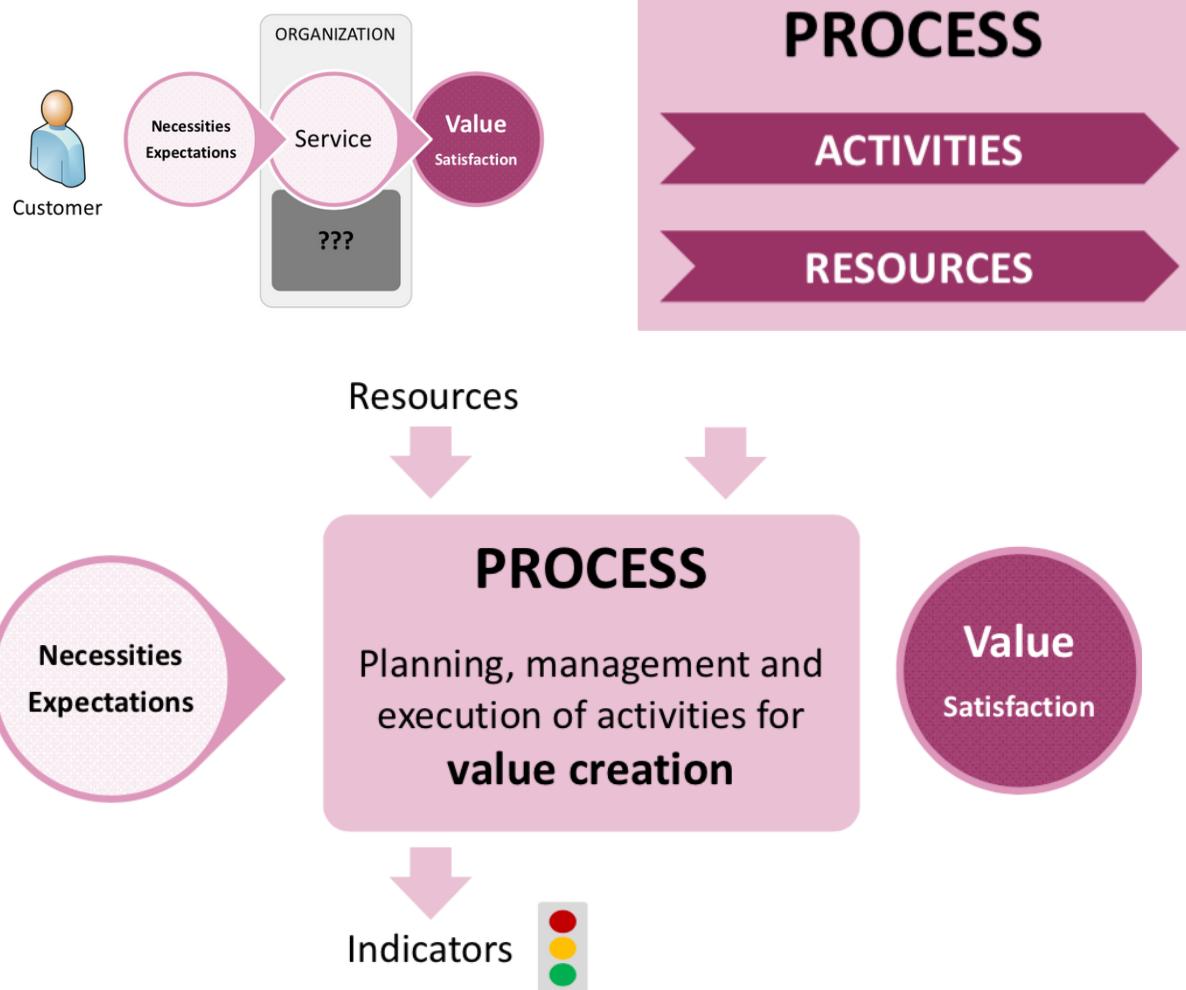




## ER - Business process management

### Service Oriented Organizations



In a traditional organization...

- Specialized workers
- Borders between departments
- No knowledge sharing
- No resources sharing
- Not customer-focused



In a service oriented organization...

- Aligned workers
- No borders between departments
- Knowledge sharing
- Resources sharing
- Focused on customer satisfaction

## Business Process Management

Holistic discipline for orchestrating activities within an organization in accordance with its strategy in order to drive continuous improvement

- Facilitates communication between managers and IT staff
- Enables up-to-date access to relevant working information
- Starting point for continuous improvement
- Increased productivity: reuse of processes
- Compliance with laws and regulations

## Business Process

What is a business process?

Set of activities performed in coordination Aimed at achieving a **business goal**

→ Important to a company's success

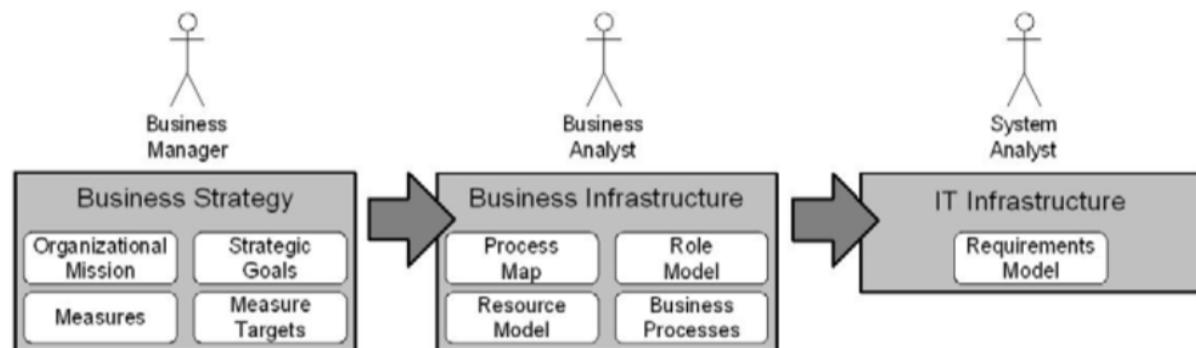
## Business Process Modeling

- The capturing of an ordered sequence of business activities and supporting information
- Business processes describe how a business pursues its objectives

### Advantages

- Common language
- Facilitates communication between parties involved
- Facilitates project understanding
- Ease process management
- Basis for process improvement

## Relationship between ER and BPM



## Business Process Modeling Notation

### BPMN: Business Process Modeling Notation

- ISO & OMG standard language (since 2006) for process modeling
- BPMN is a flow-chart based notation for defining Business Processes
- It covers behavioral and organizational perspectives
- BPMN is an agreement between multiple modeling tools vendors, who had their own notations, to use a single notation for the benefit of end-user understand and training

### BPMN: “Types” of BP

- High-level non-executable Process Activities
- Detailed executable Business Process
- Old / New business processes
- A description of expected behavior between several business Participants
- Detailed private Business Processes
- Two or more detailed executable Processes interacting
- ...

# BPM Frameworks

## Introduction

You are...

- BPM consultants just hired by a court
- required to define and analyse their current as-is business processes for admission
- expected to do your best!

Remember that...

- if you want to be the master of your processes, you have to know them first
- but you also have to get a shared understanding of what you are talking about, as well
- processes are somehow invisible, most of times it's tacit knowledge
- therefore, the main challenge is to visualize them
- only then can you discuss them!

## Our First Process Models

The project sponsor tells you:

*"I can summarize our main work into a few sequential steps. We first register the sentence appeal lodged by the citizen. It is classified by the registry department into 4 different categories and is sent to the corresponding division –there is one division per category."*

The project sponsor continues:

*"One of our 4 specialized lawyers reviews and classifies the appeal in order to briefly understand what the citizen is claiming for. Later, he assigns that appeal to one of his subordinate lawyers."*

The project sponsor continues:

*"That subordinate lawyer will be responsible for writing down an admissibility proposal. That mustn't take up more than three months. When the proposal is finished and the appeal accepted, the appeal is sent to one of the 12 jurists –who is assigned by turn."*

The project sponsor keeps speaking:

*"The jurist reviews the appeal and dictates a sentence, which is discussed in the next monthly meeting –attended by the 12 jurists."*

The project sponsor ends:

*"Finally, the sentence is published on the official bulletin."*

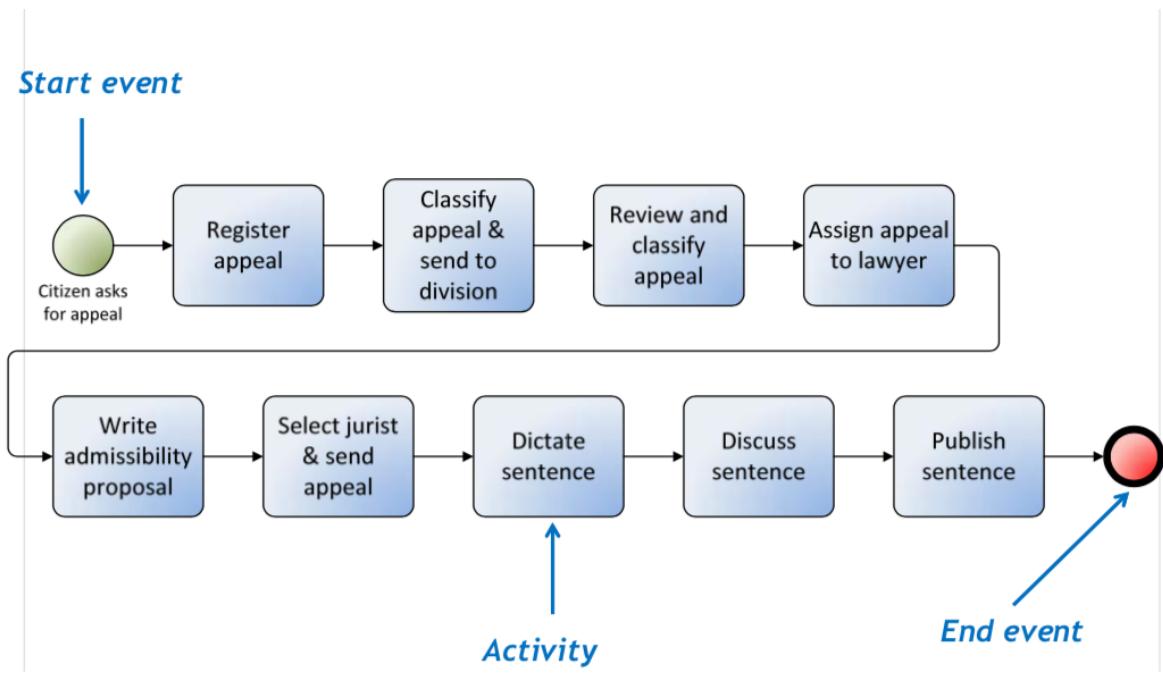
Could you visually represent that information?

With your UML background, sure you could guess the shapes for representing:

Start and end of a process

Activities

Activity flow



### Token semantics (of the BPMN)

As the token flows through the diagram, the various tasks are “enabled” to be carried out



### There is a question to project sponsor:

“Do you happen to know what if an appeal is not admitted?”

**The project sponsor replies:**

“Yes, in this case the participation of the jurist is not necessary. The lawyer writes down a ‘note for inadmissibility’ in which he specifies the reasons for non-admittance. That’s the end of the appeal.”

### Yet another question to project sponsor:

“But shouldn’t that decision be communicated to the citizen?”

**The project sponsor replies:**

“Yes, of course, but in this scenario a copy of the document is sent to his/her procurator”

So we have two scenarios:

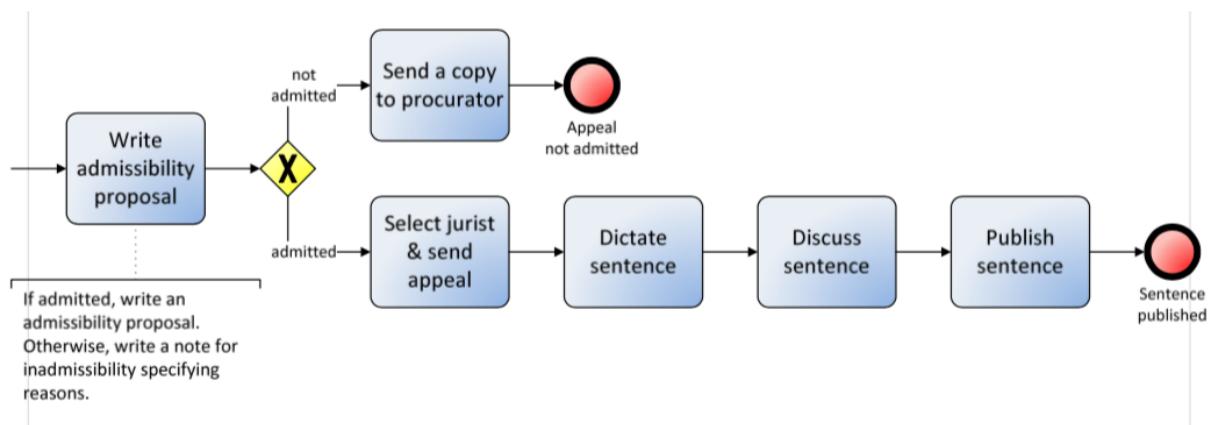
- whether the **appeal is admitted** and reviewed by a jurist and his sentence is published on the official bulletin,
- or **it is rejected** and communicated to the citizen's procurator.

Could you visually represent that information?

We need new shapes for:

Exclusive branches

Additional information regarding the behaviour of an activity



Next day you have a meeting with one of the lawyers who classify the appeals to get into detail of some the activities already discovered but briefly summarized:

**"There is much more work during the admissibility proposal writing, you should visit the specialized lawyers and ask them"**

– the project sponsor recommends you.

## Introducing: Participants

The lawyer in charge for classifying criminal appeals tells you the whole story of the admissibility process:

*"In the very beginning, I personally review the appeal in order to classify it into one of the 4 different categories."*

*"Later, three specialized subordinate lawyers will work on their own and review the appeal separately. Each one categorizes the appeal with a different evaluation parameter. Later on, I collect that information and wrap it up into one single document. Then I choose a lawyer to write the admissibility proposal."*

*"One of those previous 4 classifying categories implies that the appeal must be treated urgently. When an appeal is defined as urgent, it is categorized by only one subordinate lawyer who is selected by myself. He will be in charge of writing down the admissibility proposal."*

*"Afterwards, the admissibility proposal is sent back to one of the 12 jurists. I can't tell you much about what they do, but I could address you to the person who knows most of that part of the process."*

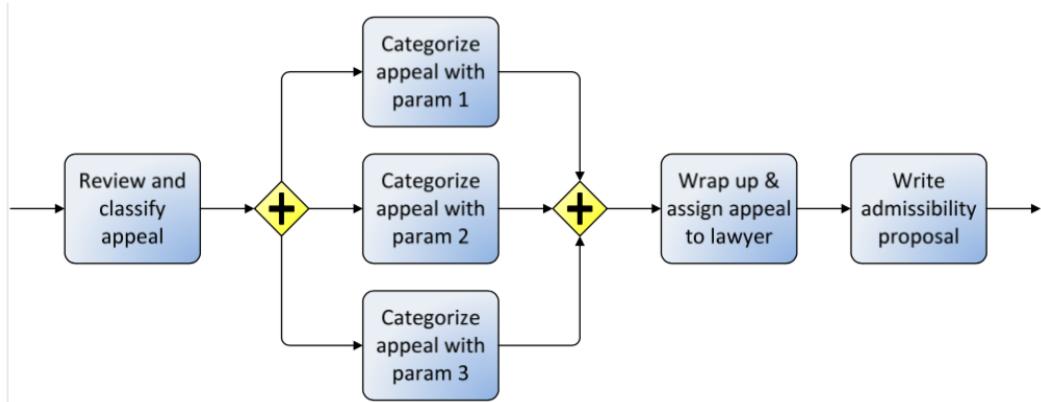
You thank him for his time and get back to your office to analyze all that information.

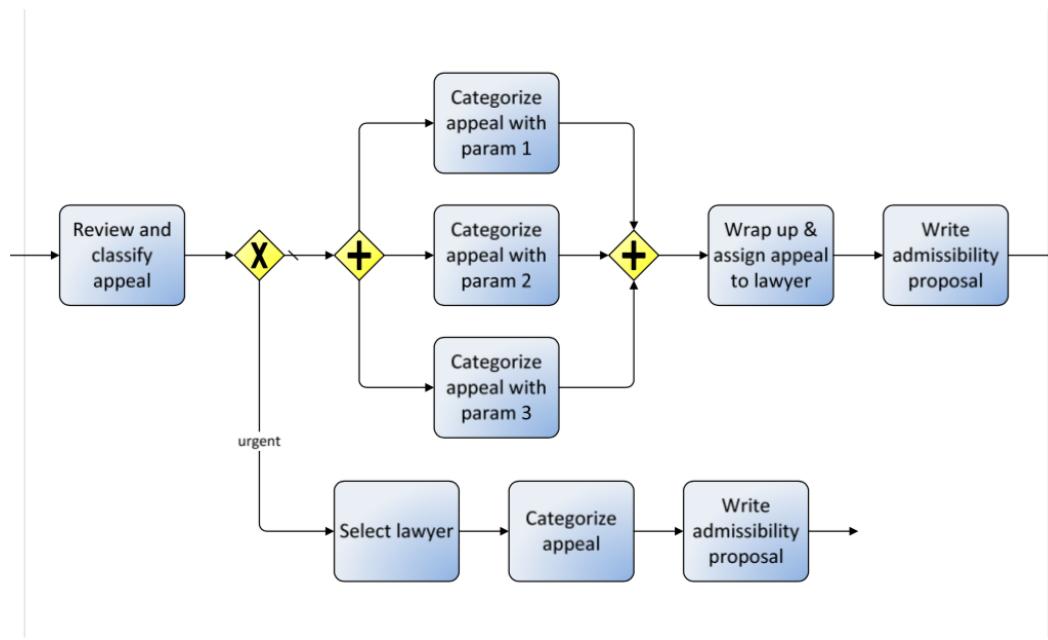
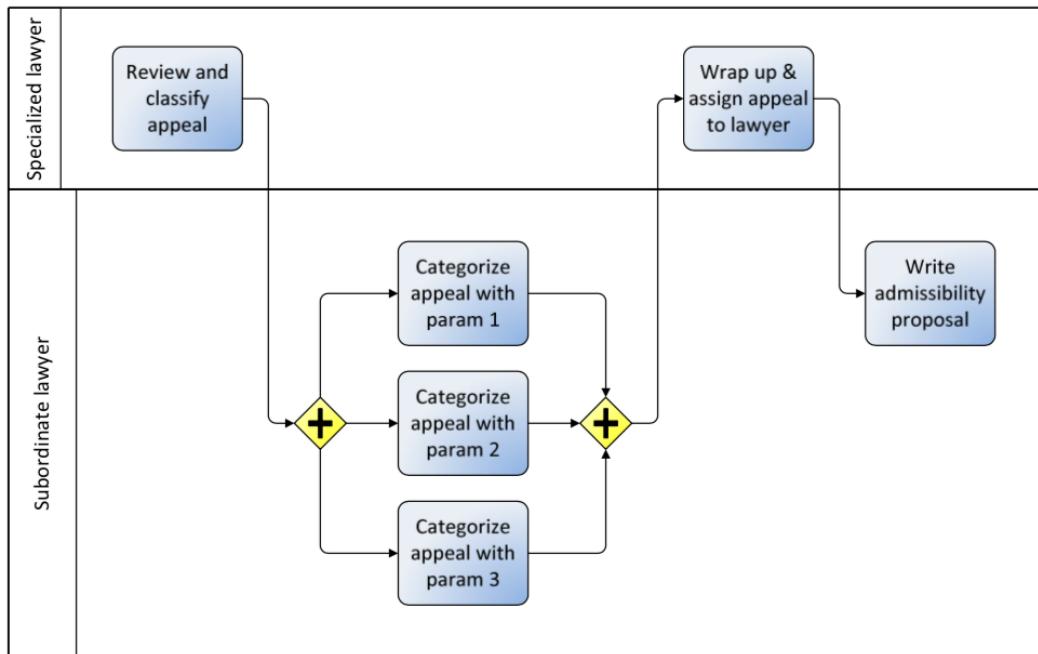
Could you visually represent that information?

We need new shapes for:

Parallel branches

Participants

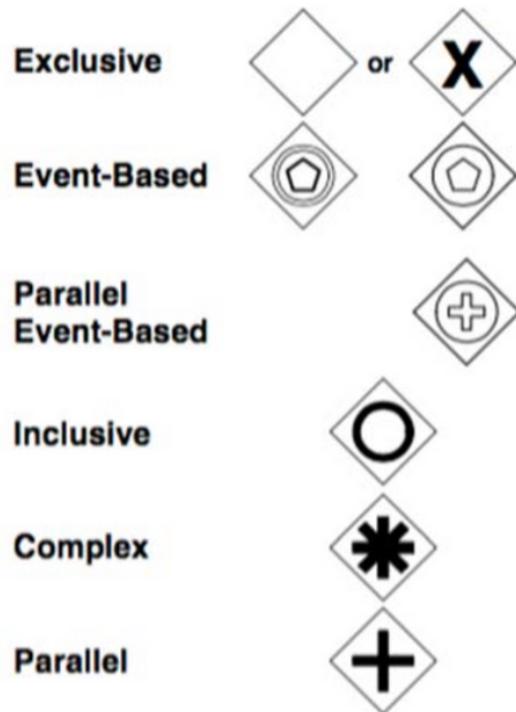




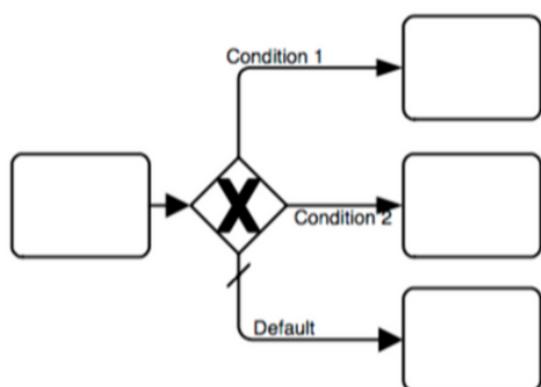
## Gateways

Gateway:

- Controls how the Process flows (how Tokens flow) through Sequence Flows as they converge and diverge within a Process.
- Capable of consuming or generating >1 token
- Do NOT represent work



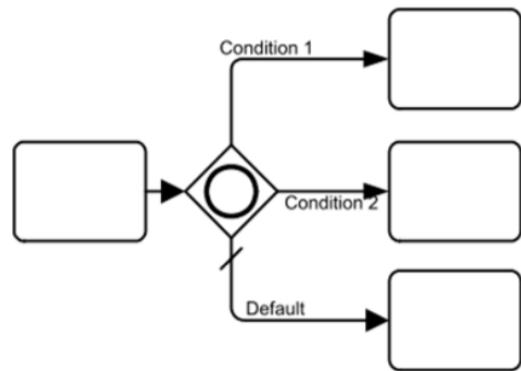
#### Exclusive Gateway (XOR):



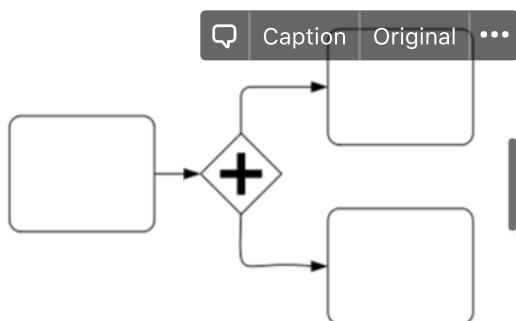
- Outgoing sequence flows should have an associated condition
- These conditions should be mutually exclusive
  - Condition 1 & Condition 2 mutually exclusive
- Possible to define default exec path.

#### Inclusive Gateway (OR):

- Alternative but also parallel paths within a process
  - Default path only taken when no other conditions are true



### Parallel Gateway:



- is used to synchronize (combine) parallel flows and to create parallel flows.

## Share Your Information

You realize that the project sponsor and the specialized lawyer have been talking about several different documents:

*the appeal, the admissibility proposal, the note for inadmissibility, the sentence...*

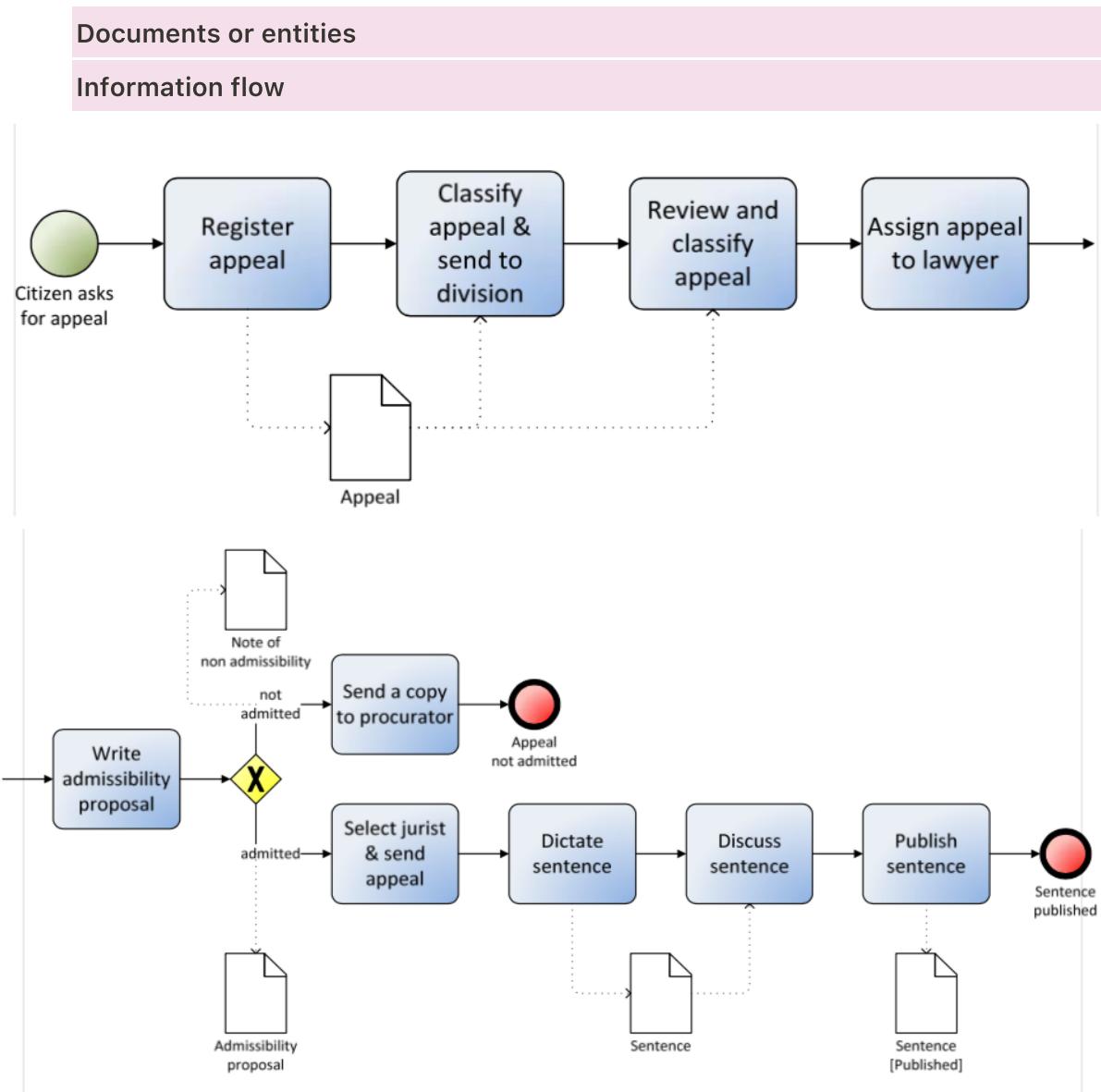
and yet that information is **not represented within your processes!**

That is:

- When are they created?
- Who are they sent to?
- Where from?

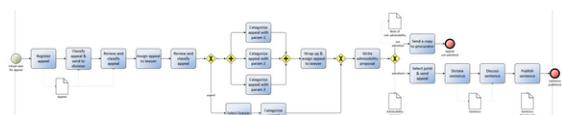
Could you visually represent that information?

We need new shapes for:



## Divide and Conquer

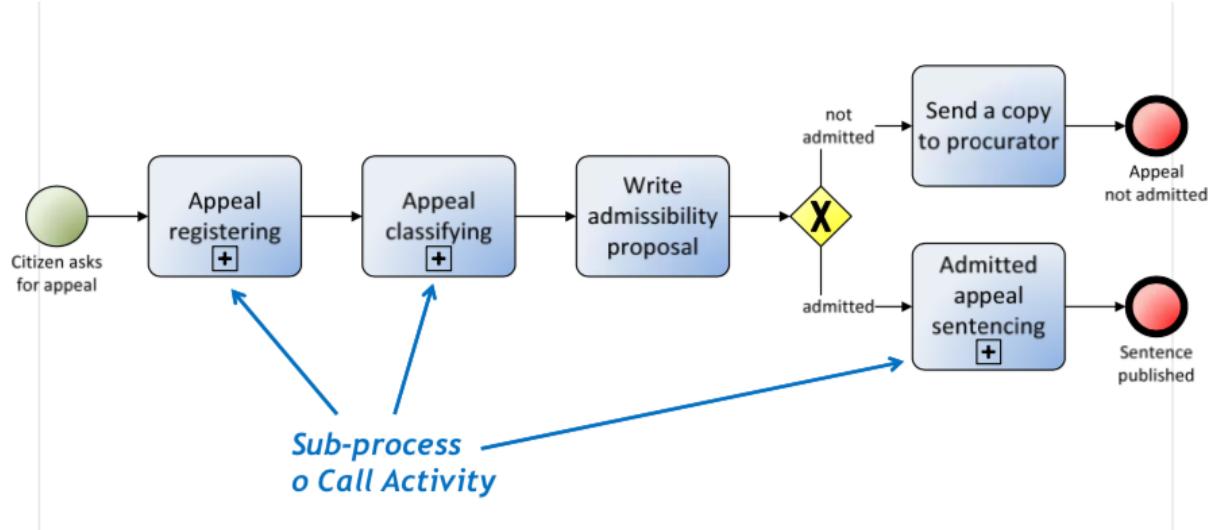
The project sponsor asks you to show him what you have done by now. You go to his office and leave the process workflow diagram on his table. He picks it up and...



There is a lot of information on a single page!

Is there a solution in BPMN to unclutter huge diagrams into something quite more readable by normal human beings?

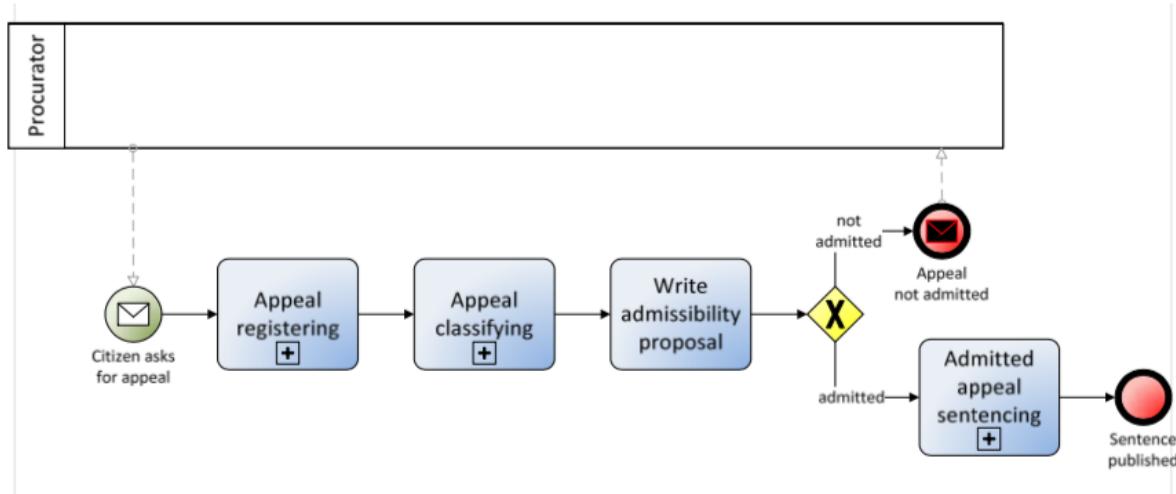




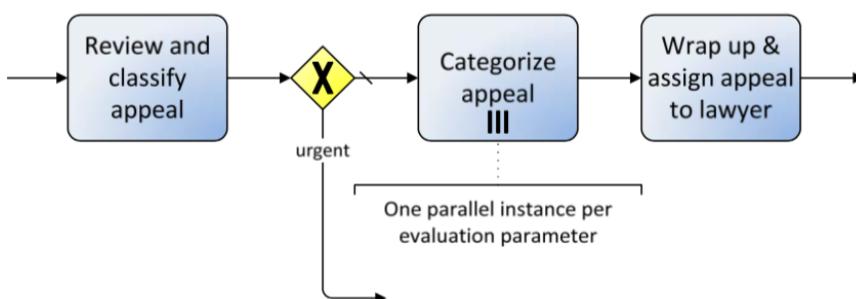
## Communicate with Partners

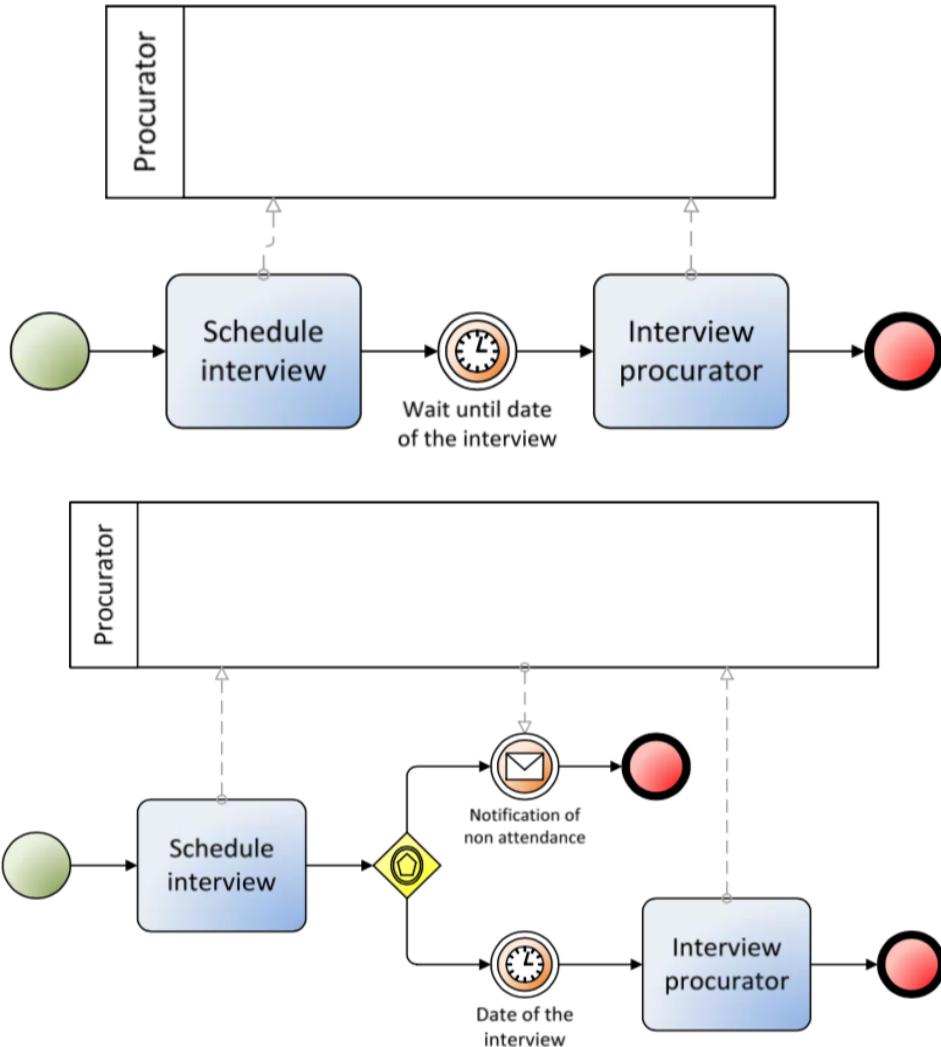
Back from a short holiday break, it's time to review your process diagrams. You are able to identify activities, documents, flows and participants in these –wait a minute...

**Do you really manage to identify ALL process participants?**



## Tricky Workflow Shapes





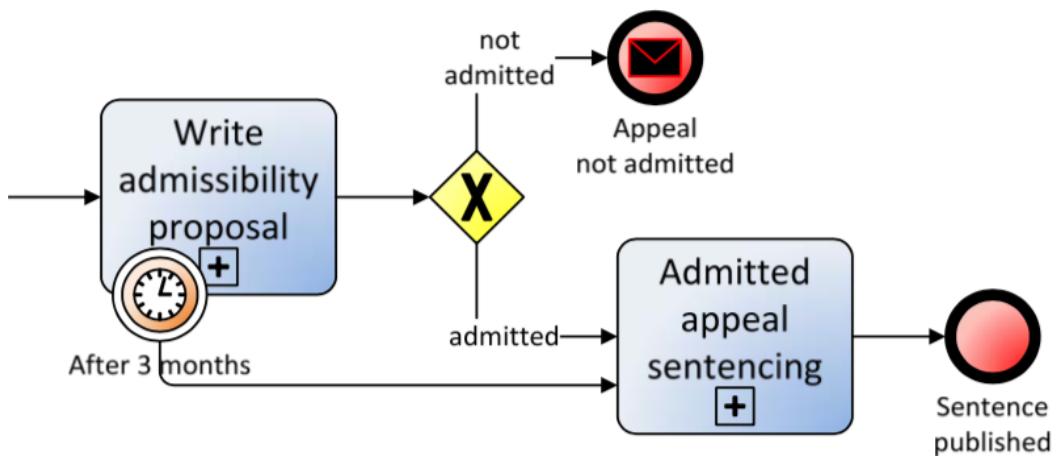
## Something Went Wrong!

You are reviewing your notes and you underline the following sentence:

*"That subordinate lawyer will be responsible for writing down an admissibility proposal. That mustn't take up more than three months (...)"*

The project sponsor clears up that point:

*"When an admissibility proposal writing takes up more than three months, it's assumed that it's a complex case so it's automatically accepted and assigned to the corresponding jurist by turn."*



Finally, you wonder what happens if the citizen eventually ceases on his appeal by any reason. The project sponsor tells you that in this scenario a simple note for cessation is written down by a clerk and the whole process is cancelled.

