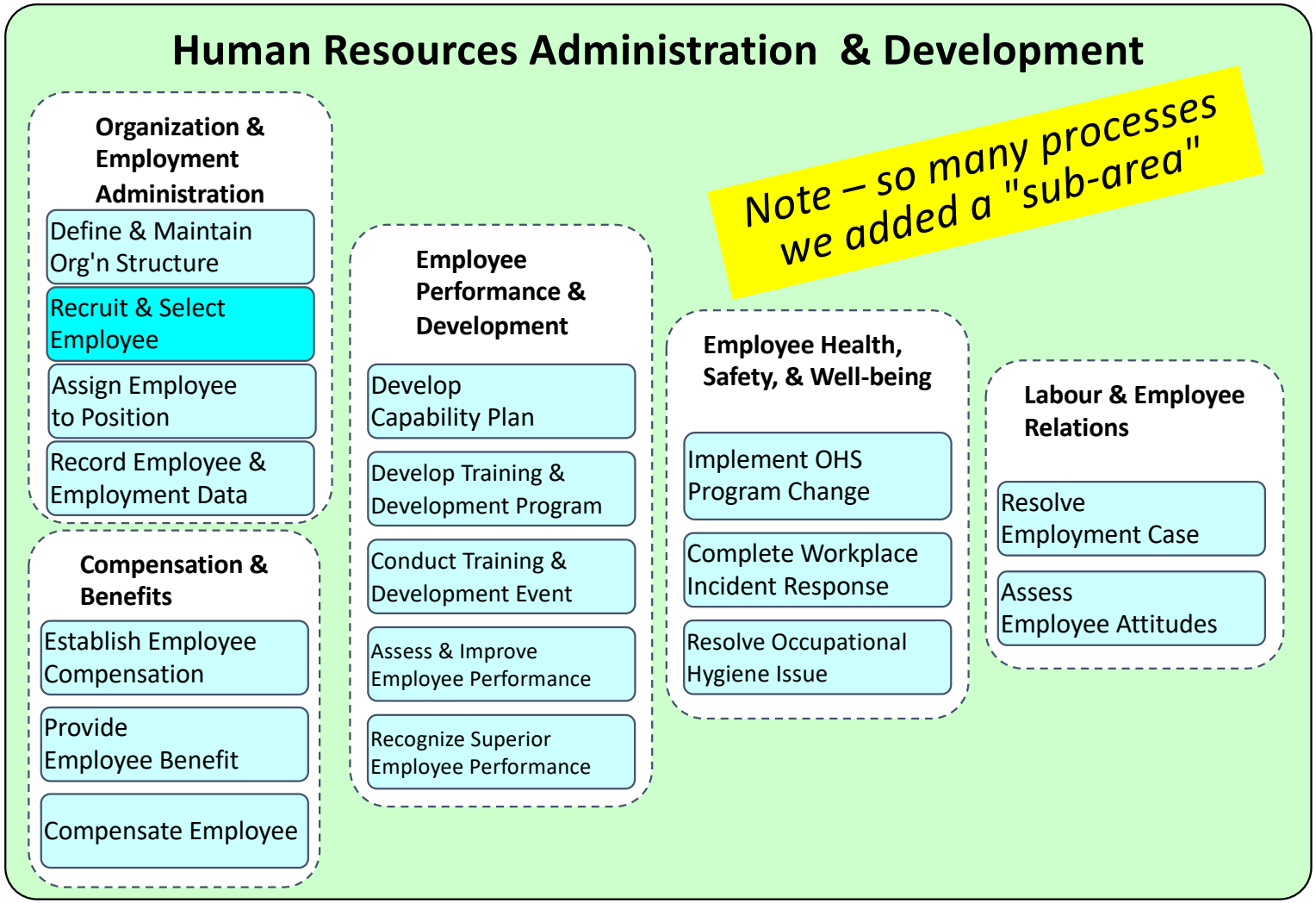
Process Summary Chart – simplified "what," plus "who"

A powerful communication tool!

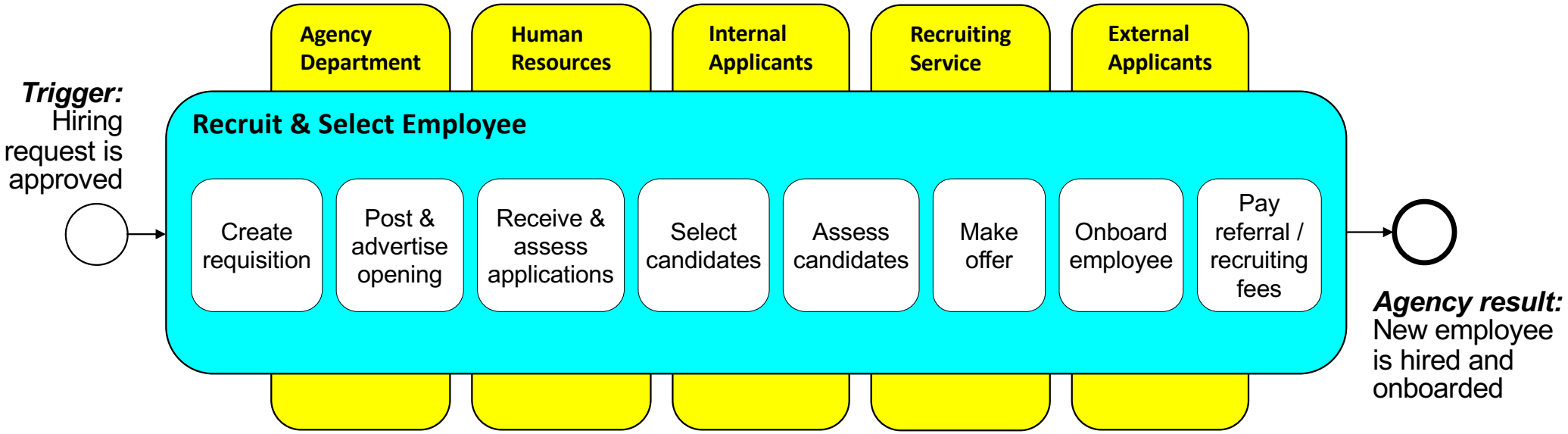
"Final" Supporting Process Areas



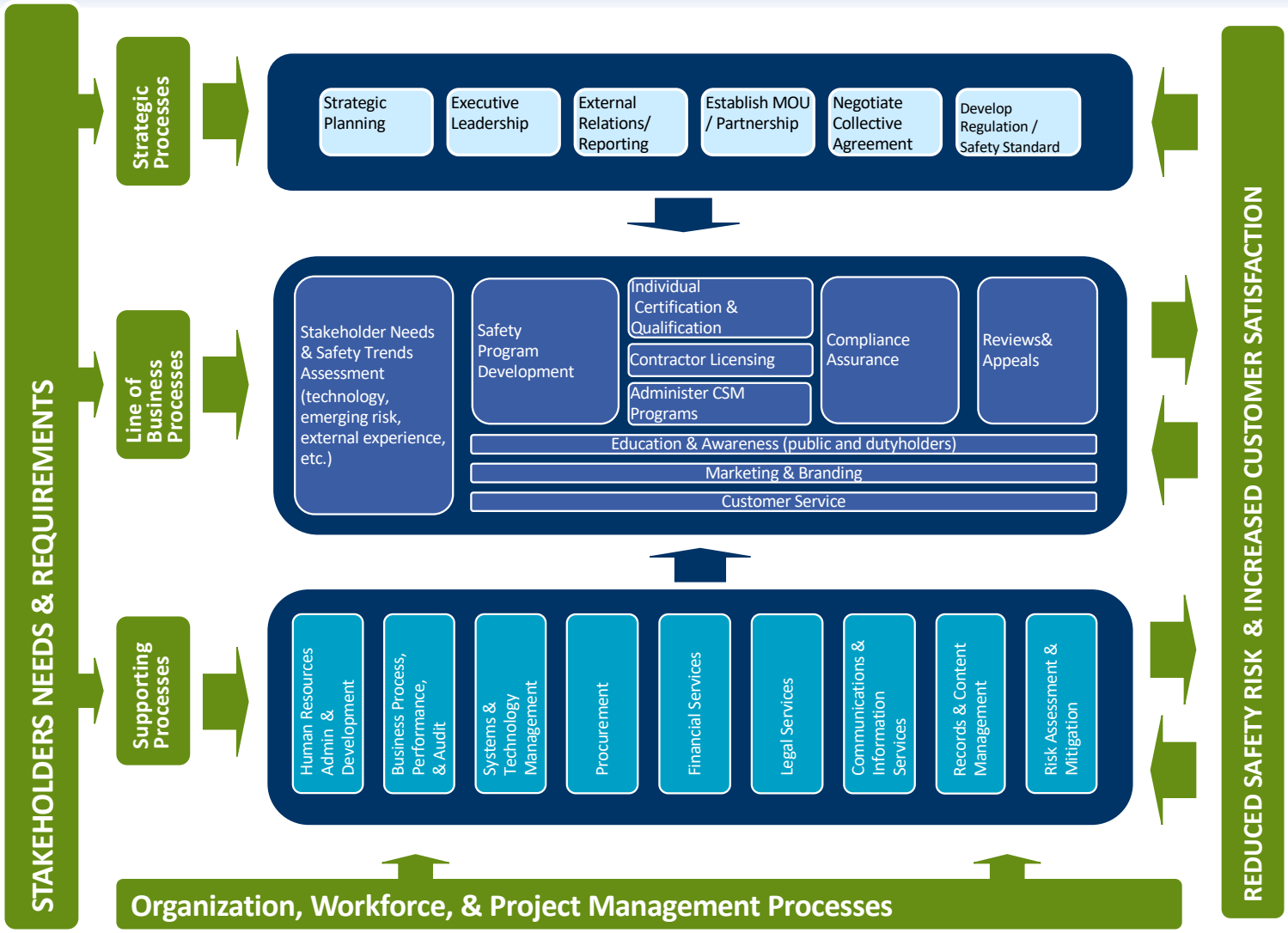
Processes within one Supporting Process Area



Scoping one Supporting Business Process



Obligatory "Everything on one page" graphic



Notes and numbers

The numbers:

- 2 Categories: Line of Business and Supporting
- 27 Process Areas
- 103 End-to-End Business Processes
- ~600 Subprocesses

Observations:

- Line of Business processes highly cross-functional, much to everyone's surprise
- Supporting *functions* often had significant involvement in Line of Business Processes, esp. *Financial Services*
- Supporting processes:
  - More numerous and "smaller" – quick transactions
  - Less cross-functional

Note – the C-level executives' comments were amazing!

Case study – using the architecture

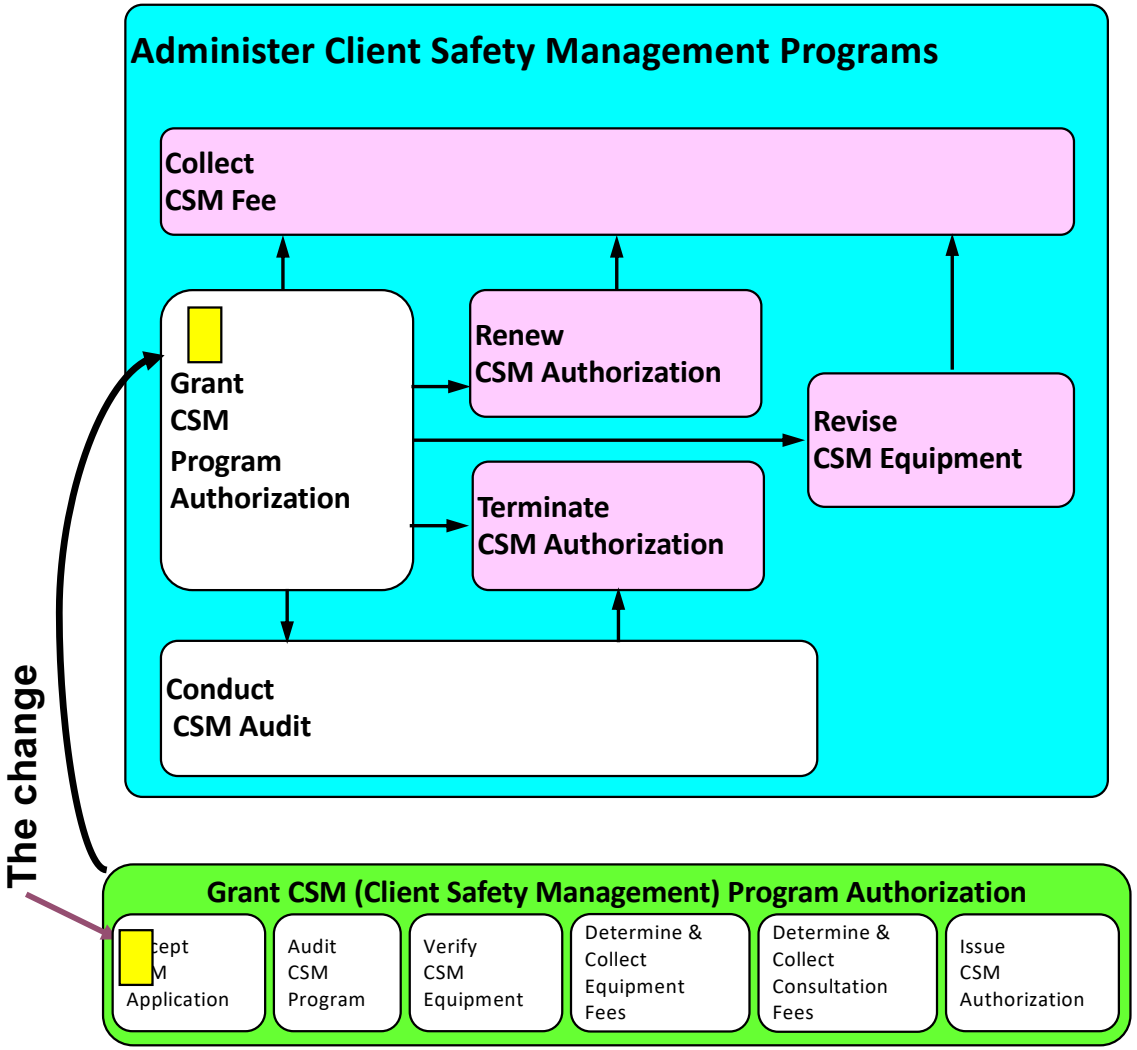
Soon after completing the architecture, an opportunity arose to put the process architecture to work

Goal –

- Shift from an inspection-based model (~800 inspectors!) to client-managed safety programs
- Clients will apply for a *Client Safety Management Program Authorisation (CSMP Authorisation)* - must show effective processes and accurate record-keeping
- Clients will pay a fee for managing *their own safety programs!* Still beneficial!

- The proposal – manage this as a standalone "shadow system"

First, check the Process Architecture!



Immediately checked Enterprise Process Architecture to understand impact areas – ***every process except one!!!***

The "simple" shadow system workaround would have major impact.

Understanding the situation using a Concept Model, Services, Use Cases

- *Business Development chooses Pilot Program* –
  boilers and pressure vessels in Oil & Gas fields



- Current systems won't support CSMP, time-consuming and expensive to change them –
  IT and Finance suggest 18 – 24 months of work
- BD is unimpressed by IT and Finance objections ("You're being mindlessly obstructionist!")
  and proposes work-around procedure. *Guess which tool they intend to use?*
- I'm hired to identify end-to-end implications –
  "Design a process and determine IT requirements that will allow this procedure to work."
- *Concept Modelling was a critical tool in understanding the underlying policies,*
  and developing the process & requirements

An interlude on Concept Modelling

- Concept Modelling / Data Modelling is *crucial* to Business Process work

- The "things" you define in your data model are the things that
  - processes act on
    (in verb-noun process naming, the noun is a "thing" – an entity)
  - businesses want information about
  - applications revolve around

- Businesses needs a *common language* more than ever

Note – it often works best if you don't begin with a lecture on *Concept Modelling* or *Data Modelling…*

JUST DO IT.

"Now! *That* should clear up a few things around here!"

What actually is a Concept Model / Data Model?

- A *description of a business* in terms of
  - **things** it needs to maintain records of – *Entities*
  - **facts about those things** – *Relationships & Attributes*
  - **policies & rules** *governing those things and facts*
- Models a view of the **real world**, not a technical design (therefore, stable and flexible)
- Can be comprehended by mere mortals (at least initially)
- Graham Witt – "A narrative supported by a graphic"

"Things" first, data later!

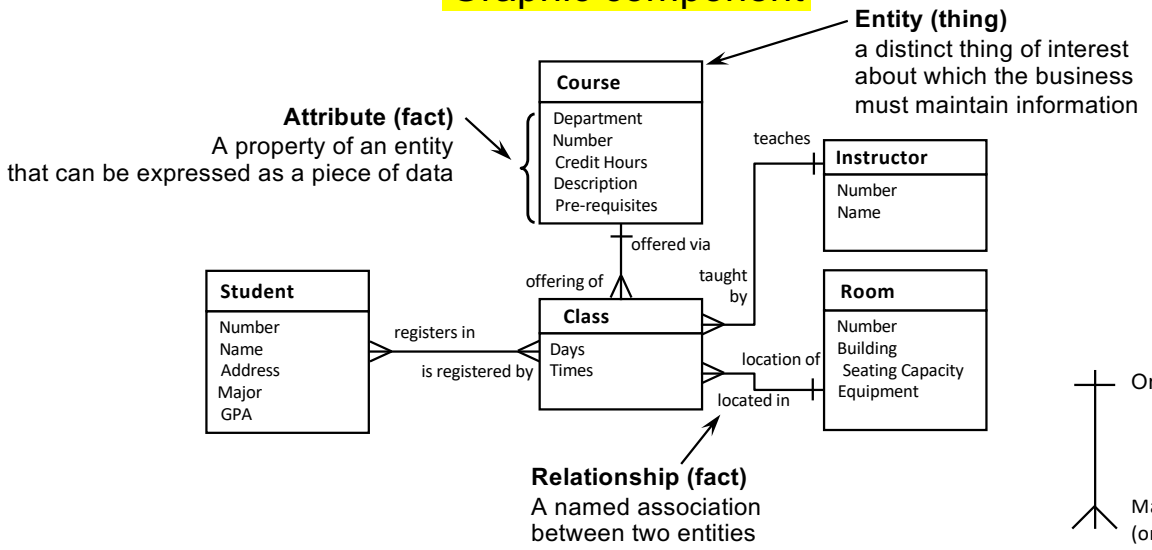
Narrative component

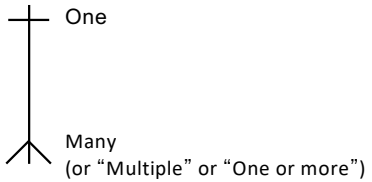
Student definition:
A Student is any person who has been admitted to the University, has accepted, and has enrolled in a course within a designated time. Faculty and staff members may also be Students

Plus "Assertions" (policies & rules)
- Each Course is offered through one or more Classes
  Each Class is an offering of a single, specific Course
- Each Instructor teaches one or more Classes
- Each Class is taught by one Instructor
  (which may or may not be true…)

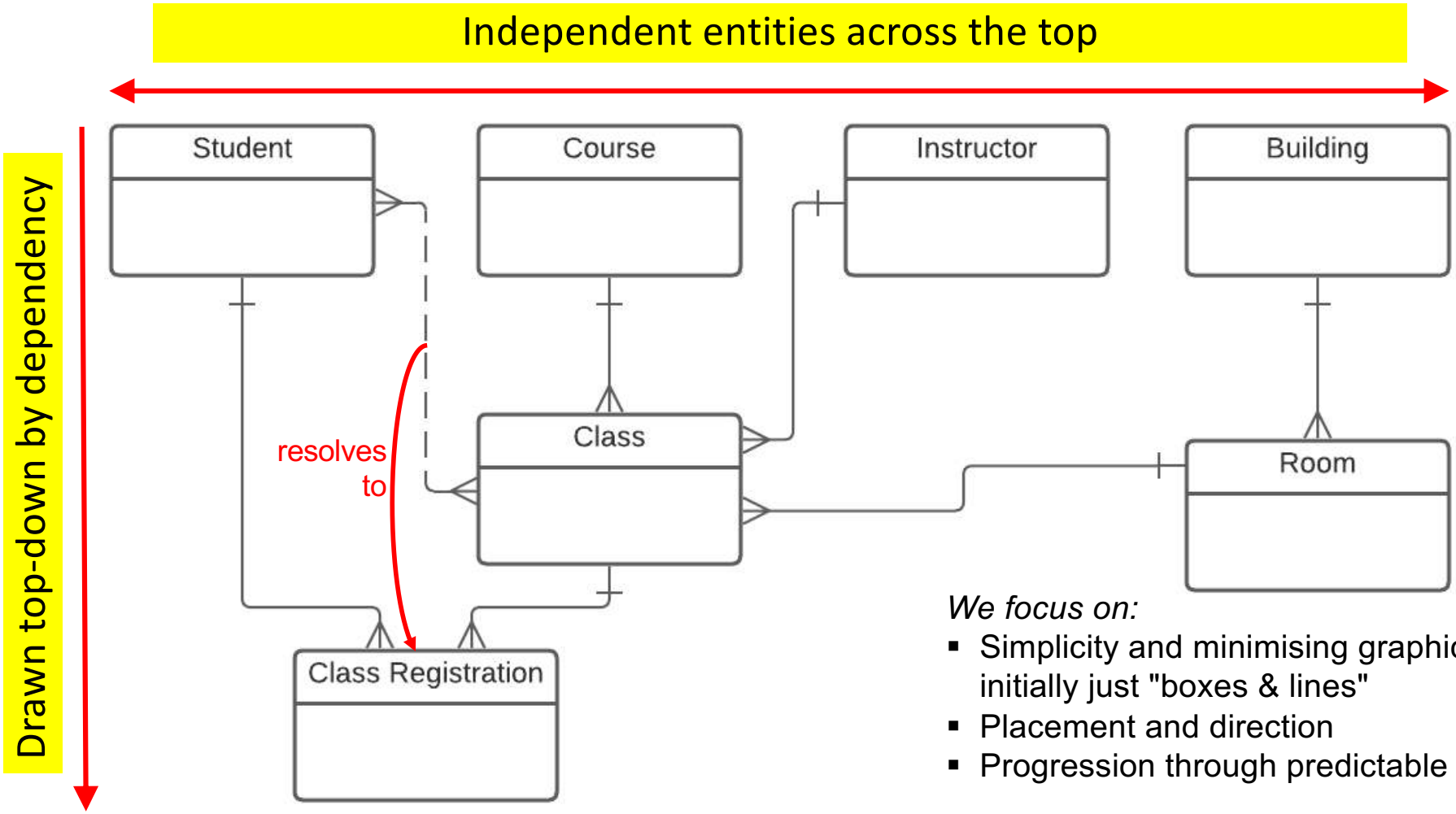
Many rules can't be shown on the diagram…
- A Student can not register in two Classes of the same Course in the same Academic Term

Graphic component





A better looking version of the model on the previous slide



We focus on:

- Simplicity and minimising graphic "widgets" - initially just "boxes & lines"
- Placement and direction
- Progression through predictable steps

Building your initial Concept Model, step-by-step

Identify and define "Things"

1. Collect terms
- 1:1 interviews
- survey (e.g., email)
- group brainstorm
- analyse documents

2. Isolate "things"
Ask *Is this…*
- a thing?
- a fact about a thing?
- or "other stuff?"

3. Identify synonyms
- select a term to use
- as general as possible
- just for this initiative, not the entire enterprise

4. Define each thing
- "good enough for now"
- first, identify "anomalies, sources of confusion, and valid differences of opinion"
- select which to include

Develop initial Concept Model

5. Organise things
- independent things across the top
- then laid out top-down by dependency

6. Draw relationships
- show dependency
- parent-child drawn bottom-to-top
- otherwise, side-to-side

7. Name relationships
- in both directions
- active verb-based!
- not mushy – *has*
- not meaningless – *related to*

8. Add cardinality
- use words first
- 1:1 is probably wrong
- 1:M (one to many)
- M:M (many to many)

Refine Concept Model

9. State assertions
- forcefully, for each relationship
- challenge the assertions!
- restate the assertion & why it changed, if it did

10. Redraw the model
- shows revised assertions
- e.g., 1:M becoming M:M
- e.g., dependent things becoming independent

11. Collect attributes
- a few for each thing
- not *all* attributes
- don't worry about normalisation

12. Move to identifying:
1. events / services
2. use cases / user stories

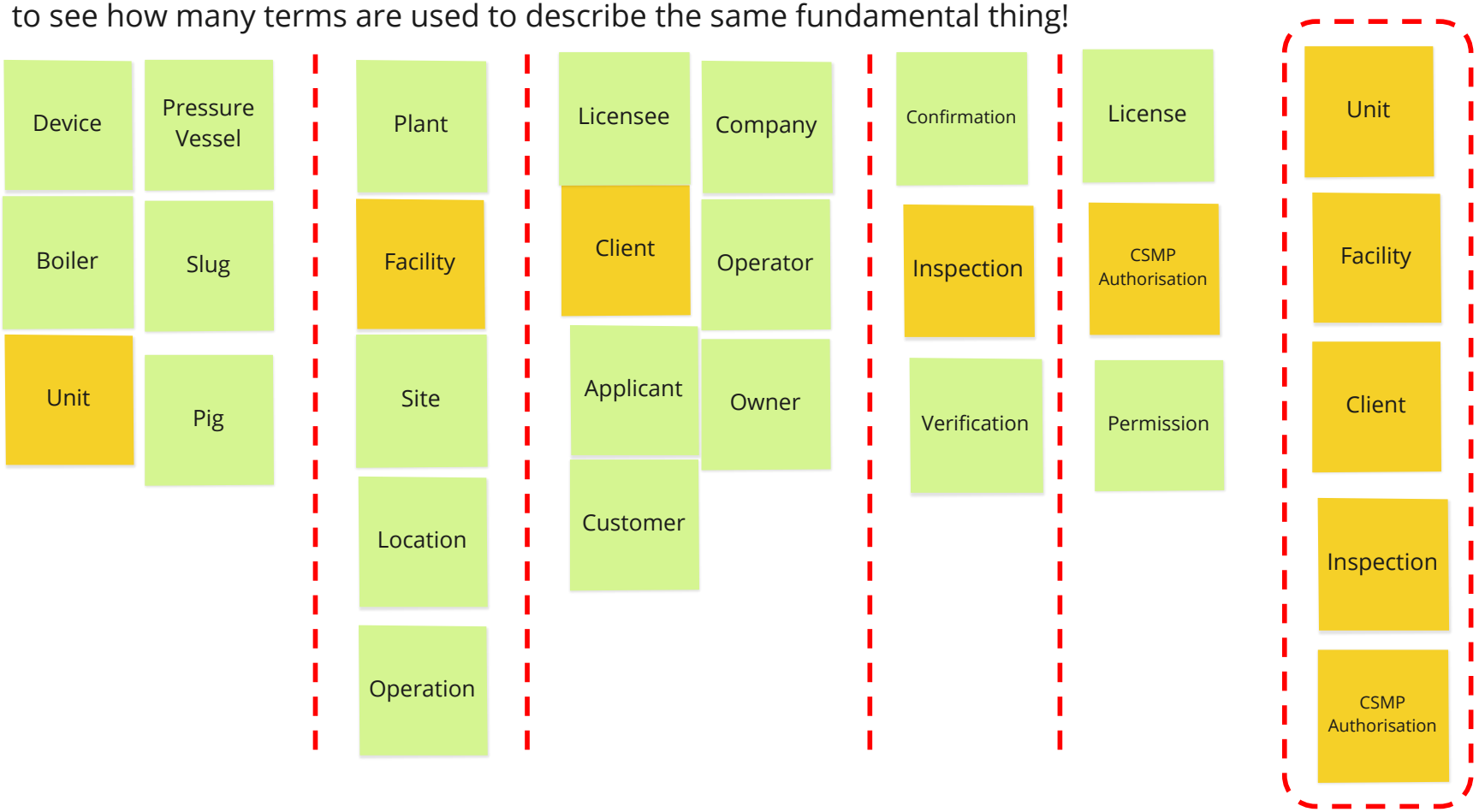
Always start with terminology (the "things")

From one-on-one interviews with 8-10 key stakeholders we gathered ~200 terms related to CSMP (Client Safety Management Program) – "anything that went by a name."
Here are 24 that met the criteria to be a "thing"– the candidate *Entities.*

Identify synonyms and select one term.
How do these relate to one another?
What do you need to know about each?

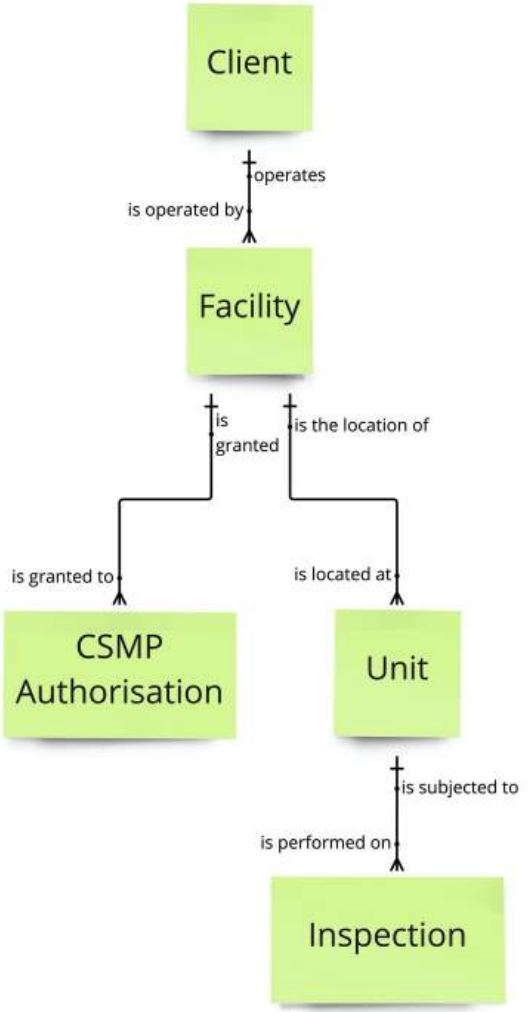
Review from an example using Miro – Terminology Analysis

Terminology analysis (continued):
Let's arrange these terms into columns of synonyms. It's always a surprise for the business to see how many terms are used to describe the same fundamental thing!



Concept Model Version 1; not perfect, but a good start

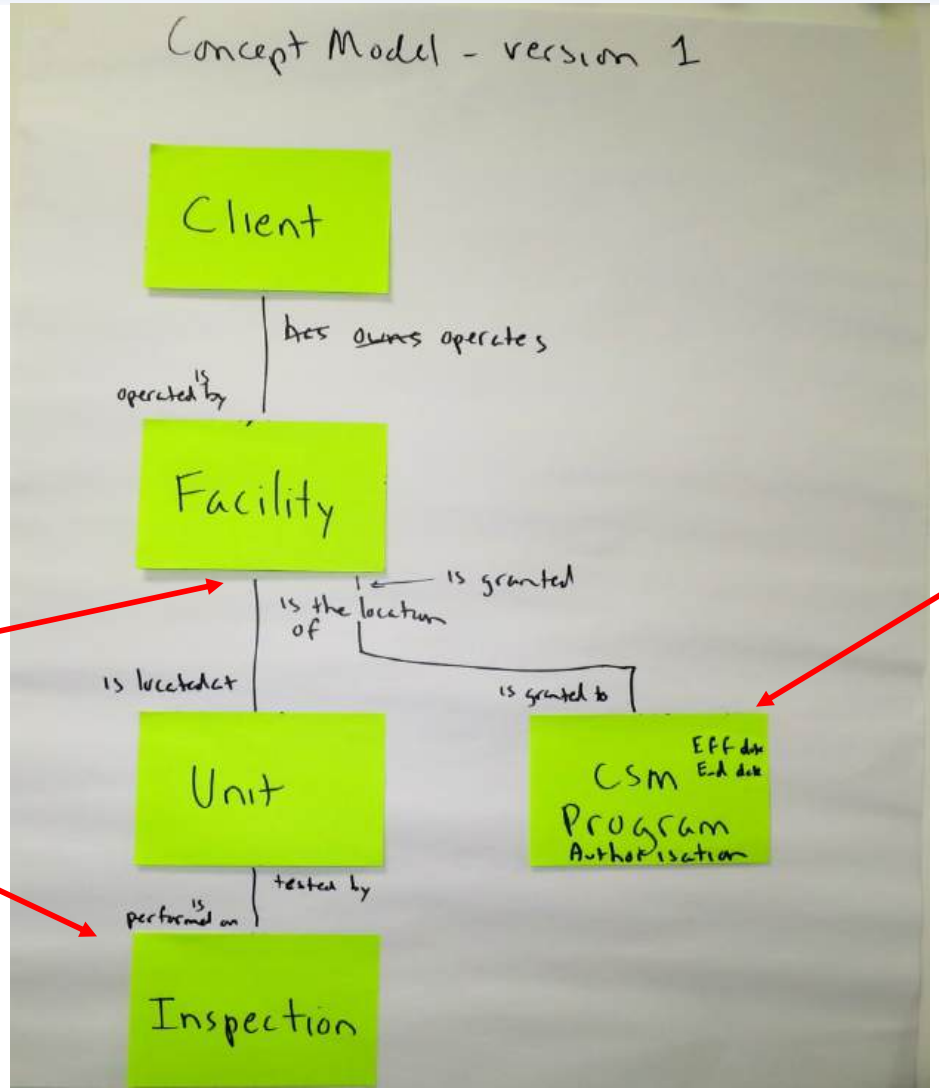
1. We arranged the entities / business objects by dependency
2. Then we drew relationship lines
3. Then we added a relationship name in each direction
4. Only then did we state (in words) the cardinality (1:1, 1:M, M:M) and then update the diagram with hash marks (⫞) and crowsfeet (⋔)



Definition -
A CSMP Authorisation is a permission (or license) to operate a self-managed safety program (a Client Safety Management Program) at a specific Facility, for a specified time period, usually 1, 2, or 5 years.

The CSMP Authorisation is "all or nothing" - it covers ALL the Units at a Facility.

Just boxes and lines, but raises important questions



Are Units permanently part of one Facility?

What do we Inspect?

What do we issue the Authorisation to?

Concept Model Version 1 – state Assertions and challenge them

Now, state the relationships ***emphatically*** as Assertions. ***Each*** Client operates ***one or more*** Facilities! Then, ***challenge*** them!
Again, don't worry yet about ***optionality*** – whether the relationship ***must be*** or ***may be*** be present.
We only care now about the ***maximum*** – each ObjectA is related to a ***maximum*** of ***one*** or ***one or more (or many)*** ObjectB.

Assertion:
Each Client operates ___

Assertion:
Each Facility is operated by ___

Assertion:
Each Facility is granted ___

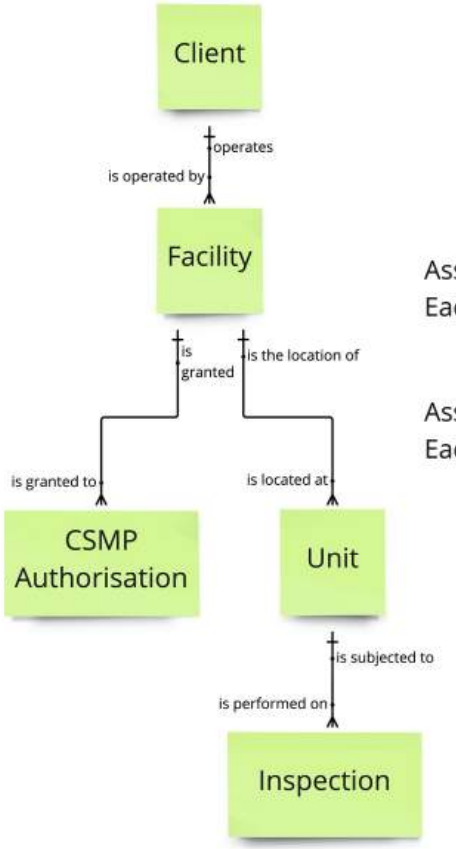
Assertion:
Each Facility is the location of ___

Assertion:
Each Unit is located at ___

Assertion:
Each CSMP Authorisation is granted to ___

Assertion:
Each Unit is subjected to ___

Assertion:
Each Inspection is performed on ___



Concept Model Version 1 – revised Assertions from challenges

Now, state the relationships ***emphatically*** as Assertions. ***Each*** Client operates ***one or more*** Facilities! Then, ***challenge*** them!
Again, don't worry yet about ***optionality*** – whether the relationship ***must be*** or ***may be*** be present.
We only care now about the ***maximum*** – each ObjectA is related to a ***maximum*** of ***one*** or ***one or more (or many)*** ObjectB.

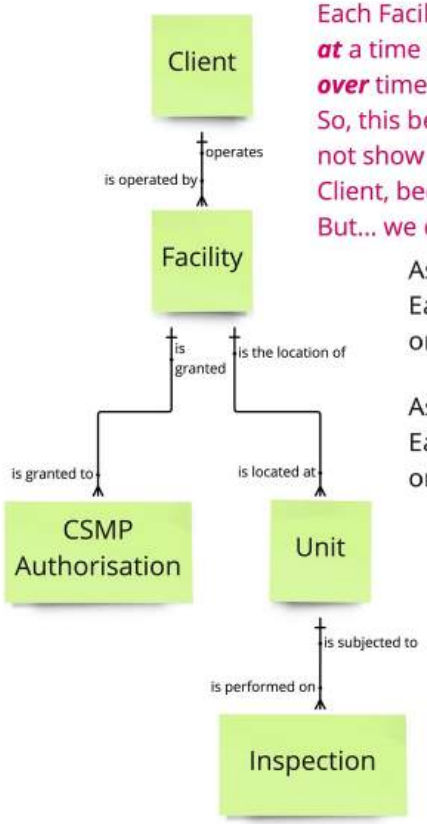
Assertion:
Each Client operates
one or more Facilities

Assertion:
Each Facility is operated by
one Client

Assertion:
Each Facility is granted
one or more CSMP Authorisations

One CSMP Authorisation ***at*** a time,
but one or more ***over*** time

Assertion:
Each CSMP Authorisation is granted to
one Facility



Each Facility is operated by one or more Clients
at a time (Joint Ventures) and
over time (changes in Ownership or Lease.)
So, this becomes a M:M relationship, and we should not show a Facility as being dependent on a single Client, because a Facility is an independent thing.
But... we don't always get our way!

Assertion:
Each Facility is the location of
one or more Units

YES, but one or more Facilities ***over*** time, because Units can move between Facilities. So, this becomes a M:M relationship, and we cannot show a Unit as being dependent on a single Facility, because a Unit is an independent thing

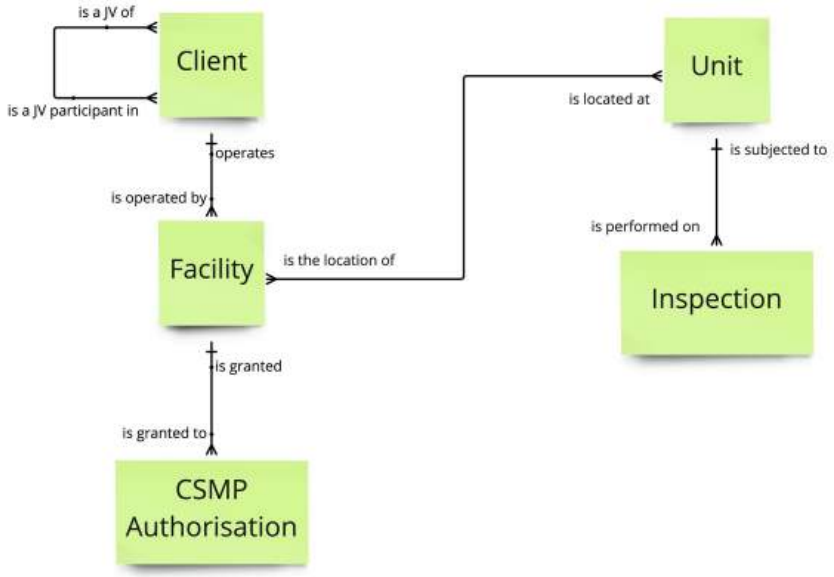
Assertion:
Each Unit is located at
one Facility

Assertion:
Each Unit is subjected to
one or more Inspections

Assertion:
Each Inspection is performed on
one Unit

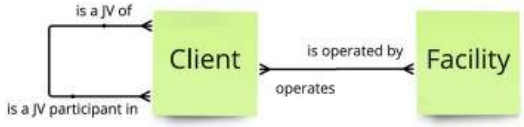
Concept Model Version 2 – revised from challenging Assertions

Now we will re-draw the initial Concept Model based on changes that came from challenging the Assertions in Ver. 1.

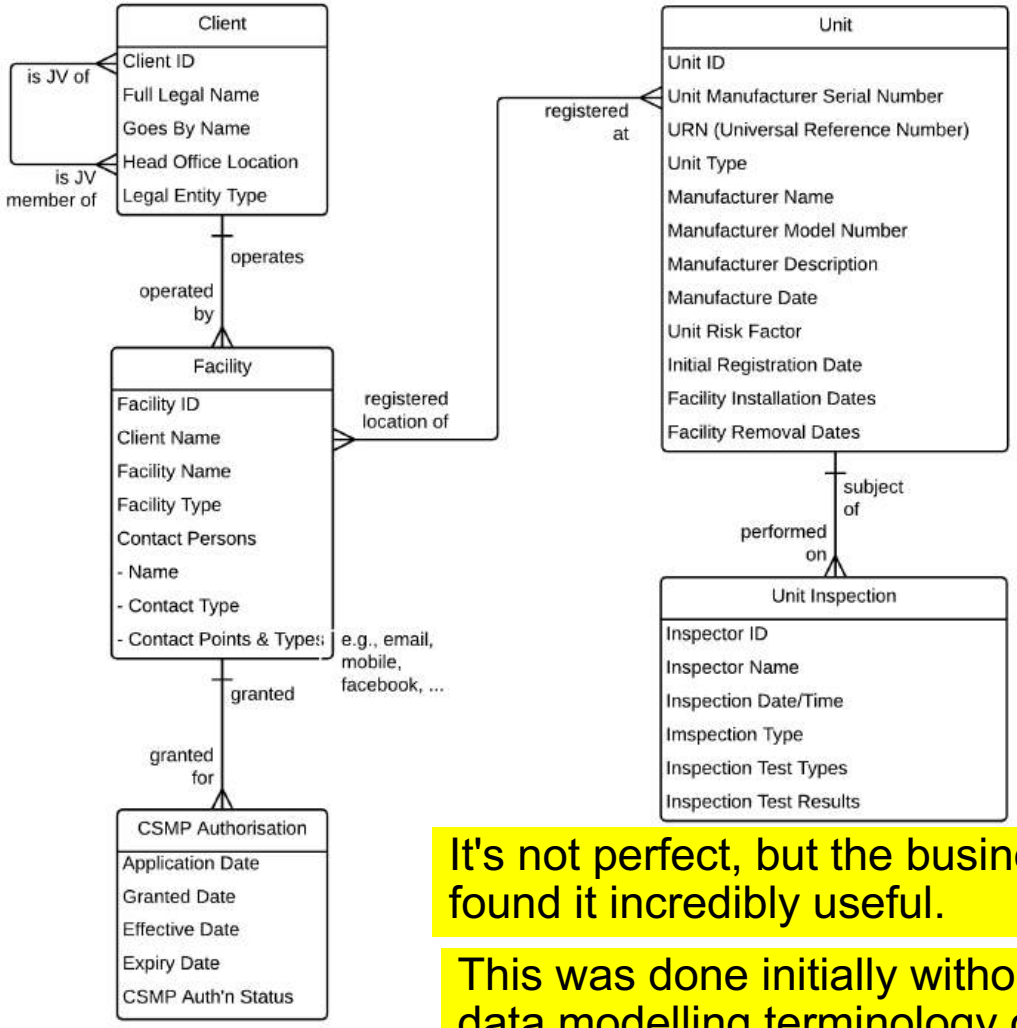


Note:
You don't always get what you *want* or what you think is the *right* thing in Concept Modelling. In this case the client (the Regulator) said they always wanted a Facility to be operated by ONE AND ONLY ONE Client.
If a Facility was operated by multiple Clients, they would require the Clients to form a new Joint Venture Client. This was to ensure that if there were legal difficulties, there was only ONE Client to go after.
Or, as they put it, "one throat to choke."

Later in the project, they realised they needed a history of the Clients that had operated a Facility, so the Client-Facility relationship became Many-to-Many, and Facility was modelled (correctly) as an independent Entity, as shown here:



"What do you need to know about the things in the Concept Model?"



Sketching this out was *fast, and* raised many questions that had not occurred to the client…

- Is there one CSMP per Client, per Facility, or some other basis?
- Do Units frequently relocate, or even turn up at another Client?
- What is inspected – the Facility or the Unit?
- Does the CSMP cover all or some Units at a Facility?
- …and MANY more…

It's not perfect, but the businesspeople found it incredibly useful.

This was done initially without any data modelling terminology or symbols!

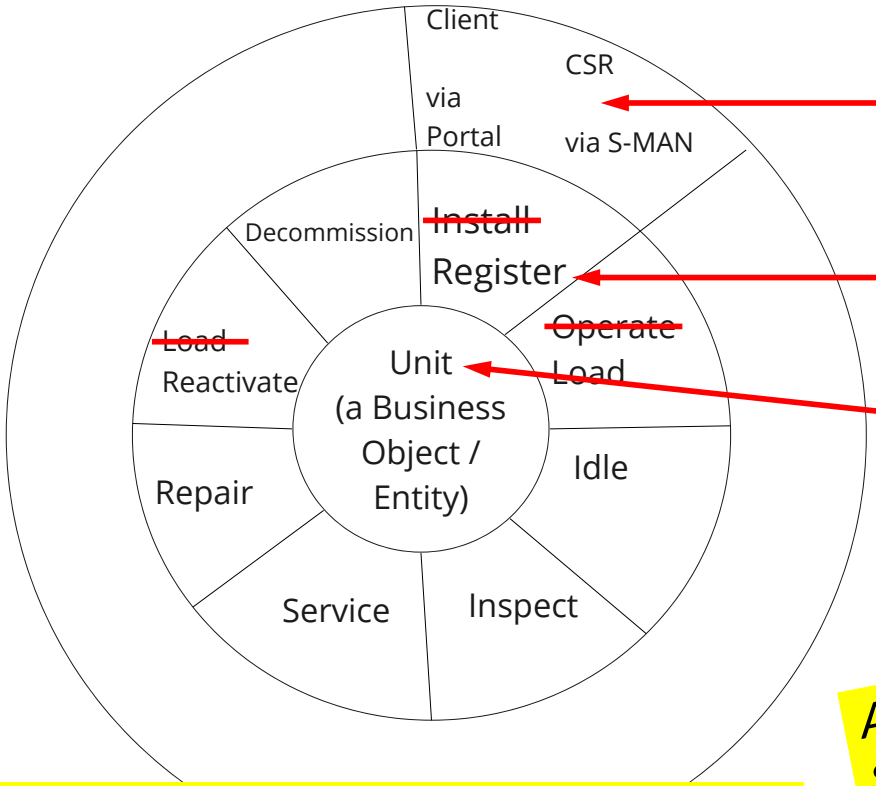
Model took ~90 minutes

Identify Services (Events) then Use Cases / User Stories

Finally, we'll identify the Services (verb - noun pairs) we need, and the Use Cases / User Stories by which the Services will be accessed

What events happen to a Unit - what are the needed services? (Verb - Noun)

- ...
- ...
- ...
-



Who needs access to each Service, and How?

Use Case	*Use Case or User Story - add Who and How*
Service Specification (Events)	*Service (or Event) - add a Verb to the Noun*
Concept Model	*Entity or simply a "thing" - a core Noun*

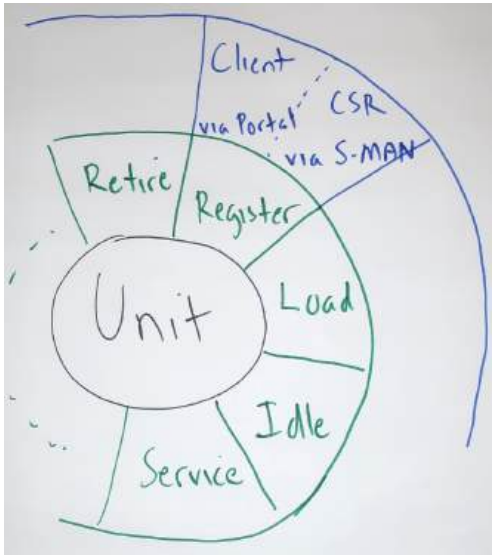
A Concept Model is a great starting point for discovering your Services and Use Cases (User Stories)

Supports *Service-Oriented Business Analysis*

Discussion – one Business Service, one or more Use Cases

	Who	What (the Service – verb + noun)	How
Multiple Use Cases	Client	Register Unit	via Portal
	Customer Service Rep (CSR)	Register Unit	via S-MAN (the ERP)
	Client	Register Unit	via Mobile App
	???	Register Unit	???

One Service



What is the value of documenting the Service only *once?* ("One Service available through multiple channels.")

- re-use of the asset, and therefore higher consistency
- better chance of getting it right – higher value from less effort
- if it's implemented as a single service, easier maintenance – it's in ONE place.

Why would we make a *single* Service available via *multiple* Use Cases?

- different actors need different "navigation and hand-holding," e.g., casual vs. expert users
- different technology platforms have different capabilities, e.g., mobile phone vs. touch-screen kiosk

Summary – what an analyst can do with a Concept Model?

First, clarify language. (A platform)

Second, establish policies and rules.

And then, identify events and services, e.g.,
A **Unit** is…

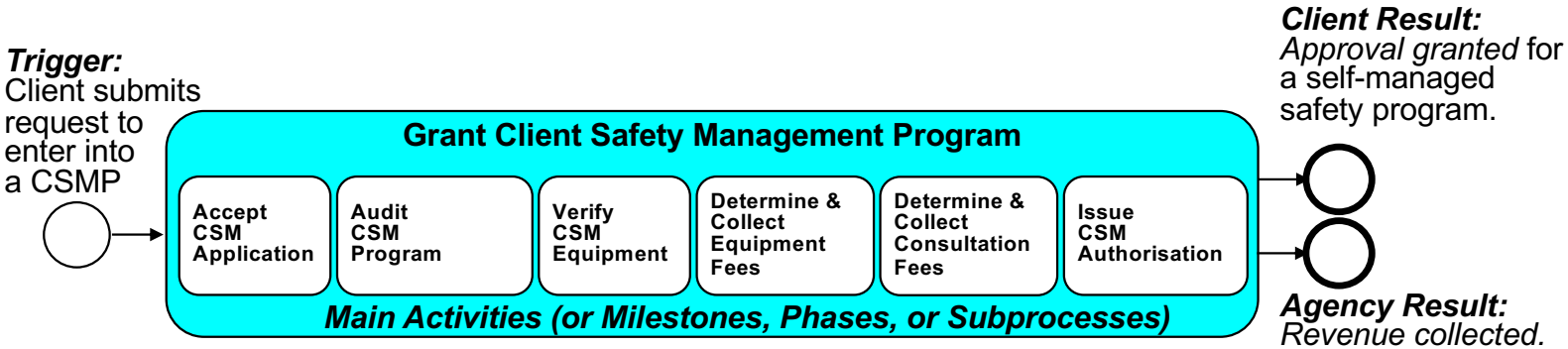
- Registered (requiring the service "Register Unit")
- Loaded (requiring the service "Load Unit")
- Idled (requiring the service "Idle Unit")
- Reactivated (requiring…)
- Repaired
- Inspected
- Relocated
- Retired
- …

These are the *essential* capabilities. In Business Analysis "essential" means **what** with no reference to **who** or **how**

Something I always do when evaluating/selecting COTS S/W

We did the same for Client, Facility, CSM Program, …

Clarify scope of the new process and identify participants

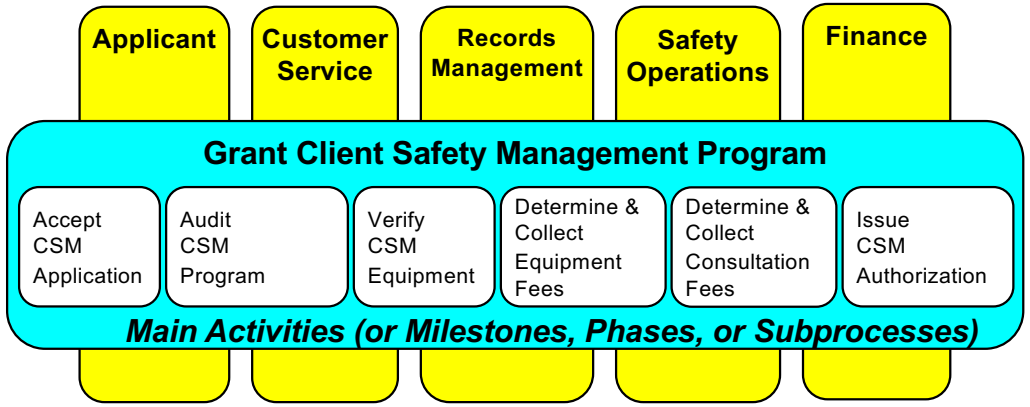


Cases:

- New
- Grandfathered
- Ownership Change

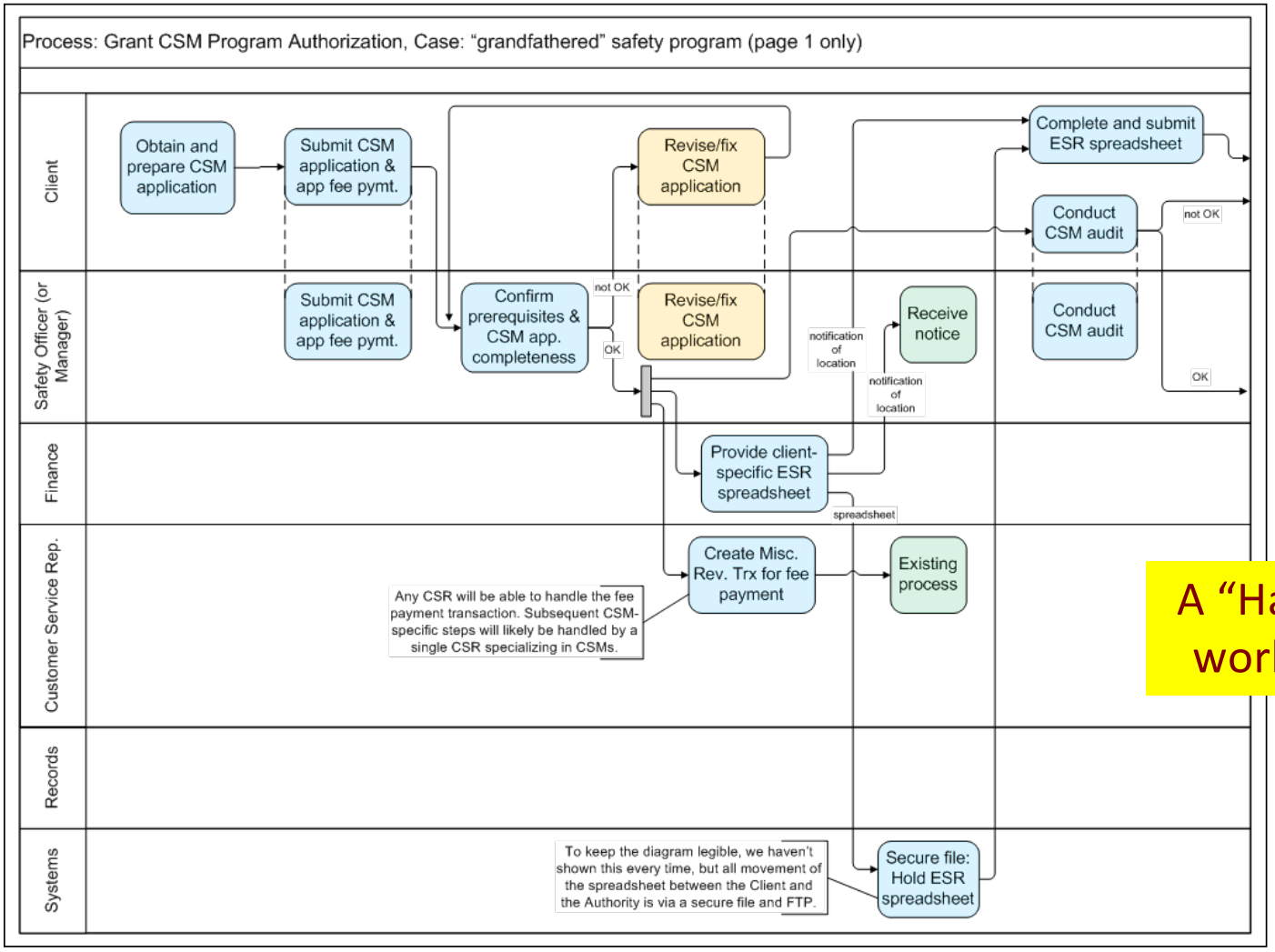
Process Scope Model – pure "what"…

We saw this example earlier



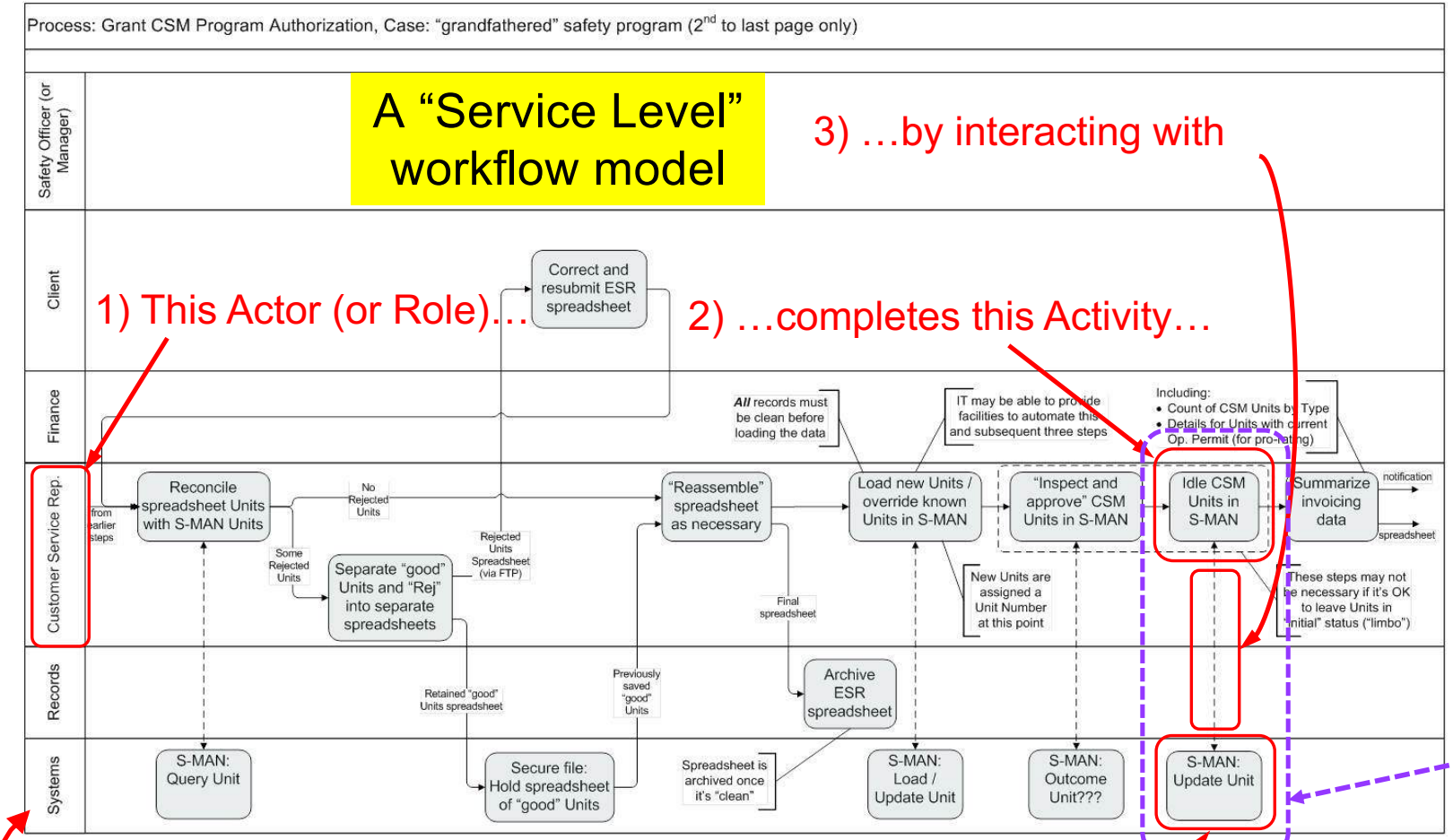
Process Summary Chart – simplified "what," plus "who"

The initial, business-friendly workflow model



A "Handoff Level" workflow model

Then detail showing where use cases & services fit

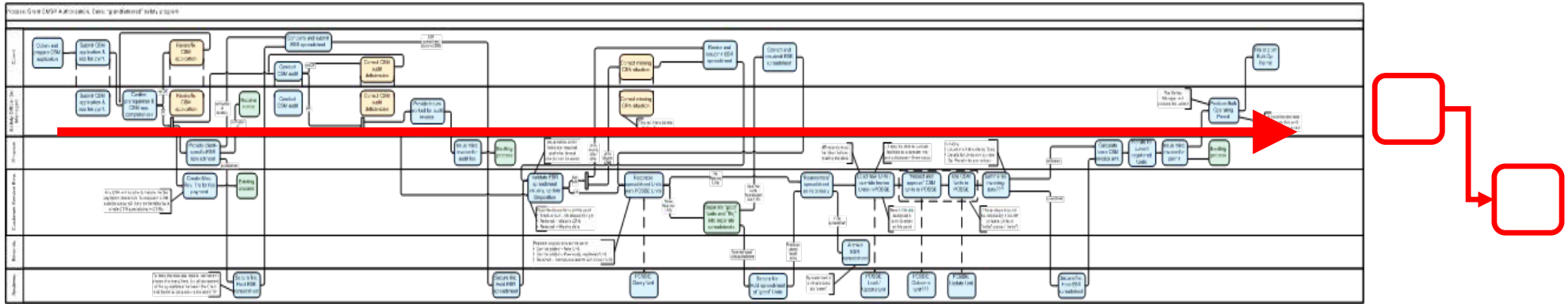


That's a Use Case!
- an actor
- interacting with a system
- to obtain a service
- to help them complete a task or obtain information

is what we mean by a Use Case (which may begin as a User Story)

Mission accomplished! Conclusions:

- "Plan A" rejected – agreement that Unit data *must* get into S-MAN
- “Plan B” (change the app) looks good, but the vendor estimates are *HIGH*
- “Plan B Minus” (existing functionality plus CSR work) is *worth the cost*

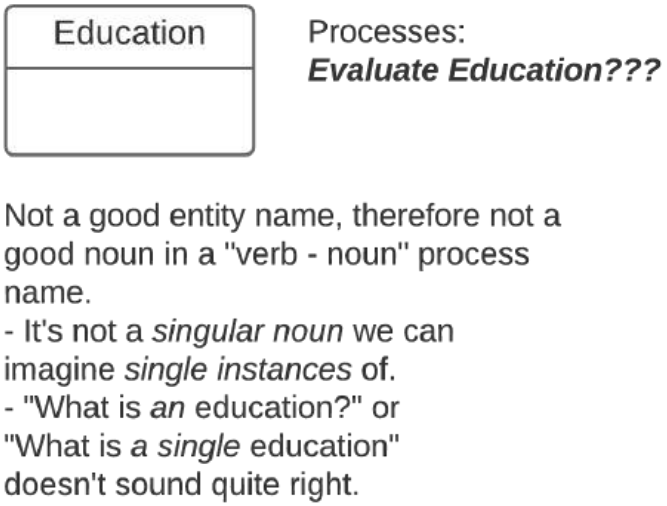


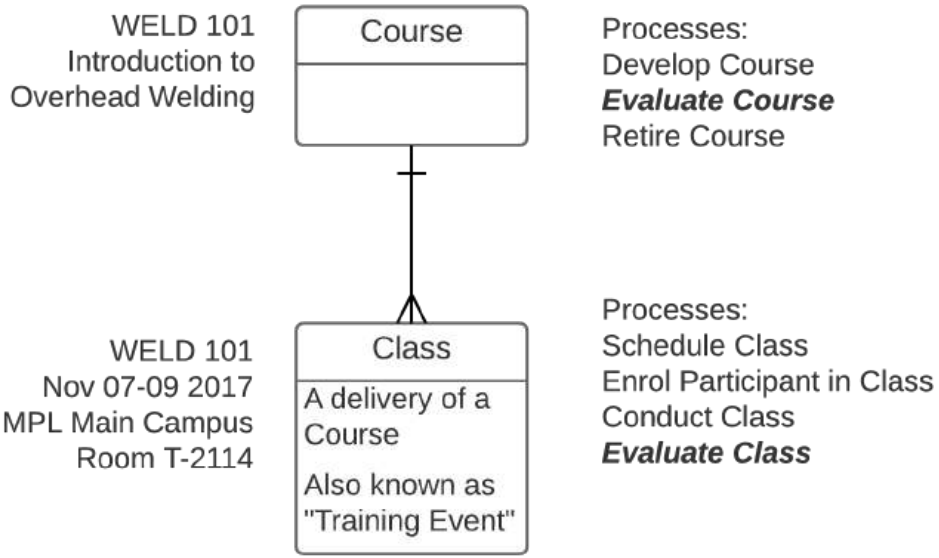
1. If requirements, issues, assumptions, etc. are buried in lists and narratives, people will argue endlessly; if they are in an *integrated* set of models, it’s much harder to dismiss the reality of the situation
2. Process Models, Use Cases, Service Specs, & *Concept Models*: ***essential!***

More examples: Example 1 – Concept Modelling to clarify the process

Analyst struggles to model “Evaluate Education” – timing disconnects, 1:M and M:1 connections within the process, token changes, …

A few minutes of Concept Modelling showed two distinct tokens and processes. “Education” was a “mushy noun.”





The key was asking "What do you mean by an *Education?*”

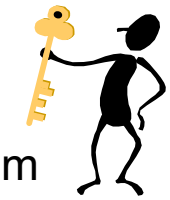
Never be afraid to ask "dumb" questions…

- Myth -

"I've got to have all the answers. I can't show my ignorance."

- Reality -

You're paid to ***ask,*** *not to* ***know.***
Someone will be glad you did.
The number of different answers will surprise ***everyone.***
Classic example – "Case" in a justice system



Just one more question, ma'am. Nothing too important...

There's one thing I'm not clear on...

Could we go over this just once more to be sure I've got it right?

Lieutenant Columbo takes up Data Modelling

"What do you mean by…?"

Example 2 – if you ignore the process AND the data…

U.S. University implementing cloud-based Human Resources and Payroll systems from *the same vendor.*

- Total spend US$80M, nothing salvageable
- University leadership unamused
- I was brought in for “project recovery”

The situation

My assignment –
take a large team through a process model and data model-based approach –
run 4-day offsite in "The Capsule"
(we felt like astronauts)

A "Futuro" house by
Finnish architect Matti Suuronen

What we learned:

- Little time on "business process"
  - very generic / unrecognisable as "what we do"
  - team tires of this
- Zero time on "data" (no "concept model")
- Management: "Get on with it – the vendor has seen it all before."
- 100+ programmers begin detailed configuration of *application rules and logic – "Straight to task."*

Initial focus – too much on "requirements"

Over 100 developers coded detailed business rules and contract terms *separately* into

- Payroll Application
- HR Application

Note: university had over 35 labour unions with complex payroll and benefits policies/rules – ***no rethinking whatsoever!***

Remediation – focus on process and data

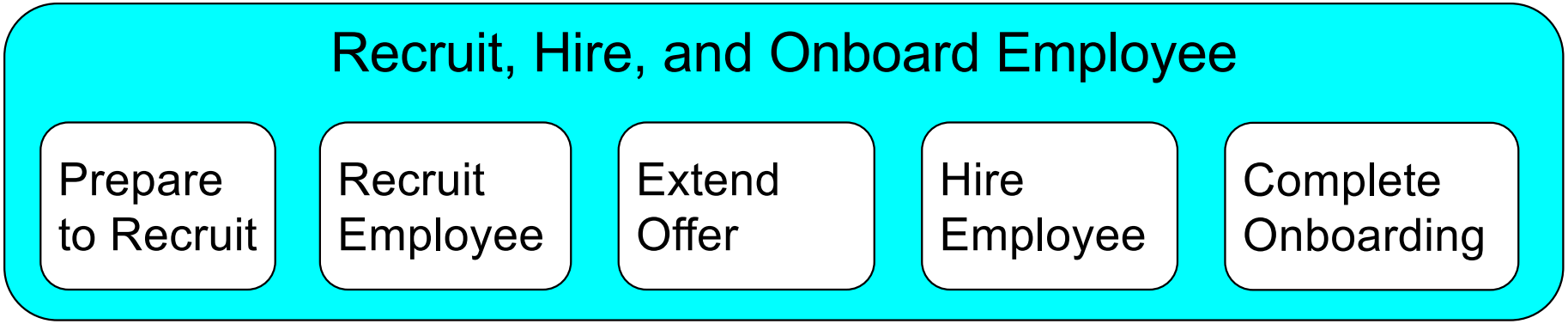
Identified, modelled, analysed, redesigned significant process – “Recruit, Hire, and Onboard Employee," the Case was "Tenure-Track Faculty”

- Developed *scope model* (invaluable!)
- Developed augmented scope model
- Assessed and redesigned based on “what”
- Added “who & how” to create a to-be *augmented scope model*

Modelled seven critical concepts in data – “what do we mean by…”

- Supervisory-Organisational Hierarchy
- Position-Based Management
- Visible Application Workflow
- etc.

First, identify main phases in a Scope Model



Augmented Scope Model ("what") for the full process

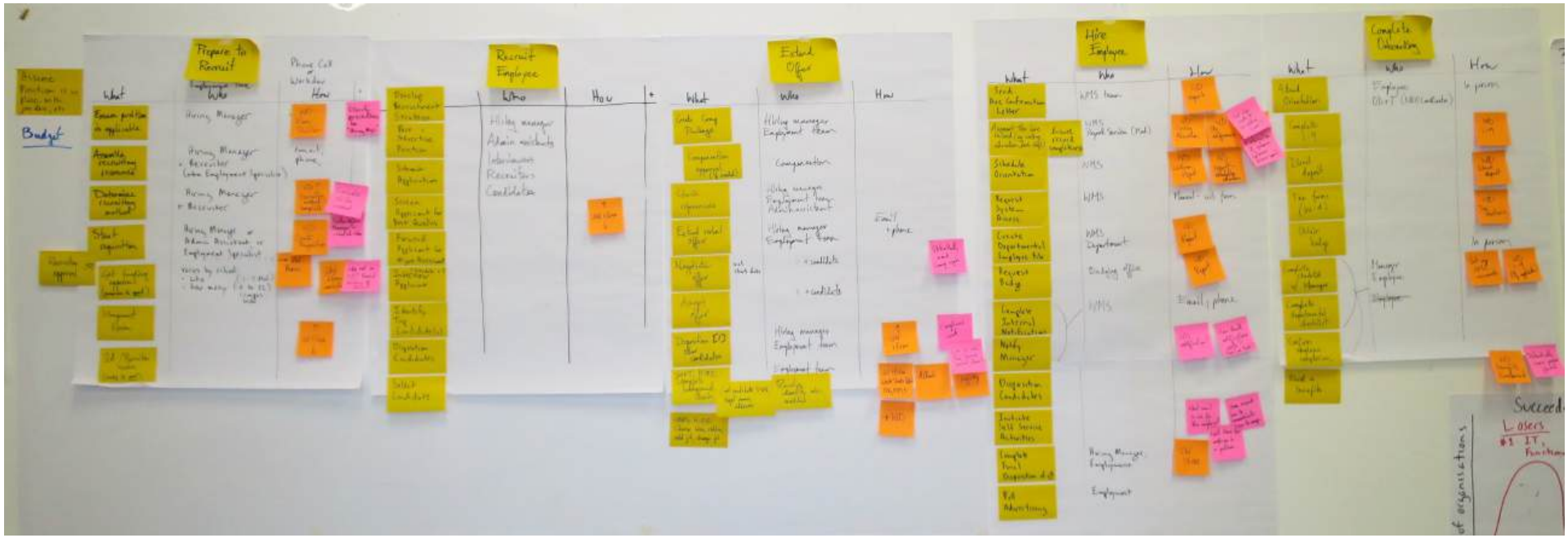
Recruit, Hire, and Onboard Employee

- *Identify* Payroll Title & Job Title
- *Develop* Job Description
- *Obtain* Funding, Compensation, & Space Approvals
- *Identify* Supervising Manager
- *Determine* Recruiting Method
- *Assemble* Recruiting Resources (e.g., search committee)

Active verbs & nouns

- *For the first time,* the entire end-to-end process is visible
- A surprise to *everyone* how much work it is, and *how many functions participate!*
- Still no reference to “who or how,” just "what" – *active verb* + noun
- *This is critical to build support for change – it “depersonalises” in a good way!*

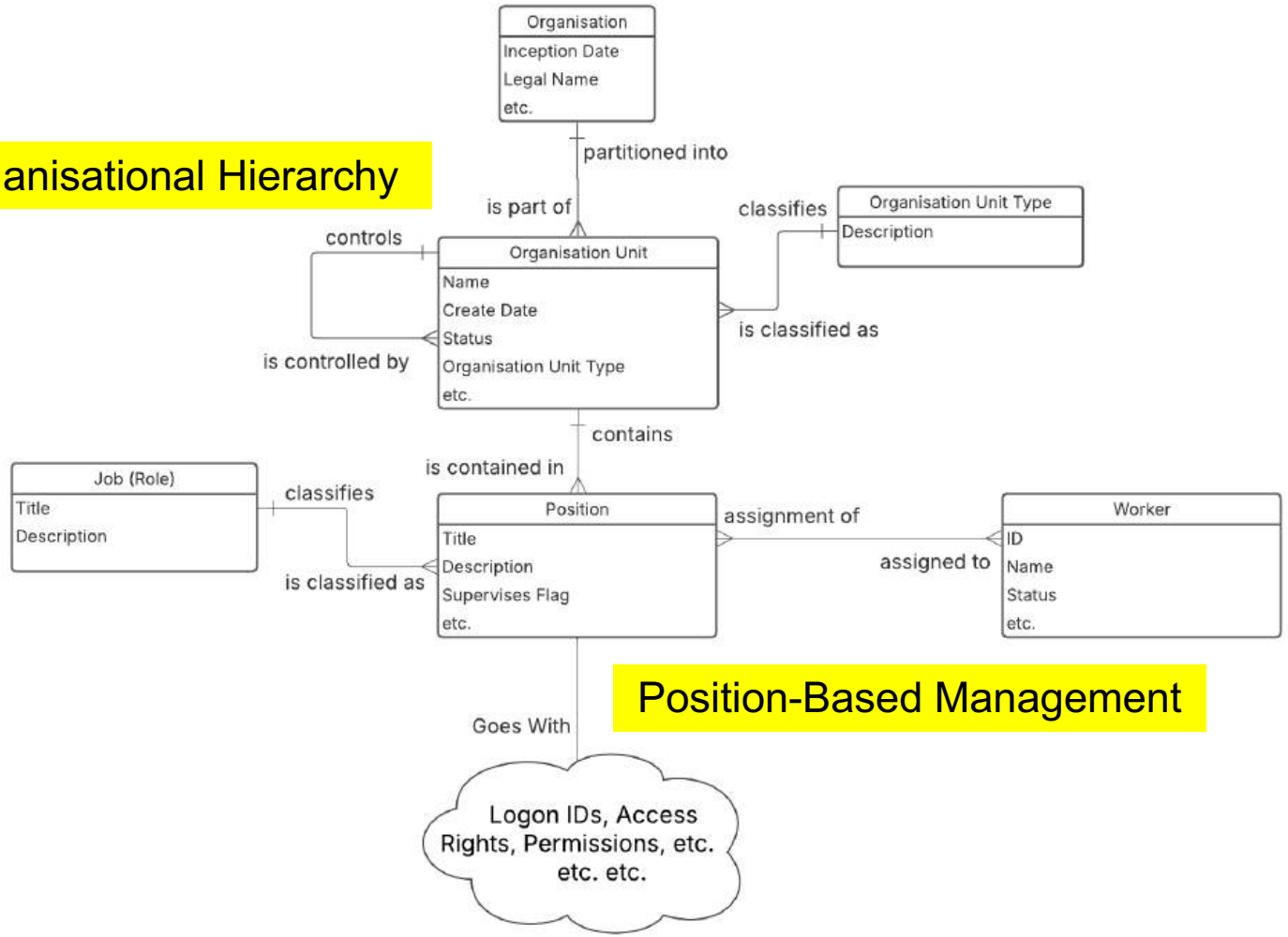
Then add "who and how"



Next, add “who” (which role) and
“how” (which tool or system function) and "notes."
Now we have the basics of a to-be process design, and *an understanding of which steps will be supported by which system functions – great for understanding if the COTS app will actually work!*
(And easier than jumping into detailed requirements and flow modelling.)

And of course, Concept Modelling was <u>really</u> important

Supervisory-Organisational Hierarchy



Position-Based Management

Example 3 – is a new process concept viable?

Classroom tech support at major US research university

- Goal: "Uber-style" tech support for classrooms –
  when an Incident is raised in a Classroom,
  dispatch it to one or more appropriate Techs
  (qualified, available, assigned to the appropriate Support Unit)
  who will bid on it.
- Approximately 20 "assertions" described the planned state:
  - Each Tech may be badged for one or more Service Category Levels, and for each Service Category Level there may be one or more Badged Techs.
  - Each Tech may be assigned to one or more Support Units during a given time period,
    and for each Support Unit there may be one or more assigned Techs.
    A Tech can only be assigned to one Support Unit at a time.
  - An Incident for a particular Classroom can be raised by
    either a Customer (the "reporter" – Faculty, Staff, Tech, …?)
    or an automated Alert raised by an Equipment Unit located in a particular GP Classroom.
  - many more…
- The assertions led to the development of an ERD.
  Note – the complete "Concept Model"
  is the combination of the definitions, the assertions, and the graphic (ERD)

Example 5 – Assertions. Lots of assertions.

Classroom Support

Assertions, for review and validation:

- Support is provided by different Support Units (organizations) for different Service Levels (tiers) and different Service Categories (Computers, Audio-Visual, Learning Technologies, Networking, Scheduling, and Facilities.) We are concerned with support for Computers, Audio-Visual, Learning Technologies, and Networks. Scheduling is supported by the Registrar's Office, and Facilities is supported by (shockingly) Facilities.
  If we only cared about one Service Category, say "Computers," there would be no need to model the "Support Category / Support Unit" concept, because it would be a given – there would only be one.
- Each Support Unit could support one or more Service Categories. E.g., Sam's Call Center provides Tier 1 support for Computers, Audio-Visual, Learning Technologies, and Networking.
- Support for Department-owned rooms is not within the scope of this initiative; support will be provided by the owning Department's Local Support Unit.
- Support for Classrooms (GPC and non-GPCs) or a Room Block of GPCs will be provided by a Support Unit during a Time Block for a Support Level (Tier.) That is, for a given Room Block (available via the Classroom reporting the Incident) for a given Service Category Level (e.g., Computers – Tier 1) during a particular Time Block, a particular Support Unit will provide support. This concept is represented via the "Support Responsibility" concept, an associative entity which indicates the responsibility of a Support Unit to provide support for a Service Category Level for a Room Block during a Time Block. There are three general possibilities:
  1. Support for the Room Block will be provided exclusively by the Local Support Unit (the Department);
     - this only applies to non-General Purpose Classrooms (Department "owned")
  2. Support for the Room Block will be provided exclusively by the Central Support Unit;
     - Will this happen? Is this a goal?
  3. Support for the Room Block) will be provided by the Local Support Unit during "normal business hours" (a Time Block) and by the Central Support Unit outside of "normal business hours."

Classroom Support

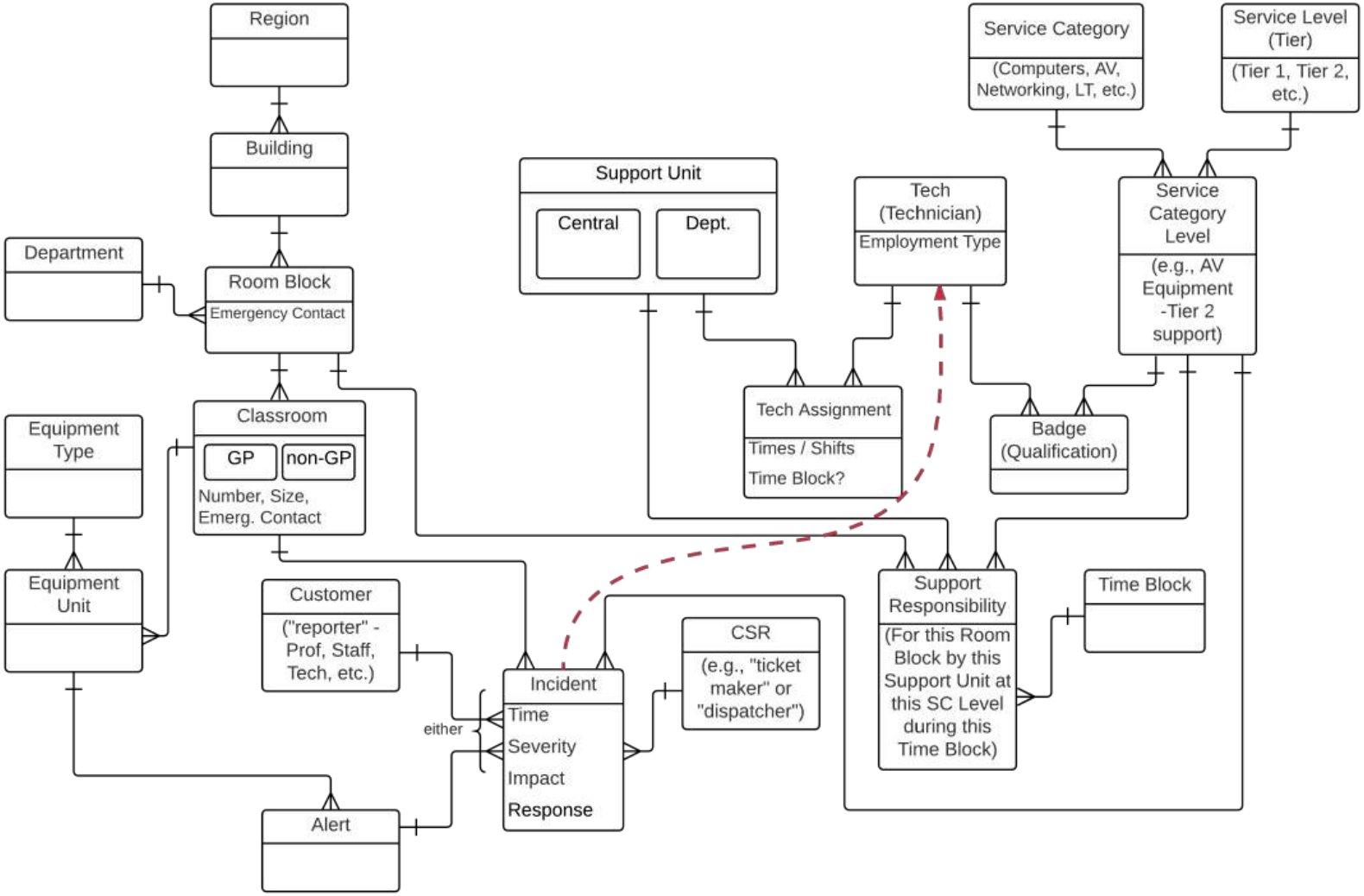
     - Is this the "normal" case?
     - Should it read "after normal business hours?" That is, will Central ever provide support both before and after normal business hours?
- Each Tech may be badged for one or more Service Category Levels, and for each Service Category Level there may be one or more Badged Techs. A M:M relationship.
- Each Tech may be assigned to one or more Support Units during a given time period, and for each Support Unit there may be one or more assigned Techs. A M:M relationship, but will a constraint be that a Tech can only be assigned to one Support Unit at a time?
- An Incident for a particular GP Classroom can be raised by either a Customer (the "reporter" – Faculty, Staff, Tech, …?) or an automated Alert raised by a an Equipment Unit located on a particular GP Classroom.
- The "dispatcher" or "CSR" at Room Support (?) assigns (or routes?) an Incident to the appropriate Support Unit based on the Support Responsibility.

Putting all this to work…

The goal is to automatically route an Incident to one or more Techs. When an Incident is raised, Dispatch will always create a Ticket, and then route it to the appropriate Tech(s) based on Service Category Level (Service Category and Service Level,) Time Block, Room, and Support Unit. Here's how…

- When an Incident is raised, we know the Room Block (via Room,) the Time Block, and the Service Category Level, therefore we know the Support Responsibility, and therefore the Support Unit.
- We also know which Techs are badged for that Service Category Level, and which Techs are assigned to that Support Unit at that time.
- Now we have a pool of Techs the Incident could be dispatched to, for them to "bid on," Uber-style.

The underlying "Concept Plus" Model



Summary of findings

The assertions and the ERD showed the idea could be implemented:

- When an Incident is raised, we know the Room Block (via Room,) the Time Block, and the Service Category Level, therefore we know the Support Responsibility, and therefore the Support Unit.

- We also know which Techs are badged for that Service Category Level, and which Techs are assigned to that Support Unit at that time.

- Now we have a pool of Techs the Incident could be dispatched to, for them to “bid on.”

This slide left blank to maintain balance in the Universe

Encouraging change in people and organisations

1. Five things you need to know about *Business Processes*
2. Identifying true, end-to-end, cross-functional *Business Processes*
3. Developing a *Process Architecture*
4. Seven ways to help people embrace *Process Change*
5. *Human-oriented* process modelling
6. A feature-based *Process Design* method – transitioning from *as-is* to *to-be*

Seven techniques we can use to build "change" into our practice.

Origins – my clients were ahead of me

"We're using your methods as a generalised approach to *any sort of change*, not just 'process' change."

"Do you have a degree in Organisational Psychology?"
Me : "Huh?"
"When we follow the method closely, almost slavishly, the usual resistance to change simply *doesn't materialise*."

"Instead of Change Management at the end of a project ("Change is coming. Now CHANGE!") we like the way support for change is built in *throughout* your approach."

Five thoughts on what doesn't work…

1. Leaping far too quickly into specifying the future state.
   No, that does not make you nimble, responsive, or agile.
2. Copying so-called "best practices" without regard for your culture, core competencies, style, or differentiator.

3. W. Edwards Deming:
   "Eliminate slogans, exhortations, and targets asking for zero defects or new levels of productivity.
   Such exhortations only create adversarial relationships, as the bulk of the causes of low quality and low productivity belong to the system and thus lie beyond the power of the work force."
   and
4. Failing to involve the people who actually *do* the work.
5. Client: "Everyone seems to think Change Management is a training plan." It's not.

Disclaimer *and fine print*

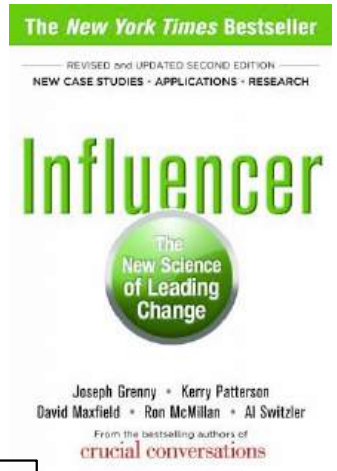
Not a methodology
- techniques
- frameworks
- ideas
- examples

For your awareness

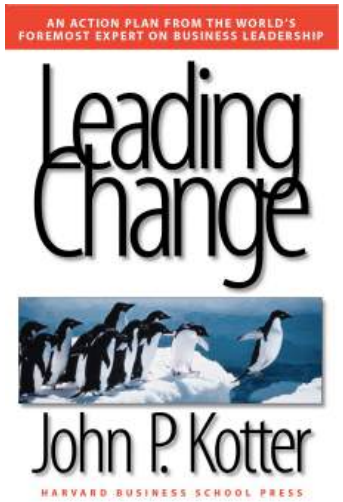
So you can learn to observe relevant factors

I'm not an expert on OD, culture, change, etc….
… but the techniques presented here *have* been validated by experts

But if you want a method – the classic sources



4/6 = 10x



Seven ways to build support for change

1 – The power of venting – let them be heard

2 – What first, who & how later – abstraction to the essence

3 – Don't start with why? – the problem with problem statements

4 – Clarify what you need to be great at – your differentiator

5 – Identify the organisation's beliefs, and their impact

6 – Describe organisational culture, and its impacts

7 – Build a feature-based, holistic view of the future state

1) Venting

1) The essence of the technique:
Early in the session, “venting” / “what's on your mind?”

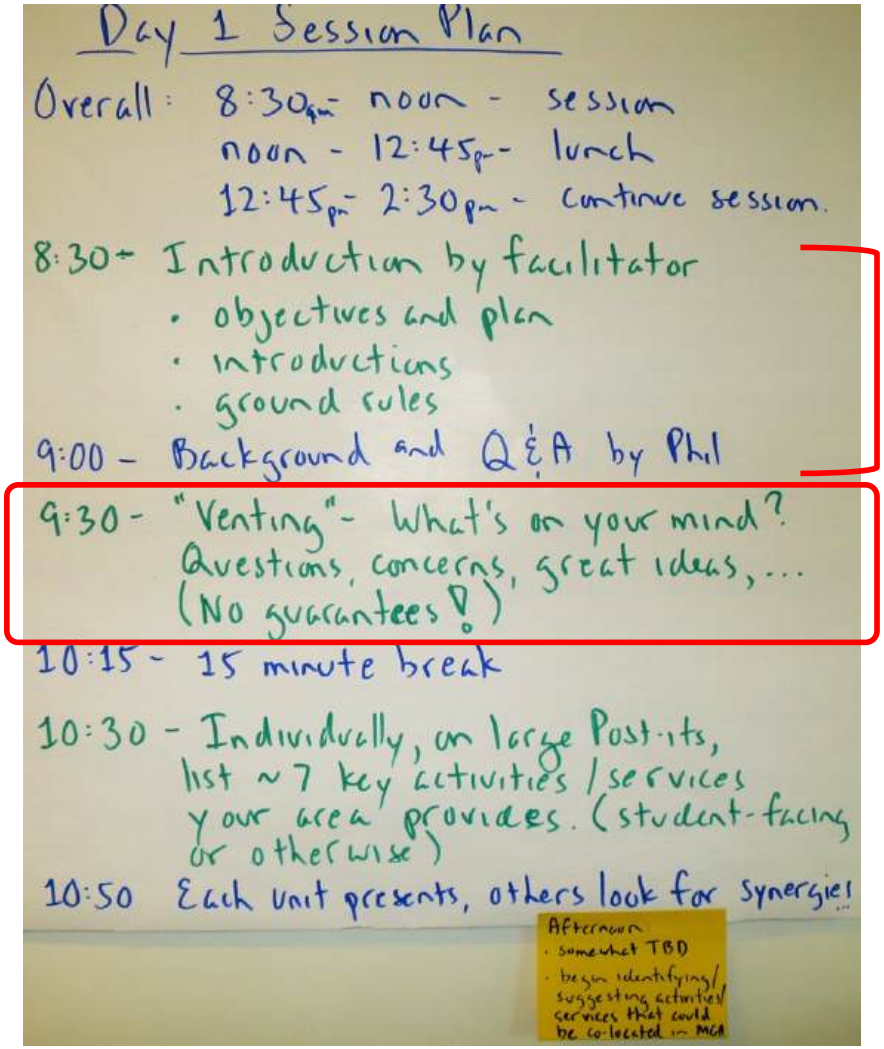
- questions
- concerns
- great ideas
- what I'd change if I could

…
related to today's topic

Discussion:

- Why is “venting” an effective technique?
- What concerns do you have about “venting?”
- How would you mitigate those concerns?

A typical first session agenda



Note – establish context *before* venting

Build "venting" into the session plan

Typical opening agenda…

- Quick presentation by the sponsor on scope and overall project goals (5 minutes)
- Introductions (10 minutes)
  - Facilitator
  - Participants
- Brief presentation by the facilitator (10 minutes)
  - What do we mean by "end-to-end" and what issues does this raise?
  - Key elements in defining an end-to-end view
  - Objectives for the series of sessions, objectives for today's session, and today's session plan and ground rules (5 minutes)
- **"Venting" / What's on your mind? (45 minutes)**
  - Key issues, specific expectations, concerns, burning questions, great ideas, cautionary tales, etc.
  - No guarantee they'll be addressed in this session.
- Clarify terminology (90 minutes)
- Identify significant activities (30 minutes) etc.

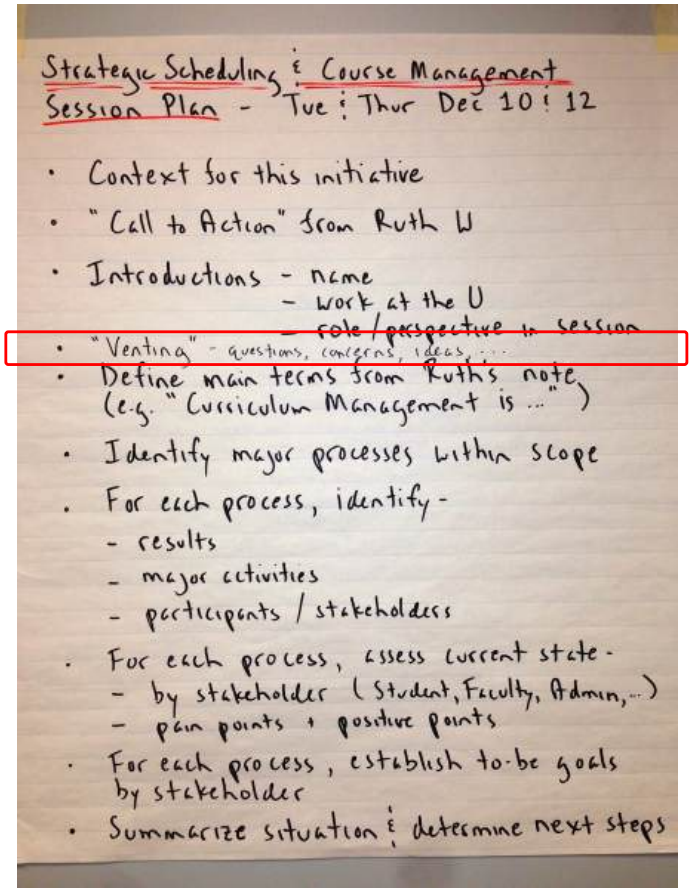
No guarantees, strictly time-boxed

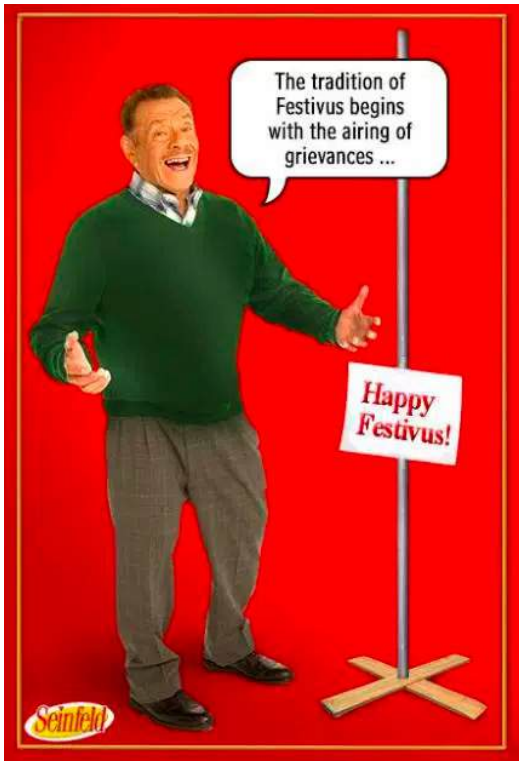
Venting example

Topic –
"Strategic Scheduling / Course Management"
(what that meant… not exactly clear)

Senior university personnel –
Department Chairs, Deans, …

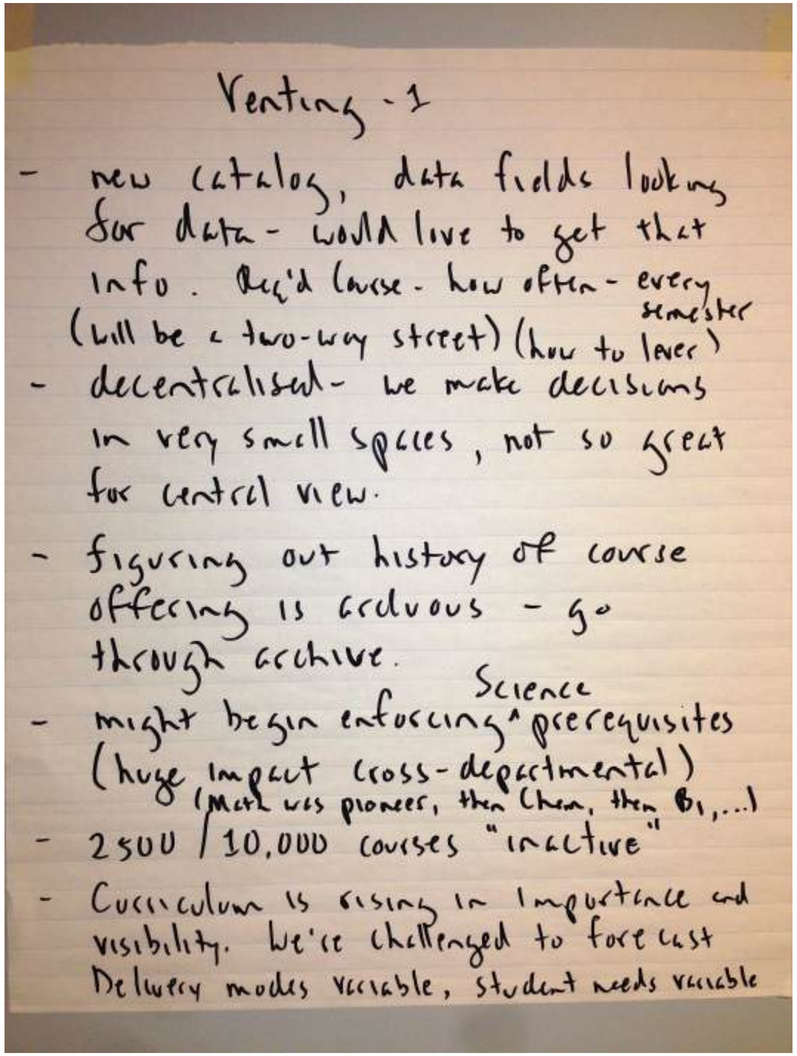
45 minutes for venting –
it was well used!





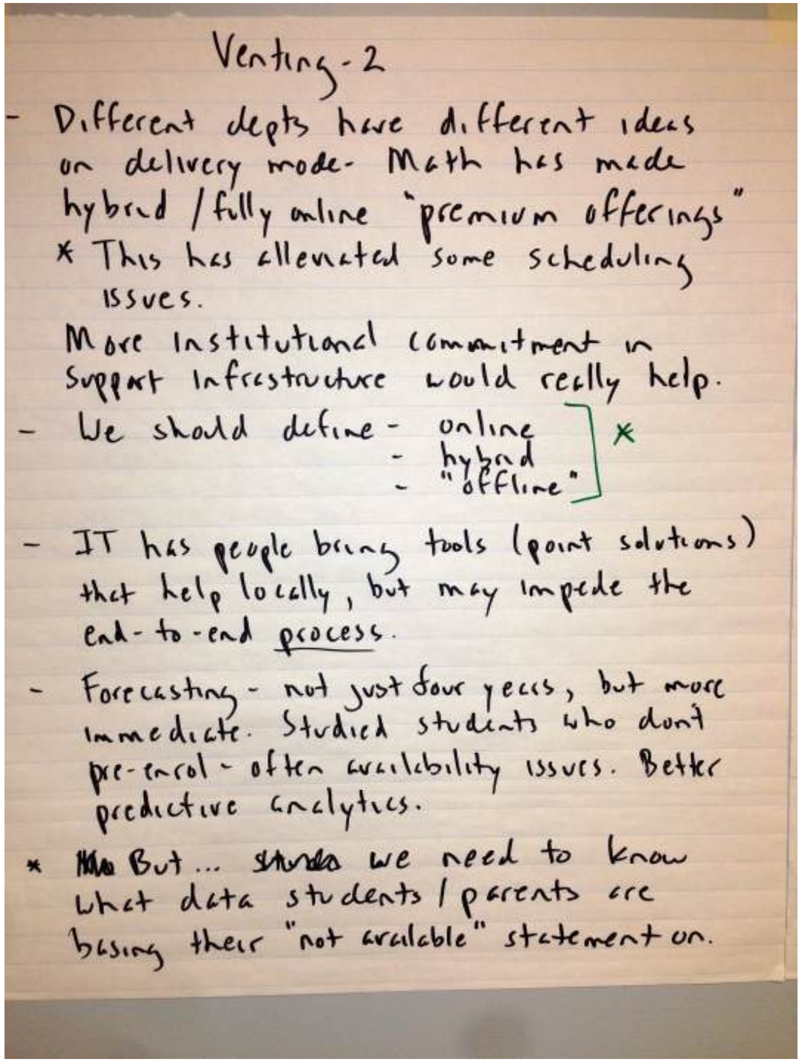
WWBP-MC – Working With Business Processes Masterclass

"Venting" 1 & 2



Venting - 1

- new catalog, data fields looking for data - would love to get that info. Req'd course - how often - every semester (will be a two-way street) (how to lever)
- decentralised - we make decisions in very small spaces, not so great for central view.
- figuring out history of course offering is arduous - go through archive.
- might begin enforcing Science prerequisites (huge impact cross-departmental) (Math was pioneer, then Chem, then Bi,...)
- 2500 / 10,000 courses "inactive"
- Curriculum is rising in importance and visibility. We're challenged to forecast. Delivery modes variable, student needs variable



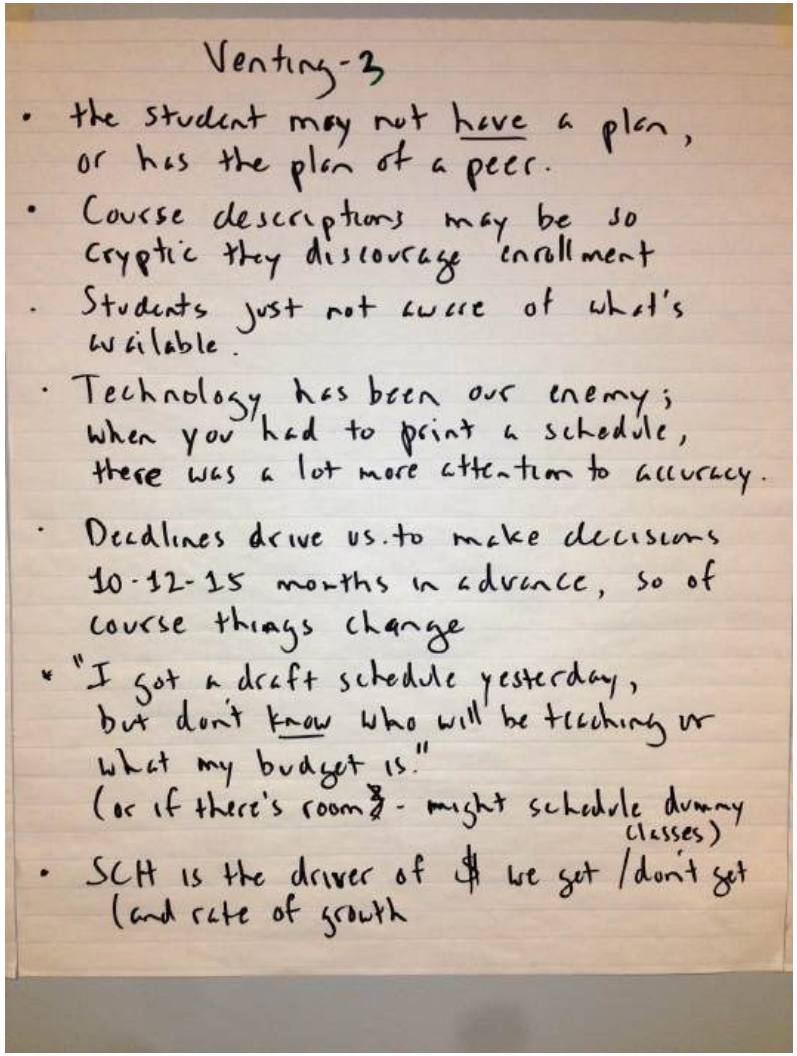
Venting - 2

- Different depts have different ideas on delivery mode - Math has made hybrid / fully online "premium offerings"
  * This has alleviated some scheduling issues.

  More institutional commitment in support infrastructure would really help.
- We should define - online / - hybrid / - "offline"] *
- IT has people bring tools (point solutions) that help locally, but may impede the end-to-end process.
- Forecasting - not just four years, but more immediate. Studied students who don't pre-enrol - often availability issues. Better predictive analytics.

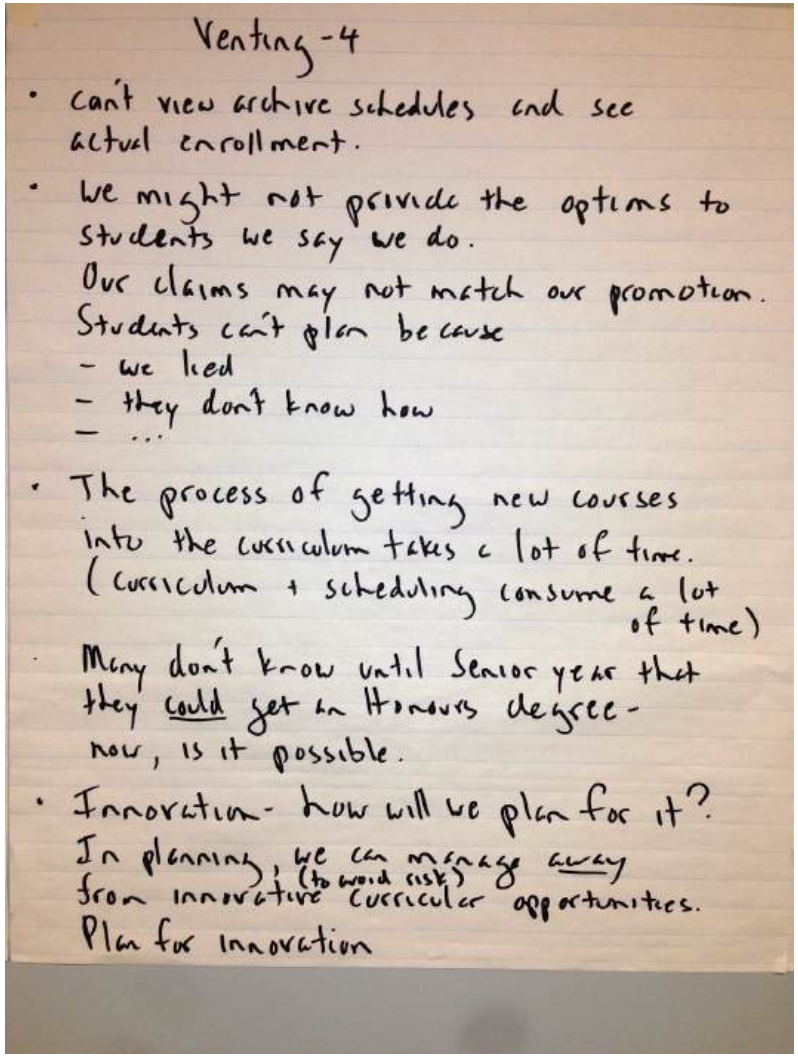
* But... should we need to know what data students / parents are basing their "not available" statement on.

"Venting" 3 & 4



Venting-3

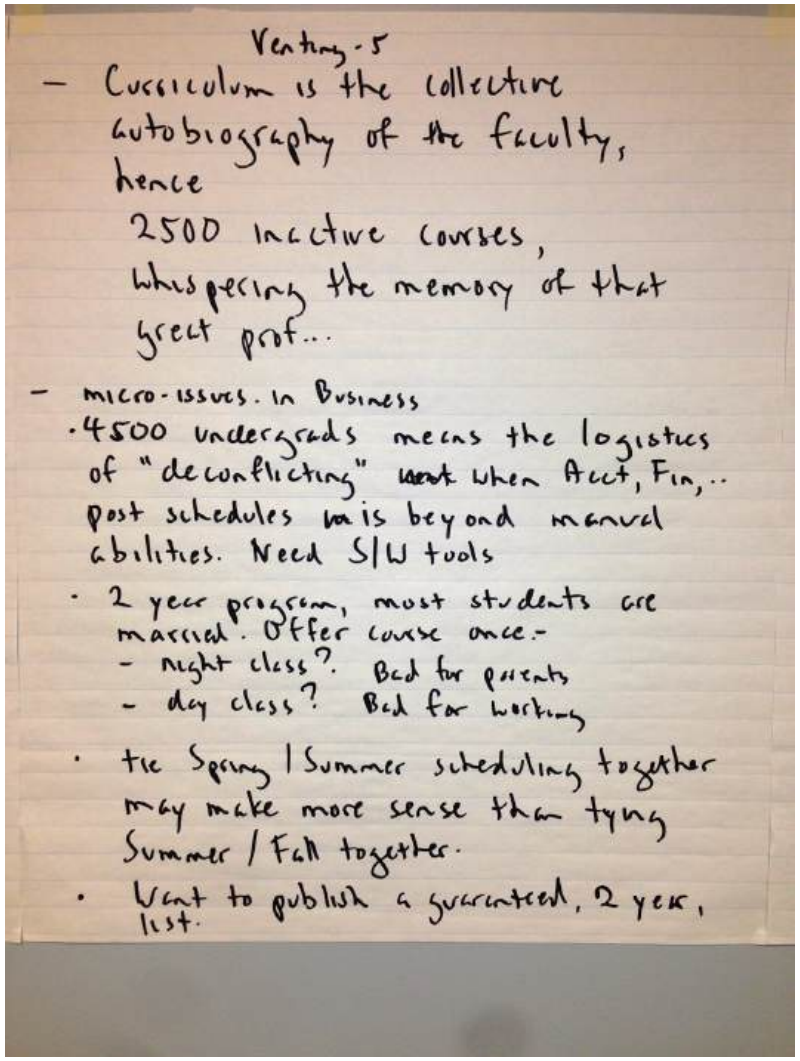
- the student may not have a plan, or has the plan of a peer.
- Course descriptions may be so cryptic they discourage enrollment
- Students just not aware of what's available.
- Technology has been our enemy; when you had to print a schedule, there was a lot more attention to accuracy.
- Deadlines drive us to make decisions 10-12-15 months in advance, so of course things change
- "I got a draft schedule yesterday, but don't know who will be teaching or what my budget is." (or if there's room - might schedule dummy classes)
- SCH is the driver of $ we get / don't get (and rate of growth



Venting-4

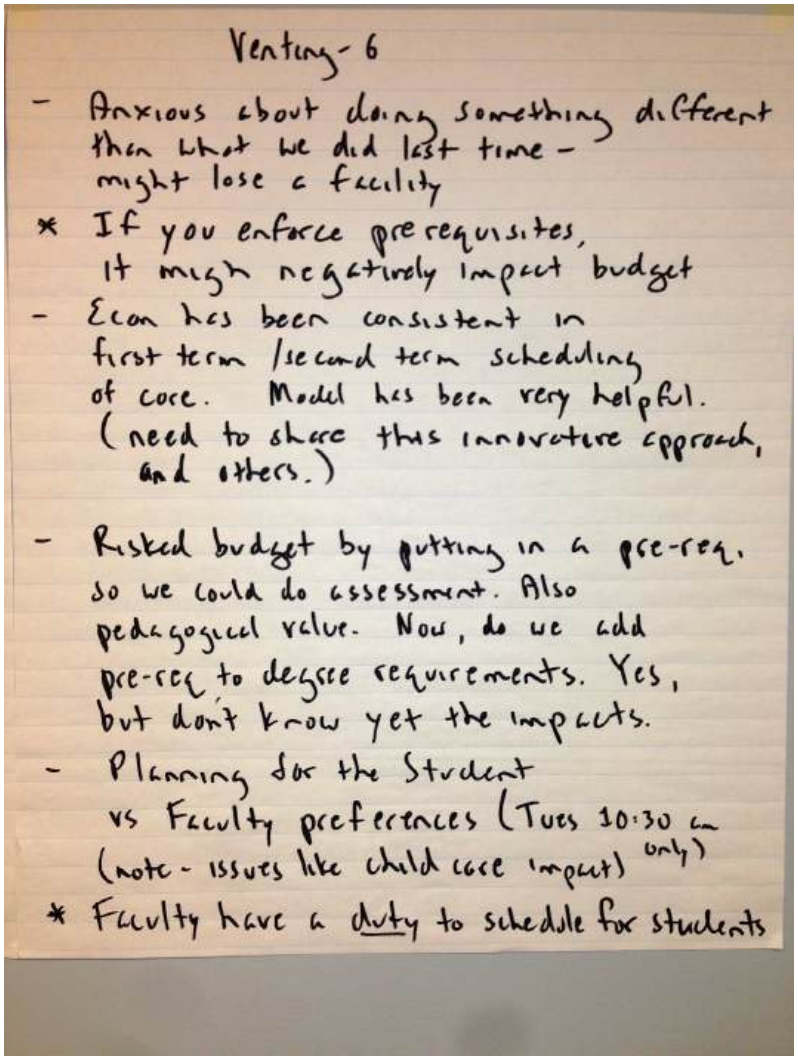
- can't view archive schedules and see actual enrollment.
- We might not provide the options to students we say we do.
  Our claims may not match our promotion.
  Students can't plan because
  - we lied
  - they don't know how
  - ...
- The process of getting new courses into the curriculum takes a lot of time. (curriculum + scheduling consume a lot of time)
- Many don't know until Senior year that they could get an Honours degree - now, is it possible.
- Innovation - how will we plan for it?
  In planning, we can manage away (to avoid risk) from innovative curricular opportunities.
  Plan for innovation

"Venting" 5 & 6



Venting - 5

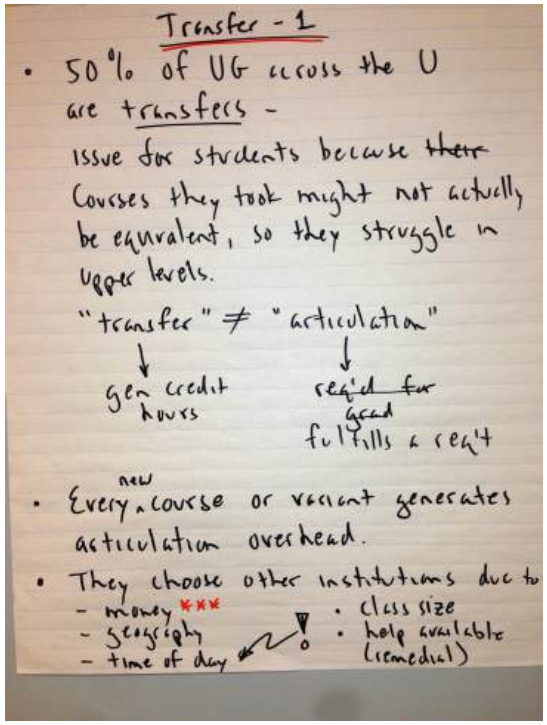
- Curriculum is the collective autobiography of the faculty, hence
  2500 inactive courses, whispering the memory of that great prof...
- micro-issues. In Business
  - 4500 undergrads means the logistics of "deconflicting" must when Acct, Fin,.. post schedules is beyond manual abilities. Need S/W tools
  - 2 year program, most students are married. Offer course once.-
    - night class? Bad for parents
    - day class? Bad for working
  - tie Spring / Summer scheduling together may make more sense than tying Summer / Fall together.
  - Want to publish a guaranteed, 2 year, list.

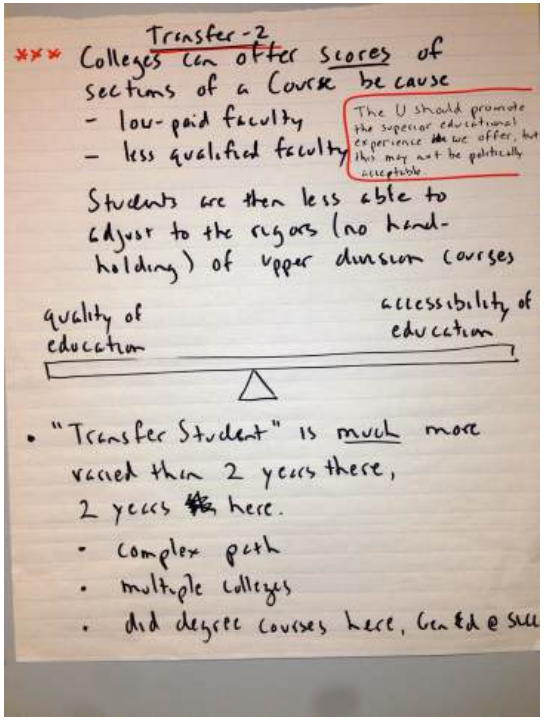


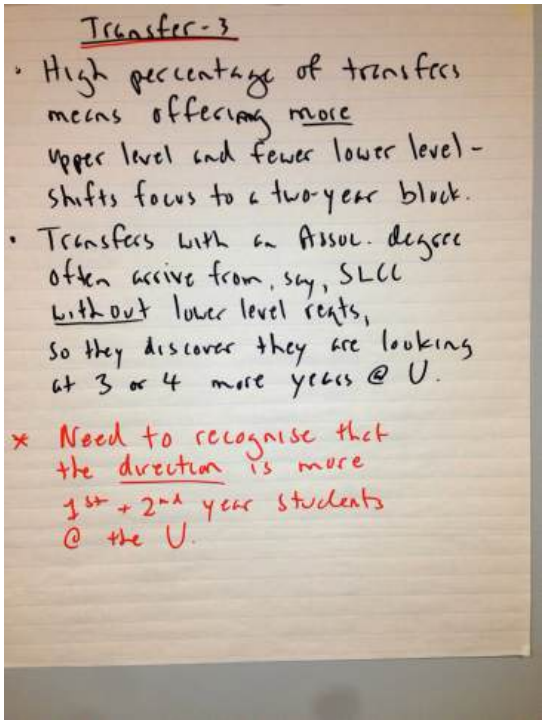
Venting - 6

- Anxious about doing something different than what we did last time - might lose a facility
- * If you enforce prerequisites, it might negatively impact budget
- Econ has been consistent in first term / second term scheduling of core. Model has been very helpful. (need to share this innovative approach, and others.)
- Risked budget by putting in a pre-req. so we could do assessment. Also pedagogical value. Now, do we add pre-req to degree requirements. Yes, but don't know yet the impacts.
- Planning for the Student vs Faculty preferences (Tues 10:30 am only) (note - issues like child care impact)
- * Faculty have a duty to schedule for students

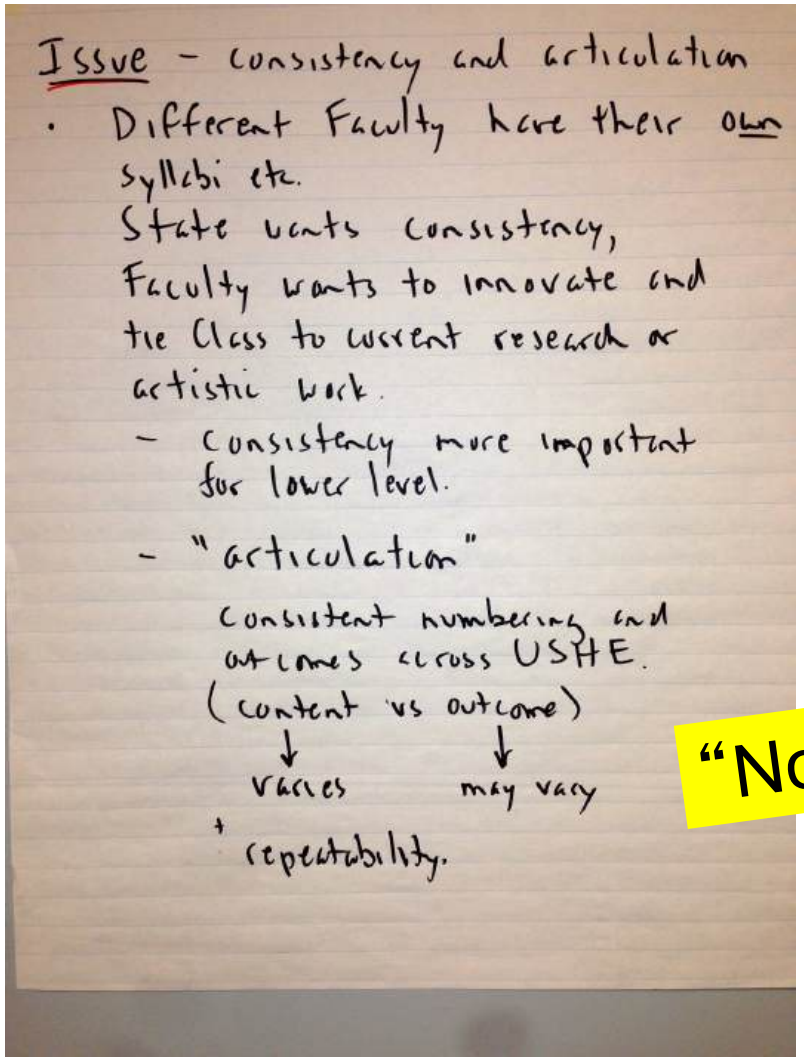
Two "Venting" topics raised a LOT of angst





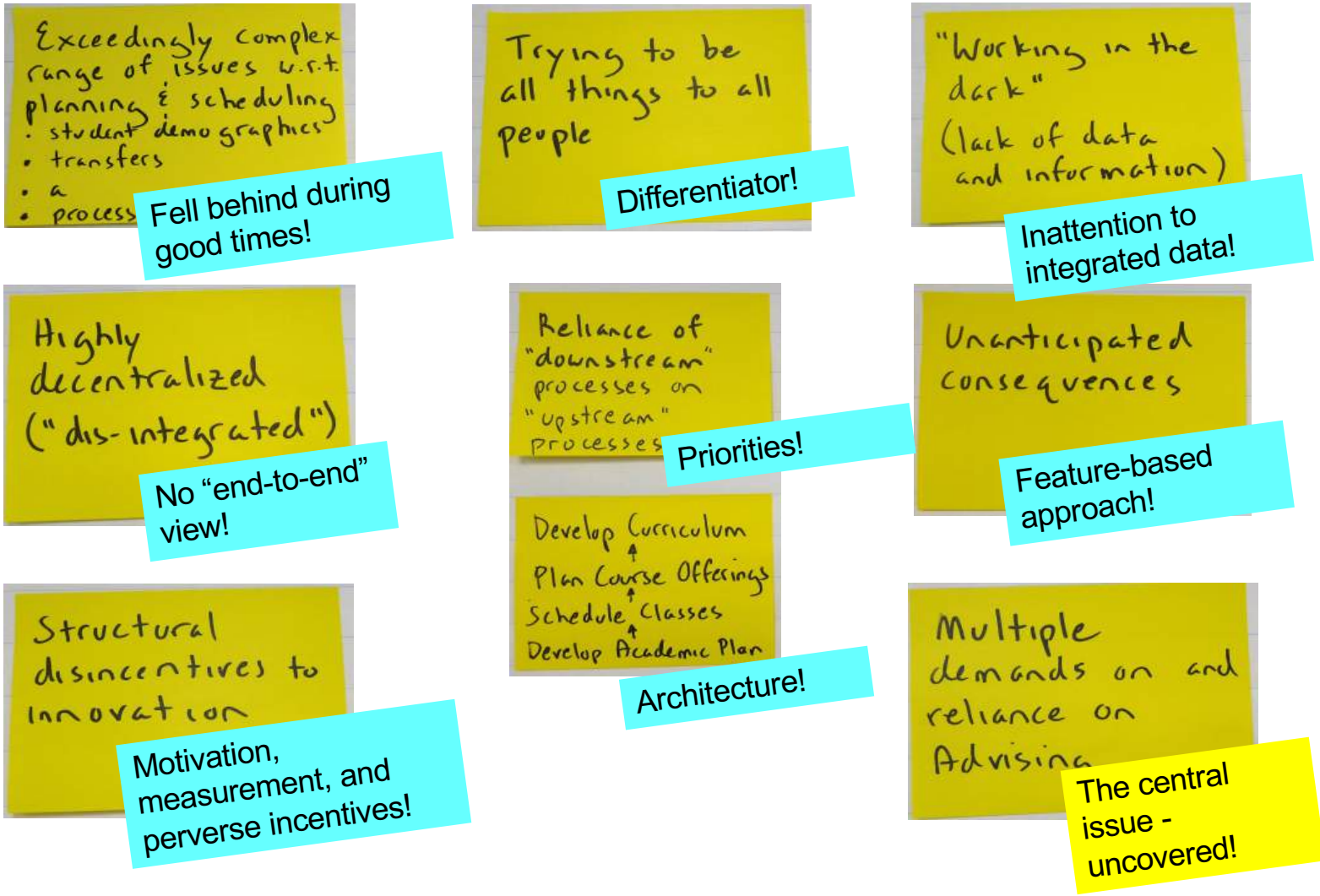


Two "Venting" topics raised a LOT of angst



"Now what???!!!"

Overnight, team synthesises 8 key themes



Next day, small groups expand on themes

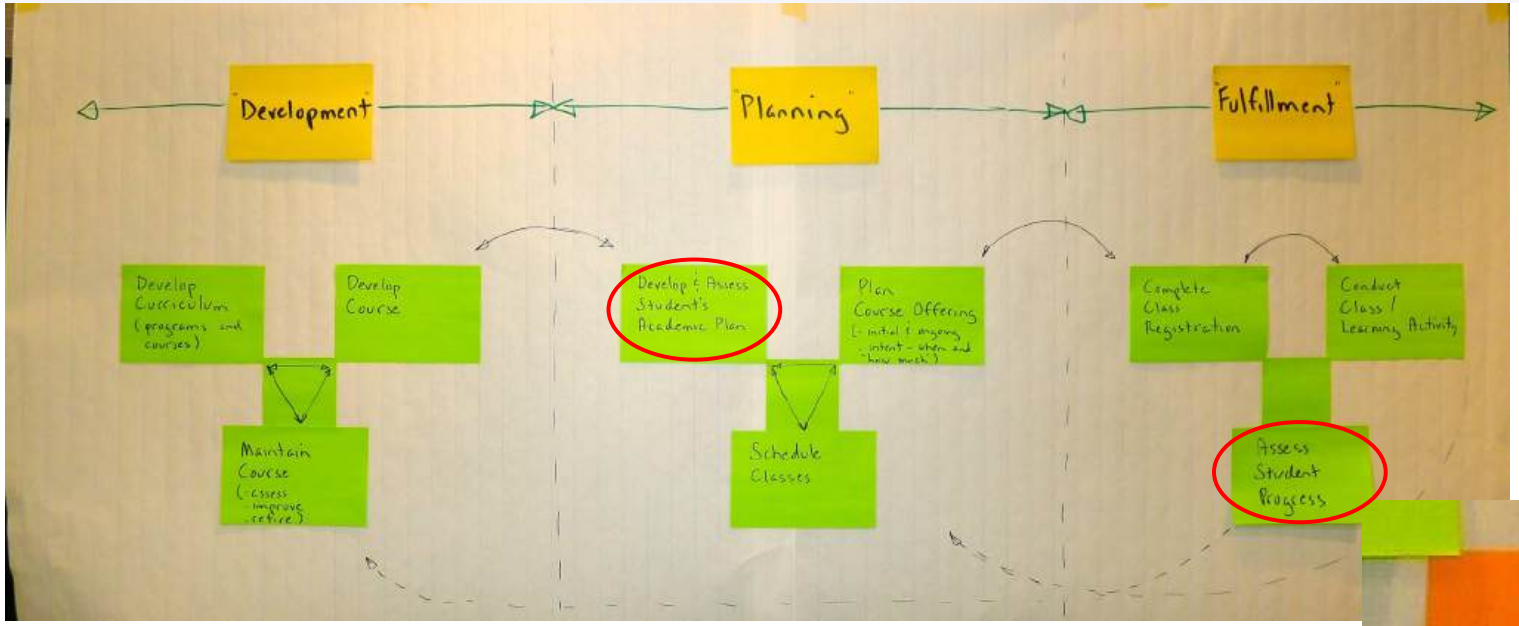
Reaction: “Wow, we've never seen anyone actually *do* anything between sessions with our notes!”

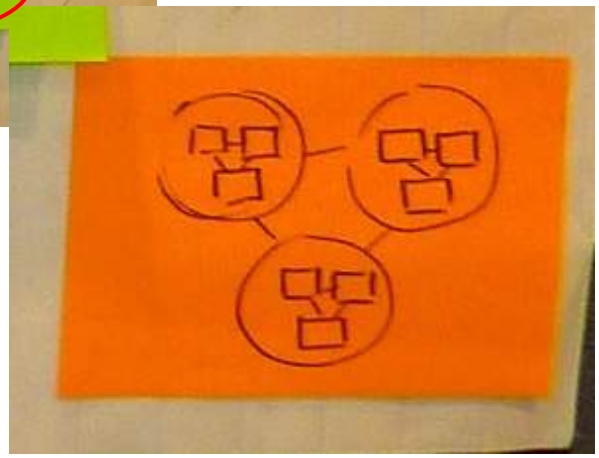
They loved it!

The result – a gold mine!

- Active participation led to buy-in
- Uncovered the real issues before we "structured" things into a future state

A cyclical business architecture

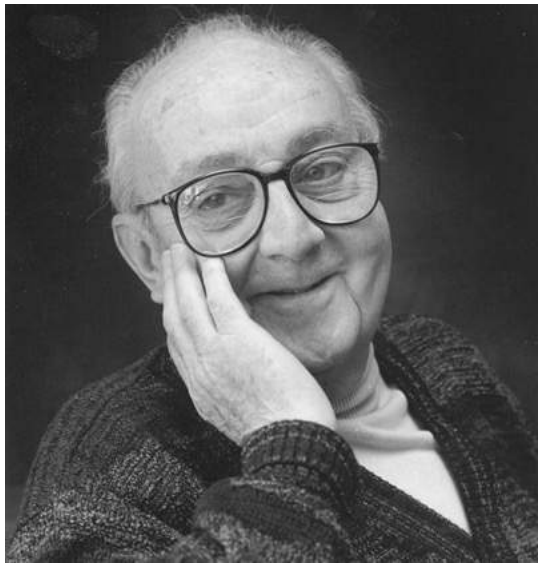




- Eventually, led to a very different Business Process Architecture and prioritisation than initially expected
- Not sure we'd have got there so quickly without “venting”

2) What first, who & how later

"All models are wrong, but some are useful."



George E. P. Box
1919–2013

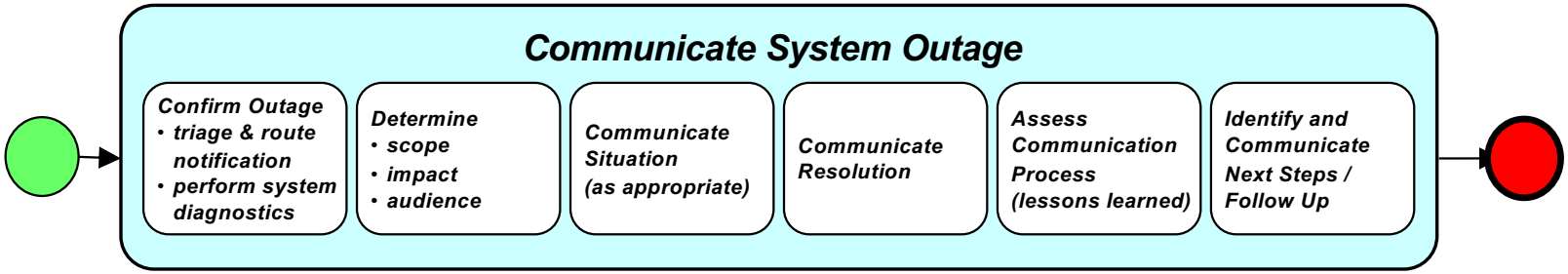
Two especially useful models

- Business Process Scope Model
- Business Concept Model
  (a.k.a Conceptual Data Model)

Both are "essential" –
they show the essence – the
"what" – of a subject with no
reference to who, how, why, etc.

See samples on the
next two slides

Samples – Process Scope Model



Triggering Event:

Notification of degradation or lack of Service
- internal system
- external provider
- calls to Service Desk

Cases:
- new
- recurring

Other factors:
- severity
- key operations periods / areas (registration, summer, course evaluation season)
- time of year
- time of day

Results:

Communications about the Outage and the progress on resolving it are delivered:
- internally and externally
- informally and formally

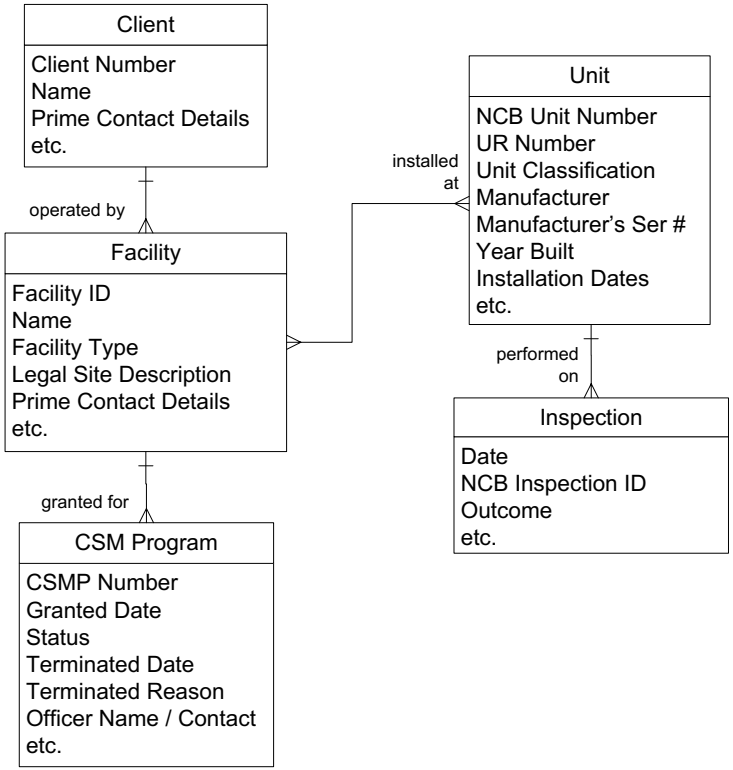
Final Results:

Service is restored and root cause is known (or is determined to be unknowable) and resolution is communicated:
- Externally ("good news")
- Internally ("cause & resolution)

Process Scope Model using "TRAC" -
what is the Trigger, *what* are the Results,
what are the main Activities
(7 ± 2 milestones, phases, or subprocesses,)
and *what* are the main cases or variations?

Why 7± 2?

Samples – Concept Model



A description of a business in terms of

- **things** it needs to maintain records of – ***entities***
- **facts about those things** – ***relationships*** & ***attributes***
- **policies & rules** – ***definitions***, ***constraints,*** and ***assertions*** governing those things and facts

"What" first, "who and how" later

Note – this won't always be appropriate, but for process- or data-focused initiatives, it's *essential!*

The essence of the technique, for process or data or both:

- Describe *what* the process is,
  with no reference to *who* (organisation or job role)
  or *how* (artifacts or implementation technology)
- Describe *what* the required data is without reference to *how* (existing systems, database/file design, forms, spreadsheets, or other implementation artifacts)

Discussion

- Why are "essential" models useful in supporting change?
- Are there any specific contributions made by
  Scope Models or Concept Models?

Example – evaluating S/W with data models & events

Selection of new Financials app is hopelessly bogged down

- Considerable effort in building a BDM*
- Two problems:

1 matrix points to the app no one likes

2 want vendor demos with focus and control

Requirements	D&B	Oracle	SAP	Coda	etc.
1	Y	Y	Y	Y	
2	Y	Y	Y	N	
3	Y	Y	Y	Y	
4	N	Y	N	Y	
5	N	N	Y	Y	
6	Y	Y	Y	Y	
7	Y	Y	Y	Y	
8	Y	Y	Y	Y	
9	Y	N	Y	N	
10	N	Y	N	Y	
11	Y	Y	Y	Y	
12	Y	Y	Y	Y	
13	Y	N	Y	Y	
14	Y	Y	N	N	
…					
…					
858	N	N	N	Y	
859	Y	Y	Y	Y	

*** Big Dumb Matrix**

BDM issues

- **time consuming**
- **most apps meet most criteria**
- **still can't tell if an app will work well in your environment**

Selecting an application

The problem:
understand business to decide on package configuration options
a list of 100s of requirements wasn't helping

The approach:

- small team builds "thing model"
  (concept model, ~60 entities total, 15 "core")
- for each core entity,
  identify 3 to 5 life cycle events
- for each event, develop scenario
- turn over to app vendors - show us
  - "How do you support the data model?"
  - "How do you handle scenarios?"

"Things we track" -
Project, Work Order
Plant, Plant Equipment
Product Type, Product Lot
Product Inventory
Sale, Transfer
Location, Ledger Entity
Financial Category
Responsibility Center
Account, Sub-Account
Fixed Asset

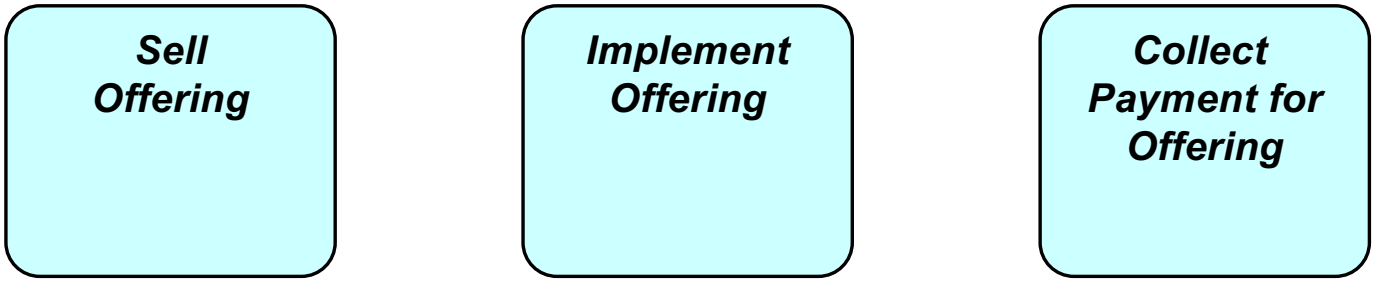
"Events that happens to them"
Fixed Asset is
Acquired or Constructed
Depreciated
Transferred
Disposed Of

The key points:

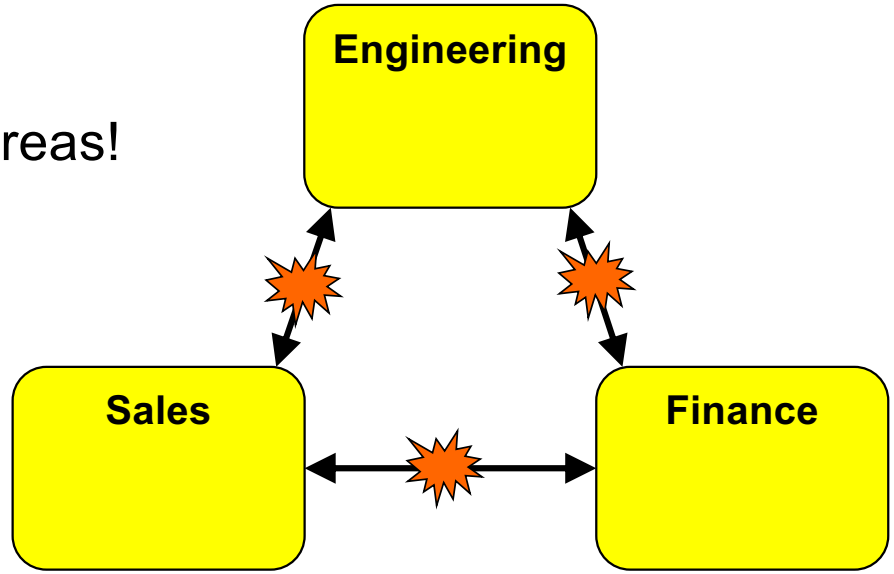
- ***initiated by the business***
- it worked! – saw how an app would support the business
- didn't initially call it "data modelling"
- left vendor some room - "Here's how we'd do it."

Using a Scope Model to overcome resistance

A regional telecommunications provider (the "Telco") thought they had three main Business Processes, and efforts to improve them were failing:

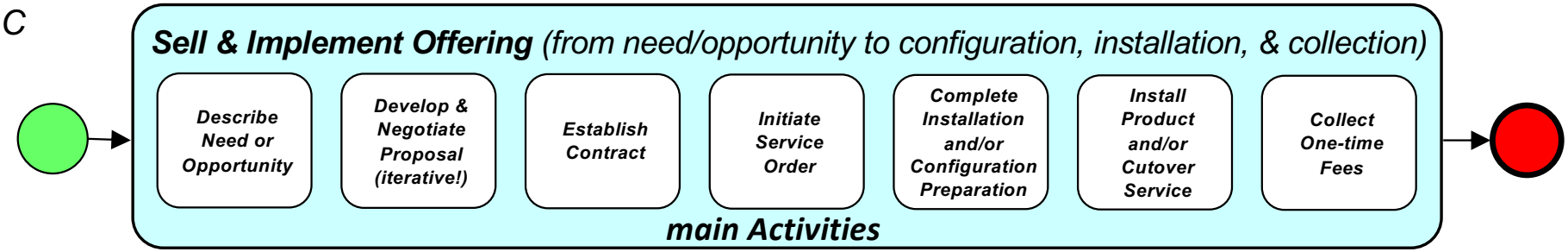


The outcome…
conflict between functional areas!



Process Scope Model showed ONE process not THREE

TRAC



Triggering Event:
- *Prospect / Customer* expresses *need*
- *Telco (Inside Sales, Marketing, Sales Rep, …)* recognizes *opportunity*

Cases:
- BU with or without Telco Internet, no cabling *(our focus)*
- initial installation
- service only
- product only
- mixed

Other factors:
- TBD

Results:
Customer:
Product / Service is *installed and operational* per original or amended contract terms
Telco:
- Ongoing source of *revenue* in place
- One-time *fees* collected

Employee:
- *Commission* or *referral credit*

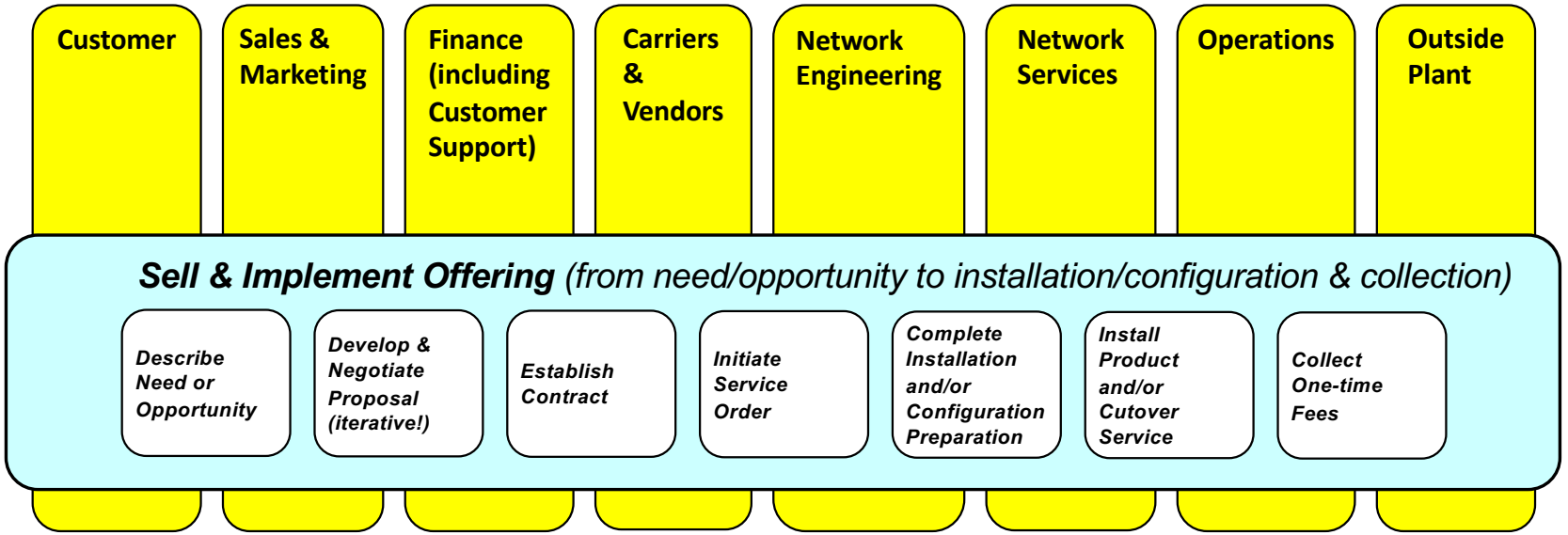
Agent:
- *Commission*

The "token," a Service Order, is changing state from *need/opportunity* to *configured, installed, & collected*.

The Business Process could be named "Fulfill Service Order" but the client wanted to name it "Sell & Implement Offering."

- President reports *culture change*. "We're all in this together!"
- An end-to-end, cross-functional Business Process is a great lens to view *organisation conflict and disfunction!*

Process Summary Chart – my favourite diagram!



Process Summary Chart (a.k.a. ”Process vs. Function Chart”) adds “who” at the organisational unit or functional level.

Nothing else clarifies "Process" vs. "Function/Organisation" as well.

Great for putting details of Activities or Functions in context, e.g. …

Multiple roles by organisation for "Sell & Implement Offering"

Customer

Roles:

- Office manager or Owner (Smaller)
- IT (Larger)
- C-level (CIO, COO, CFO…)
- Third party IT vendor or agent
- Customer Project Coord.

Sales & Marketing

Roles:

- Senior. Account Execs
- Strategic Rel'nship Managers
- Account Rep 1
- Inside Sales Rep

Finance (including Customer Support)

Roles:

- Sales Admin
- Order Writer
- Billing Rep.
- Customer Support Rep.
- Director of Customer Support
- Receiving and Posting Payments (what role does this?)

Carriers & Vendors

Roles:

- Port Out Specialist (for CS Record) CSR/LSR
- IT Person
- Local government
- "Call before you dig"
- Customer Project Co-ord (int/ext consultants or phone vendors)

Network Engineering

Roles:

- System Admins (assign IP)

Network Services

Roles:

- BU Tech (survey)
- Switching Specialist (NS Spec)
- Network Services Coord / Provisioner

Operations

Roles:

- Sales Engineer
- CLEC Technician
- Material Manager
- Materials Specialist
- Project Manager
- Customer Training & Support
- Install Supervisor

Outside Plant

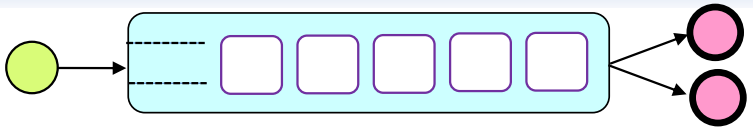
Roles:

- Drop Crew
- Lineman (not usually)
- Engineering Supervisor
- Outside Records Specialist

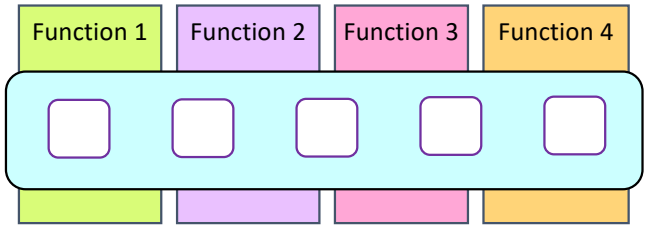
It was a shock to senior leadership to see how many roles were involved, often overlapping or unnecessarily

Many benefits to starting with a Process Scope Model

Why start with a *Process Scope Model?*



Then a *Process Summary Chart?*



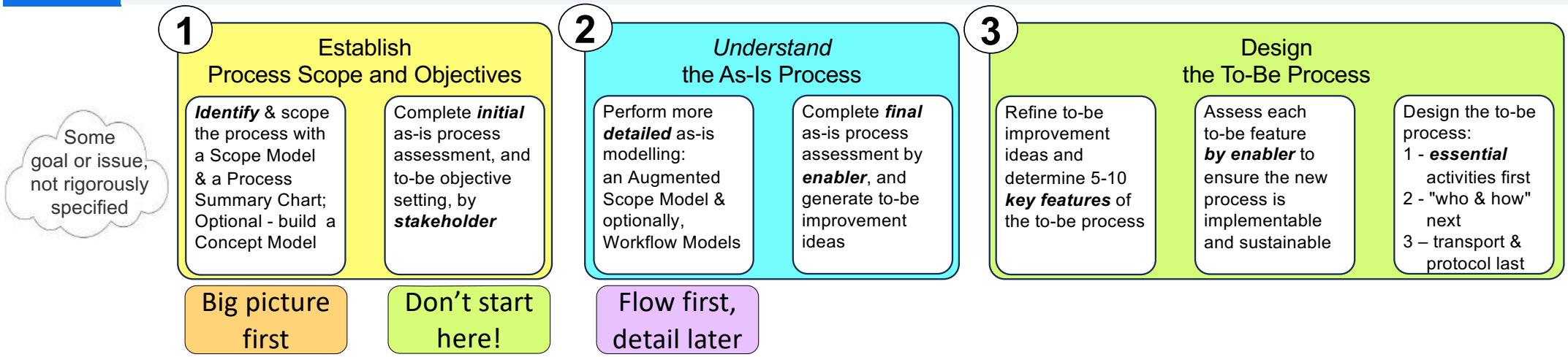
- People see themselves as part of something larger and more important than their own job, department, systems, …
- Without this, issues and objectives will be seen in functional (organisational) terms
- Actual client comments – The focus on w*hat*…
  - adds clarity and critical thinking.
  - highlights how far removed the "as-is" is from "what" we're trying to do.
  - avoids the tension that comes with "who and how," which is personal (it depersonalises in a good way

3) Don't start with "why?"

The essence of the technique:
After *venting and* establishing the essential *what* of the process or area being studied, conduct a three-part, stakeholder-based assessment of the as-is situation.

The three Cs:
Concerns – each stakeholder group's issues with as-is
Context – why these concerns are arising *now*
Consequence of inaction – if we don't change, what…?

Our methodology – three responses to three common difficulties



My *hardest* assignments

1 – Premature diagnosis of the situation

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

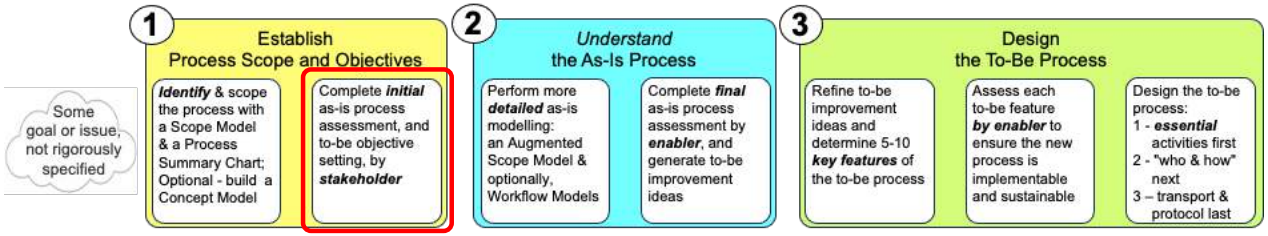
3 – A rapid descent into unhelpful detail

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.

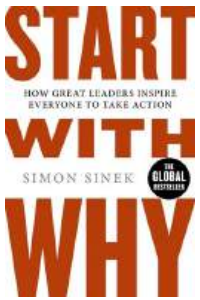
Rigorous techniques to identify real business processes – a Process Scope Model and a Process Summary Chart make scope and context visible.

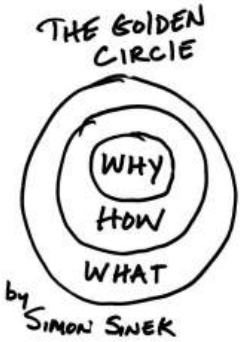
Clarify the big picture, then take a *controlled* descent with well-defined levels of detail.

Perform initial as-is assessment, determine to-be objectives



Why does this process need to change?





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

But for a process…

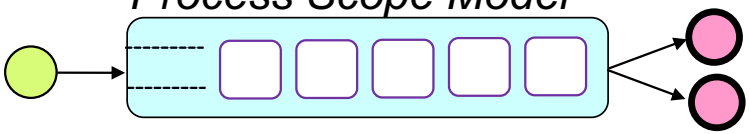
What first

Who & How next

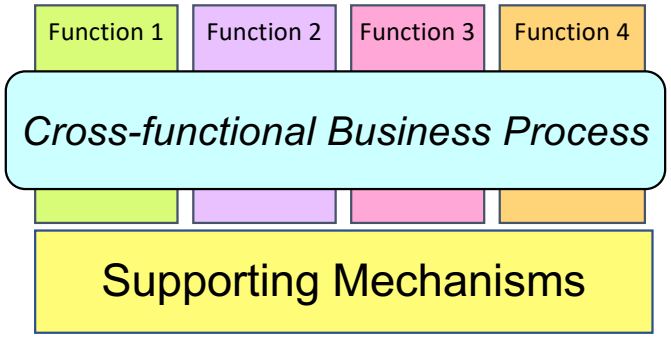
Only then *Why?*

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

Process Scope Model



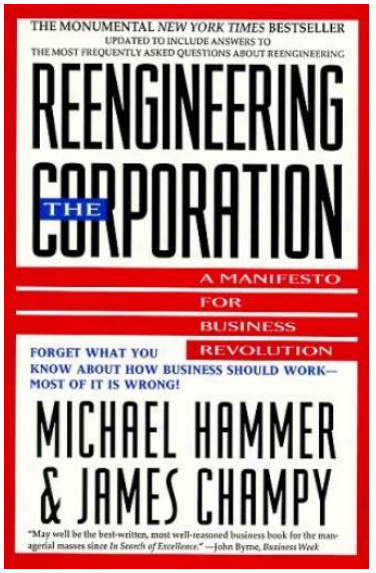
Process Summary Chart



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!

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?
Consider external and internal influences.

Areas to consider:

- Regulatory change
- Workforce changes (e.g., "recruiting and retaining" vs. "retiring")
- Emergent technology (e.g. 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 standarised)
- 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 –

Client was very happy!

- *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

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…"

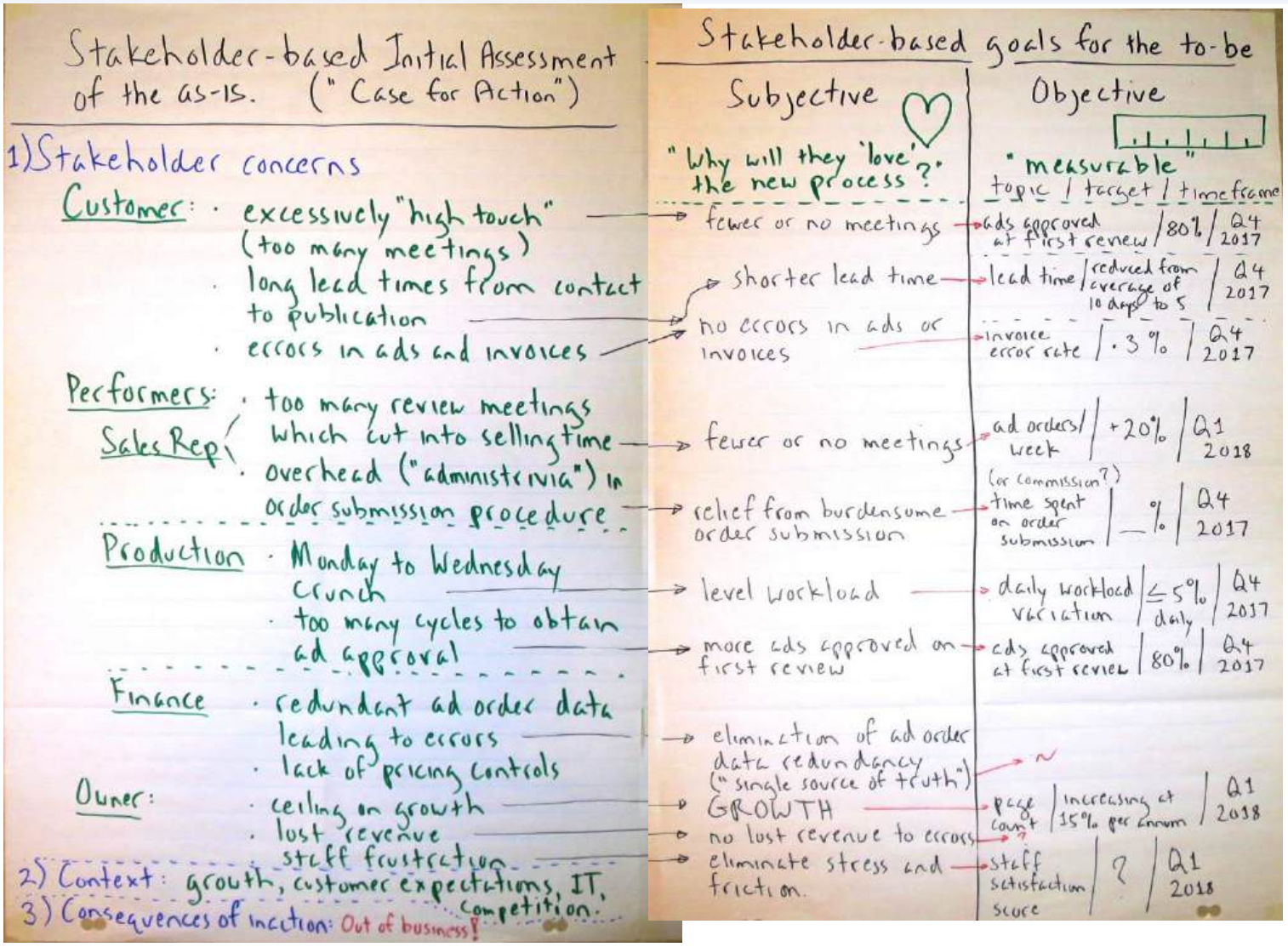
Measurable objectives

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

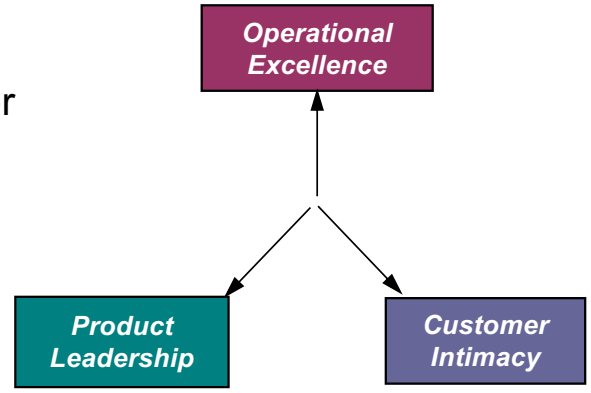
Example from in-person workshop – assessment to goals



Case for Action summary

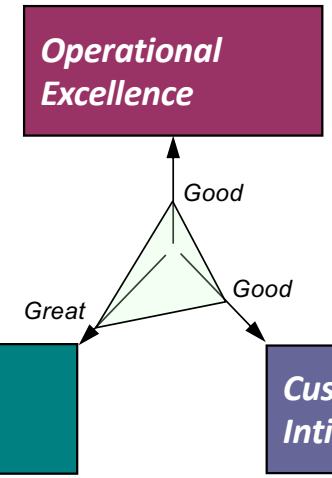
Stakeholder assessment	Context	Consequences of inaction
All stakeholders have *real* issues with the as-is process – it needs attention!	These issues have surfaced because of changes *beyond our control* in the wider environment.	If we don't fix this process, there are *serious* consequences – individually and for the enterprise.
Factual and unexaggerated	*Blame-free and non-threatening*	*Urgent!*

The *Case for Action* is also a great starting point for specifying to-be objectives,
and clarifying the process' *Differentiator*.



4) Clarify the "differentiator" – how will you excel? (a reminder)

Great at one,
good at the other two.
(Not awful at the other two.)



Consistent, predictable, error-free, and efficient – focus on low cost (or safety, in some industries.)

More efficient, but less flexible in changing direction or meeting needs of individual customers.

Continuous and rapid introduction of new products and services, or changes to the mix

More flexible for adapting to needs of new offerings, but less efficient.

Tailors product or service delivery to the processes of individual customers.

More flexible for adapting to needs of individual customers, but less efficient.

Key points -

1. Concept developed for the entire enterprise, but we find it more useful for individual processes / 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!*

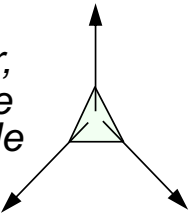
Understanding through differentiators

The first time I used this framework on a consulting engagement

At a leading U.S. Health Maintenance Organization *major* reengineering of "Provide Clinical Care" is stalled:

- I'm brought in to get it moving
- Quickly determine there are no overall objectives

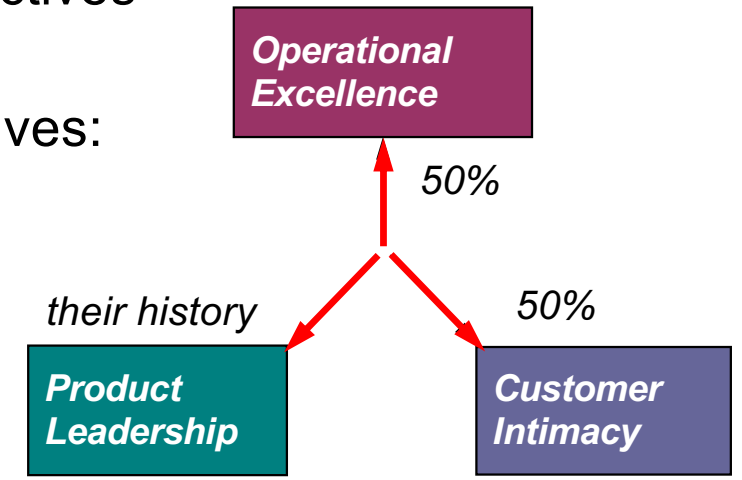
With no differentiator, you're stuck in the Bermuda Triangle



Key finding when determining program objectives:

- 50% thought Op Ex
- 50% thought C.I.

The immediate and ultimate outcomes…



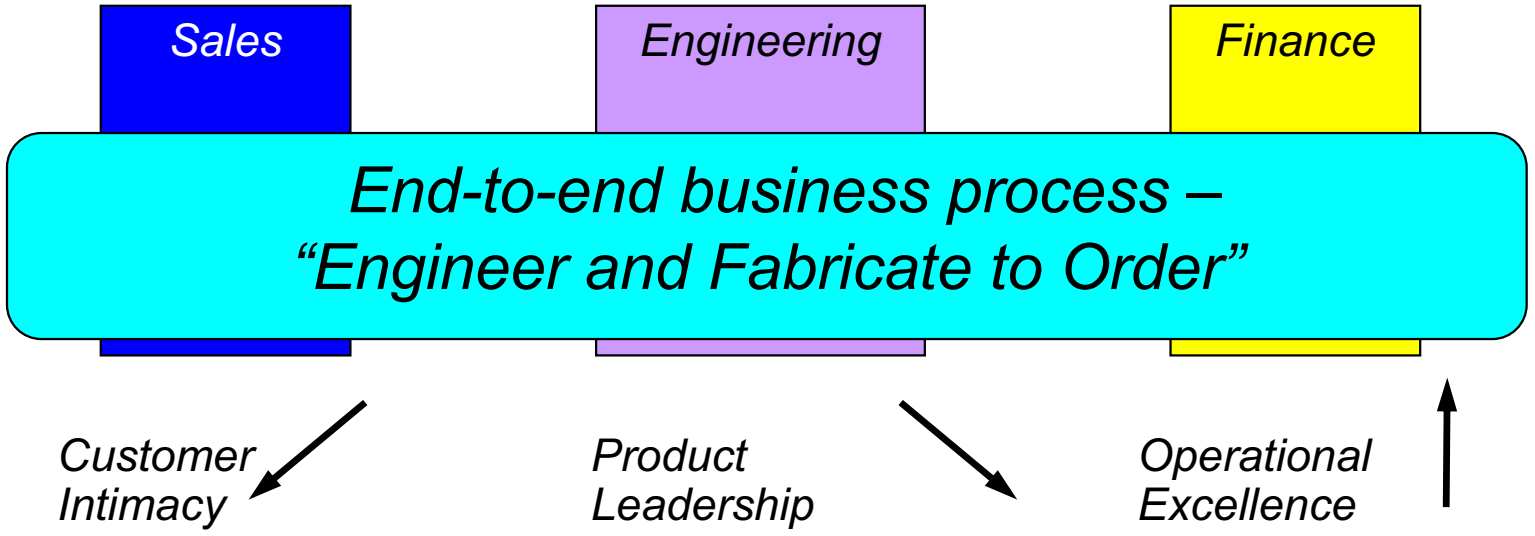
Conflicting differentiators or *no* differentiator are very common problems, so establishing the differentiator is part of every Project Recovery job

Another common differentiator problem

Conflicting differentiators within functions of a process leads to lower performance

An aerospace machine shop, once the leader at custom "design and build" was beginning to struggle and fall behind.

- Each of the three main functional areas had a natural affinity for a *different differentiator*
- Sales and Finance were doing what they thought was best but *causing grief* for the Engineering function the company's reputation was based on



Another example – different differentiators

Client: a financial services organisation offering the management of tax-advantaged savings for higher education was a recent assignment.

- We'll call them “EdSave.”
- Terrific growth, now things “fraying around the edges,” M.D. requested an “organisational review.”

Outline of our findings:

- Background, approach, observations, quick wins
- Mission and differentiator
- The organisation overall:
  Leadership and management, high-level structure, recruiting and retention
- The organisation's culture:
  Communication, management style, writing & review
- Cross-functional work and projects
- Organizational role refinement – Operations and Finance
- IT: Custom system (The “Windows app”,) outsourced development,
  IT role refinement
- Business Intelligence / Analytics

Later, in the section on *organisational culture*

EdSave differentiators

"EdSave" is a classic example of an enterprise in which two different business areas – development and execution – each have their own differentiator

In *developing new offerings*, the differentiator is clearly *Product Leadership*

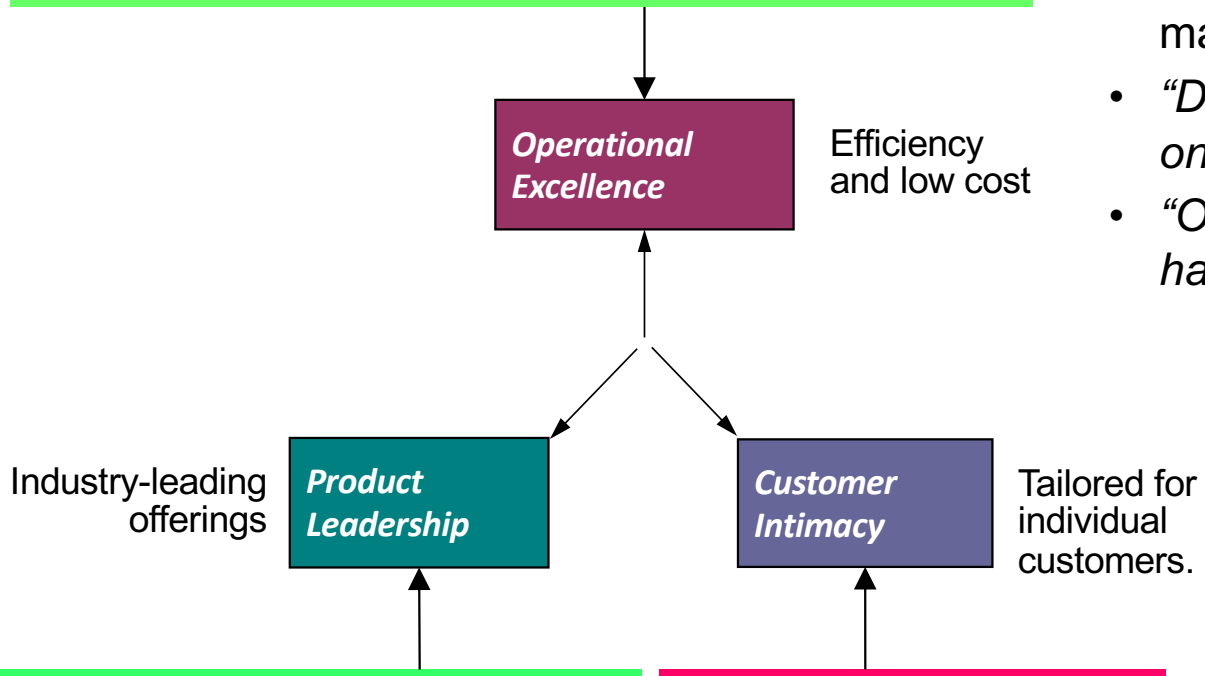
- EdSave known as the innovator
- New product development partly contracted out to external financial consultants
- "We must constantly innovate, because if the ratings fall, money *moves*."

In *serving the Account Owners* (opening, contributions, withdrawals, …)
EdSave's differentiator must be *Operational Excellence*

- To drive the cost structure down, EdSave must continue to drive Account Owners to an easy-to-use web experience and minimize person-to-person interaction
- *"The Boglehead mentality focuses on fees, fees, fees."*
- "<EdSave offers> *a simple plan for simple people to engage in a solid plan."*
- *"We must make a concerted effort to minimize complexity"*

Vision – what is EdSave's "differentiator?"

2) Operationally, EdSave must "execute like crazy"
- low costs lead to low fees
- understandable offerings and processes



1) EdSave creates leading products
- consistently first with new options
- partially subcontracted out

***Don't* get distracted by tailoring for individual customer needs**

EdSave's differentiator is not *Customer Intimacy*, and should not be distracted by it

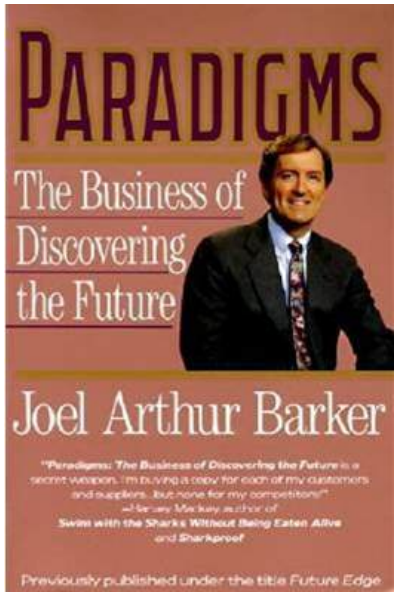
- The most common error organizations make is trying to excel at Op Ex *and* CI
- *"Do we really need to respond to that one cranky customer?"*
- *"One comment from an Account Holder has us trying to turn on a dime."*

5 – Identify the organisation's beliefs, and their impact

The essence of the technique is to identify the underlying (and often unstated) *beliefs* that drive the behaviour of the organisation – the *paradigms.*

E.g.,

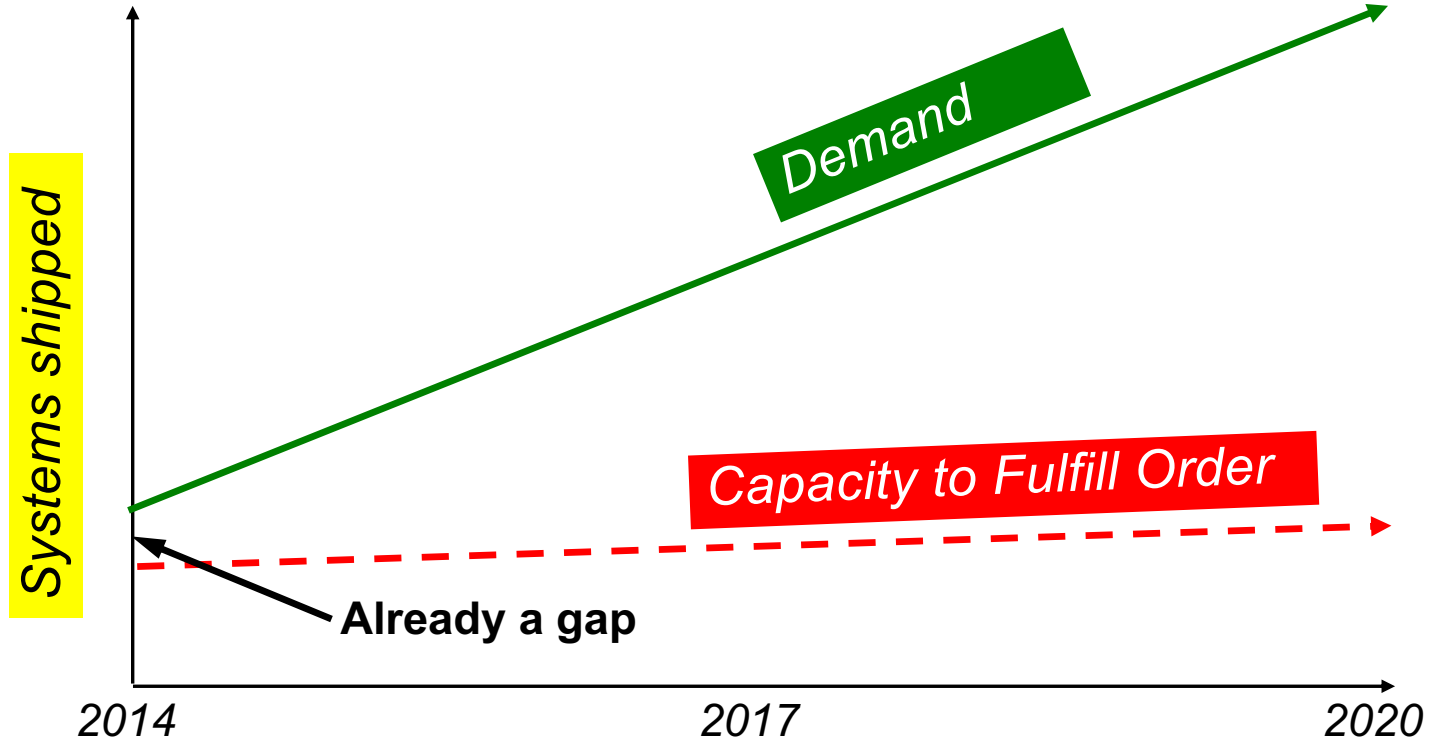
- Belief –
  "Our Customers expect a *high-touch* experience with *personal contact*."
- Reality –
  "Our younger Customers want a *low-touch* experience via an *app*."



Then, are these beliefs preventing the organisation from moving in the direction it needs to go?

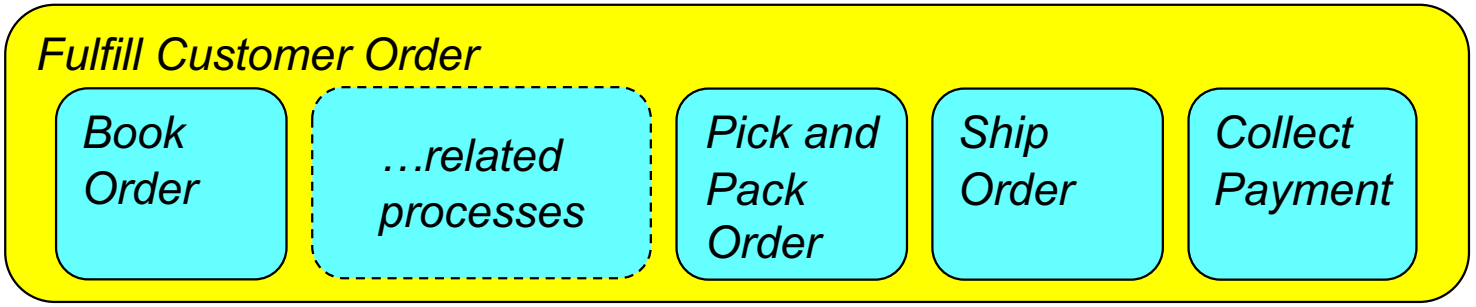
Case study – belief systems as barriers

The Problem:
Leading high-tech manufacturer hits limits to growth –
they can *build*, but can't seem to *ship* complete systems



What works for a $100M company doesn't work for a $1B company!

Hitting the wall of beliefs



Determined root causes and suggested process changes.

But, for every suggested change: **"We can't do that!"**

The Third Law of Process Design: "*For every suggestion, there is an equal and opposite reason it can't be done.*"

Team visibly dispirited: "This is the point we always get to!"

Me: *"Always…?"* Team: "This is the fifth time we've tried!"

Classic symptom of having "hit the limit" with underlying beliefs

To achieve more than incremental improvement, a new platform of beliefs and principles is needed.

Formulate value statements – new beliefs

First, identify barriers, the underlying beliefs causing them, then ***new beliefs***

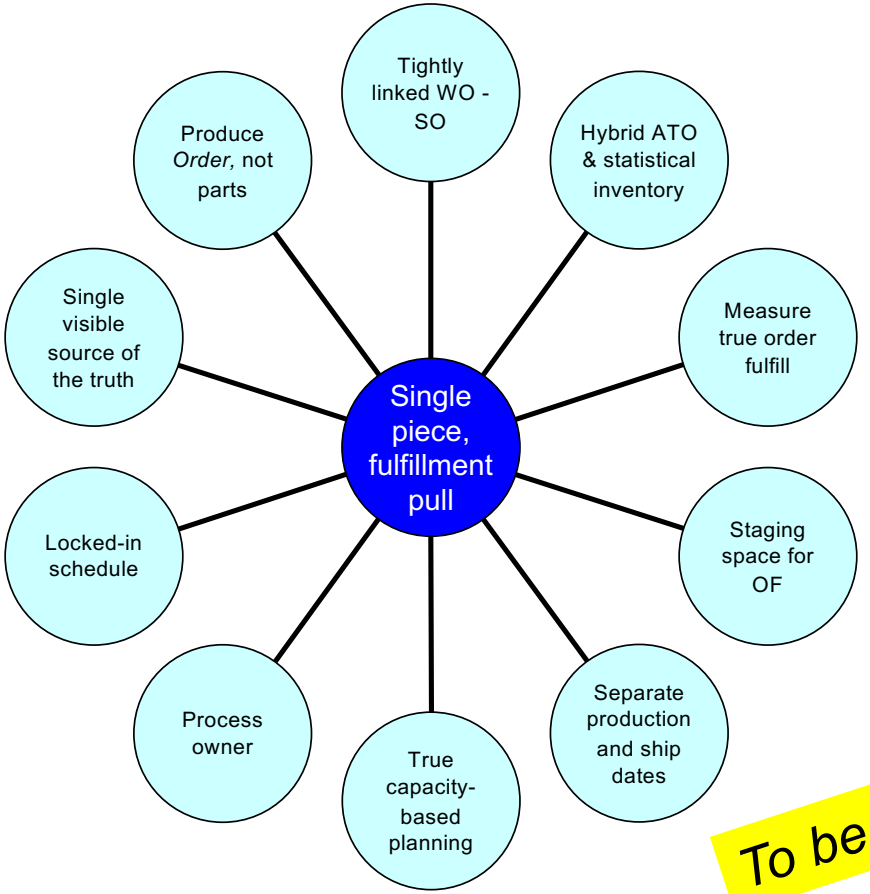
"We value this…"	**"We value this more…"**
Adapting schedules and dates to meet customer requests.	Providing a firm Promise Date to the customer, and sticking to it
Capacity utilisation of a cell or a person.	Smooth, non-disrupted flow of the overall process and the well-being of associates.
Responsive teams.	Recognizing that teams have a real lead time and capacity.
Teams value their data	One visible source of the truth
Filling Consumable Orders within 24 hours and minimising finished goods inventory. ***(This was the core issue!)***	***Shipping complete system orders according to Promise Date and not "cannibalising" them.***

Borrowing from The Agile Manifesto

This simple but cohesive set of value statements enabled us to describe a new process.

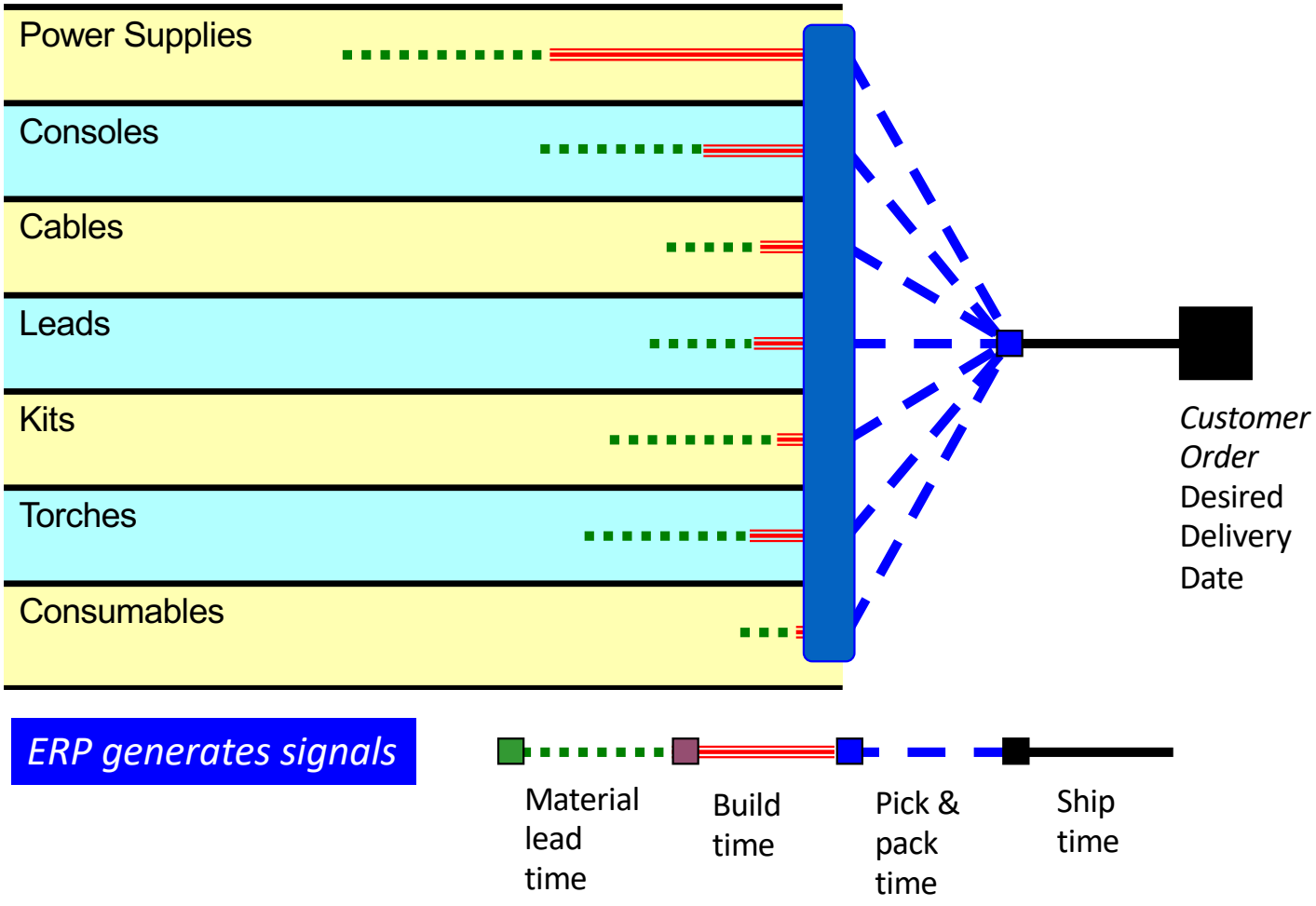
Collect ideas. Lots of ideas…

Identify 5 to 10 key features of to-be process

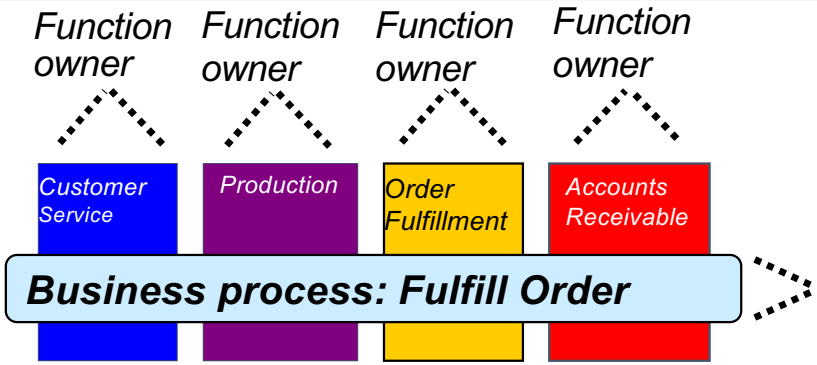


To be continued . . .

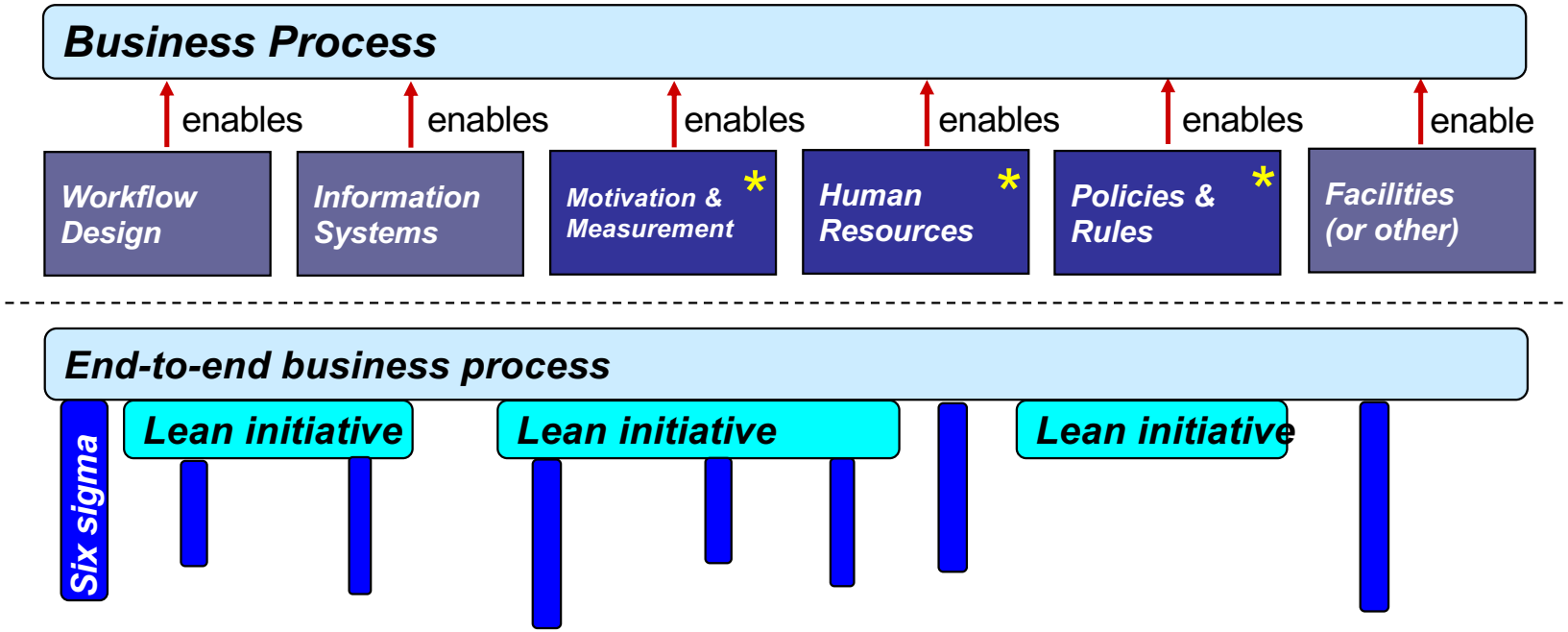
Fulfillment-pull model



Reporting it out to the CxOs



Who owns the process? A process owner/steward/officer *must* be appointed
- clarify goals and metrics for the process
- ensure and monitor alignment among all the moving parts/



6 – Describe organisational culture, and its impacts

Culture: behavioural norms that are reinforced because they are seen as “good.”

Amplified by the behaviours of leaders

Evident in the behaviours of individuals and groups

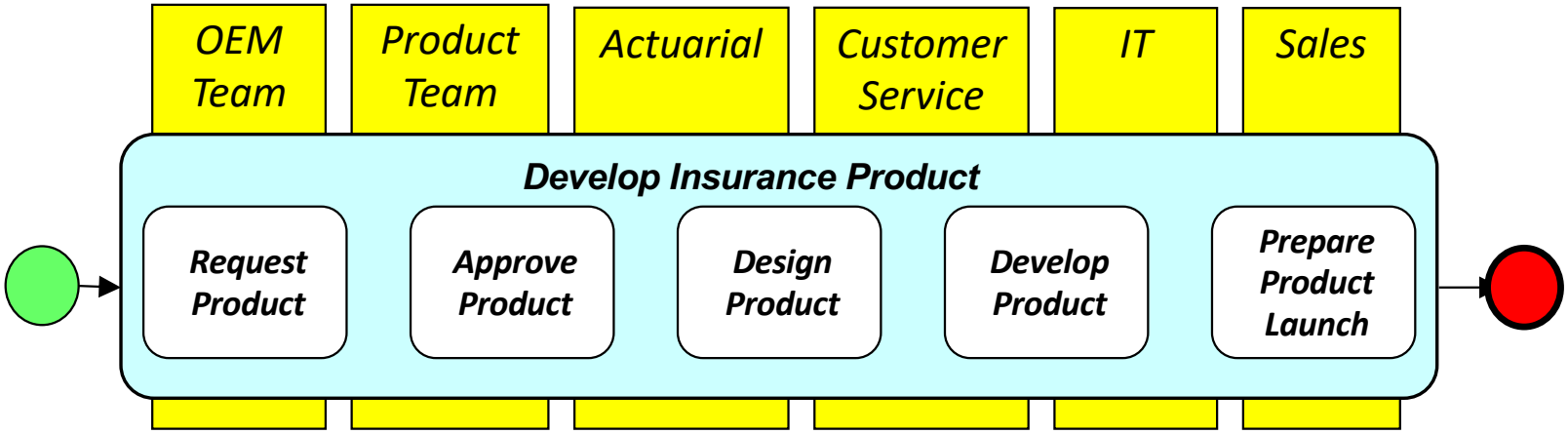
Embedded in a network of organisational practices

Visible in the “way that work gets done” on a day-to-day basis

Shared beliefs, values, and assumptions held by members of an organisation

Summary image from http://www.nhorizons.ca/

Note – "What is good?" may vary across functions



The misalignment might not be in explicit measures, but in different groups' perceptions of "what is good"

- OEM – deadline driven
- Product – number of products / features introduced
- Customer Service – simpler products
- IT – bug-free product launches

Organisational Culture

1) Assess "organisational culture," formally or informally, using one of the available frameworks –
we'll use the Organisational Culture Assessment Instrument (OCAI.)
All organisations have a culture, recognised or not.
Impacts process design and ability to change e.g.,
an organisation characterised by
centralised, top-down control and decision making
will not successfully implement a change requiring
front line accountability and decision making
What is a *best practice* for one culture can be a *worst practice* for another

2) Considerations
A quick, informal assessment is probably adequate
You might keep your assessment to yourself…

Organisational culture

OCAI – Organisational Culture Assessment Instrument

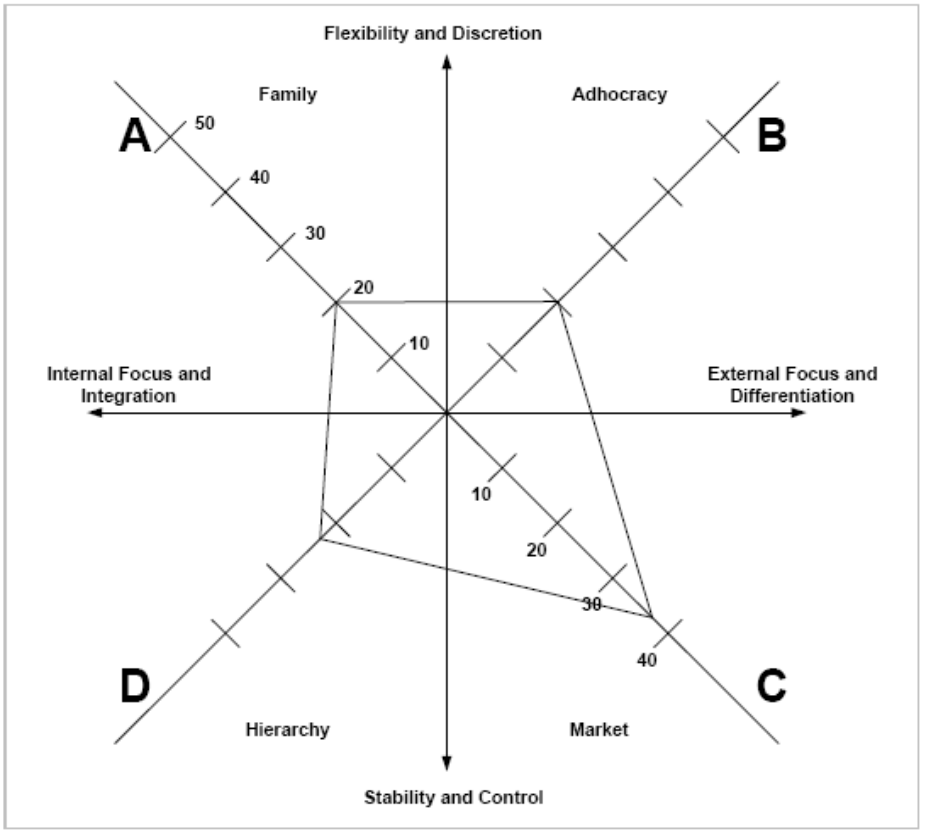
Professors Kim Cameron and Robert Quinn found two dimensions of culture were vital in understanding effectiveness:

- *Internal* focus and integration
  vs.
- *External* focus and differentiation

- *Stability* and control
  vs.
- *Flexibility* and discretion

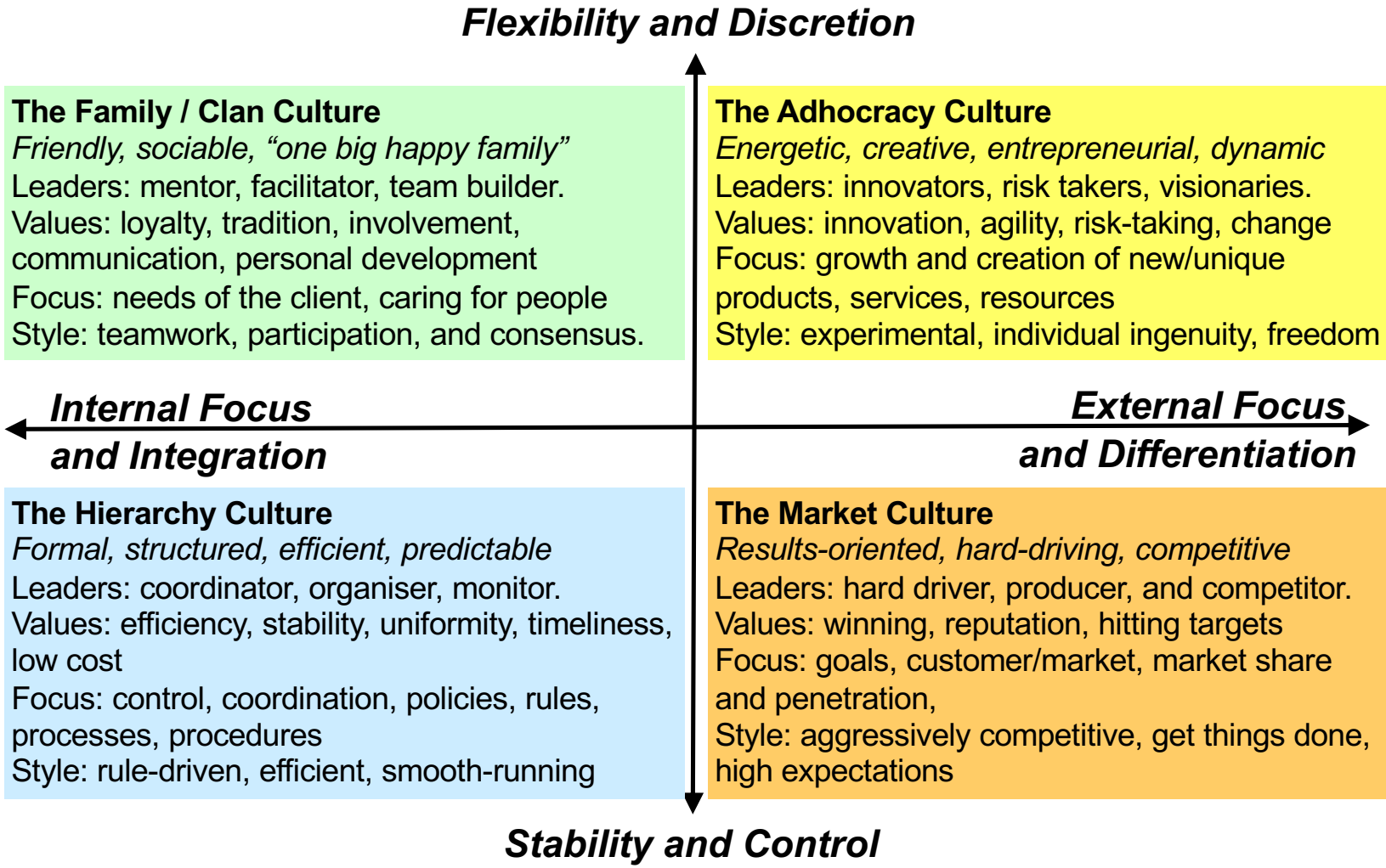
A survey-based assessment determines

- *current* dominant organisational or team culture
- *desired* organisational or team culture



Rather than formal surveys, it can be effective to just *observe and ask.*

OCAI – Organizational Culture Assessment Instrument

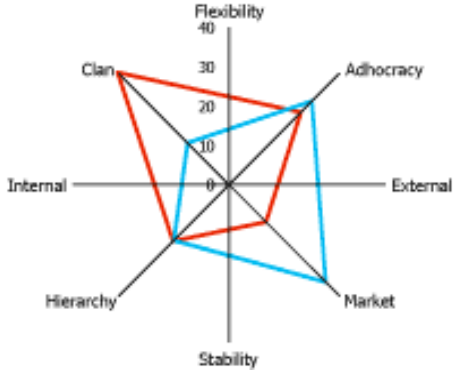


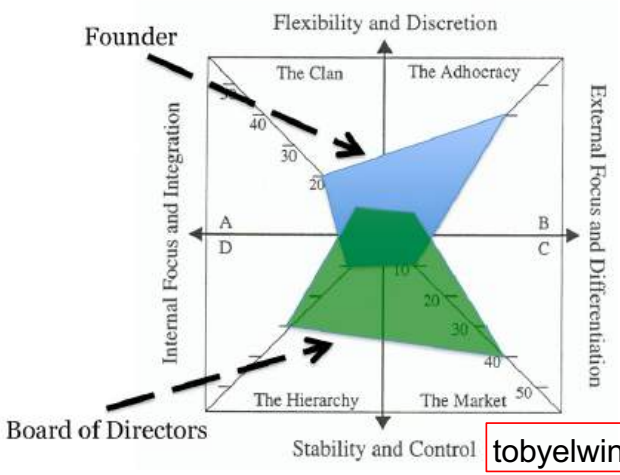
OCAI method

Test takers assess corporate culture, splitting 100 points over descriptions of the four culture types with respect to six aspects of the organisation – dominant characteristics, organisational leadership, management, etc.
Done twice – current state and desired state
The culture profile illustrates:

- Current blend of cultures and the dominant culture
- Relative strength of the dominant culture
- Discrepancy between present and preferred culture

Can also show “competing values”:



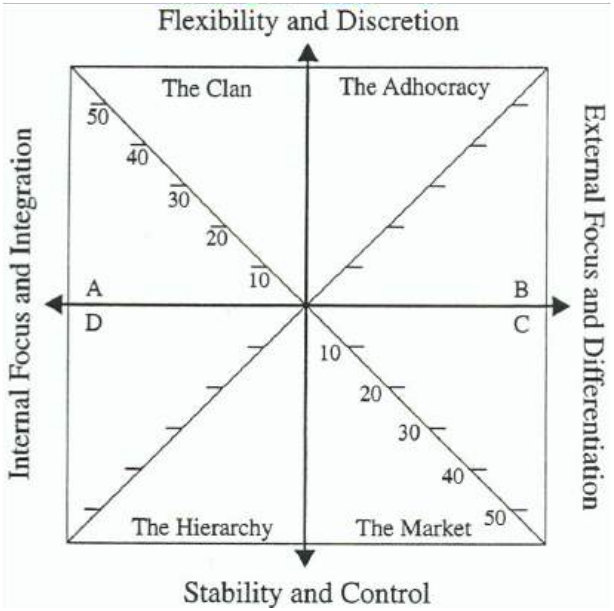


tobyelwin.com/competing-values-drives-your-organization-out-of-business

As noted before, you should always be *observing and asking.*

An example – 2

The “organisational review” at EdSave included an informal OCAI assessment:
Off the scale in “Market culture”, essentially 'zero' in “Family / clan culture”
This shaped the planning and design of the desired future state.



We didn't actually draw the chart – didn't have the data to back it up.
These often are drawn to show differences between two groups, or “current” and “desired.”

National culture

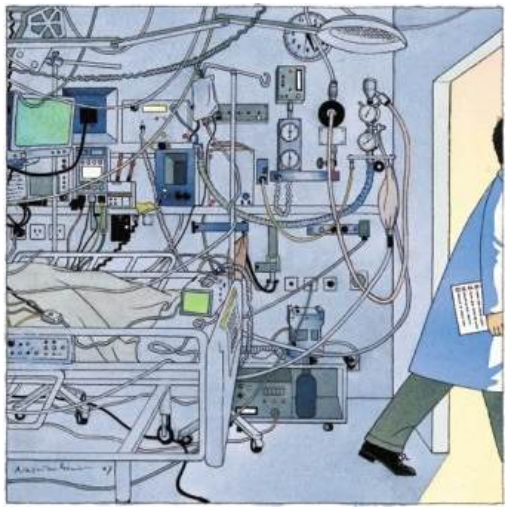
Modeling culture with Hofstede's cultural dimensions:

Small vs. large power distance	How less powerful members of groups perceive (and accept) that power is distributed unequally.
Individualism vs. collectivism	How an individual identifies with self or with group, how performance is seen as a group or individual function, …
Masculinity vs. femininity	Value of competitiveness, aggressiveness, assertiveness, etc. vs. relationships, quality of life, etc.
Low vs. High uncertainty avoidance	Extent to which uncertainty and ambiguity are avoided; "strong avoidance" values standardization, structure, rules, ritual, etc.
Long vs. short term orientation	"Future leaning" attitudes, e.g. thrift and persistence vs. "past/present leaning" e.g. benefit now, respect for tradition, and reciprocity.

DISC-
red vs green

Understanding this has many implications for matching future state design to the organisation

Closing thought – procedure driving culture change

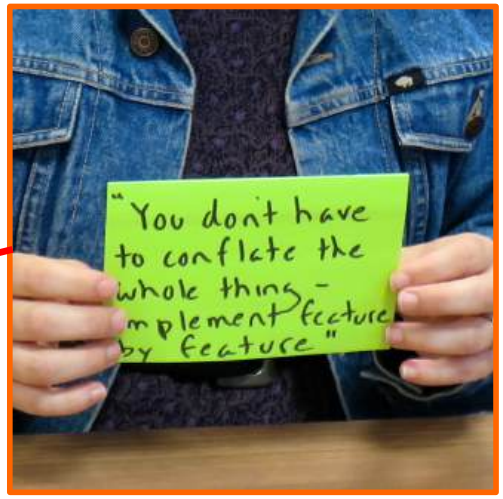


"The Checklist"
The New Yorker
Dec. 10, 2007 +
2011 Commencement Address,
Harvard Medical School

The point – fantastic statistical improvements in surgical outcomes from utilising a pre-surgery checklist.
Amazingly, this also drove *cultural change!*

7) A feature-based approach to process design

1) The essence of the technique is to identify each key feature of the to-be process, and determine what will be required (***enabler by enabler***) to make it work.
   The alternative is to treat the entire to-be process as a “big bang,” implemented all or nothing.

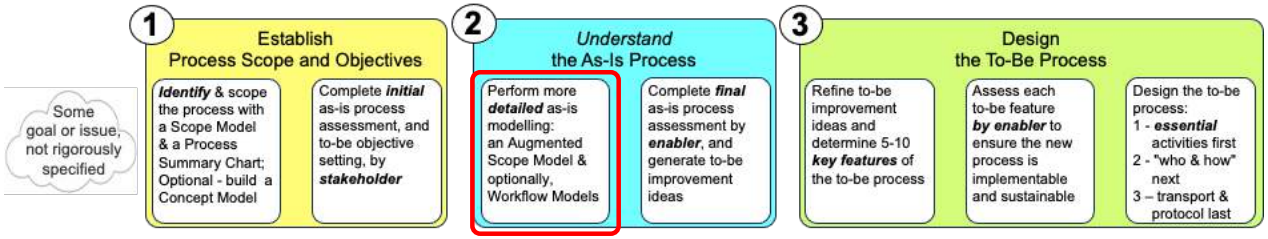


Supports implementing change, feature by feature. Highlights need to understand the six enablers. More in the upcoming section on design

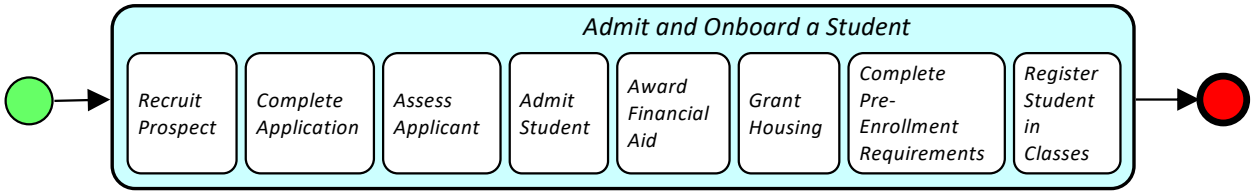
Making process modelling relevant

1. Five things you need to know about *Business Processes*
2. Identifying true, end-to-end, cross-functional *Business Processes*
3. Developing a *Process Architecture*
4. Seven ways to help people embrace *Process Change*
5. *Human-oriented* process modelling
6. A feature-based *Process Design* method – transitioning from *as-is* to *to-be*

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 / assess 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

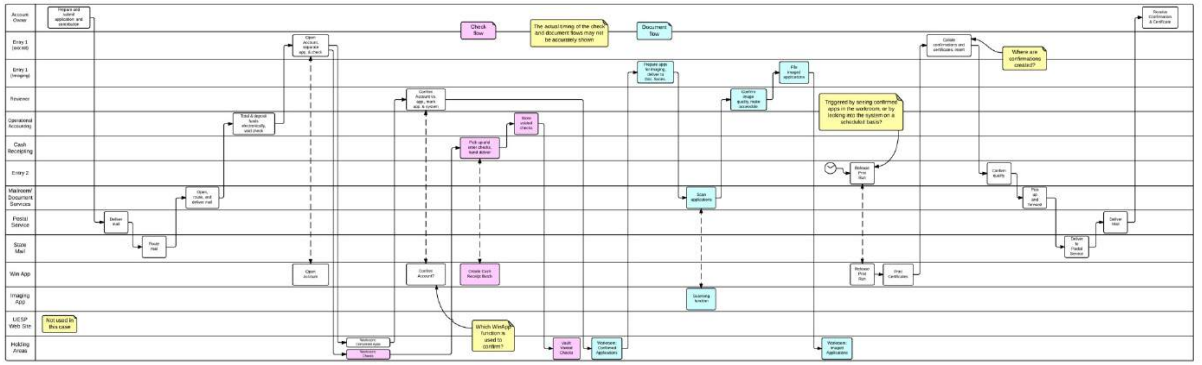
Optionally, model initial Workflow –

- Simplicity – minimal symbols and detail
- "Flow first, detail later!"

I always build an Augmented Scope Model –

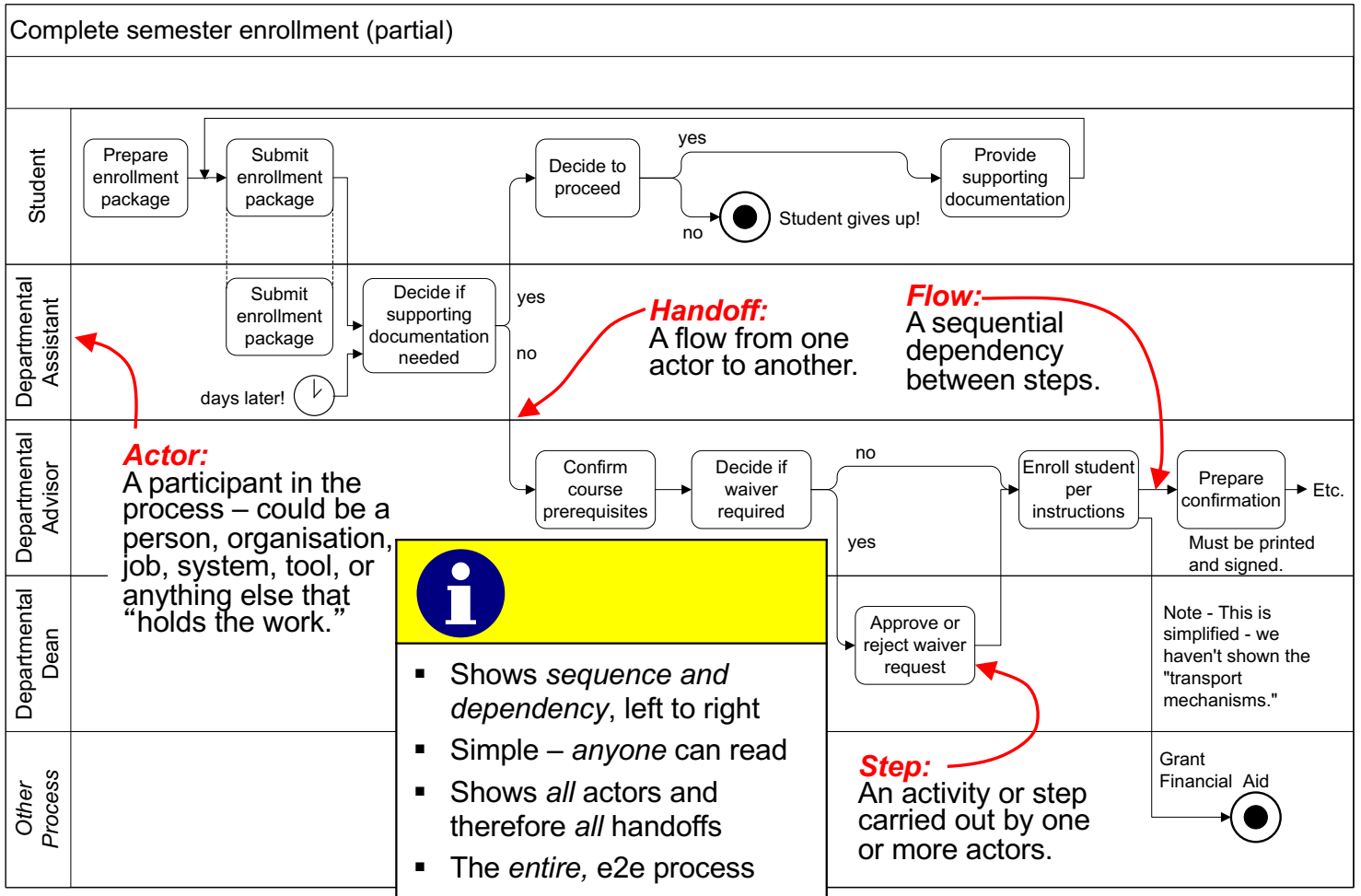
1. *What* the *detailed* activities are, e.g. "Register Class" (verb + noun)
2. Add *who* and *how*, e,g, "*Advisor* Register Class *via SIS*"

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



www.lucidchart.com

Simple Swimlane Diagrams – maximise their strengths



Who – the actors

What – the steps

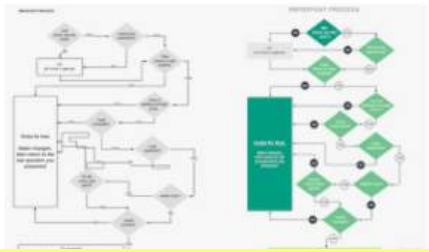
When – the flow

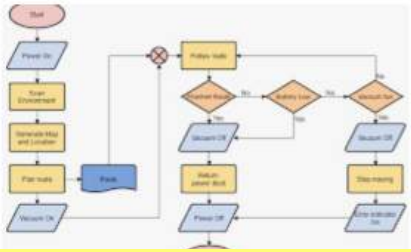
Other tools are better for capturing detail – *how* the steps are done:

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

Why did simple Swimlane Diagrams become popular?

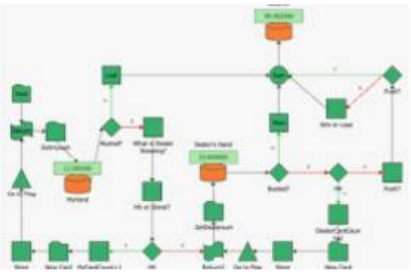
A quick Google Images search on "swimlane diagram" reveals…





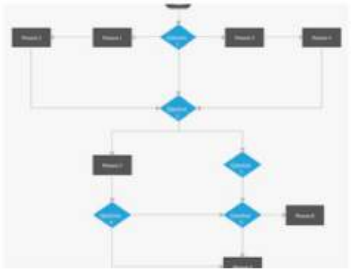
… lots of diagrams I might draw differently.

Dota 2 Flow Chart ...
reddit.com



complex RENO flowcharts easier ...
weibull.com

Follow flowchart best practices without ...
cacoo.com

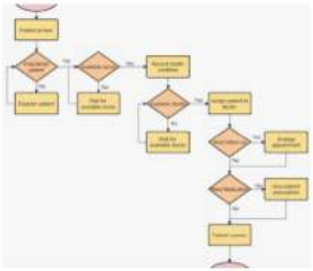


Flowchart Tutorial (Complete Flowchar...
creately.com

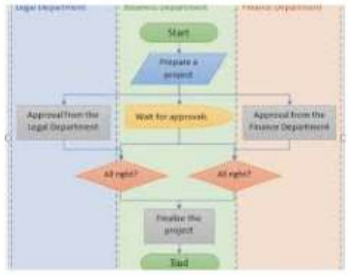
21 Creative Flowchart ...
visme.co

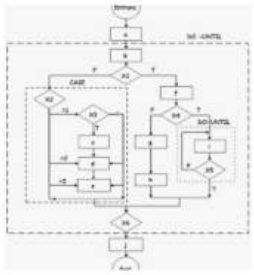
Flowchart Programming ...
conceptdraw.com

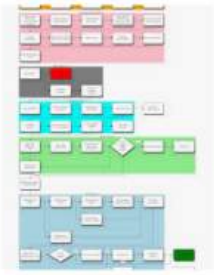
Free Flowchart Templates ...
gliffy.com

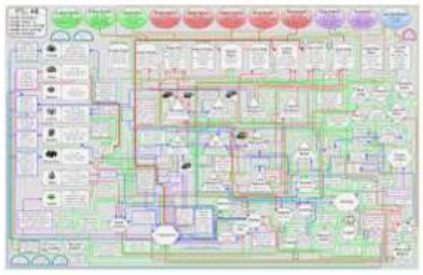


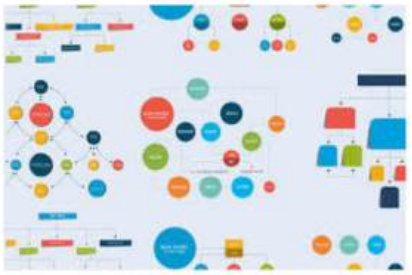
Flowchart Tutorial (with Symbols, ...
visual-paradigm.com

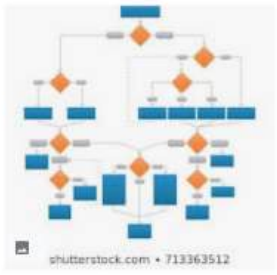




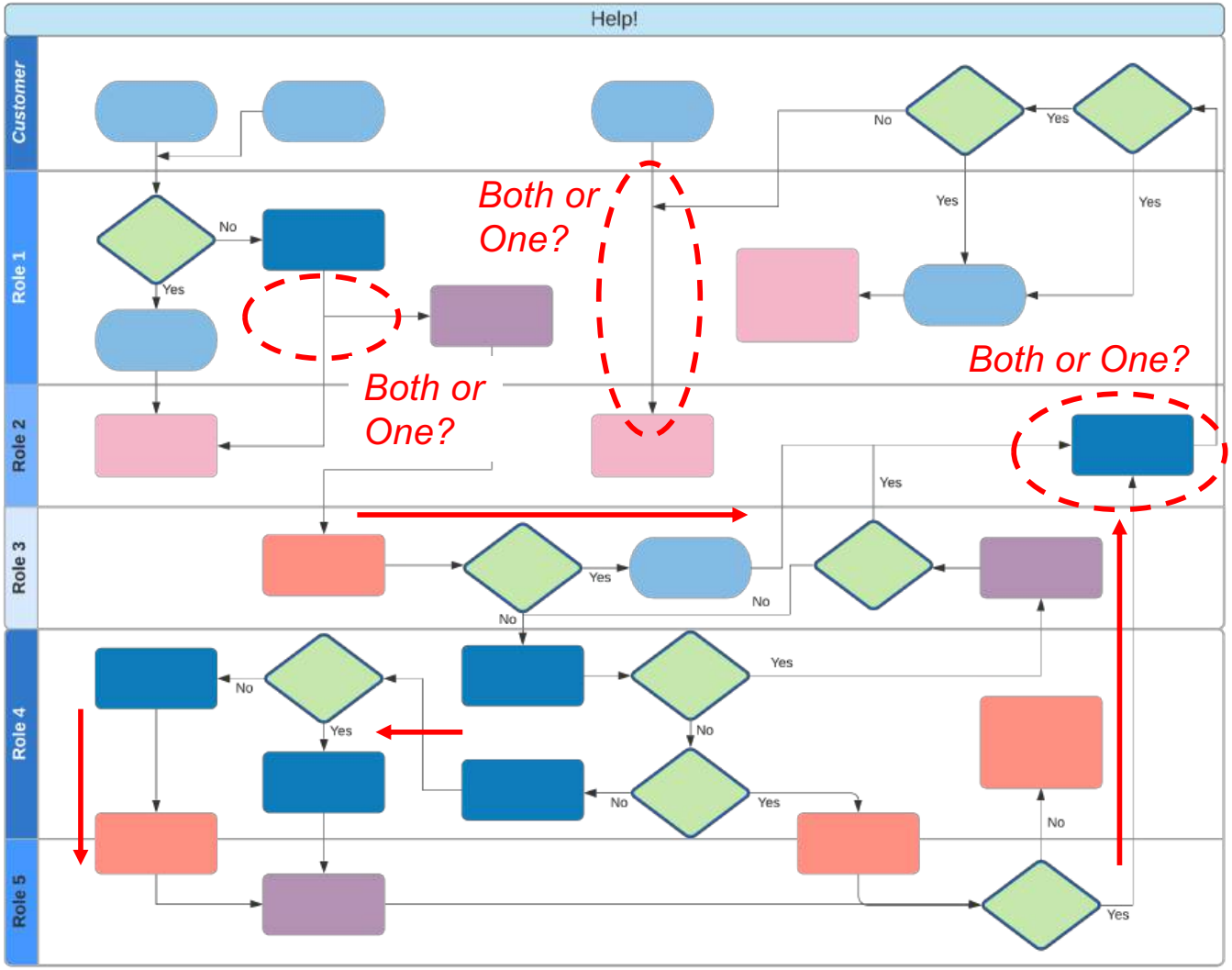








One example… "Chaos With Colours"



Probably accurate,
not too many symbols, but…

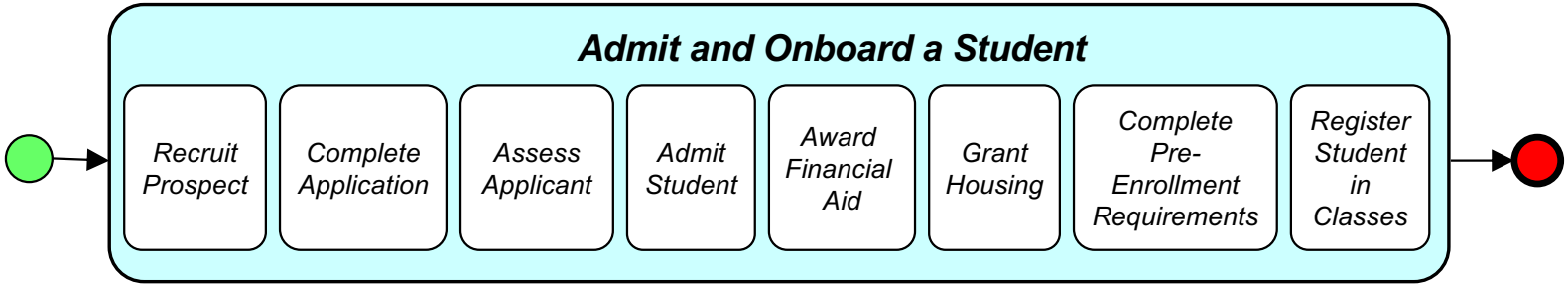
- do unexplained colours help?
- significance of multiple flows?
  - two separate flows inbound to a step
  - two joined flows inbound to a step
  - one outbound flow splitting
- but most of all…
  flows in all directions!:
  - left to right
  - right to left
  - top down
  - bottom up

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



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- etc.

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- Confirm Other Requirements (visa, shots, insurance, …)
- Register Orientation
- Complete Orientation
- etc.

- Identify Courses
- Create Class Schedule
- Register Classes
- etc.

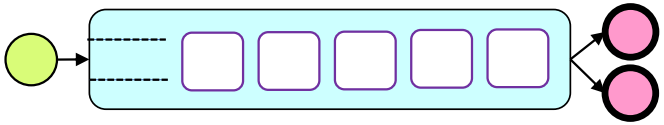
Later add *who* & *how* to each Activity

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

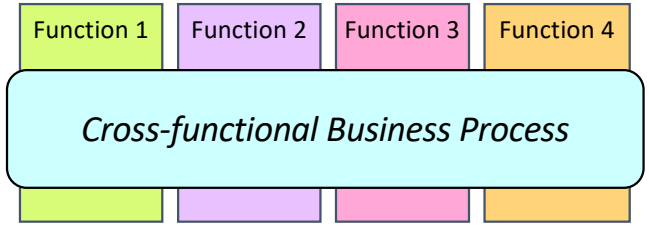
Before "swimlaning"…

We're almost at swimlane level!

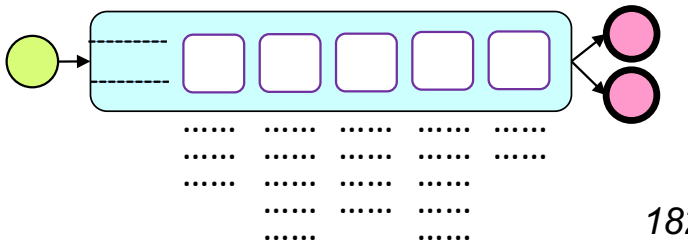
Always!
Process Scope Model *(TRAC)*



Always!
Process Summary Chart



Almost always!
Augmented Scope Model

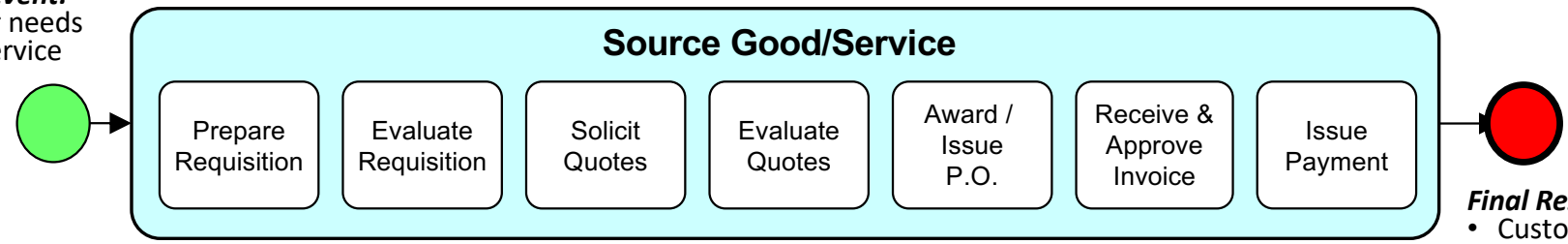


Another fast Augmented Scope Model example

Cases:
- $5000 - $25000 Goods
- $25000 - $50000 Goods
- $5000 - $25000 Services
- $25000 - $50000 Services

Assume everything <$5000 is purchased with a PCard

Triggering Event:
- Customer needs Good / Service



Develop scope of work / specs

Investigate potential vendors (and price?)

Solicit vendor quotes (just to get an idea)

Obtain approval (Department)

Verify Item and Account (General Accounting)

Submit requisition (visible to all)

Confirm completeness – get clarification this is actionable (scope sufficient)

Assign (or re-assign Buyer as necessary)

Identify MBE/SB opportunity (competitive) (co-op)
* sole source or co-op, vendor(s) known

Determine methodology
- sole source
- co-operative (piggyback on contract)
- competitive
- emergency

Determine (additional) potential vendors

Solicit quote (including Bid Due Date)

Post quote (solicitation documents) in "the binder"

Resolve vendor queries

* Up to $200K, we control who gets solicitations; above, no control – it's "publicly advertised."

Over $200K there would be 20 more activities, and could be multiple award.

Receive quote (mail, fax, e-mail, …)

Confirm completeness

Verify suitable price, terms, and conditions (generally, low bid for equivalent)

Clarify (not negotiate) with vendor

Optional:
- Evaluate equivalency (for alternate)
- Confirm equivalency w. Customer

Identify vendor

Generate Purchase Order

Notify Requestor

"Transmit / deliver" P.O.
* Pain point – we aren't sure when the vendor receives the P.O.

Receive Good/Service
* Invoice could be attached

Accept Good/Service

Issue invoice (vendor)

Receive invoice:
- from vendor
- from the department the vendor sent it to

* Vendor complains invoice is "lost"

If >$5000, match
- invoice
- PO
- receiver

If <$5000, match
- invoice
- PO

* Could invoice $4K on $40K PO

Batch invoices for GAD

Issue Payment (Magic Happens Here)

Receive payment

* If multiple line items, different line items could go to different vendors;
* If multiple vendors, line items are not split.

Final Results:
- Customer has received Good/Service:
- Vendor has been paid
  - via A/P
  - via PCard

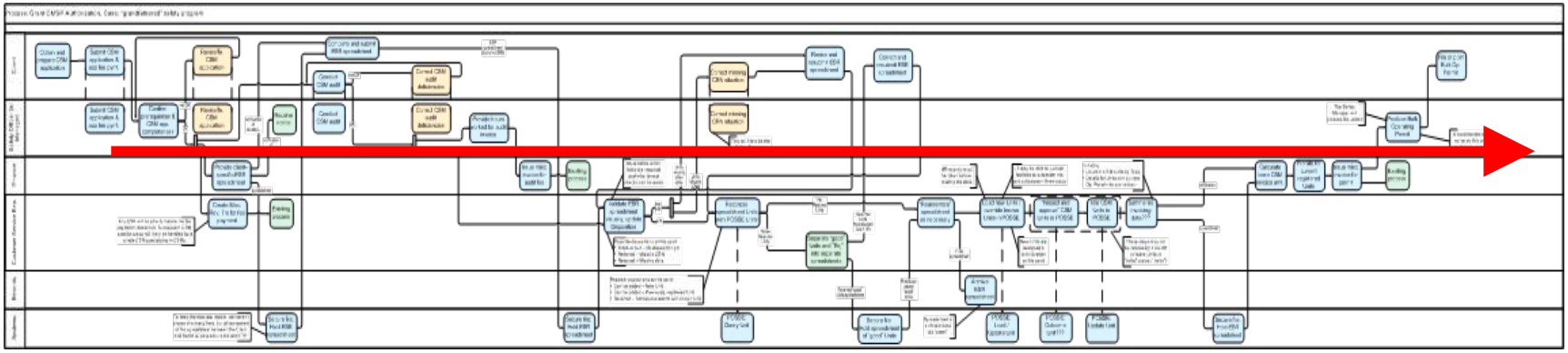
Core principles – "Flow first, detail later" and "Simplicity!"

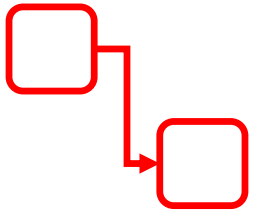
The purpose of a *Workflow* Model is to show the *Flow* of *Work*

Whatever you call them,
they are a *great* tool for showing flow –
sequence and dependency of steps

- Swimlane Diagram
- Workflow Model
- Process Map
- Cross-Functional Flowchart
- People-Process Chart
- Functional Deployment Diagram
- Process Responsibility Diagram
- LOVEM Diagram
- …

Left-to-right flow





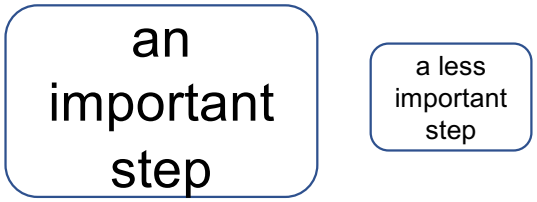
Simple… but not *simplistic*

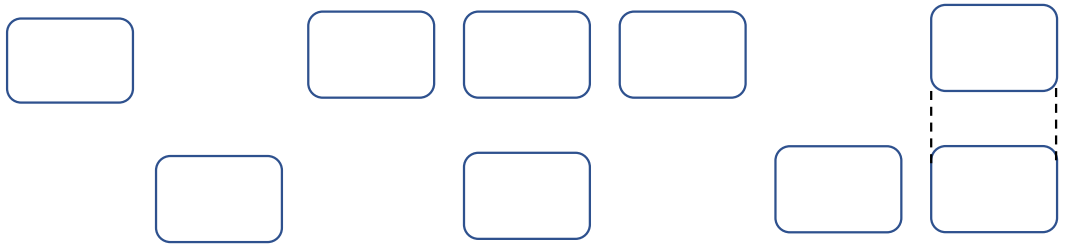
Symbols were just boxes and lines

The Cognitive Psychology of diagramming

What do people first perceive on a diagram?

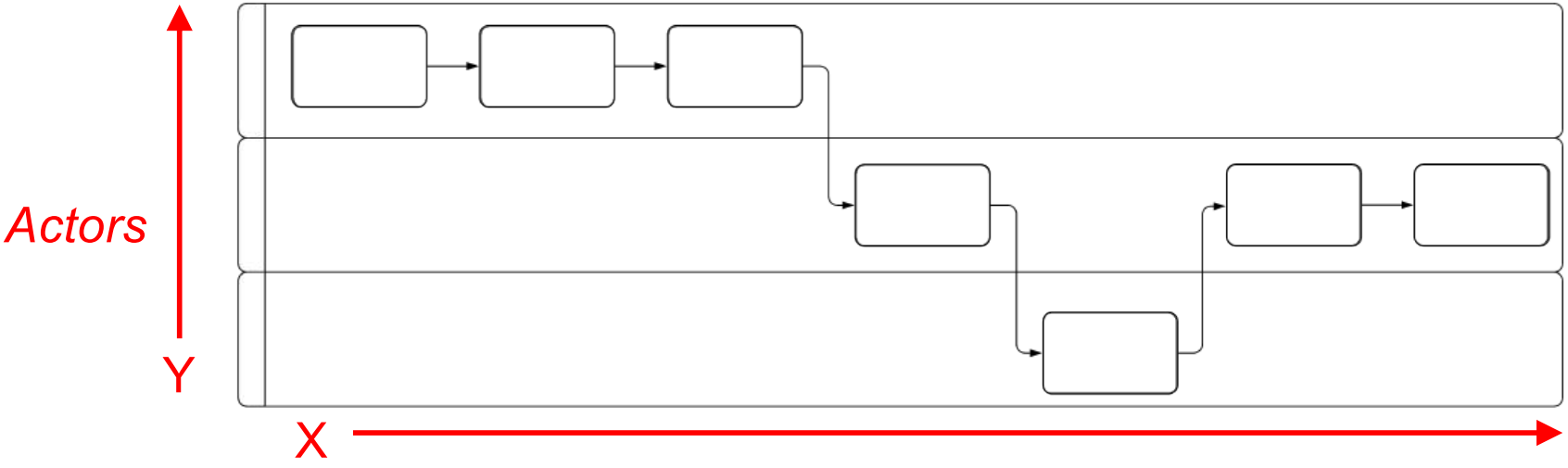
1. relative size



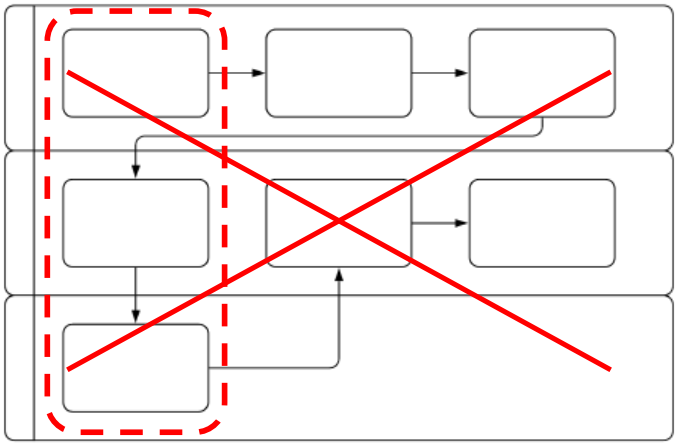


Make all the steps the same size, *unless* you're trying to make a point

2. relative X-Y position



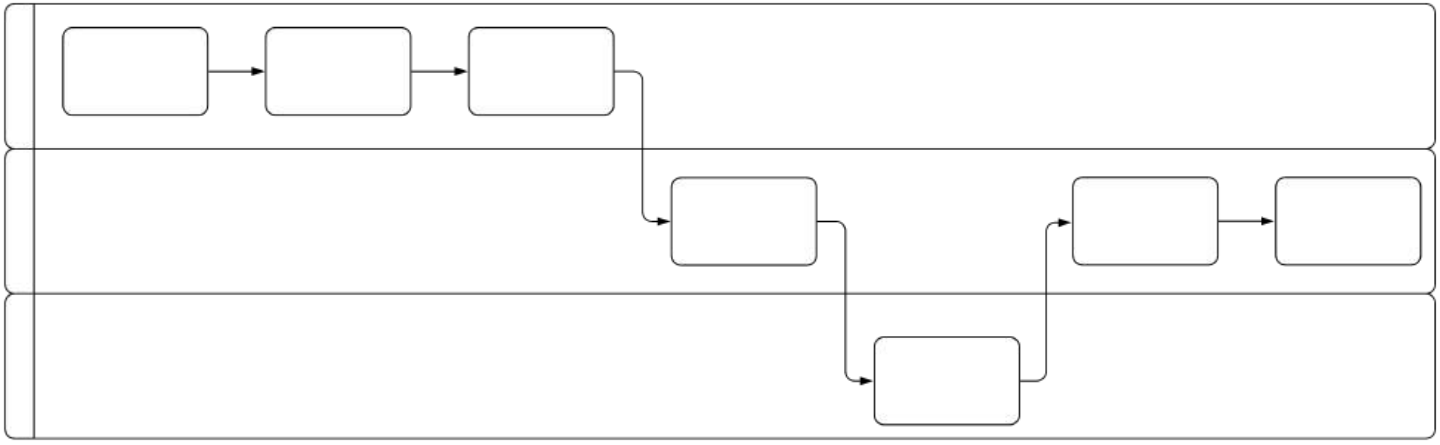
Don't conceal sequence and dependency



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.

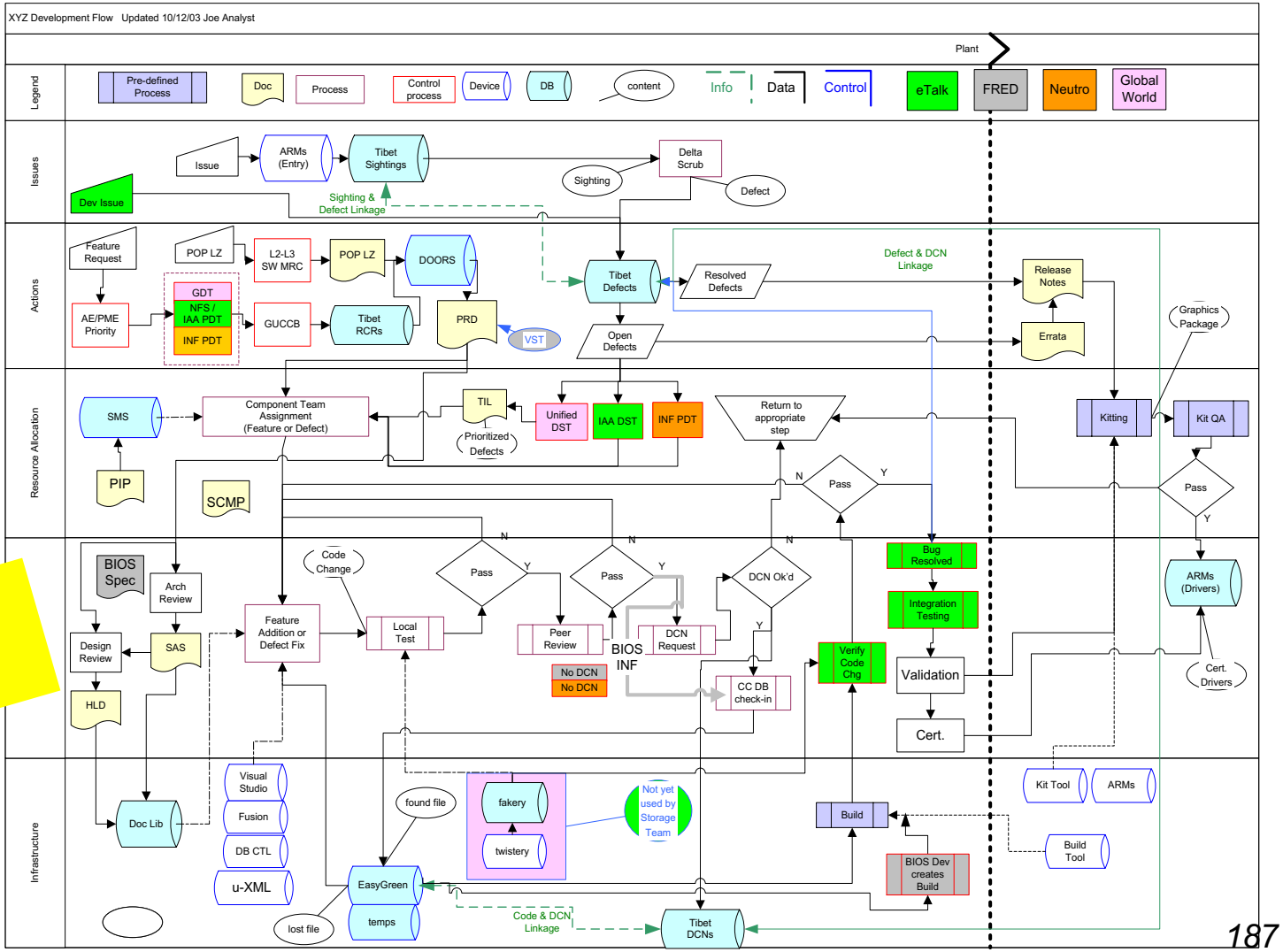
"I think I know why our business partners don't want to review this…"

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

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

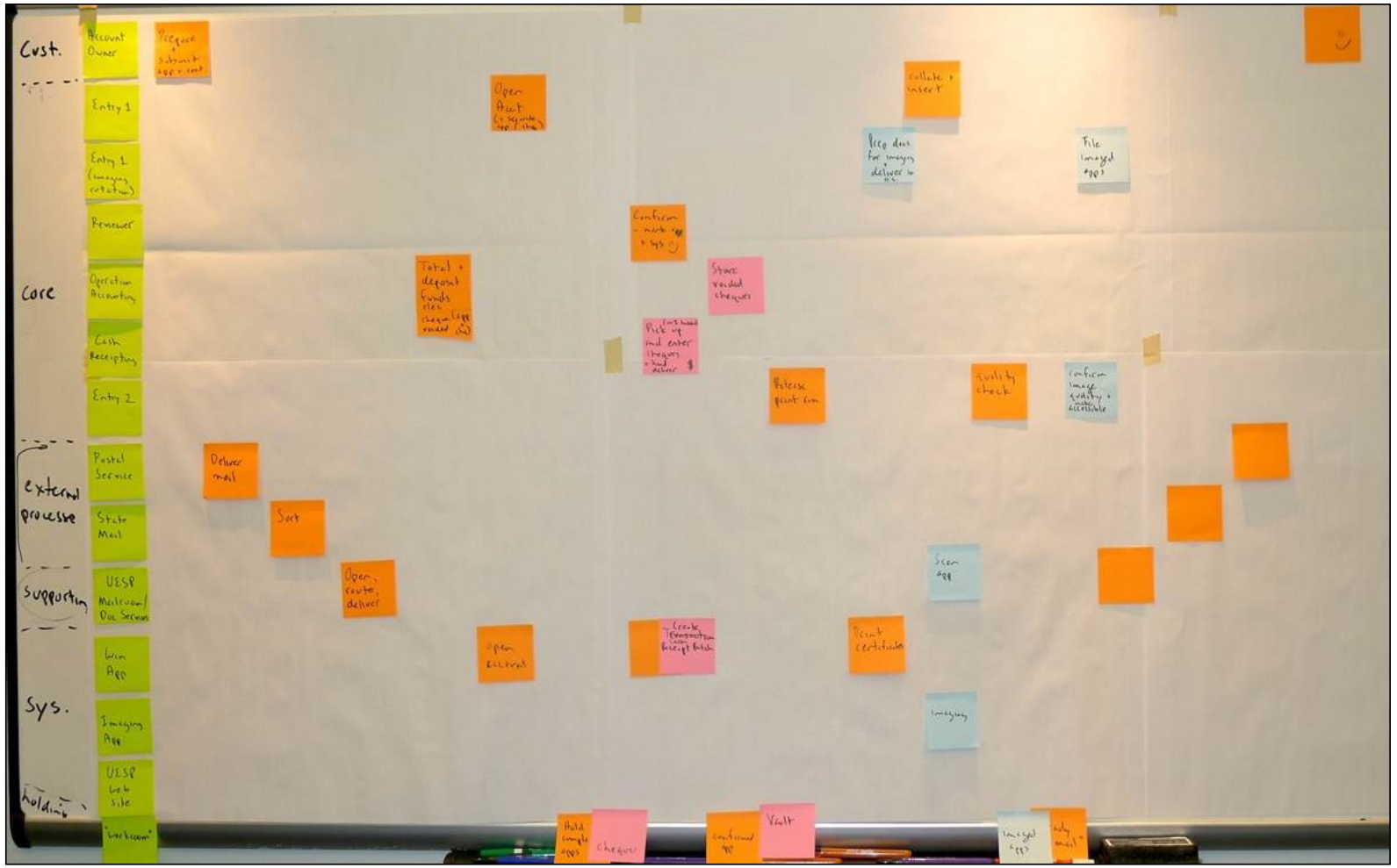
- no obvious flow
- too many symbols
- cryptic acronyms
- lanes aren't actors
- …

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



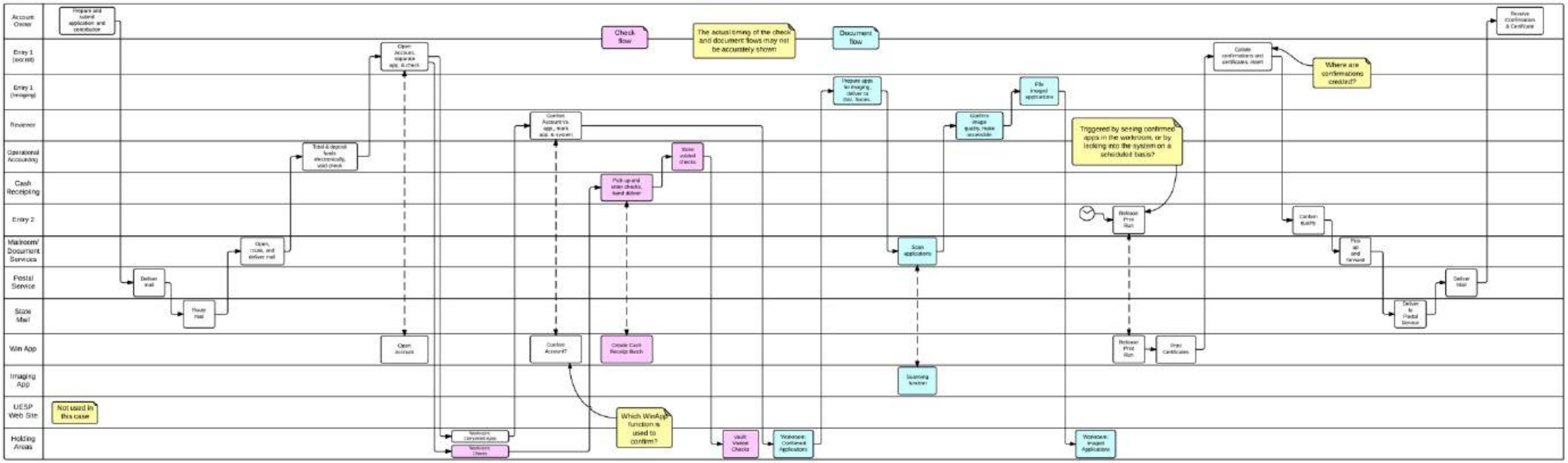
Boxes alone are a great start

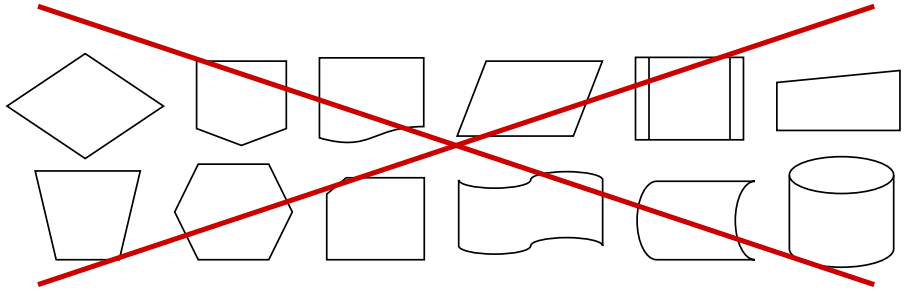
Remember – you can build an initial flow model with Post-its, real or virtual

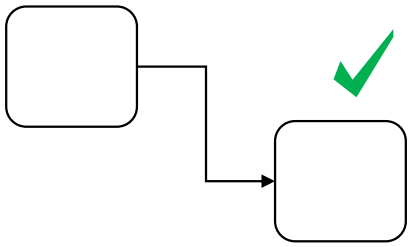


Minimal symbols

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

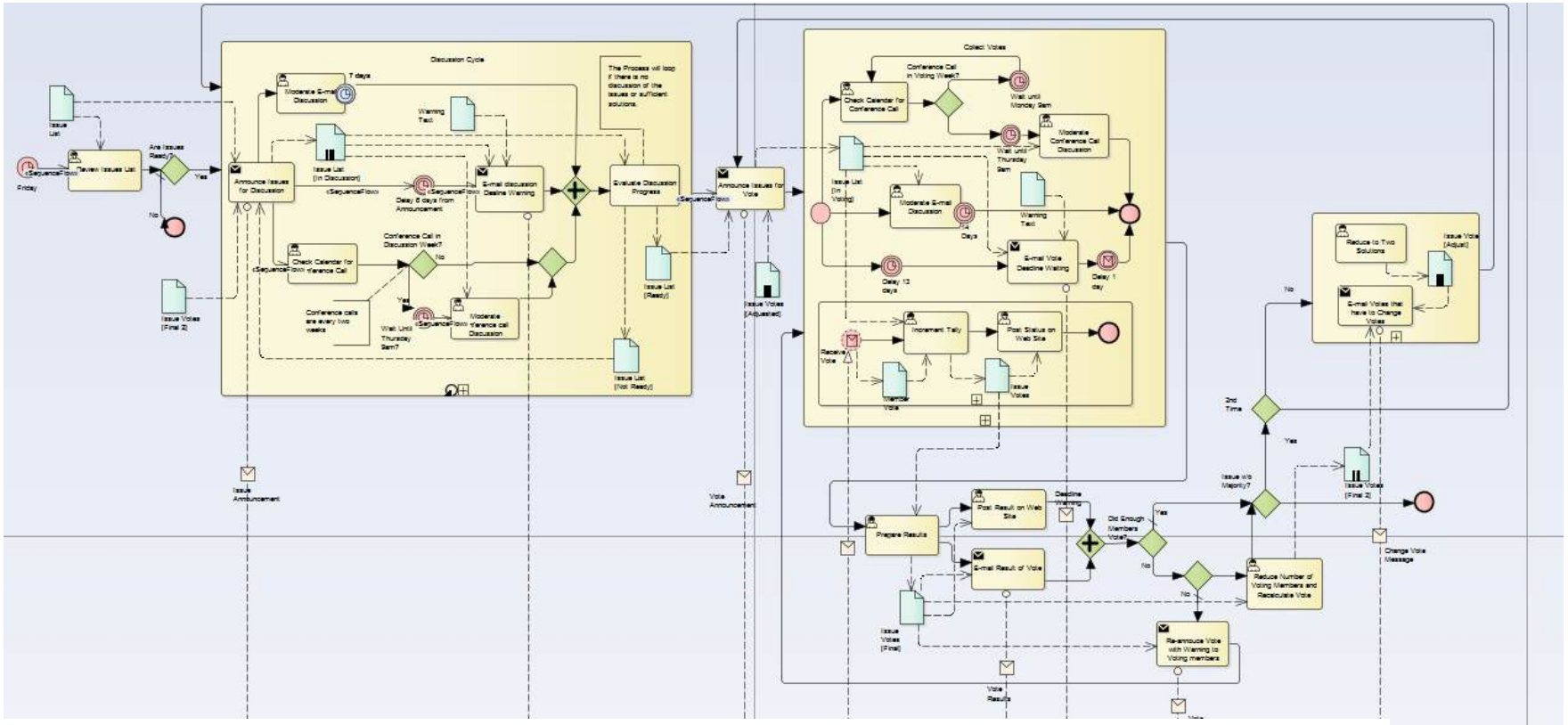






Full BPMN – not useful for business purposes*

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.

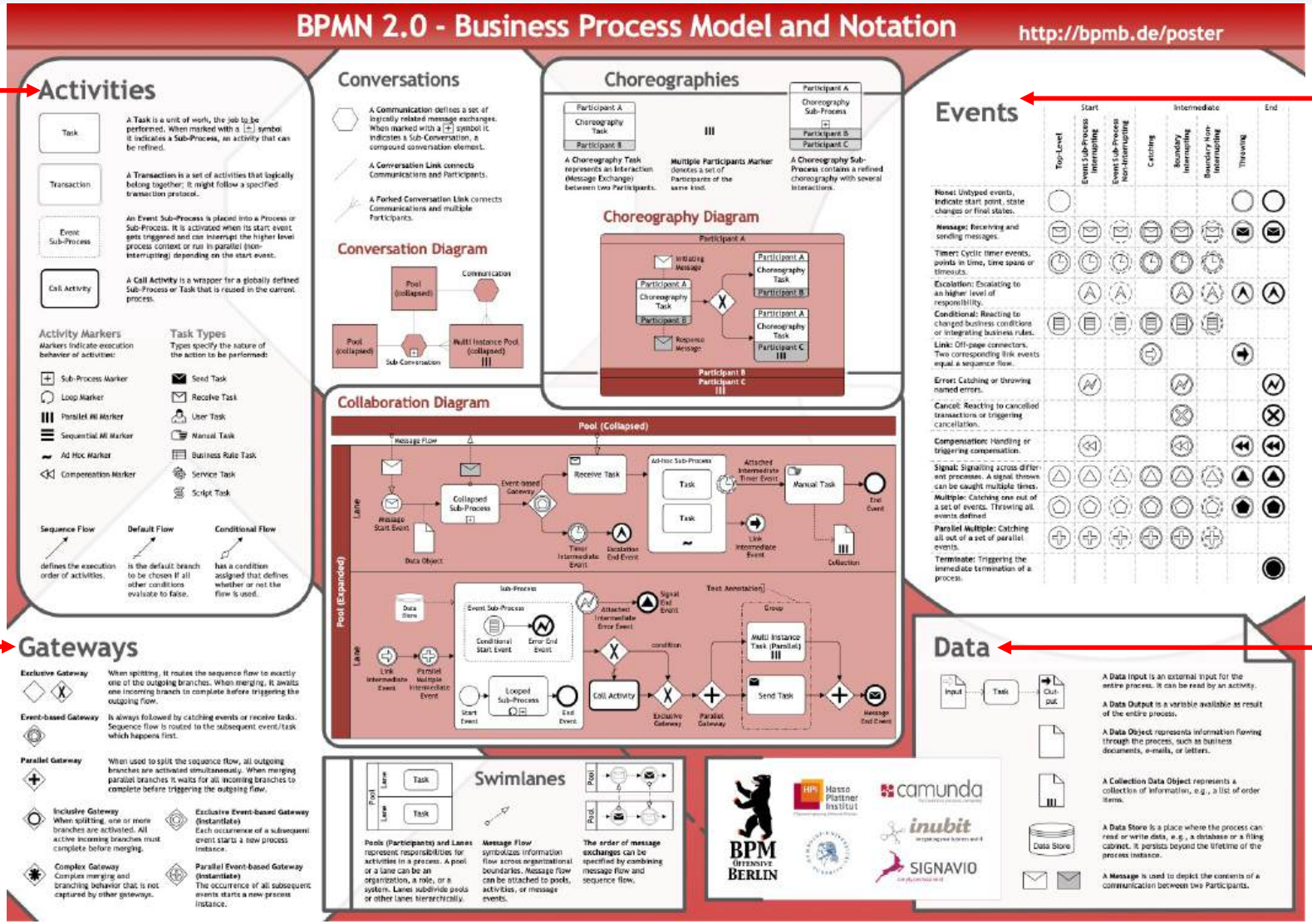
The full BPMN symbol set (why we use a subset)

4 kinds of Activities (plus Markers & Task Types)

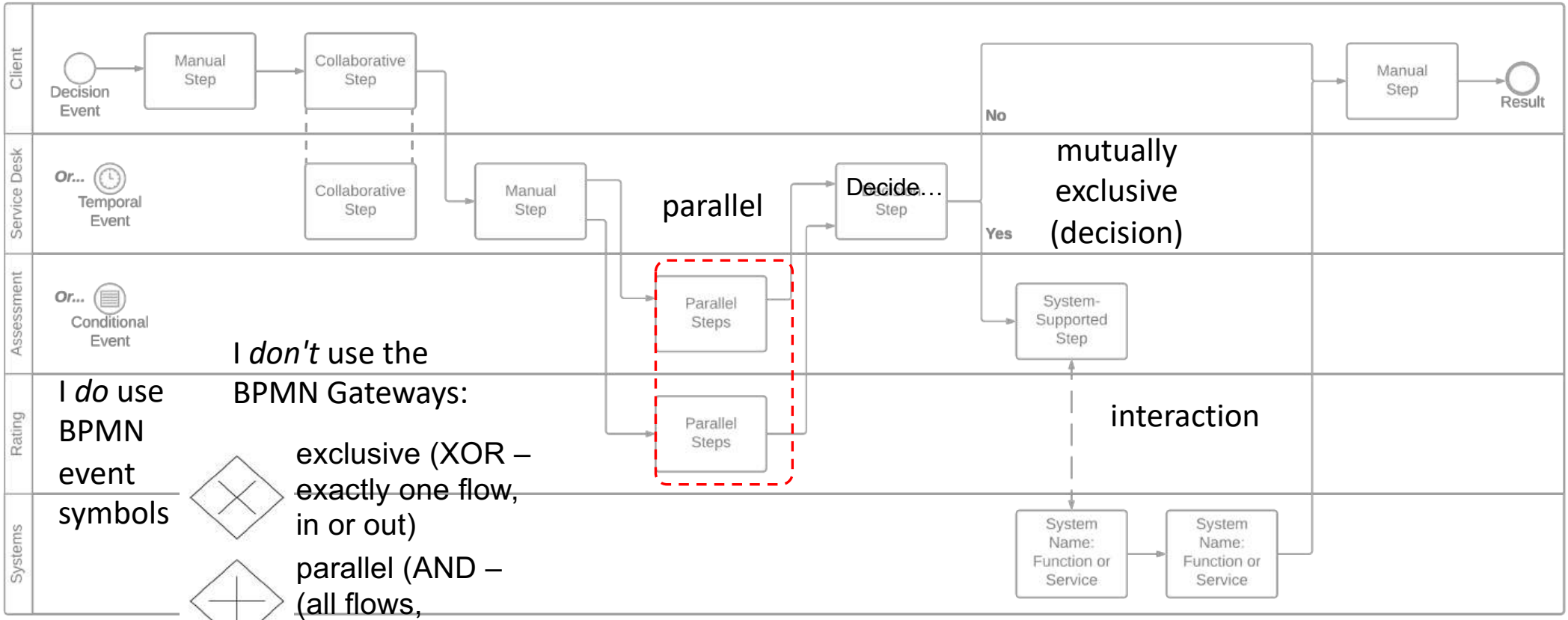
63 kinds of Events

7 kinds of Gateways

6 ways to represent Data



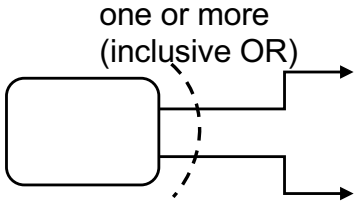
Minimal symbols for an approachable workflow model



I *do* use BPMN event symbols

I *don't* use the BPMN Gateways:

- exclusive (XOR – ~~exactly one flow,~~ in or out)
- parallel (AND – (all flows, in or out)
- inclusive (OR – one or more flows, in or out)



Three questions to develop your initial workflow model

Emphasis:

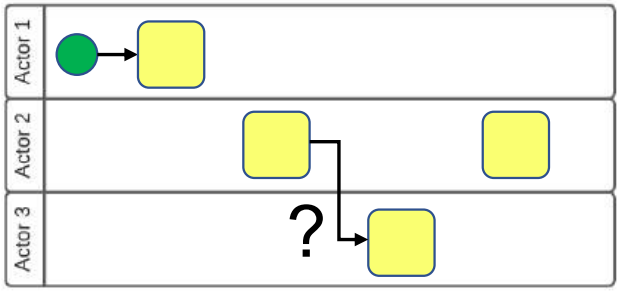
- keep you out of the details – focus on *flow*
- ensure the involvement of *every* actor is shown – it doesn't matter *how much* or *how little* they do, or whether they *add value*

Three simple questions:

1. "*Who* gets the work next?"

2. "*How* does it get there?"
   – Often uncovers "transport" actors or systems

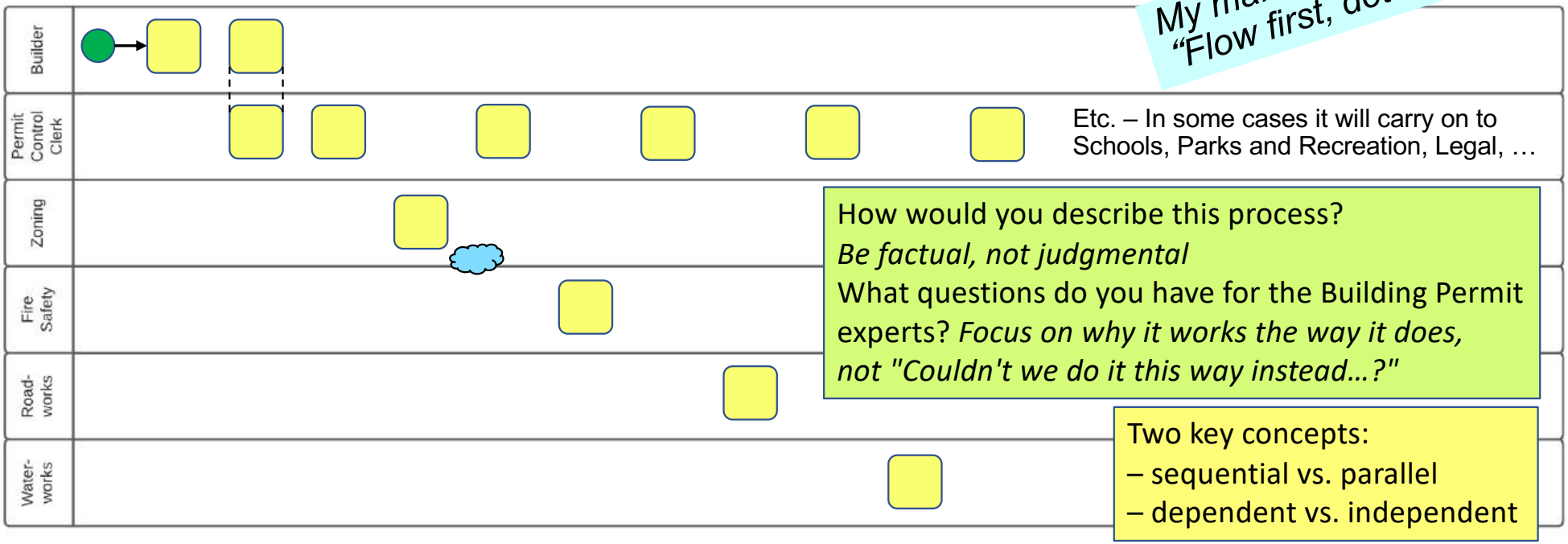
3. "Who *really* gets the work next?"
   – Often uncovers additional actors



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!)

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

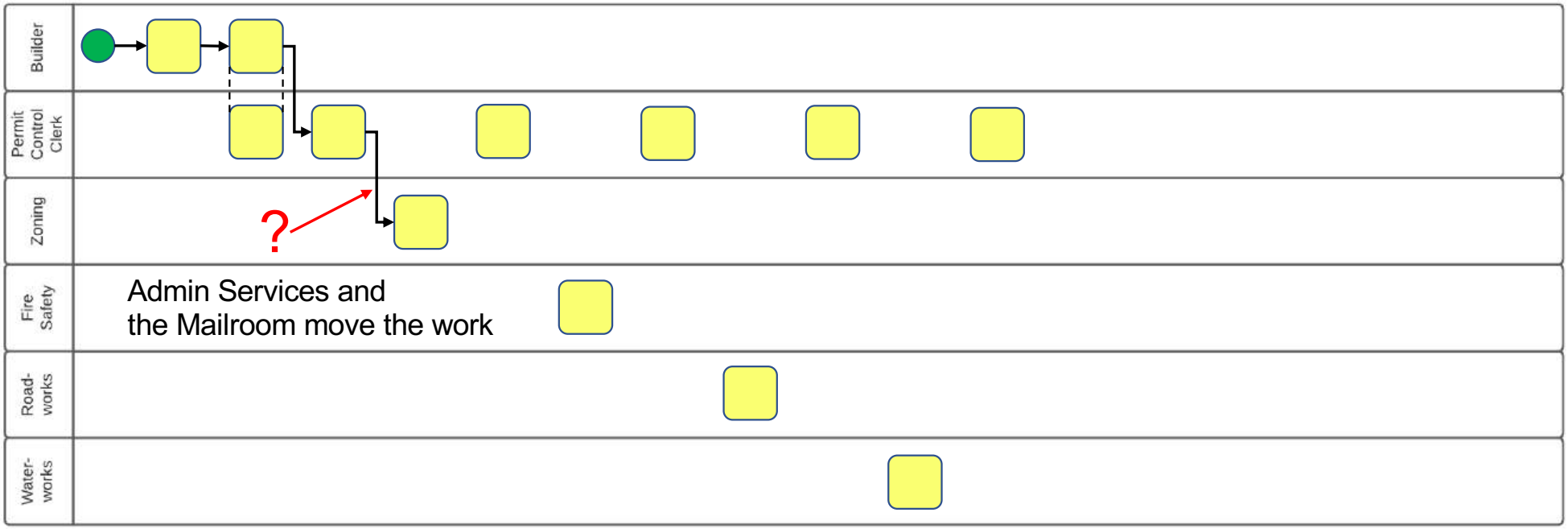
Process: Issue Building Permit
Case: Single Family Dwelling (SFD)



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?"

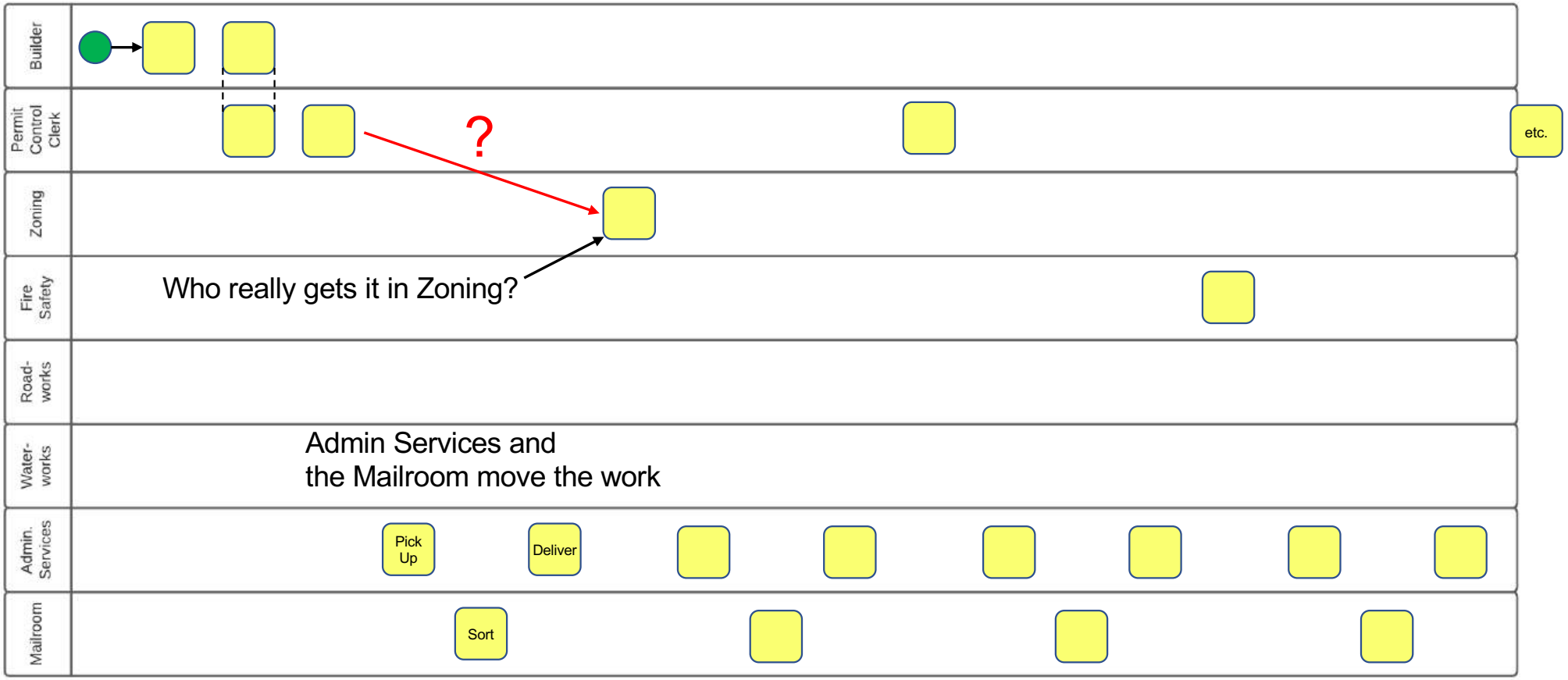
2 – "How does it get there?" uncovers more actors

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



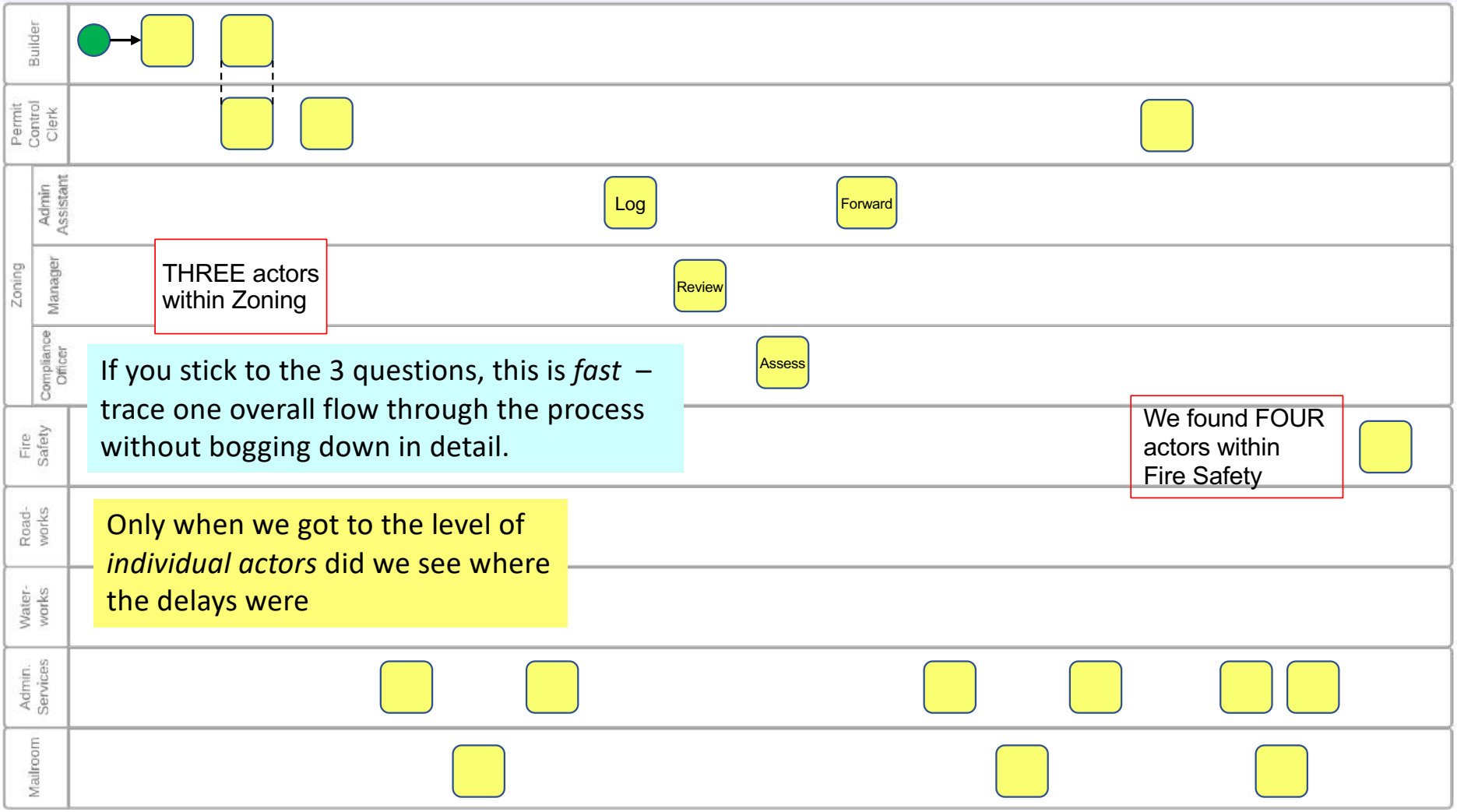
Next, at every handoff, ask question 2 –
"How does it get there?"
- uncovers *additional actors*, and therefore more handoffs
- a handoff is a potential source of *delay, error, or expense*

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

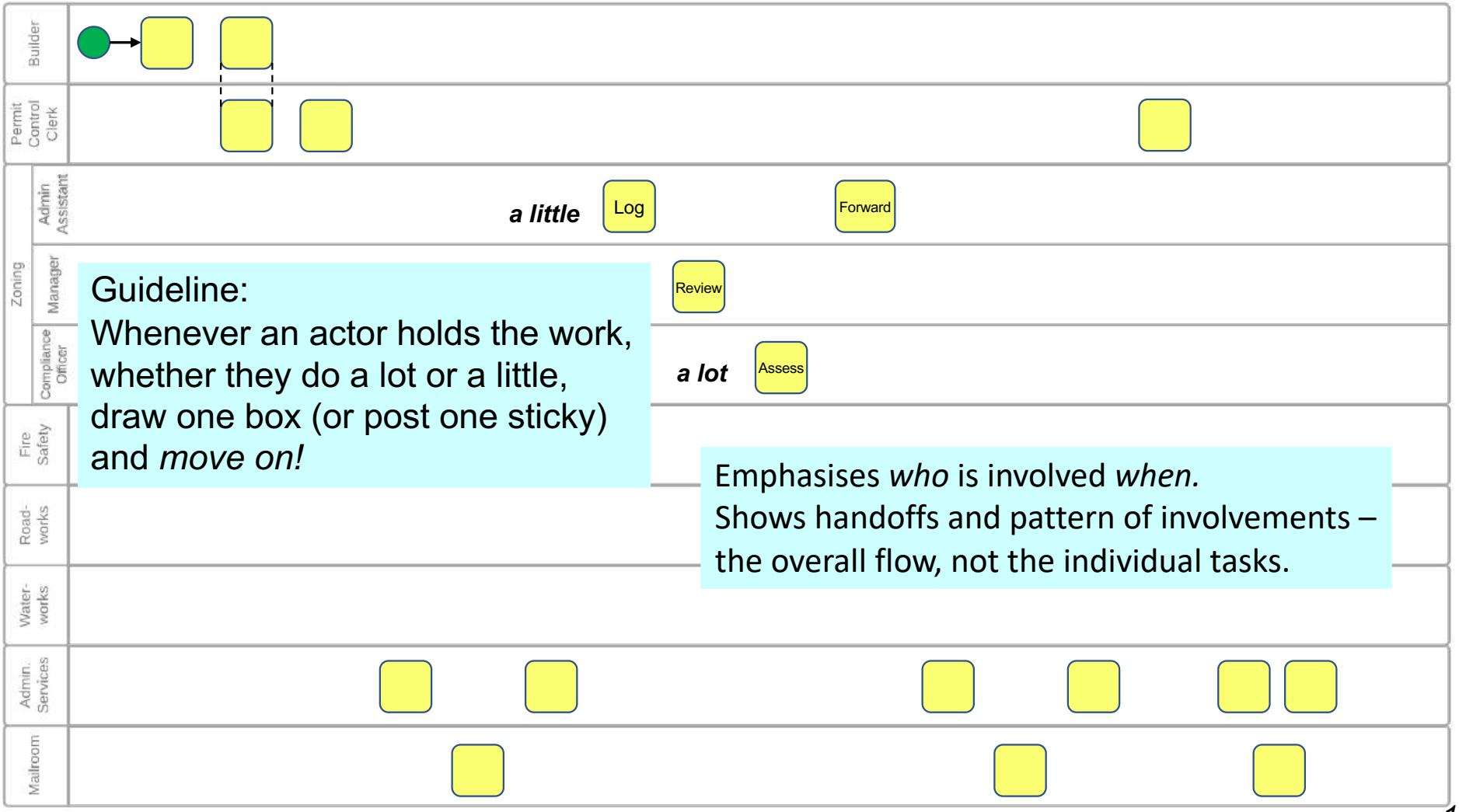


Now, consider each handoff and ask question 3 -
*"Who really gets it next?" D*oes it *really* go directly to the actor you first identified?

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



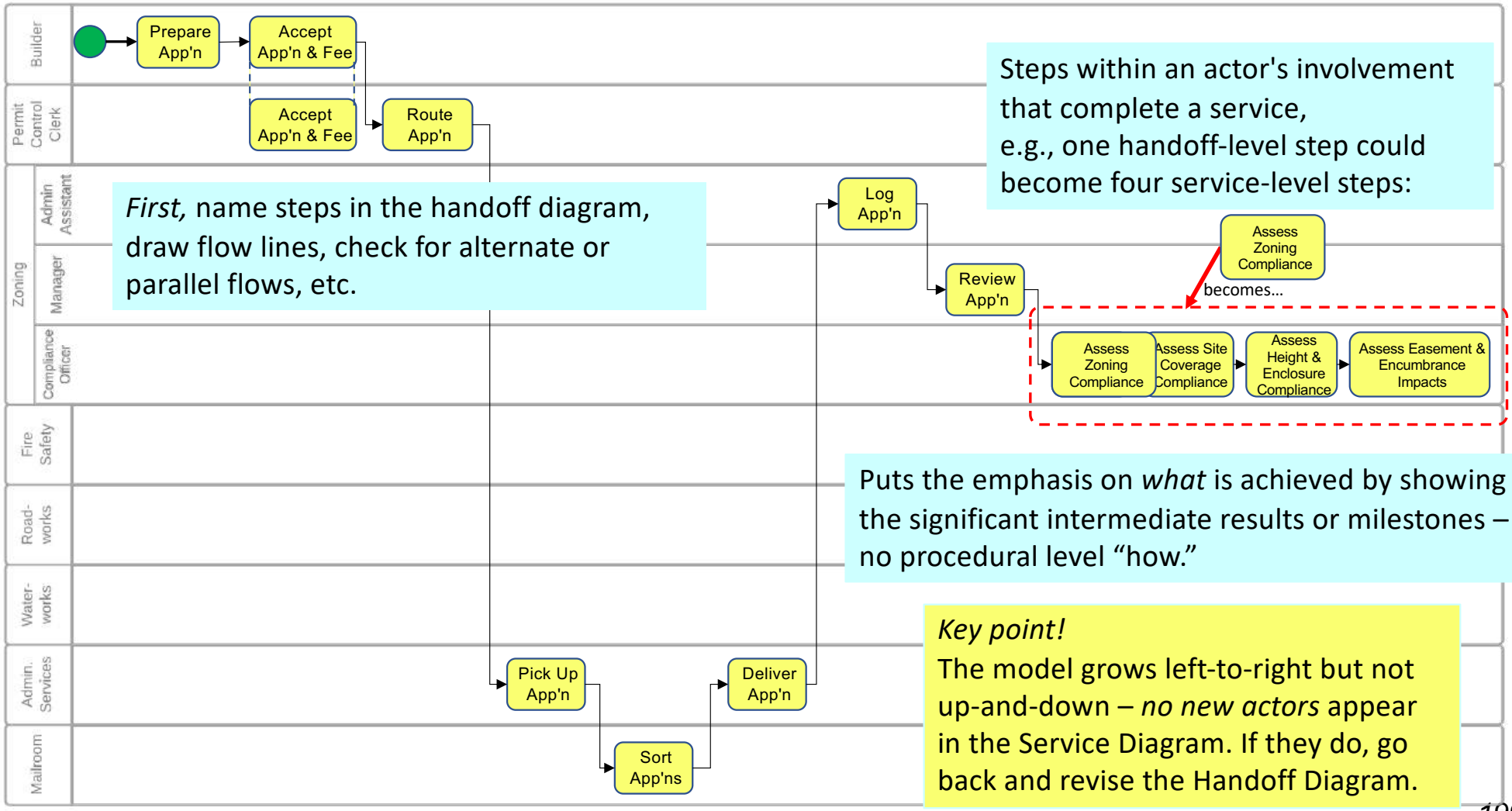
We have started a "Handoff Diagram"



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"



First, name steps in the handoff diagram, draw flow lines, check for alternate or parallel flows, etc.

Steps within an actor's involvement that complete a service, e.g., one handoff-level step could become four service-level steps:

Puts the emphasis on *what* is achieved by showing the significant intermediate results or milestones – no procedural level "how."

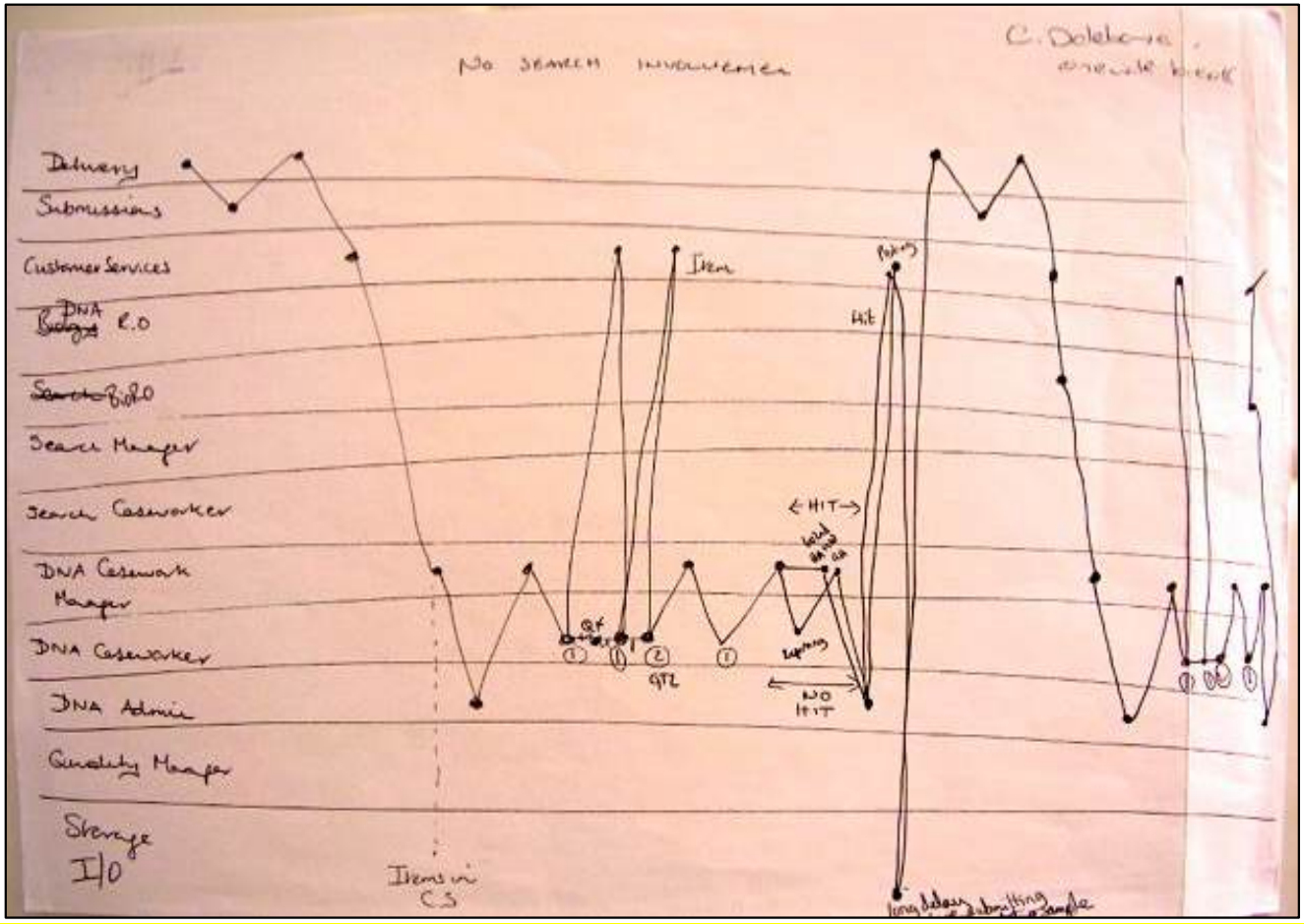
Key point!
The model grows left-to-right but not up-and-down – *no new actors* appear in the Service Diagram. If they do, go back and revise the Handoff Diagram.

Two levels of swimlane diagrams

Level	Definition	Emphasis	✓ Notes
1 Hand-off	• Draw one step (box) every time an actor continuously "holds the work," no matter how much or little they do	"Who"and "When" - pattern of involvement	• Sometimes this level of detail is enough to understand As-Is process behaviour
2 Service	• Decompose handoff-level steps into discrete services, *as necessary:* one step each time actor achieves a significant result or state change	"What" is actually achieved	• Usually, we don't go any further than this for the As-Is process • Also called a "Milestone" diagram

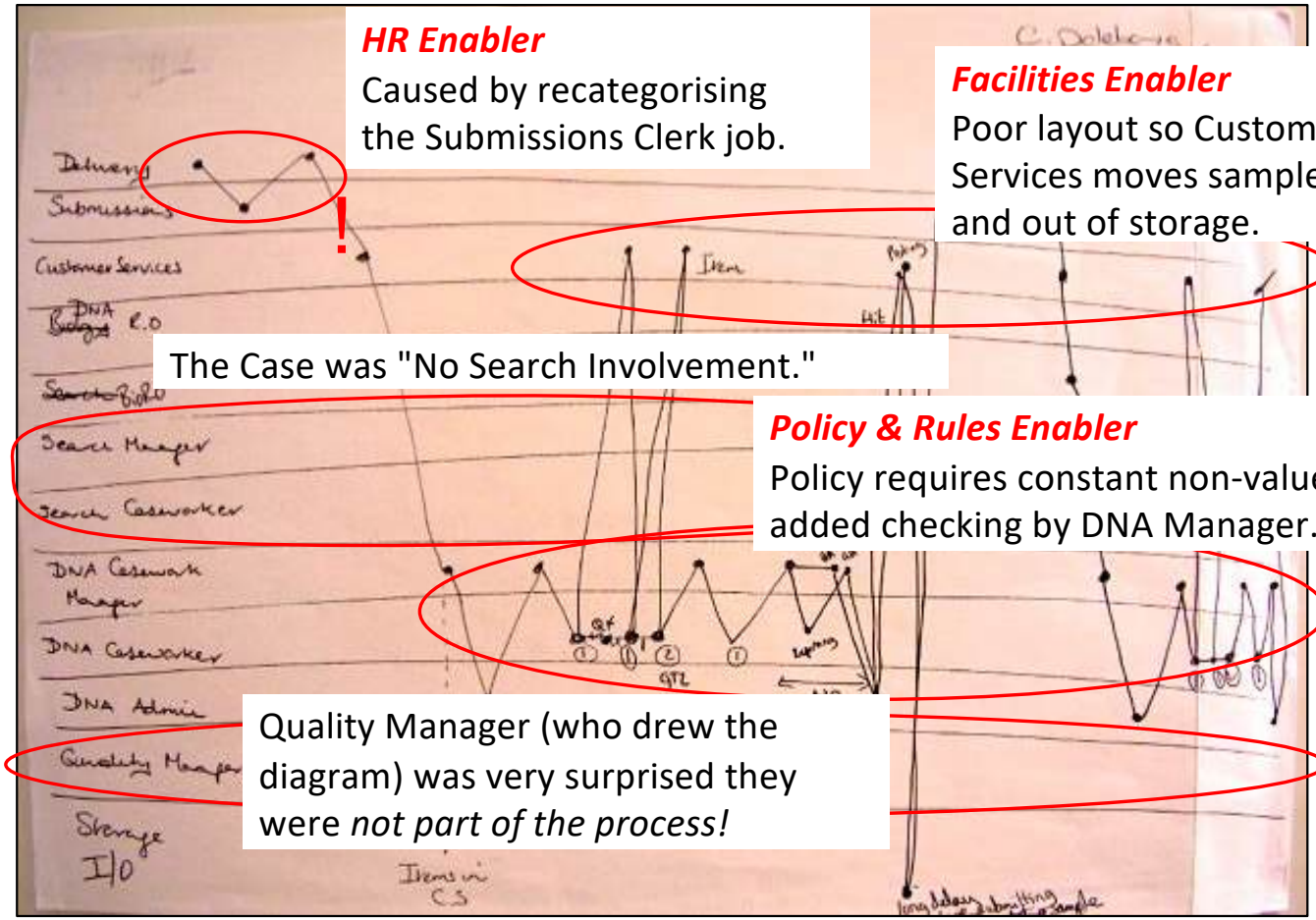
The handoff-level diagram is critical – ensures we discover the overall flow before diving into detail.

What stands out on this minimalist Handoff Diagram?



"Order and simplification are the first steps to mastery of a subject."
Thomas Mann

We learned a LOT in a short period of time



HR Enabler

Caused by recategorising the Submissions Clerk job.

Facilities Enabler

Poor layout so Customer Services moves sample in and out of storage.

The Case was "No Search Involvement."

Policy & Rules Enabler

Policy requires constant non-value-added checking by DNA Manager.

Quality Manager (who drew the diagram) was very surprised they were *not part of the process!*

Business Process Design (Workflow)	Technology & Information Systems	***Motivation & Measurement***	***Human Resources & Organisation***	***Policies & Rules***	Facilities (or, **Knowledge / Info / Data**, Communications, Documents, …)

The Service level workflow

- Purpose -

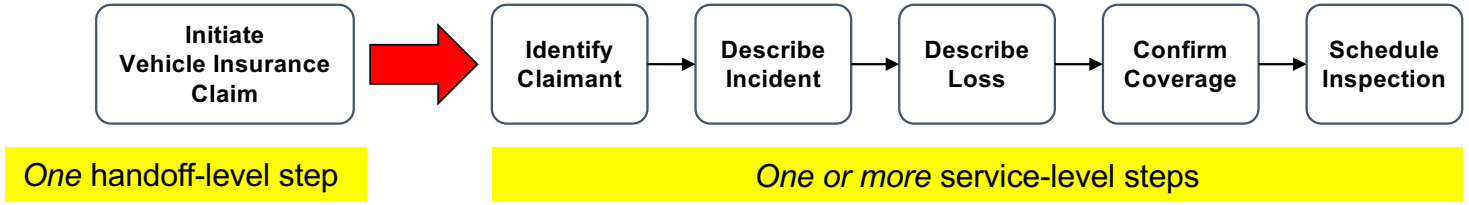
Understand the actual contribution of each actor to the process

Ensure feasibility and effectiveness of process (can each actor actually perform their steps?)

Show relationship to systems - steps involving automated support correspond strongly to use cases and services

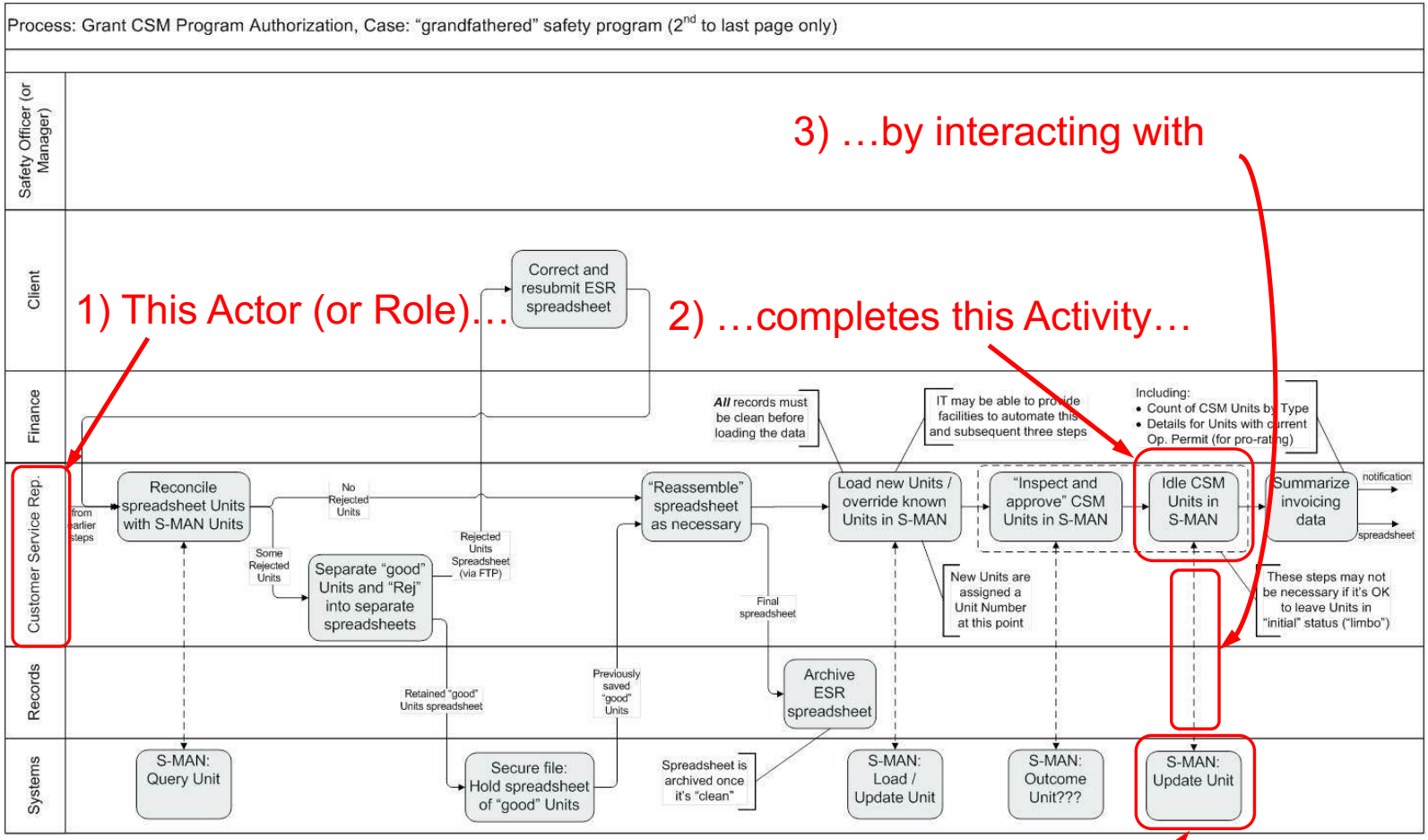
Key points:

- Steps within an actor's involvement that complete a service
  E.g., *one* handoff-level step could become *five* service-level steps:



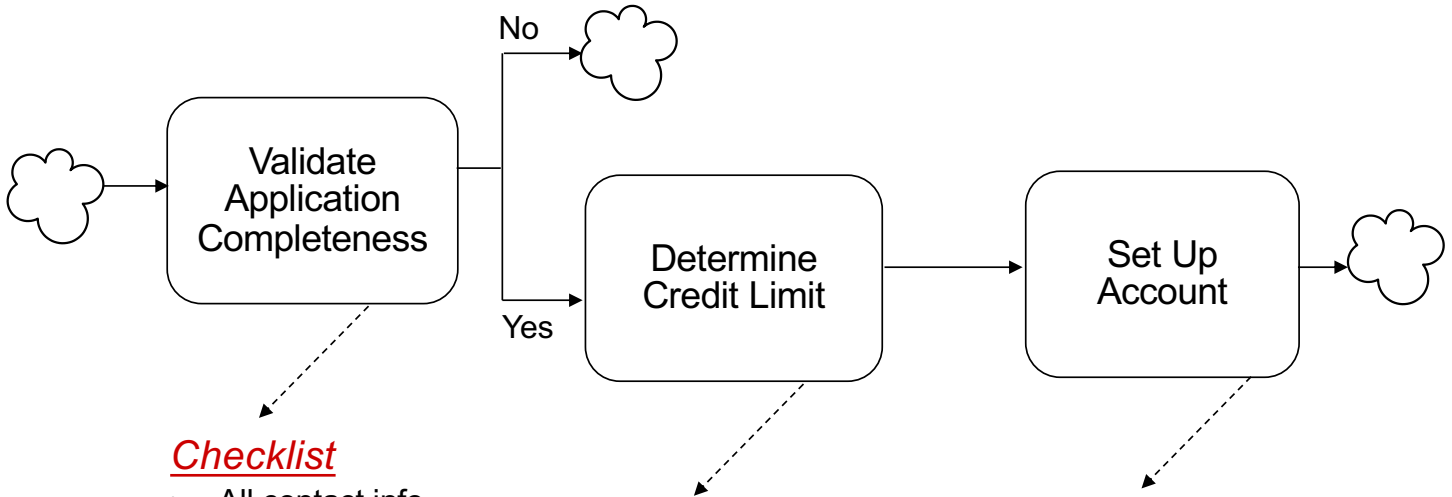
- Puts the emphasis on *what* is achieved during the process by showing the significant intermediate results or milestones –
  "the achievements, not the individual tasks"

Reminder: the service level ties in Use Cases and Services



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.



Checklist

- All contact info complete?
- Tax registration number provided?
- Net income <= gross income?
- etc.

Procedure

- Determine gross annual income
- Subtract annual tax
- Subtract child support
- Etc.

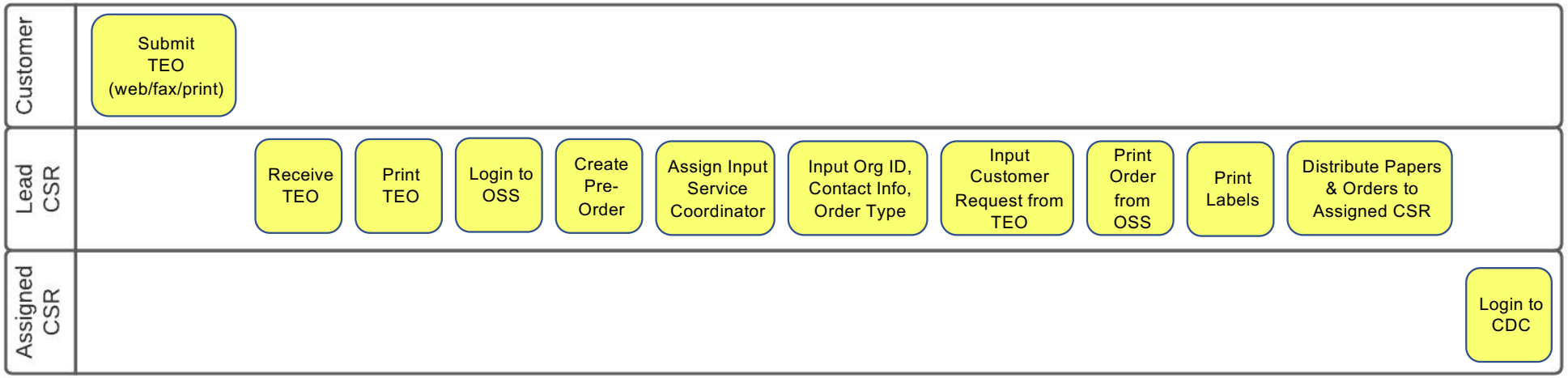
Use Case

- When credit rep enters… Then system displays…
- When credit rep selects… Then system calculates…
- etc.

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)

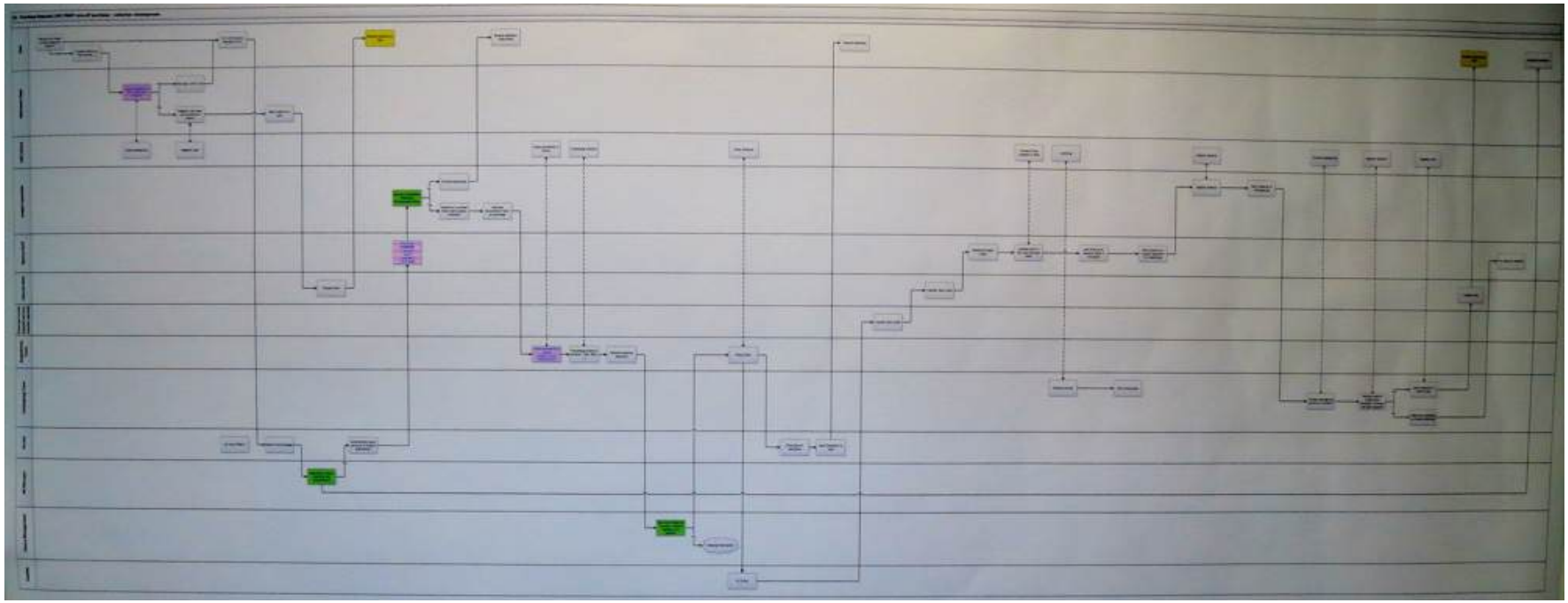


You've gone too far if:
- there are multiple steps in sequence by the same actor
- the steps include "how-to" instructions (procedural level detail)

Getting out of the weeds if you've gone too far

Client struggling with process redesign, mired in detail

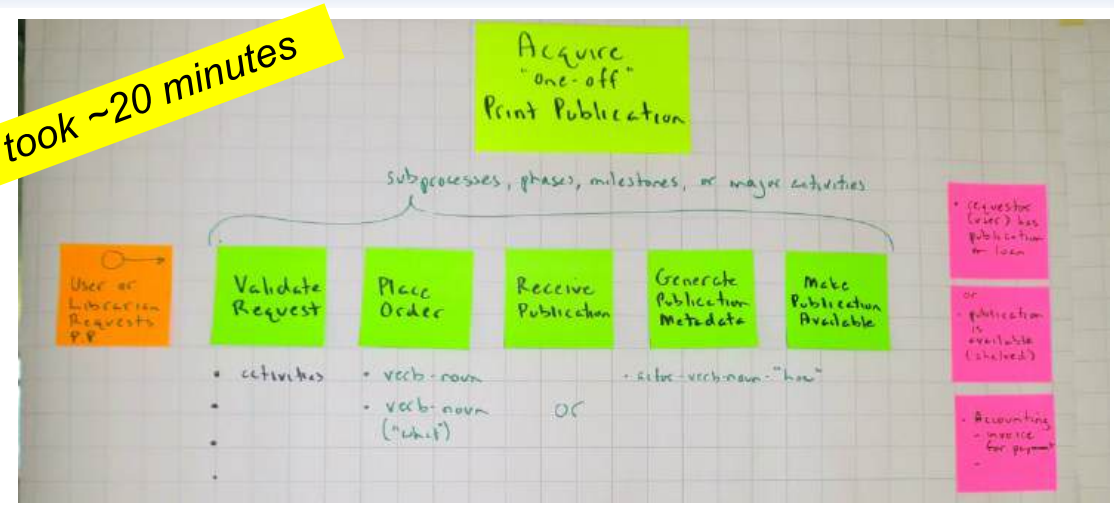
One of 17 flow models for variations of the same process



Excellent models, but detail without context is the enemy!

Step One – Establish context with a Process Scope Model

Step one – build a Process Scope Model then a Summary Chart



The process was actually "Acquire Information Asset" and the Case was "One-off Print Publication"

Cleaner version using our "TRAC" framework – Trigger, Results, Activities, Cases:

Then add participating functions:

Trigger: *User or Librarian requests Print Publication*

User (Requestor) | ***Library*** | ***Accounting*** | ***Agent*** | ***Supplier***

Acquire "one-off" Print Publication

Cases TBD:

(triage criteria)

Validate Request | ***Place Order*** | ***Receive Publication*** | ***Generate Publication Metadata*** | ***Make Publication Available***

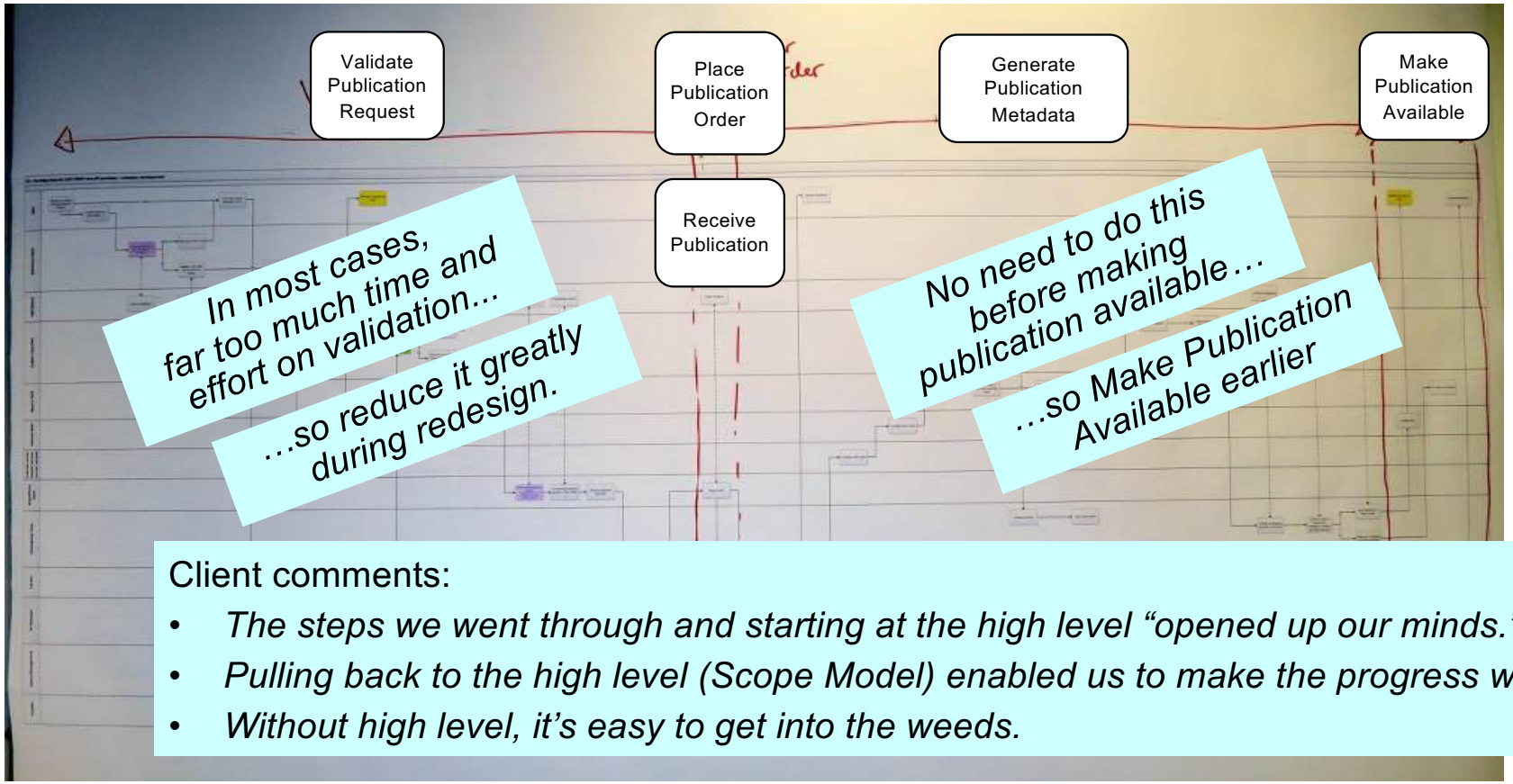
Customer result: *User (requestor) has publication on loan*

Library result: *Publication is available (shelved)*

Process Scope Model puts the detail into context

One of the clients had a great idea –
overlay the phases from the *Process Scope Model* on the *Workflow Model.*

90+ % of the process is activities the customer dislikes or doesn't care about!



Client comments:

- *The steps we went through and starting at the high level "opened up our minds."*
- *Pulling back to the high level (Scope Model) enabled us to make the progress we did.*
- *Without high level, it's easy to get into the weeds.*

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

Business Process assessment (as-is) and design (to-be)

1. Five things you need to know about *Business Processes*
2. Identifying true, end-to-end, cross-functional *Business Processes*
3. Developing a *Process Architecture*
4. Seven ways to help people embrace *Process Change*
5. *Human-oriented* process modelling
6. A feature-based *Process Design* method – transitioning from *as-is* to *to-be*

Before we do a "formal" as-is assessment…

1. Record first impressions, and identify obvious problems and NVA (non-value added) work
2. Identify *leverage points* –
   A point in a process that has a *disproportionate impact* on overall performance.
   - Often early in the process
   - Most "bang for the buck" – *fix first!*

Leverage point examples:

- Sales reps dislike returning to the office to submit orders, so, they submit in bulk at the last minute, causing a surge in workload
- Forensics lab accepts *all* items submitted, in the mistaken belief they are *legally obligated* to accept all of it, even though much of it is *redundant* or *useless*

…then apply structured, enabler-based techniques

Two critical techniques address common problems:

1. *Problem:* focusing excessively on *workflow and IT.*
   Solution: conduct a *final assessment* that holistically addresses *all* ***enablers*** and generates potential improvements
2. *Problem:* implementing process "improvements" that have *unforeseen consequences* (negative and/or expensive)
   Solution: assess each significant improvement ("feature") by specifically considering each of the six ***enablers***

Result: a set of to-be process characteristics ("features") that:

- impact specific issues
- are consistent with one another and the differentiator
- are feasible with respect to culture, resources, …

Key point – don't jump into workflow design too soon!!!

Our methodology – two points highlighted by clients

Some goal or issue, not rigorously specified

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***

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

3 Design the To-Be Process

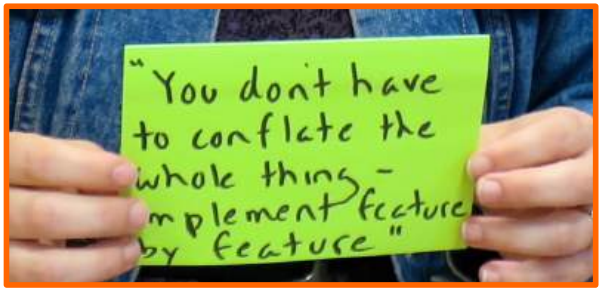
- Refine to-be improvement ideas and determine 5-10 ***key features*** of the to-be process
- Assess each to-be feature ***by enabler*** to ensure the new process is implementable and sustainable
- Design the to-be process:
  1 - ***essential*** activities first
  2 - "who & how" next
  3 – transport & protocol last

Start with *what* | *Inclusive* assessment | Based on *reality* | Awareness of *all* factors | Addresses *our* goals | We can *do* it! | Feature-based approach

1 – Builds support for *change*

"We like the way support for change is built in *throughout* your approach, not bolted on at the end."

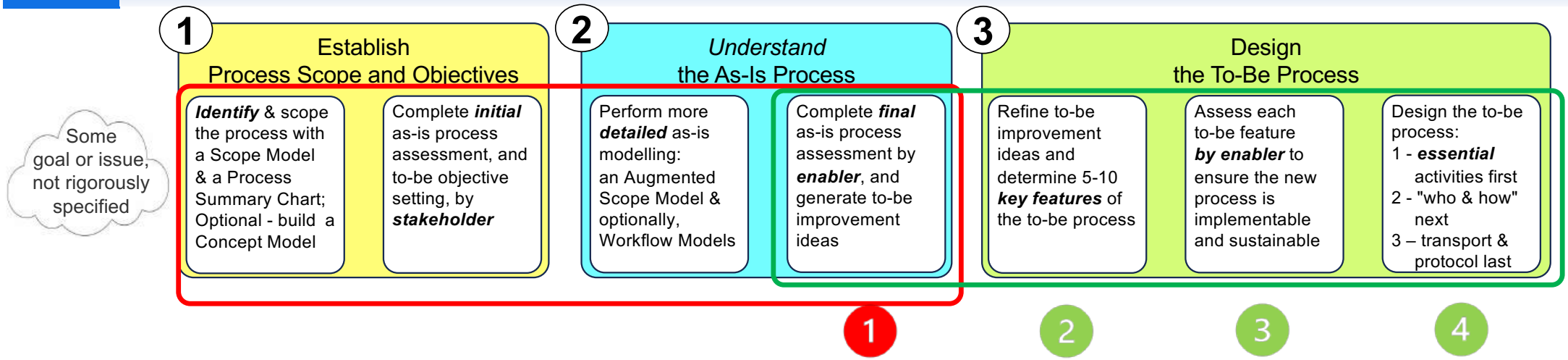
2 – Not a "big bang" – an effective, implementable, sustainable business process



Feature-based approach makes it *Agile / iterative.*

And *fast!* – up-front work avoids endless rehashing later

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



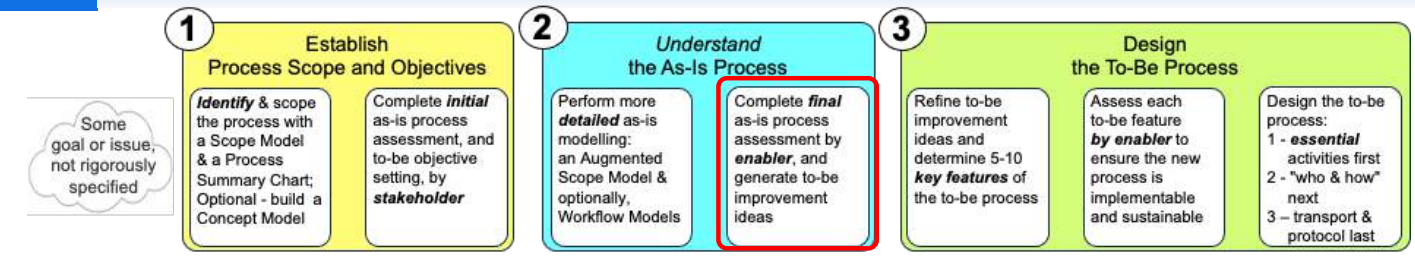
This activity (1) marks the pivot from as-is to to-be:

- 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

Business Process

enables

enables

Business Process Design (Workflow)	Technology & Information Systems	***Motivation & Measurement***	***Human Resources & Organisation***	***Policies & Rules***	Facilities (or, **Knowledge / Info / Data**, Communications, Documents, …)
• Too many actors • Non-value - added steps • Duplicate steps • Delays and bottlenecks • Excessively sequential	• Unavailable information • Data re-entry • Missing functionality • Awkward interfaces • Lack of support for workflow	• Inappropriate performer or process measures • Internal rather than customer focus • Measures of tasks vs. outcomes	• Mismatches between task value and performer • Too little empowerment • Fragmented jobs / roles • Inappropriate recruiting and placement	• Out-of-date policies or numerical limits • Excessive review or approval steps • "Anecdotal" or inconsistent policies • Misinterpreted regulations	• Mismatch of work needs and facility • No support for team work • Layout that impedes flow of people or material

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*

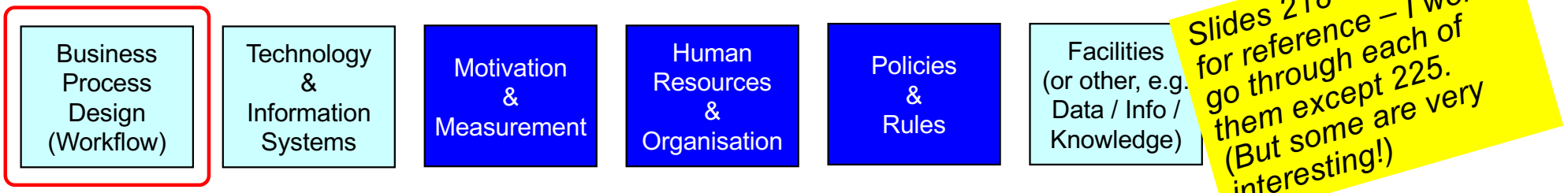
Human Resources

- 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*

Assessment by enabler – Business Process Design



Slides 218 – 226 are for reference – I won't go through each of them except 225. (But some are very interesting!)

Assessment points:

- Too many actors or excessively granular activities?
- Non-value-adding or duplicated steps?
- Unnecessary intermediaries
- Steps excessively sequential or not performed in natural sequence?
- Confusing "inform" with "approve," leading to unnecessary delay?

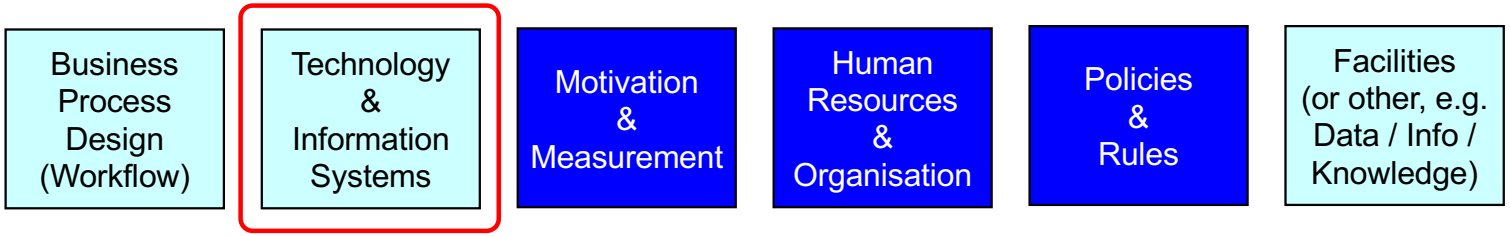
Example:

- The paper-based ***Settle Claim*** process was highly sequential, involving many roles and many tracking and checking steps. The to-be process perfectly duplicated the as-is flow using a workflow engine!

A quote:

- "We have customised the process to meet every possible variation and need. Every instance is unique. Can we develop a baseline process that would meet *most* needs?"

Technology & Information Systems



Assessment points:

- Unavailable information or redundant data re-entry?
- Missing functionality?
- Awkward interfaces?
- Lack of support for workflow?
- Not leveraging new technologies? (Robotics, drones, AI, BPA…)
- Purchased software that is more complex than necessary

Example:

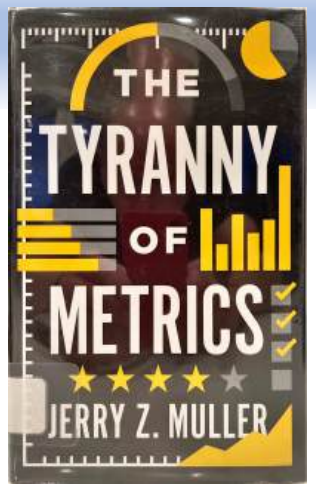
- Nurses in a ***Regional Dialysis Program*** were "supported" by multiple, dis-integrated applications, most externally hosted. They spent >50% of their work hours manually copying or "cut and pasting" data between applications.

A quote:

- "We are so 'last-century' – printing, scanning, sending, and emailing inaccessible information. The result – we have local 'information factories' of shadow systems and Excel nightmares."

Motivation & Measurement

Business Process Design (Workflow)	Technology & Information Systems	**Motivation & Measurement**	Human Resources & Organisation	Policies & Rules	Facilities (or other, e.g. Data / Info / Knowledge)



Assessment points:

- Inappropriate performer or process measures?
- Internal rather than customer focus?
- Measures of tasks vs. outcomes? (e.g., piecework)
- Simple measures that are easy to game vs. metrics (algorithms) that are hard to game?
- Rewards that work against the process? ("Perverse incentives")

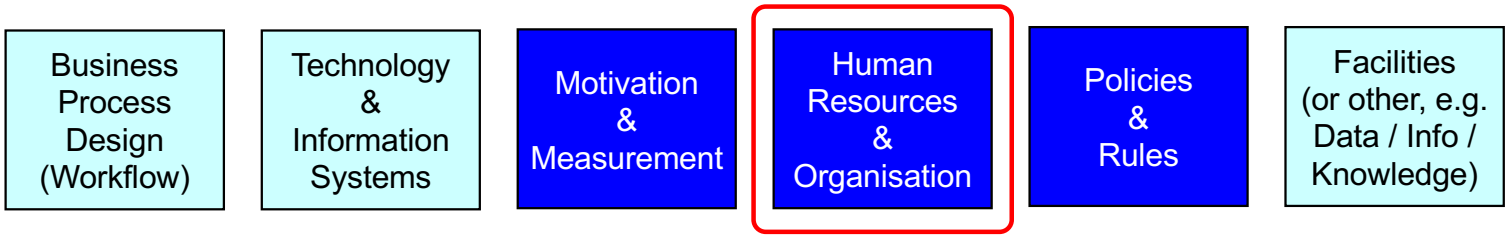
Example:

- A major telephone company invested hugely in reengineering Customer Service “processes” to enable CSRs to up-sell and cross-sell, but left performance measures based on call time in place. The result – total failure.

A quote:

- "We reward our Quality Assurance people on the number of defects they discover. Naturally, they find a LOT of defects, and in some cases actually introduce them!"

Human Resources & Organisation



Assessment points:

- Mismatches between task value and performer?
- Too little empowerment?
- Fragmented jobs / roles?
- Recruiting for past needs?
- Roles needed to hold the process together – Expediter, Co-ordinator, Traffic Manager, …

Example:

- A laboratory underwent major cost cutting and laid off many administrative and clerical support workers. Highly paid, scarce scientists then spent ~55% of their time on administrative tasks – *and they were not very good at them!*

A quote:

- "Our complex, decentralised, granular organisation structure and role definitions lead to a fractured process where no one feels responsible for the whole."

Policies & Rules

Assessment points:

- Out-of-date policies or numerical limits?
- Excessive review, inform, or approval steps?
- Inconsistent or conflicting policies
- “Anecdotal” policies
- Misinterpreted regulations

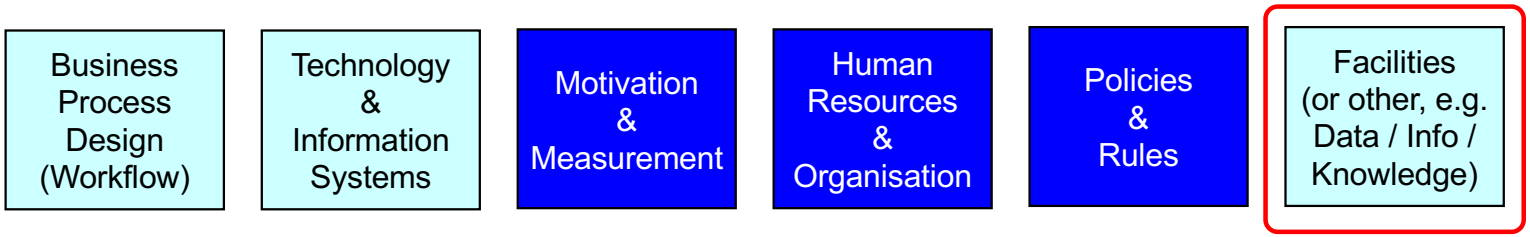
Example:

- For any policy change, a Property and Casualty Insurer required a document be signed at a broker's office and sent to their centralised Signature Verification Unit. This was of dubious value and is now a major bottleneck for a global company.

A quote:

- "All these 'wet signatures' may be a cultural need, not a legal need."

Facilities (or other)



Assessment points:

- Mismatch of work needs and facility?
- No support for teamwork?
- Layout that impedes flow of work, people, or materials?
- Process design that optimises a facility, not the process?
- "Facilities flow" that bears no relation to the "workflow?"

Example:

- In a hospital, the location of units (Imaging, Toxicology, Cath Lab, …) dictated a bizarre (*and risky!*) patient flow that took them through every floor and area of the hospital.

A quote:

- "Our in-person Customer Service area has two separated counter areas – essentially "Payments" and "Returns" – requiring two people to staff them, even in slow times. It's not so great when we're busy, either."

Conflict within an enabler

Contradictory policies, or "gaps and laps"

E.g., at a manufacturer of high-tech manufacturing equipment, the #1 problem was *inability to ship complete systems on time*

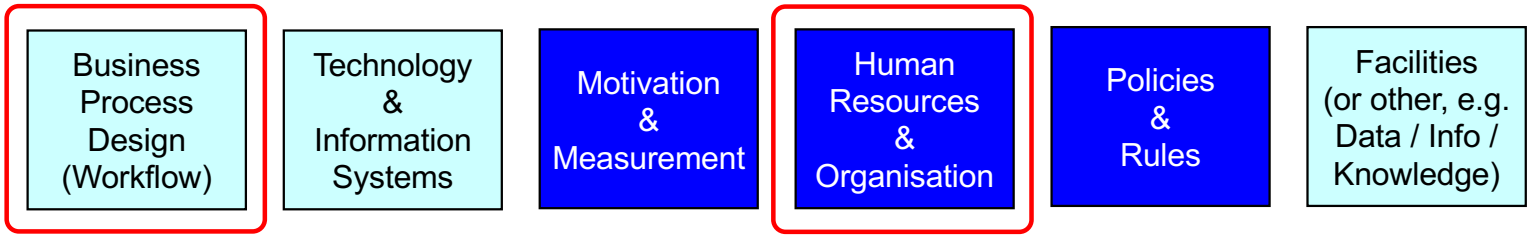
- Policy: Virtually no finished goods inventory of spare parts and consumables – *"overly Lean"*
- Policy: All orders for spare parts or consumables *must be* shipped within 24 hours
- *Outcome* – complete systems awaiting shipping were *cannibalised* for spare parts and consumables

Conflict between enablers

E.g., at a gas utility a staffing decision (HR), a policy, and a performance reward (punishment) collectively harmed the process

- HR – Outsourced Level 1 Customer Service Reps to BPO provider
- Policies and Rules – Level 1 CSRs must escalate certain cases (e.g., disconnection) to Level 2 CSRs employed at the utility
- Motivation and Measurement – Outsourcer is hit with a *financial penalty for every escalation!*
- *Outcome* – Discuss with your colleagues the likely outcome

A problem in one enabler surfacing in another



E.g., at a national Forensics Lab, a reclassified job definition led to fractured workflow:

- Police Officer submitting an Item met with Submissions Clerk
- Police Officer then had to go elsewhere meet with Customer Services to complete submission.

Why? Submissions Clerk role improperly reclassified, now lacks legal authority to accept evidence (the Item) – Police Officer sent to Customer Services who have legal authority to accept the Item even though it's *not their job!*

Assessment by Enabler generates potential features for the To-Be

Workflow:

- Resource not available to Requestor until after *all* classification and tagging is complete, even though classification and tagging is unnecessary in many/most cases because the US Library of Congress and British Library do it and make it freely available to other libraries.

*To-Be **potential feature** (an idea) – make Resource available immediately, then do classification and tagging only if necessary, first checking if other libraries have done it*

IT:

- Three separate core systems lead to manual copying of data from system to system, often through "shadow systems."

To-Be potential feature – automated data replication

- Functional richness of core systems leads to overcomplexity

To-Be potential feature – identify the subset of features are really needed, and only use those

Assessment by Enabler generates ideas for the To-Be

Motivation & Measurement:

- Because work is so granular, no one is motivated by the performance of the whole, which is not even measured.

To-Be potential feature – develop relevant end-to-end metrics, and develop role and workgroup metrics to assess our impact on professional staff

Human Resources:

- Acquisition tasks don't require a skilled, higher cost Records Manager – Agency staff could do much more, RMs could do higher value work.

To-Be potential feature – Assign authority for higher-value work to Agency staff

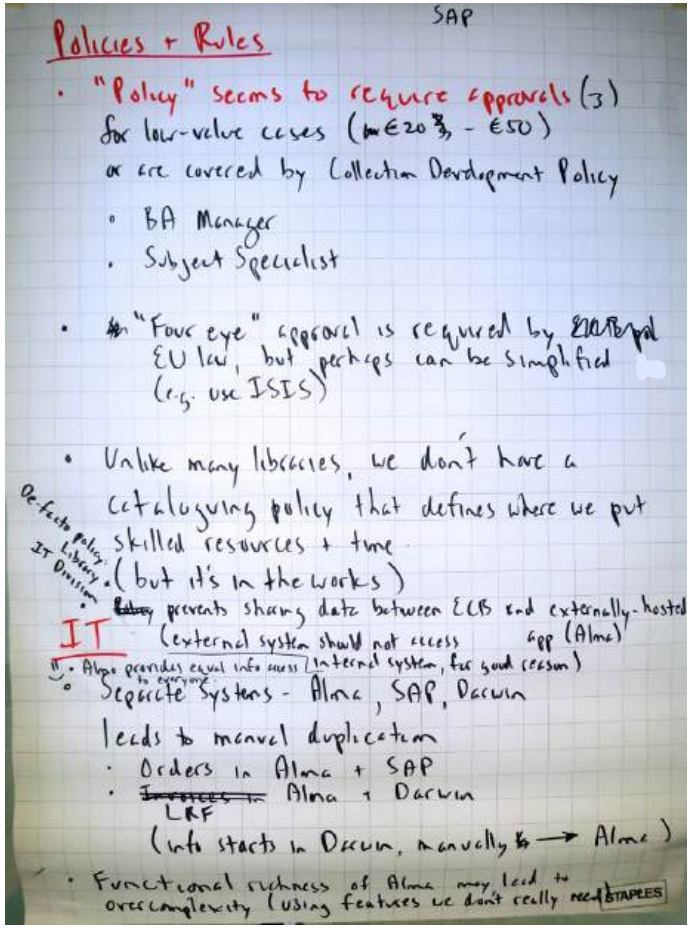
Policies & Rules:

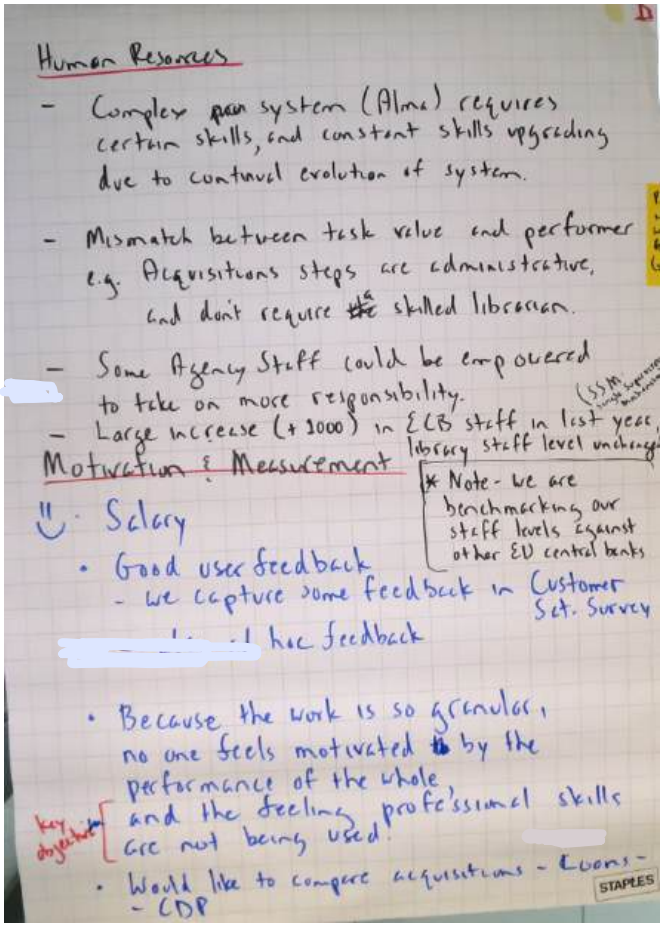
Three *(3!)* approvals required for low-value (€20 - €50) cases

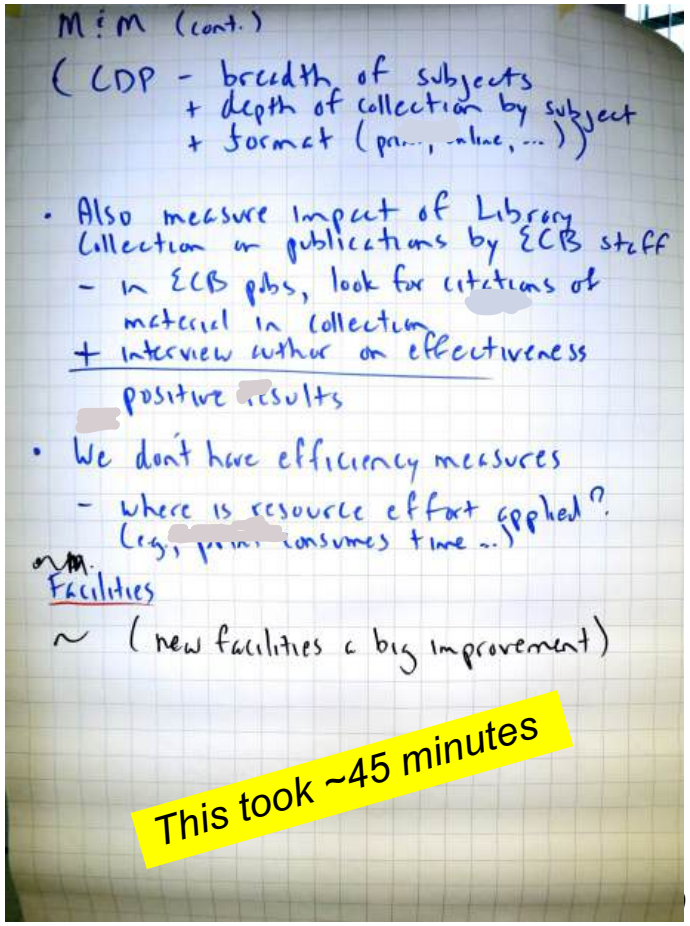
To-Be potential feature – revise policy to reduce approvals, eliminate them entirely for low-value cases

The value of a framework,

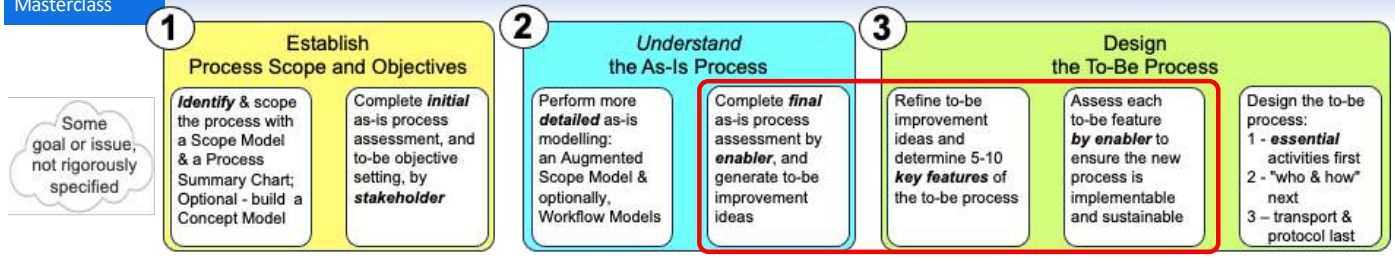
Give people a framework, go through it point-by-point,
and they will *quickly* identify factors that would have been *missed*.







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~~	Rejected by execs.
		New Sales Assistant role to enter Service Orders	A *feature*.
Human Resources	Order Capture and Order Submission are not effective uses of a Sales Rep's time	Service Order entry directly by Customer	Another *feature*.
		New Sales Assistant role to enter Service Orders	Same *feature* 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!

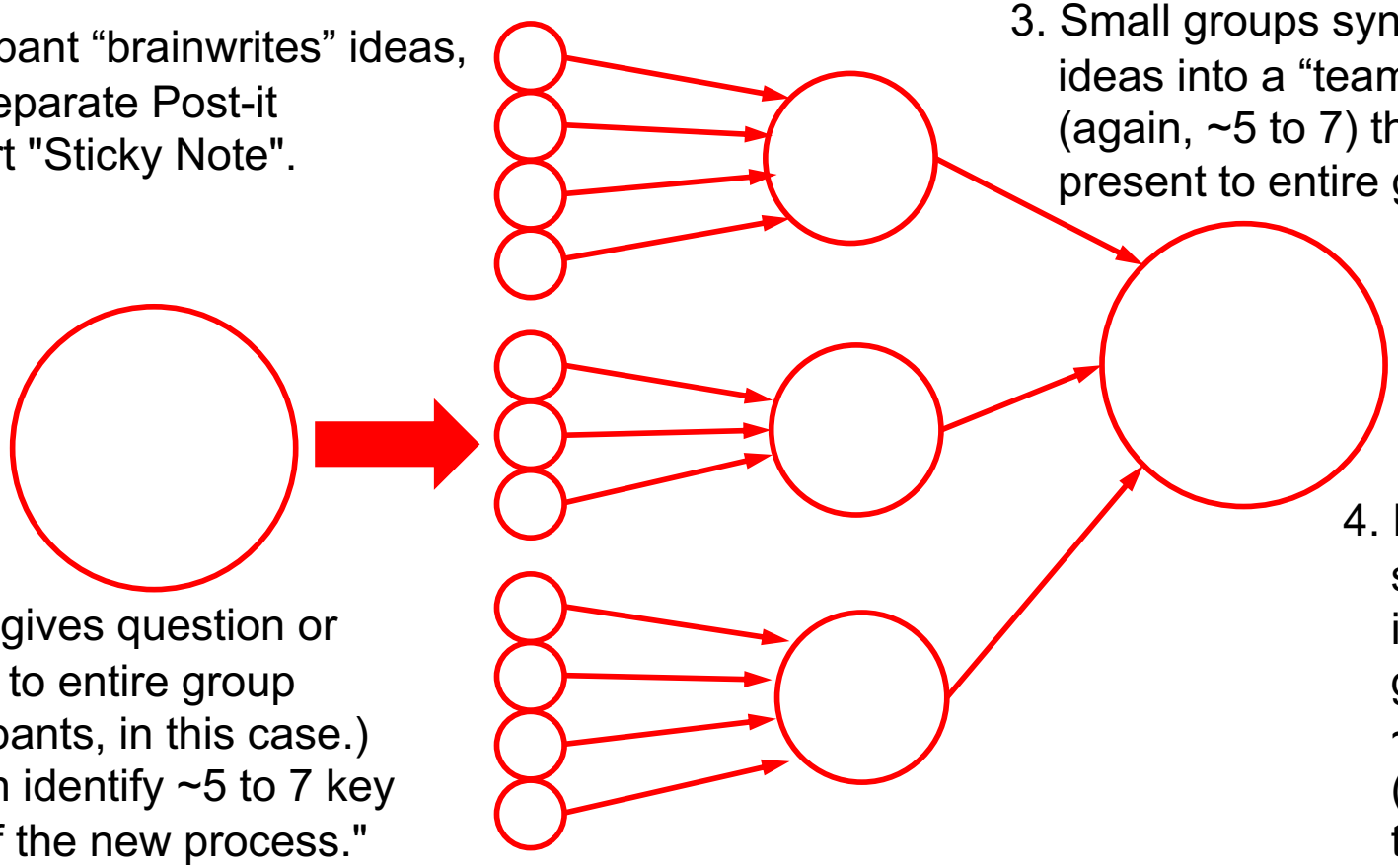
Determine to-be process key features – consensus approach

Use "brainwriting" and "big wheel, little wheel" facilitation

- Proven to generate *more* ideas / more *diverse* ideas
- Easier for *everyone* to contribute

2. Each participant “brainwrites” ideas, each on a separate Post-it or Lucidchart "Sticky Note".

3. Small groups synthesise ideas into a “team effort” (again, ~5 to 7) then present to entire group.

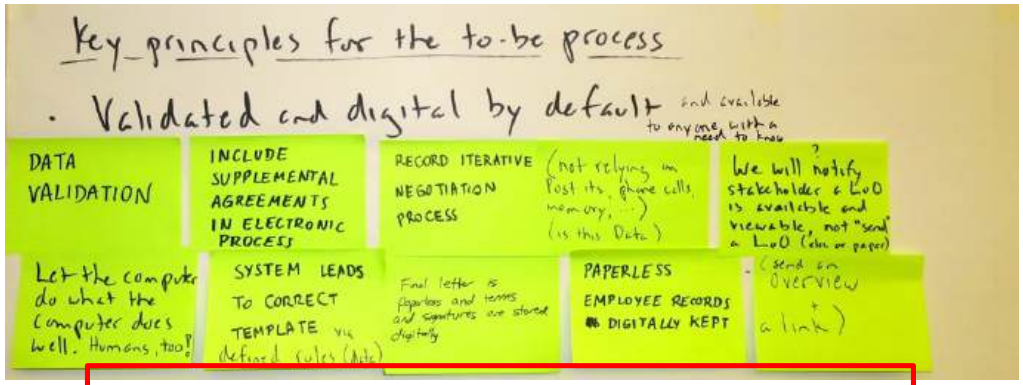


1. Facilitator gives question or instruction to entire group (11 participants, in this case.) "Let's each identify ~5 to 7 key features of the new process."

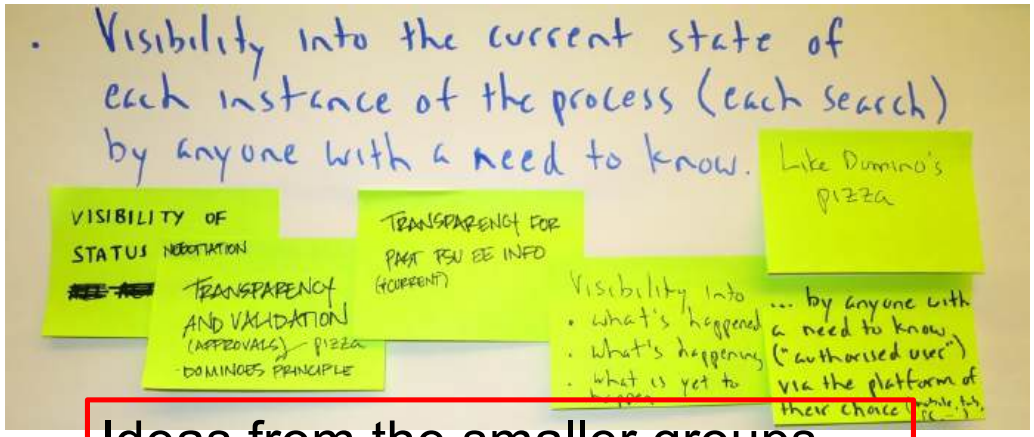
4. Entire group synthesises ideas into a group effort, ~5 to 7 *features* (rarely more than 10)

Example – determining features of the to-be process

Synthesis of features from group suggestions…



Ideas from the smaller groups…



Ideas from the smaller groups…

Five of seven features determined by the team

1. Data digital by default, validated and captured at source, and suitable for all downstream use.
2. Visibility into the current state of each instance of the process (each faculty search) by anyone with a need to know.
3. Separate the “need to approve” from the “need to be informed.”
4. Each search will follow a defined and visible workflow.
5. *The process will be designed for digital signatures **only – no fallback!***

Lucidchart / Lucidspark, Miro, or even Google Jamboard are perfect for a brainwriting session like this.

Features usually focus on one enabler, but involve all

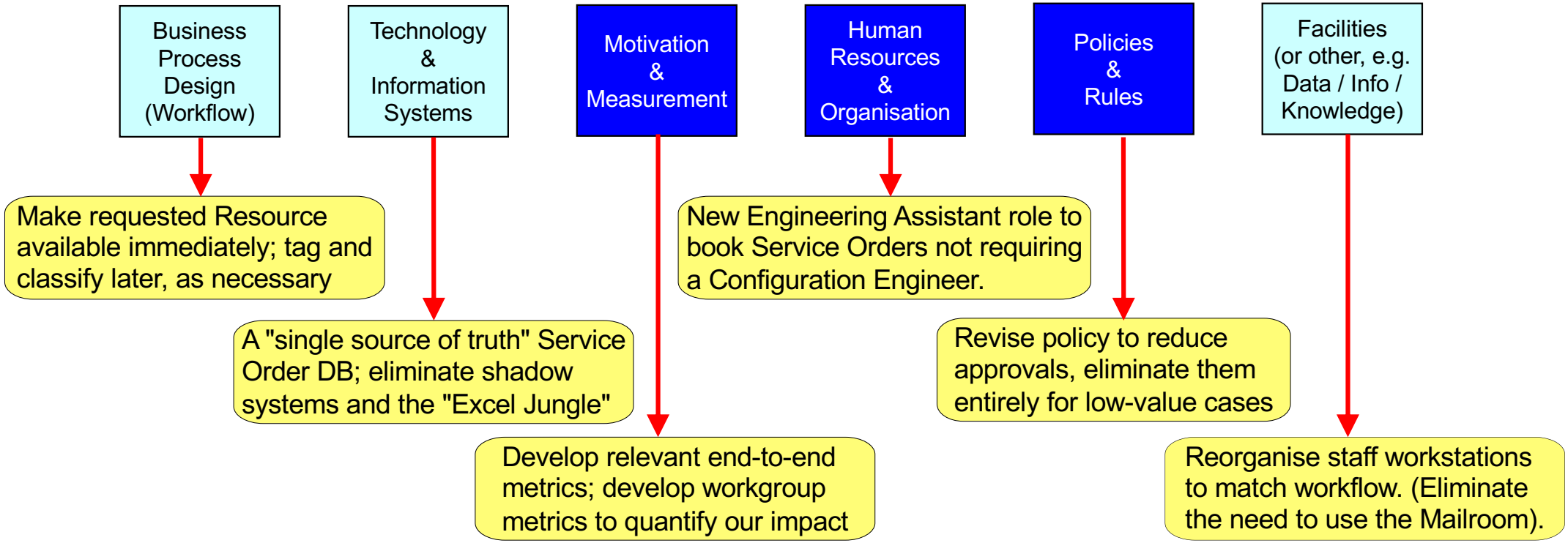
Reminder:

A *feature* is a significant *change* (*improvement)* or *factor* in the design of a new process.
Can be implemented one at a time.

Intent:

- "Don't sweat the small stuff" – focus on significant ideas.
- Avoid "Big Bang" implementations – implement feature-by-feature

Assessment by Enabler (and other techniques) generates ideas – some become *features*:



Another example – 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*
Assign authority for higher-value work to Support Staff rather than having it all done by Senior Records Managers.	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!

A richer example – first, describe the feature (page 1 of 2)

A surprise benefit – invaluable during training and roll-out.

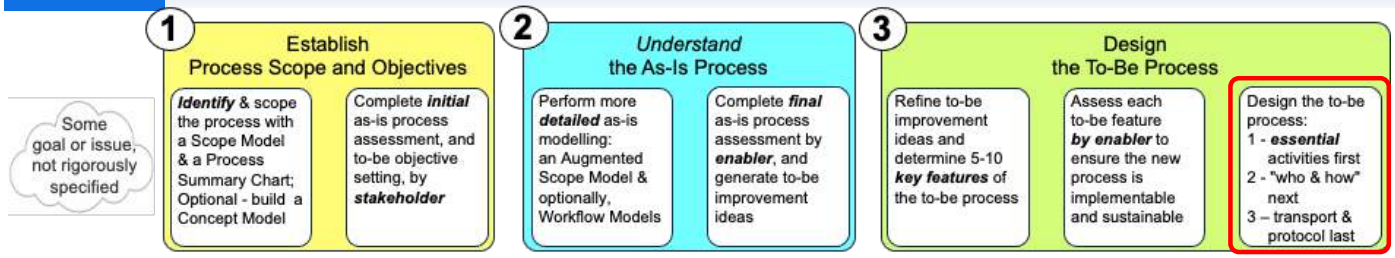
Feature name (A feature is a particular characteristic or improvement in the to-be process)
Forensic strategy (“applying science at the front end”)
Description
A Senior Scientist, typically the Case Manager, will meet with the Submitting Officer and develop a case strategy specifying which avenues of investigation, and which items and tests are most likely to yield the needed results in the least time with the least effort. The goal is to do this for as high a percentage of cases as possible. This is the first decision point in another characteristic, *multiple decision points.* Visually, this is the first stage in a funnel, in which the work being performed on a case is continually reduced as new facts arise.
Issues addressed
There is a tendency for the Customer (the police) to submit all possible items, and request all possible tests, or at least submit more items for more tests than are necessary or justified. This is known as “forensicating” a case and is ironically a primary cause of the delay and expense that the customer is unhappy with. Currently, Forensics accepts all items and performs all requested tests through to completion. In some cases, the suspect has become the accused and then the defendant, and has been convicted and incarcerated, yet testing continues.
Anticipated outcomes / benefits
For the Customer – deliver a positive result in less time, at less cost. For Forensics – free up resources by reducing submissions, and performing fewer tests on fewer items, thereby providing better throughput for all cases. In the future, Forensics will only perform those tests that will help, and which will stand up in court because we can say “we chose these tests for these reasons.” On an ongoing basis the customer will become more aware of the avenues that are most effective.

Then identify requirements to implement each feature (page 2 of 2)

Eight features assessed in a single five-hour session!

Enablers	
Process Design	Performers ("actors"), tasks, sequence, dependency • Senior scientist "meets with" appropriate scientist, not necessarily in person • Assessment and agreement and recording of *requirement* which is not contracted yet. • The requirement must be made available to the Process Manager, who will assess it with respect to current capacity. • The Case Manager and Process Manager will then negotiate and refine the requirement. They will then agree on "what and when" and commit capacity, which might involve another provider.
Information Systems & Technology	Systems, automated support, data and Information, comm. • Capture requirement • Real-time view into work-in-progress and committed capacity (Forensics' and subcontractors)
Motivation and Measurement	Measurement, assessment, consequences • The Process Manager will be measured on accurately estimating capacity and throughput. • The Process Manager makes a commitment for Forensics, and will be measured on having done the least to get the necessary result. ("lean consumption")
Human Resources	Recruitment, placement, education, roles, matching task to role • New front-end role for scientists • Process Manager role • Provide service 24x7 will impact some staff. • Recruitment, recognition, and reward are fundamental to making this work
Policies and Rules	Internal: policies & guidelines. External: laws and regulations • The overall submissions policy must be revised to reflect forensic strategy vs. "take it all." • Investigate legal consequences of forensic strategy. • Mechanism to protect the individual scientist from pressure. ("Forensics, not the individual scientist" – this is a corporate decision, not a personal decision) • Scientists can't make commitment without the Process Manager. • A 10 minute phone call and a 4 hour conference both constitute delivery of a service. A request to confer with a Case Manager constitutes contract initiation.
Facilities and Equipment	Physical accommodations, layout, equipment, furnishings • Some place to meet – in person, teleconference, …

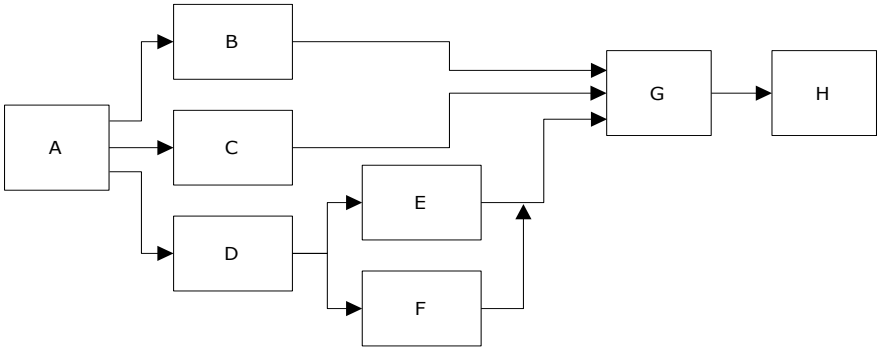
4 – Design to-be process – overview

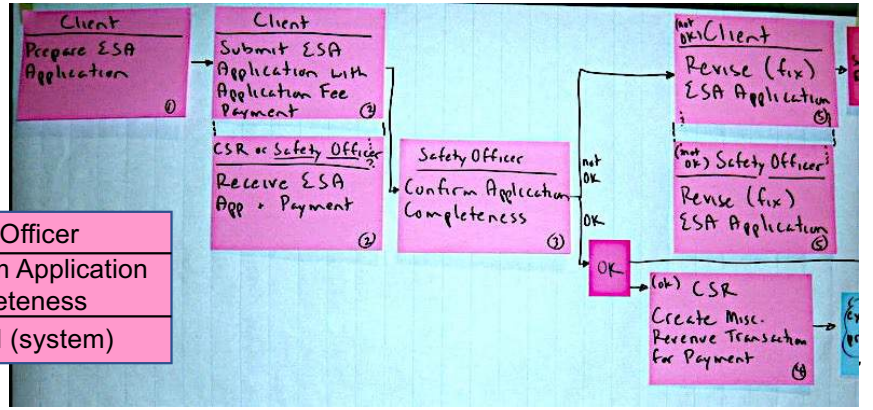


Key points:

- 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.")





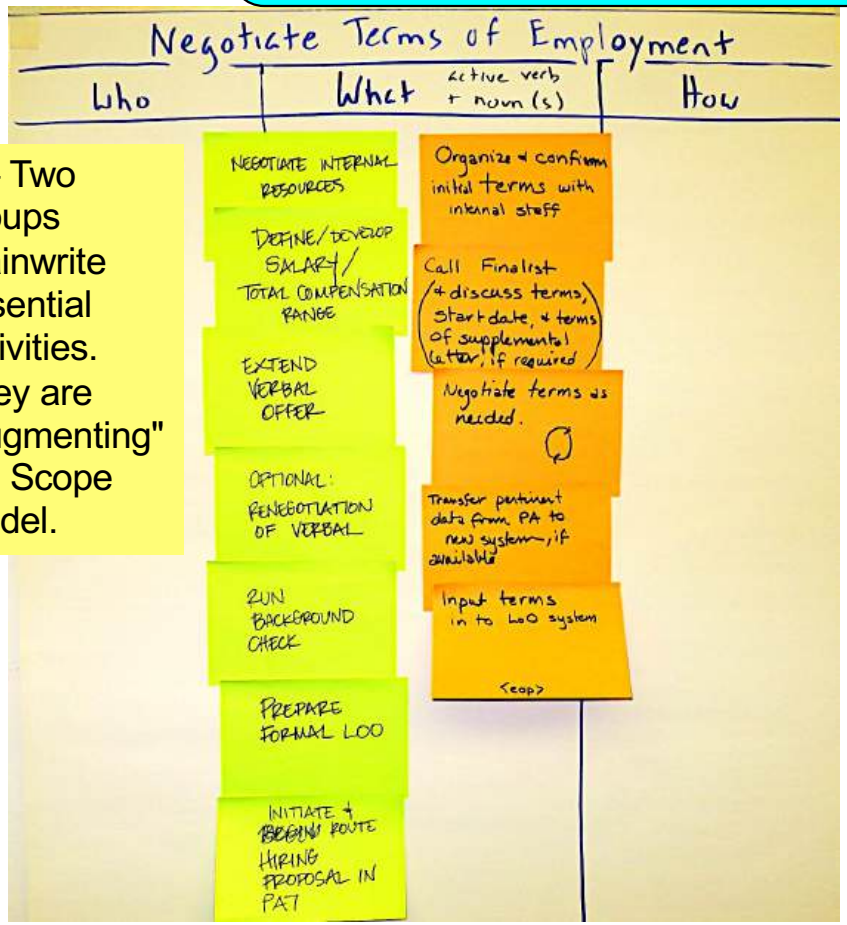
Who:	Safety Officer
What:	Confirm Application Completeness
How:	S-MAN (system)

4 – Design to-be process – the details – identify essential activities

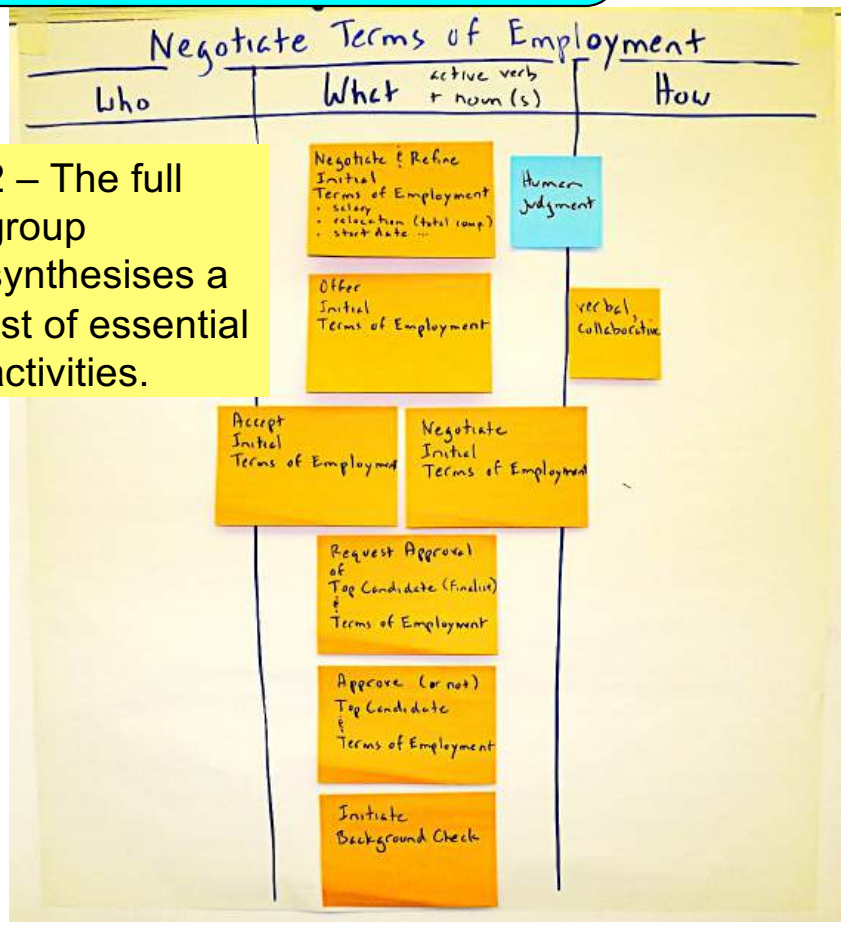
Recruit, Hire, and Onboard Employee

Prepare to Recruit	Recruit Applicants	Evaluate Applicants & Select Finalist	Negotiate Terms of Employment	Finalise Terms of Employment	Onboard Employee

1 – Two groups brainwrite essential activities. They are "augmenting" the Scope Model.



2 – The full group synthesises a list of essential activities.

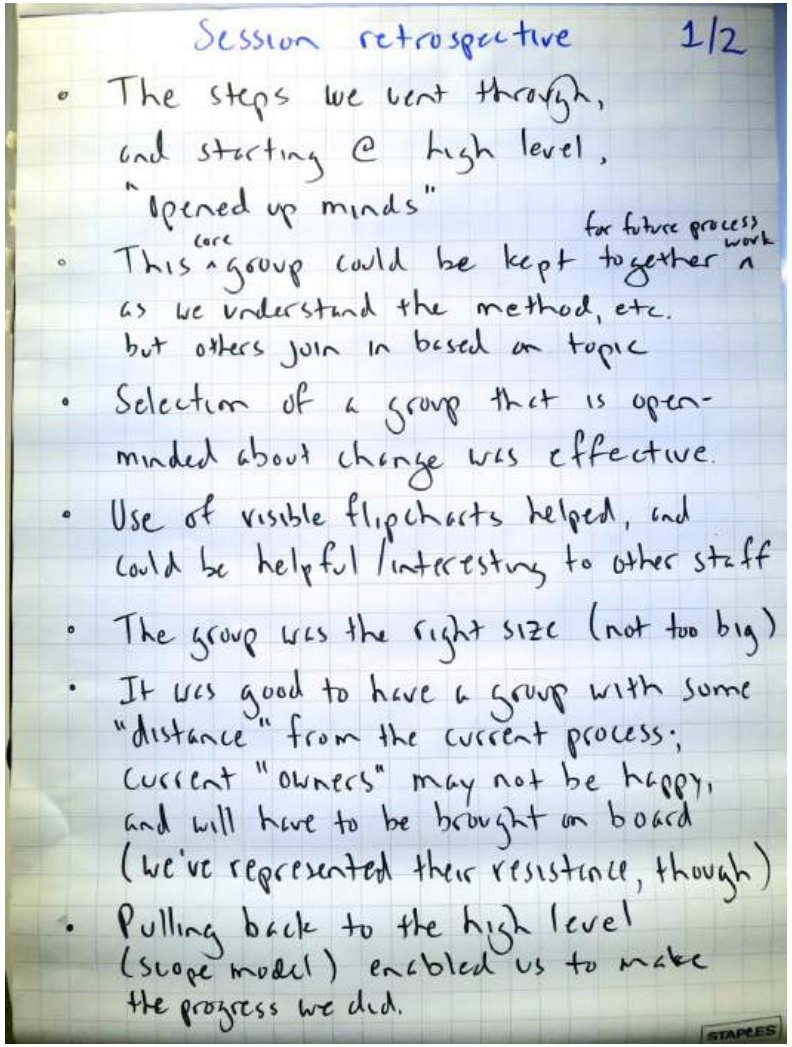


Lucidchart version

For each essential Activity, add "Who," "How," and lots of "Notes"

- We have the core of the to-be process design
- Going immediately to a Swimlane Diagram would be *overwhelming!*
- But now, developing the to-be flow model (swimlane diagram) is straightforward – *We Can Do It!* We have:
  - actors (swimlanes)
  - steps
  - how the steps will be done
  - sequence (approximate, but OK for now)

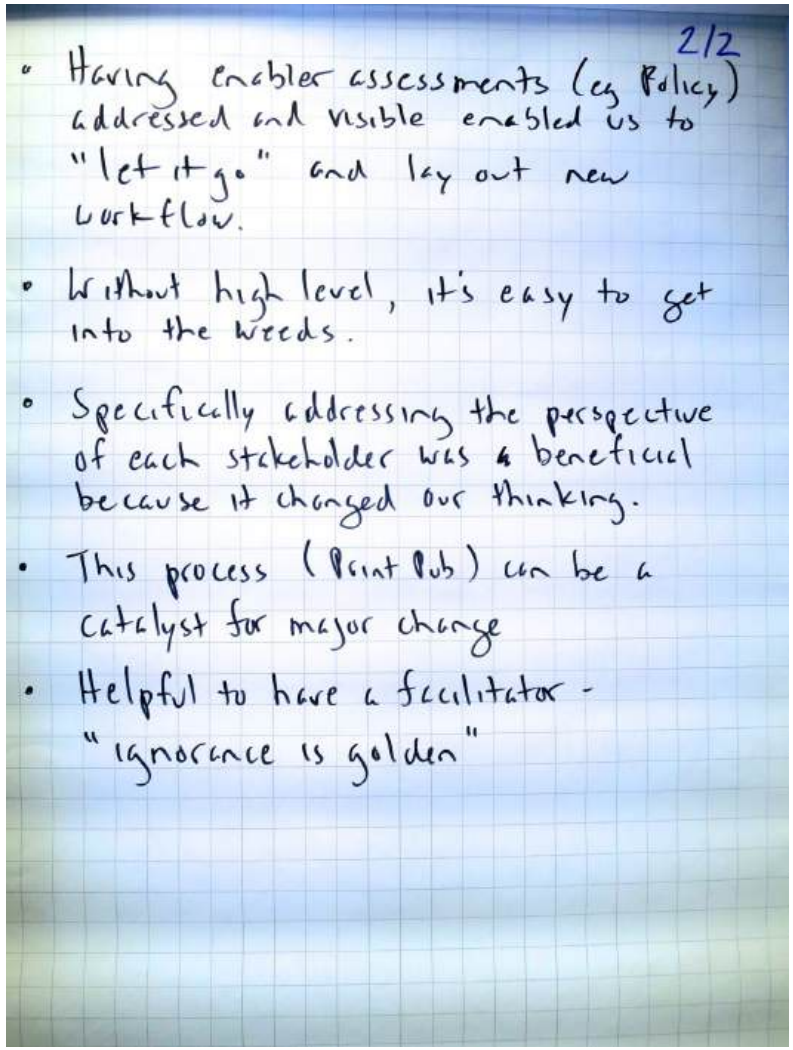
Final observations from session retrospective, 12 people



Session retrospective 1/2

- The steps we went through, and starting @ high level, "opened up minds"
- This core group could be kept together for future process work as we understand the method, etc. but others join in based on topic
- Selection of a group that is open-minded about change was effective.
- Use of visible flipcharts helped, and could be helpful/interesting to other staff
- The group was the right size (not too big)
- It was good to have a group with some "distance" from the current process; current "owners" may not be happy, and will have to be brought on board (we've represented their resistance, though)
- Pulling back to the high level (scope model) enabled us to make the progress we did.

STAPLES



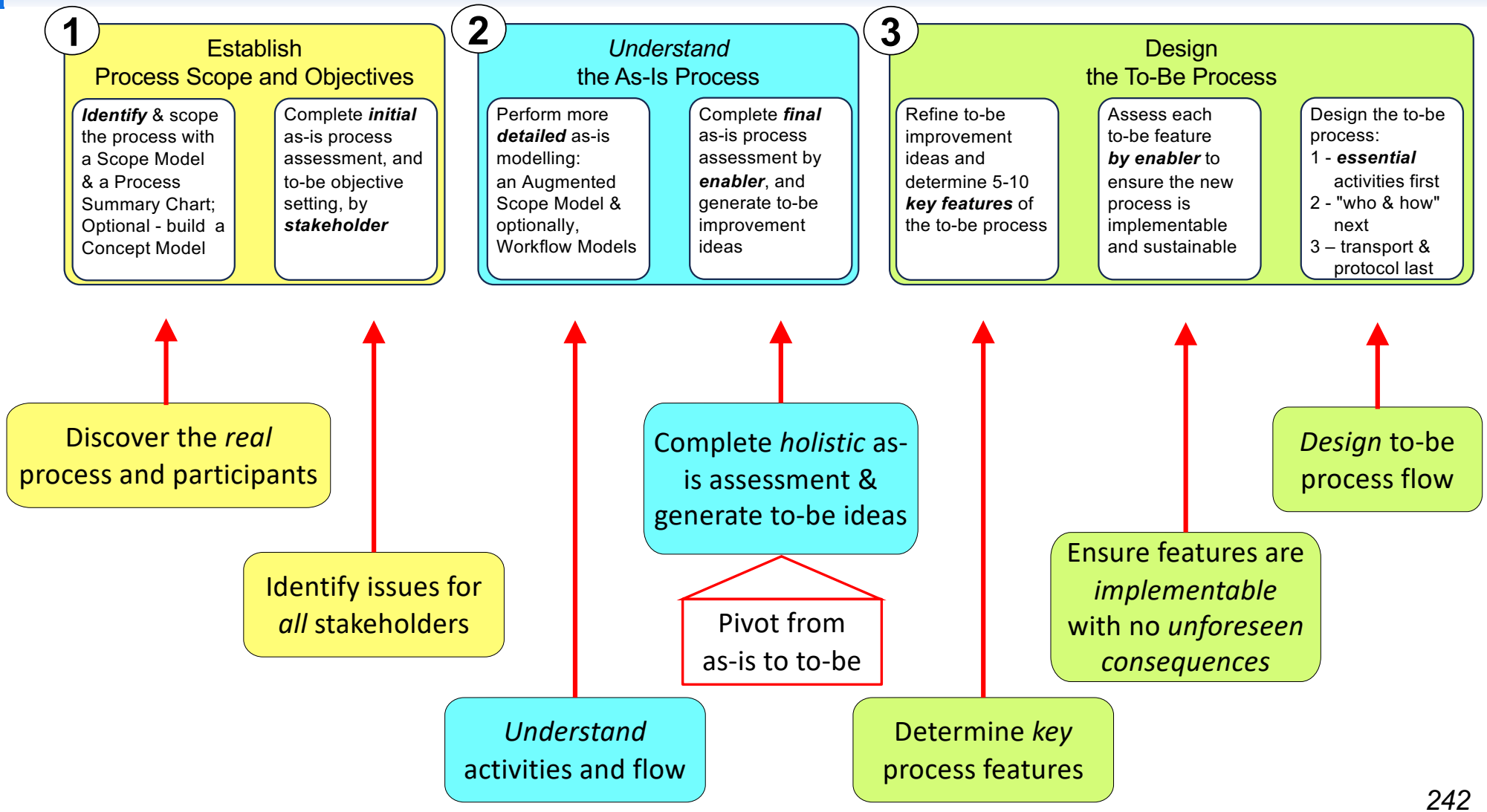
2/2

- Having enabler assessments (eg Policy) addressed and visible enabled us to "let it go" and lay out new workflow.
- Without high level, it's easy to get into the weeds.
- Specifically addressing the perspective of each stakeholder was a beneficial because it changed our thinking.
- This process (Print Pub) can be a catalyst for major change
- Helpful to have a facilitator - "ignorance is golden"

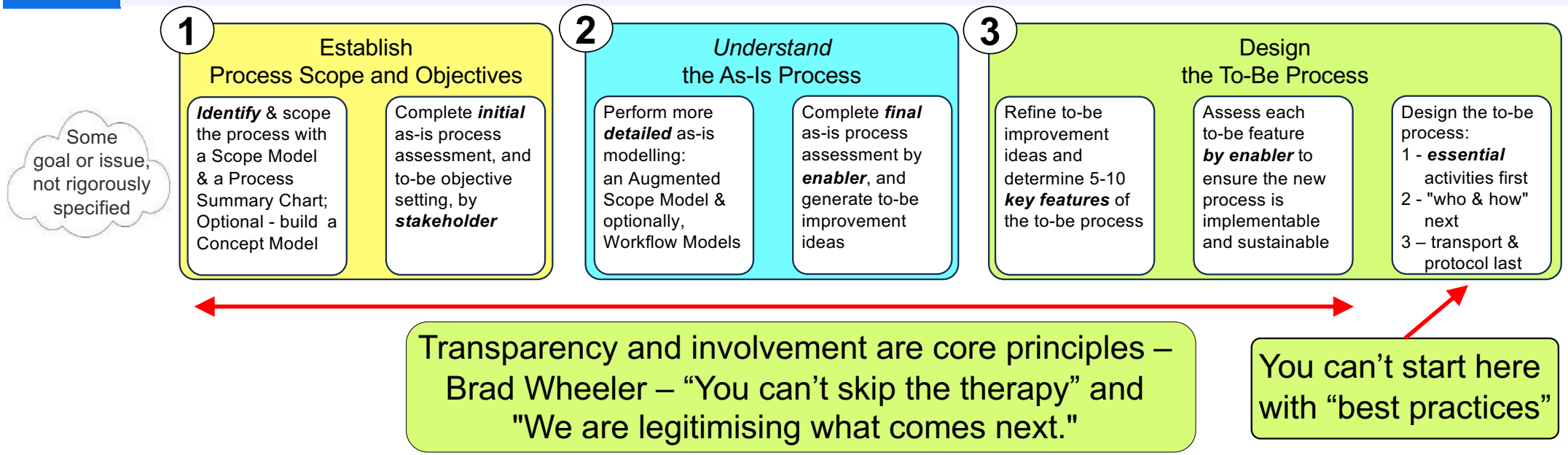
Final thoughts from session retrospective

- The steps we went through and starting at the high level "opened up minds."
- Use of visible flipcharts helped, and could be helpful / interesting to other staff.
- Pulling back to the high level (Scope Model) enabled us to make the progress we did.
- Having enabler assessments (e.g., Policy) addressed and visible enabled us to "let it go" and lay out new workflow.
- Without the high level, it's easy to get into the weeds.
- Specifically addressing the perspective of each stakeholder was beneficial because it changed our thinking.
- Helpful to have a facilitator – "ignorance is golden."

Every phase contributes to the goal – don't skip any!



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

Phase 1 summary – Discover processes, "frame" the target process

– 1 – Identify, scope, and assess the target process

– 2 – Understand the "as-is" process

– 3 – Characterise and design the "to-be" process

Phase 1 – Identify processes & "frame" the target process (scope, issues, goals)

Identify a set of related processes	***Select target process and define "what" (essential scope)***	***Define as-is process "who and how"***	***Determine why process must change – "Case for Action"***	***Specify to-be process goals – "Process Goals" and Differentiator***	***Specify to-be process performance metrics***

• ID common terms
• Select core nouns (things)
• ID activities acting on things
• Link activities into processes
• Draw *Process Landscape*
	• *What* – ***TRAC:***
	  • ***T***riggering event
	  • Final ***R***esults by stakeholder
	  • ~5 +/- 2 main ***A***ctivities
	  • ***C***ases / variations
	• Draw *Process Scope Model*
		• *Who* – Functions / Organisations / each Actor (optionally main responsibilities)
		• *How* – supporting Mechanisms
		• Draw *Process Summary Chart*
			• Stakeholder issues and concerns
			• Business context (changes in the environment)
			• Consequences of inaction
			• Record *Case for Action*
				• Establish subjective goals by stakeholder
				• Establish objective (measurable) goals
				• Clarify differentiator
				• Record *Process Goals*
					• Determine basic *measures*
					• Craft process *metrics:*
					  • strategically aligned
					  • outcome-based
					  • customer-focused.

Phase 2 summary – Model and understand the as-is process

– 1 –
Identify, scope, and assess the target process

– 2 – Understand the "as-is" process

– 3 –
Characterise and design the "to-be" process

Phase 2 – Model and understand the as-is process, and impact of all enablers

Organise and initiate a modelling session

- Workers, managers, external stakeholders
- Review *Process Landscape, Process Scope Model,* and *Process Summary Chart*
- Review ground rules

Augment Process Scope Model with more detailed steps

- Identify ~5 – 7 essential steps per main Activity
- Determine "who and how" for each key step
- Add supporting activities (e.g., transport, review, inform) as necessary

Optional: Develop handoff-level as-is Swimlane Diagram

- From trigger, trace *one* flow to result – "flow first, detail later"
- Three questions:
  1 - "Who next?"
  2 - "How?"
  3 - "Who really?"
- Add details – names, labels, alternate flows

Validate completeness using "the five questions" for each step

1) "How does it get there?"
- system?
- external process?
2) "Good name?"
3) "All inbound flows shown?"
4) "All actors / systems shown?"
5) "All outbound flows shown?"

Model other cases of the same process

- Use initial diagram (case) as starting point.
- If unwieldy, it's normal to create a separate diagram

Develop service-level Swimlane Diagram, if necessary

- Develop *service level* diagrams (one per case)
- Document procedures etc. as needed (not usually done)

Optional, if you choose to develop as-is *Swimlane Diagrams* (*Workflow Models.*)

Phase 3 summary – Define to-be process characteristics and design

– 1 –
Identify, scope, and assess the target process

– 2 –
Understand the "as-is" process

– 3 – Characterise and design the "to-be" process

Phase 3 – Assess as-is process, develop to-be characteristics, design to-be

Conduct final assessment of as-is and generate ideas for the to-be	***Decide on overall approach***	***Conduct a challenge session to generate more to-be ideas***	***Select 5-10 key features for the to-be***	***Assess each feature by enabler (to avoid unanticipated consequences)***	***Design to-be process***
• Collect first impressions and *ideas* • Identify leverage points and *ideas* • Assess process (and optionally each step) by enabler, and record *ideas*	• Abandon • Outsource • Leave as-is • Improve or redesign • Totally new design	• *Optional* • State underlying assumption in each step • *Overstate!* and challenge • Record alternative *ideas,* or keep statement	• Team and management review • Select 5 – 10 key *ideas* that: - meet goals - are significant - are feasible • These are the to-be *features*	• Describe what must be done, one enabler at a time, to make the *feature* work • Result: *Characterised To-Be Process, Process Requirements*	• Identify essential activities (*what*), then *who* & *how* • Link activities by dependency and adjust • Draw initial Swimlane Diagram • Add non-essential activities • *Annotate!*

Three phases – summary

Phase 1
Identify, scope, and assess the target process

- ***Identify related processes***
  - identify and link activities
  - 1:1 links are in same process
  - draw *Process Landscape*
- ***Use TRAC to clarify target process' scope***
  - **T**riggering event
  - **R**esult for each stakeholder
  - ~5+/- 2 main **A**ctivities
  - **C**ases (main variations)
  - draw *Process Scope Model*
- ***Clarify as-is process elements***
  - functional areas
  - actors and responsibilities
  - systems and mechanisms
  - draw *Process Summary Chart*
- ***Assess as-is process by stakeholder*** (initial assessment)
  - also specify context and consequences of inaction
- ***Specify to-be process goals***
  - subjective and objective
- ***Specify performance metrics***
  - customer-focused outcomes, not internal task efficiency

Phase 2
Understand the as-is process

- ***Organise and initiate session***
  - staff and management plus external stakeholders
  - review scope, issues, goals
  - review ground rules
- ***Build Augmented Scope Model***
  - Identify main steps by Activity
  - Identify who & how per step
- ***Build as-is swimlane diagram***
  - ***Optional***
  - one case and path at a time
  - Three questions: "Who next?," "How does it get there?," "Who *really* gets it?"
- ***Check each step - 5 questions***
  - Verify all flows in and out
  - Confirm active, accurate name
  - Confirm all actors / systems
- ***Model other process cases***
  - create new diagram, or use original case as a starting point
- ***Add additional levels of detail***
  - *only if necessary*

Phase 3
Characterise and design the to-be process

- ***Assess as-is process by enabler*** (final assessment)
  - using as-is models as a guide
  - record ideas for to-be
- ***Decide on approach*** (abandon, outsource, leave as-is, improve or redesign)
- ***Conduct challenge session***
  - challenge hidden assumptions
  - record ideas for to-be
- ***Eliminate infeasible ideas*** (cost, legal, resources, impact, …)
- ***Select 5 – 10 key ideas – these are the to-be "features"***
- ***Assess each feature by enabler***
  - helps us *avoid unanticipated consequences*
  - builds Process Requirements
- ***Identify & sequence essential activities***
- ***Lay out to-be workflow***
  - handoff then service
  - only then add non-essential steps

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 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!

- e: asharp@clariteq.com
- ig: @alecsharp01
- m: +1 604 418-3352