University of Pisa
MSc in Computer Engineering

Systems for Strategic Management and Support

LECTURE 21

http://www.iet.unipi.it/m.cimino/pdis/

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Conduct the workflow modeling session

- Main steps:
  - Preparing for the workflow modeling session;
  - Initiating the session;
  - Building the initial handoff (level 1);
  - Validating and extending the model;
  - Adding detail, as necessary, with a service (level 2) model;
  - Transitioning into task-level documentation.

- There may be pressure to skip as-is modeling. It is a false economy, a known problem, bacause the true BP is larger than people think it is, and you should not make changes to one part of the process without the knowledge and participation of the whole.

- Participants: anyone who participated in the identification sessions that has a role in the process to be mapped is a candidate, along with any additional folks identified during framing.
- Participants should also include both management or supervisory personnel and front line workers (not their representatives). Some support staff should also be involved, especially IT staff, who often have a true end-to-end view.
- Also external participants (customers, suppliers, and so on) should be included, because they may do substantial work in the process, in the age of e-business, e-commerce and extended enterprises.
- On average: two or three cases of the process and some details for the service –level diagram within a three hour session. After the handoff diagram, one or more further session for refining it and ensuring coverage of the main cases. This is done via one-on-one interviews or small meetings (90’-120’) with each functional area involved + a finale walkthrough with the entire group.

- On average: two-three sessions per week, each lasting half a day (in the morning), e.g. Tuesday and Thursday mornings (avoid Monday and Fridays due to traveling problems).
- For every hour in a facilitated session, your team will invest three additional hours: two in documenting the session, and another in preparing for the next one. Hence, a half-day session will involve a full day documenting it and another preparation half-day.
- If participants are geographically distributed, do virtual (electronic) meetings, via some viedoconferencing tools and sharing some simple drawing tool like Visio.

The Kickoff meeting

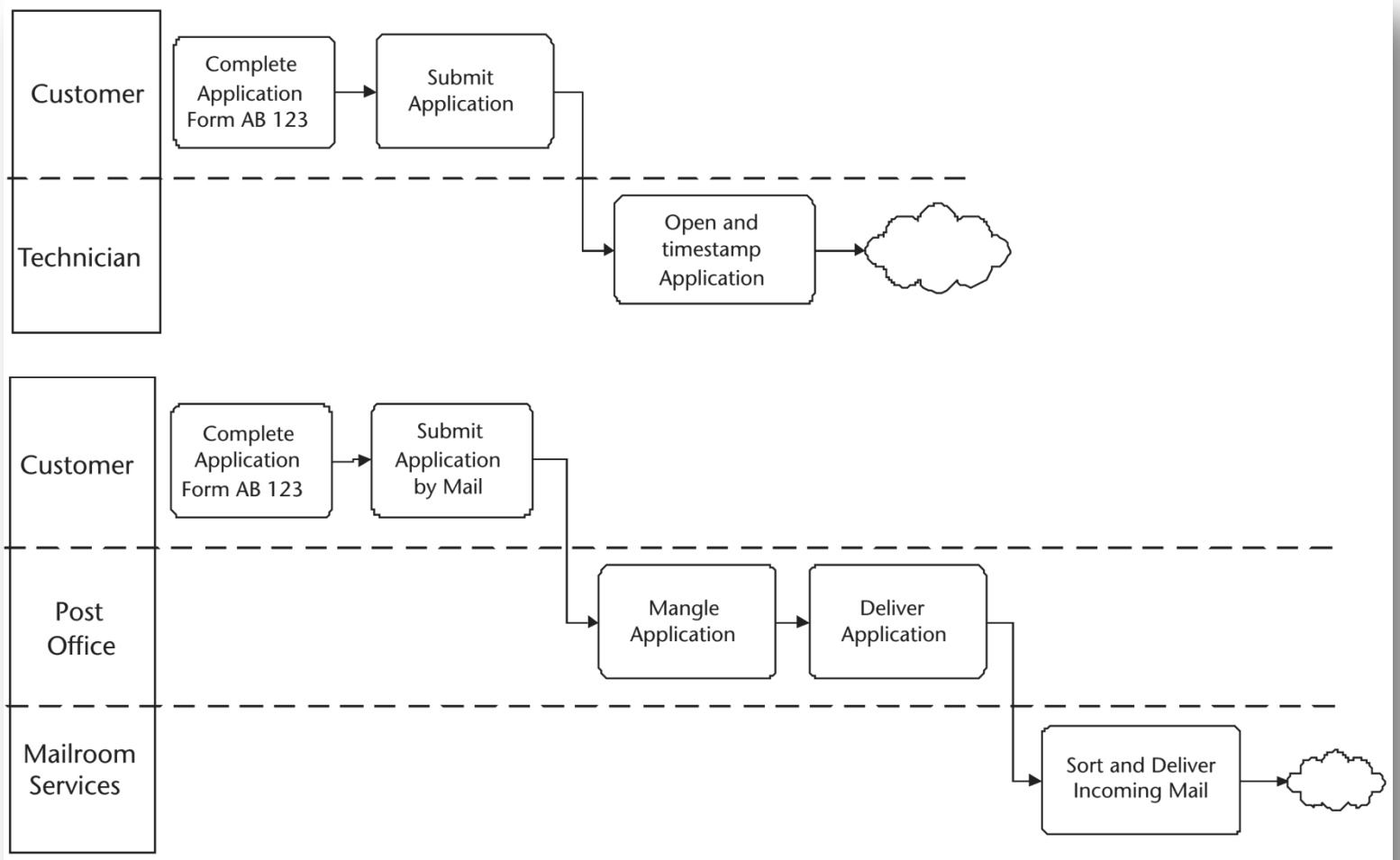
- Be focused. Start by answering (10') to two questions: basic principles of swimlane diagrams, and scope/context of the specific process to model

Building the Handoff-level diagram

- Option 1: Trace the flow via the 'three questions approach': who gets the work next? who does it get there? who really gets the work next?
- Option 2: Bottom up, gather activities, then assemble. Brainstorm the individual acrivities (who does what?) on post-it, and then sequence and cluster the activities to produce handoff-level diagram. It is useful when participants do not easily understand sequence and flow

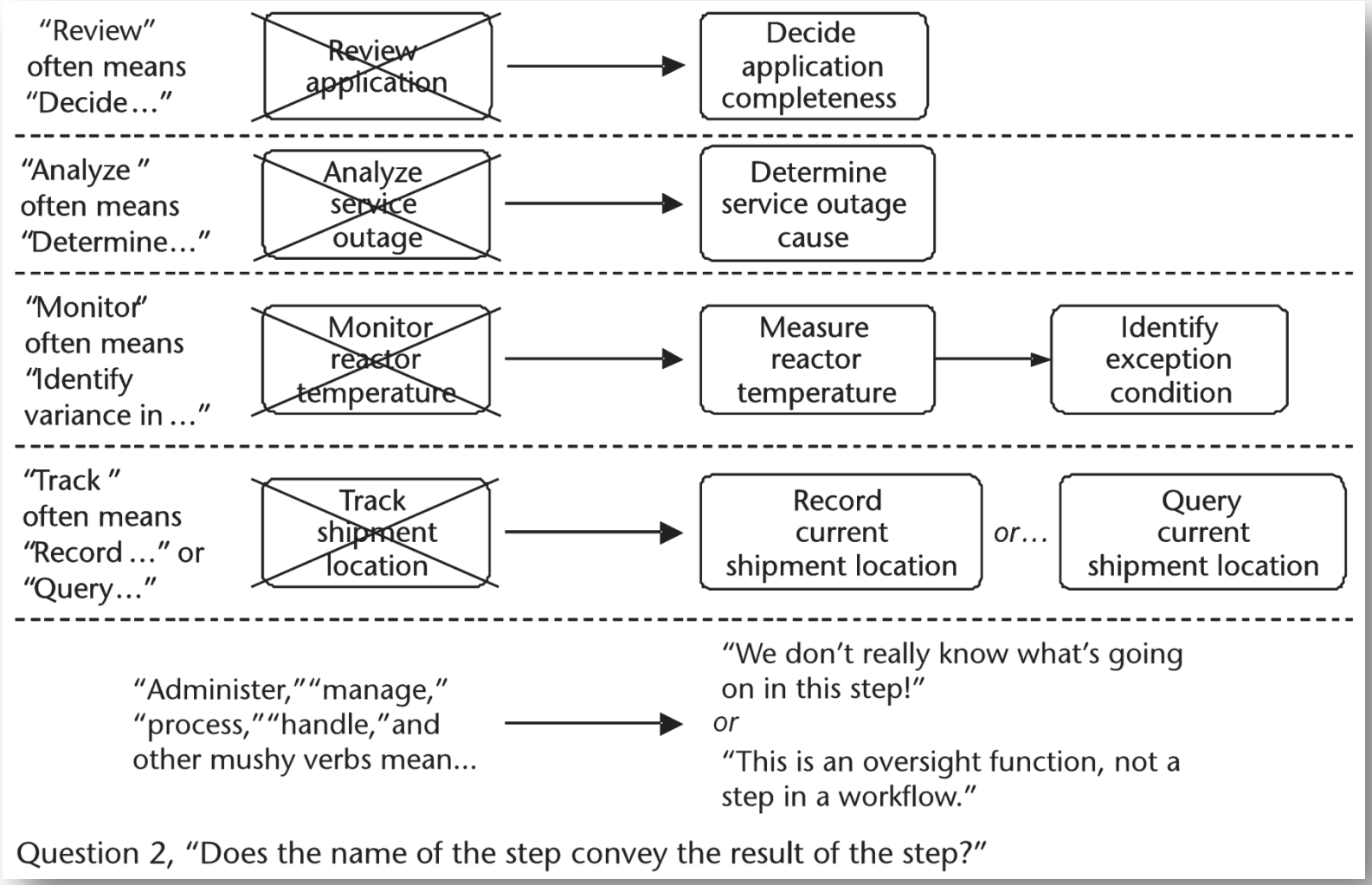
Refining the initial model – the five key questions

- Review each step in the swimlane diagram, one by one, ad ask each of five specific questions about it. This is especially useful with handoff diagram, because it allows verification and extension for adding more detail at the service level. Some real examples →

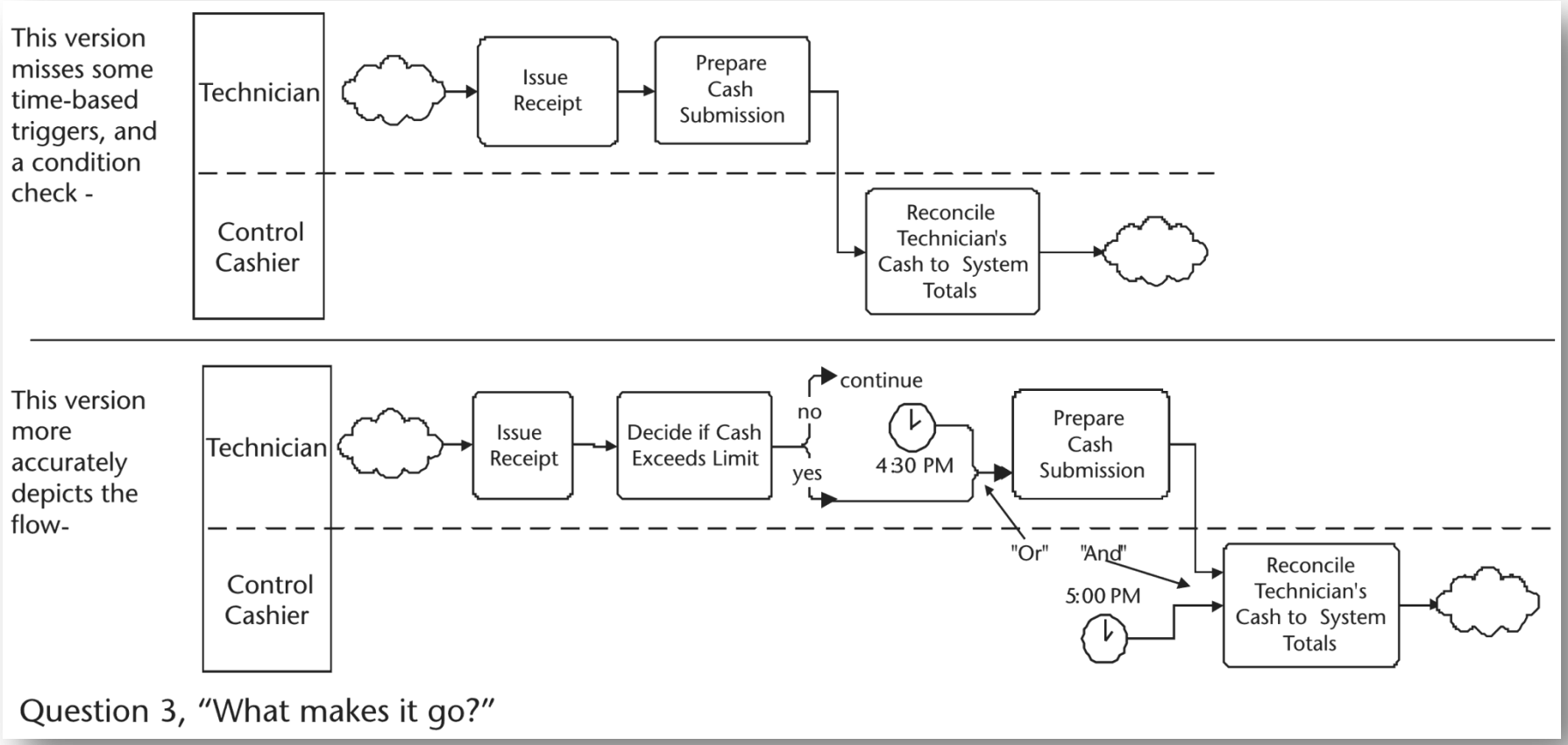


Question 1, "How does it get there?"

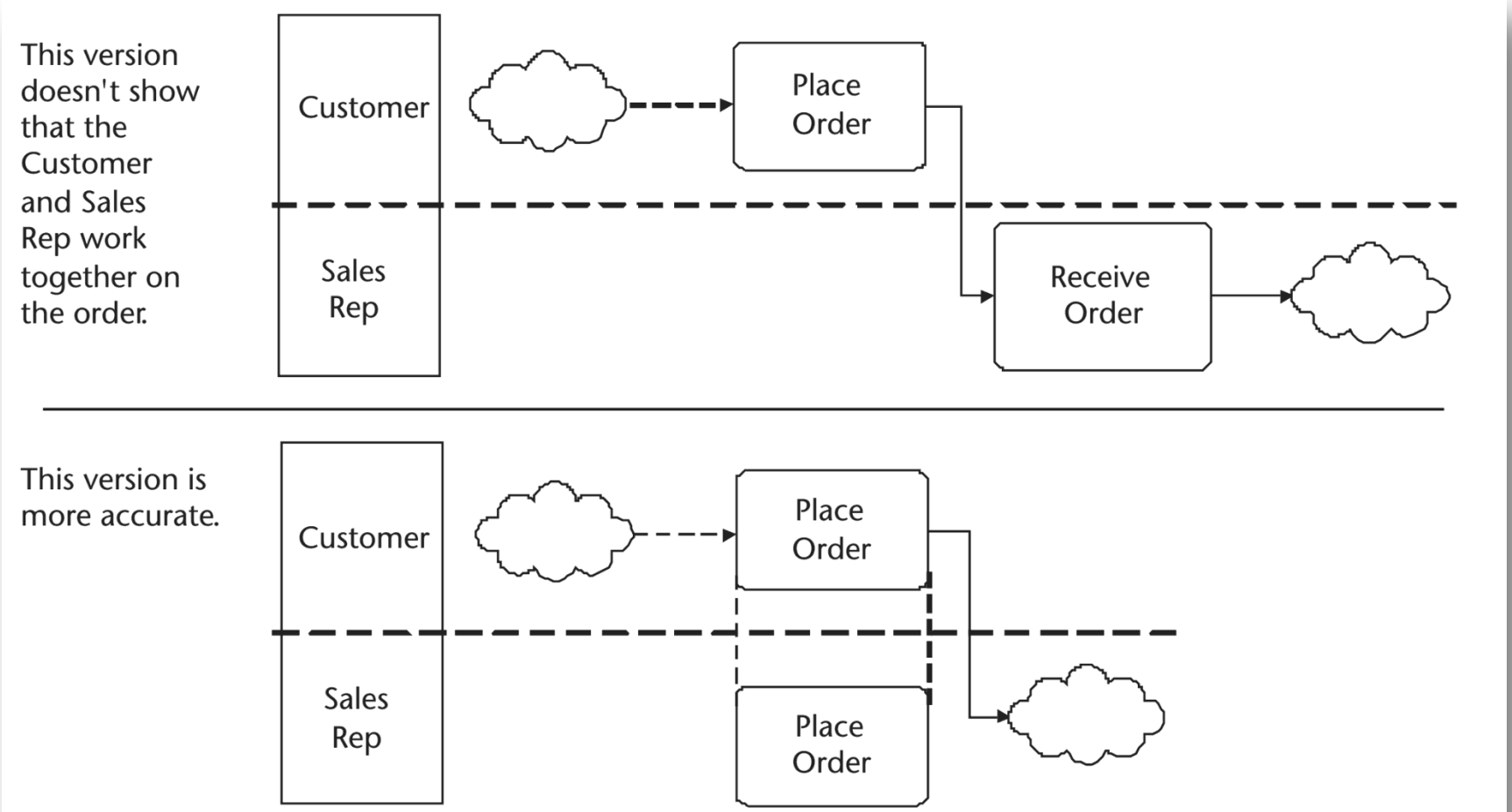
- Question 1: How is the work delivered by the Customer to the next step? It can be discovered that additional actors are involved.



- Question 2: The purpose is to agree on what the outcome of each step is, and that the name conveys the result. No mushy verbs.

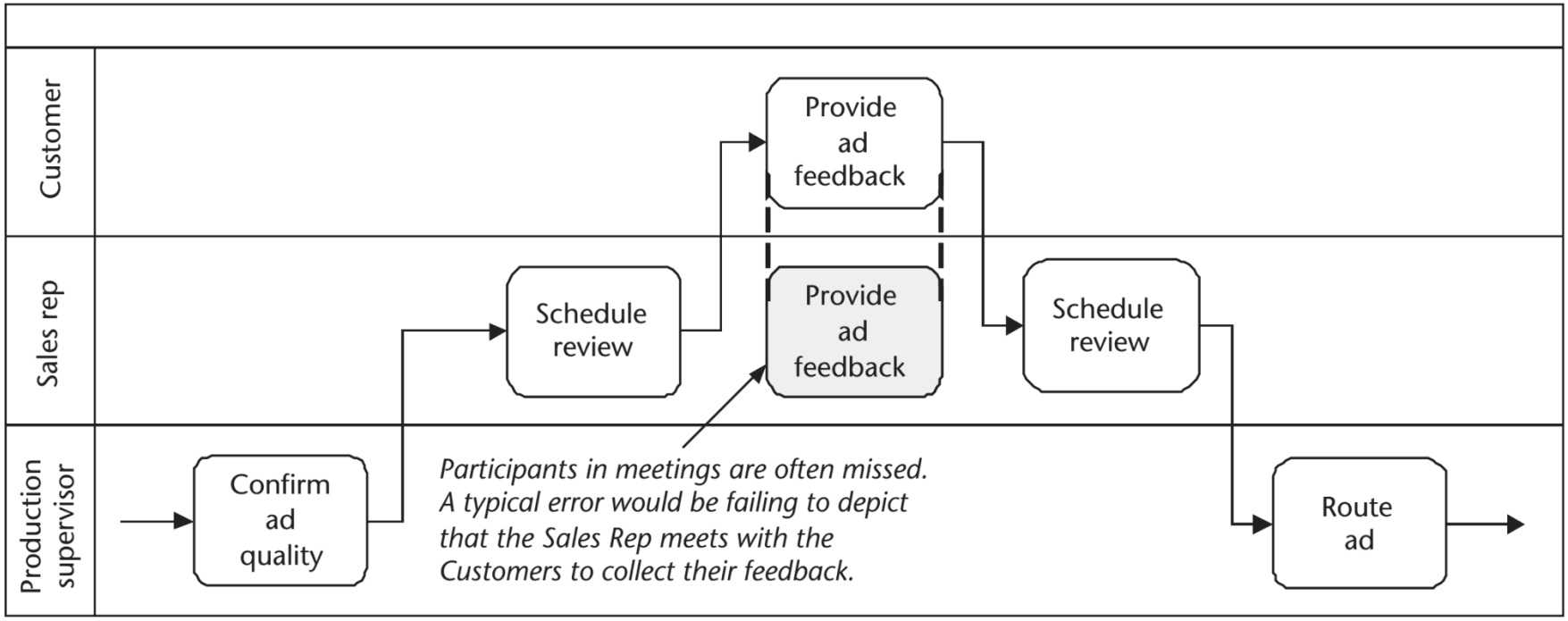


- Question 3: The purpose is to uncover missing trigger conditions for a step. Often the initial diagram will show a single flow line entering a step. Is the flow line showing really all that it takes to trigger the step?



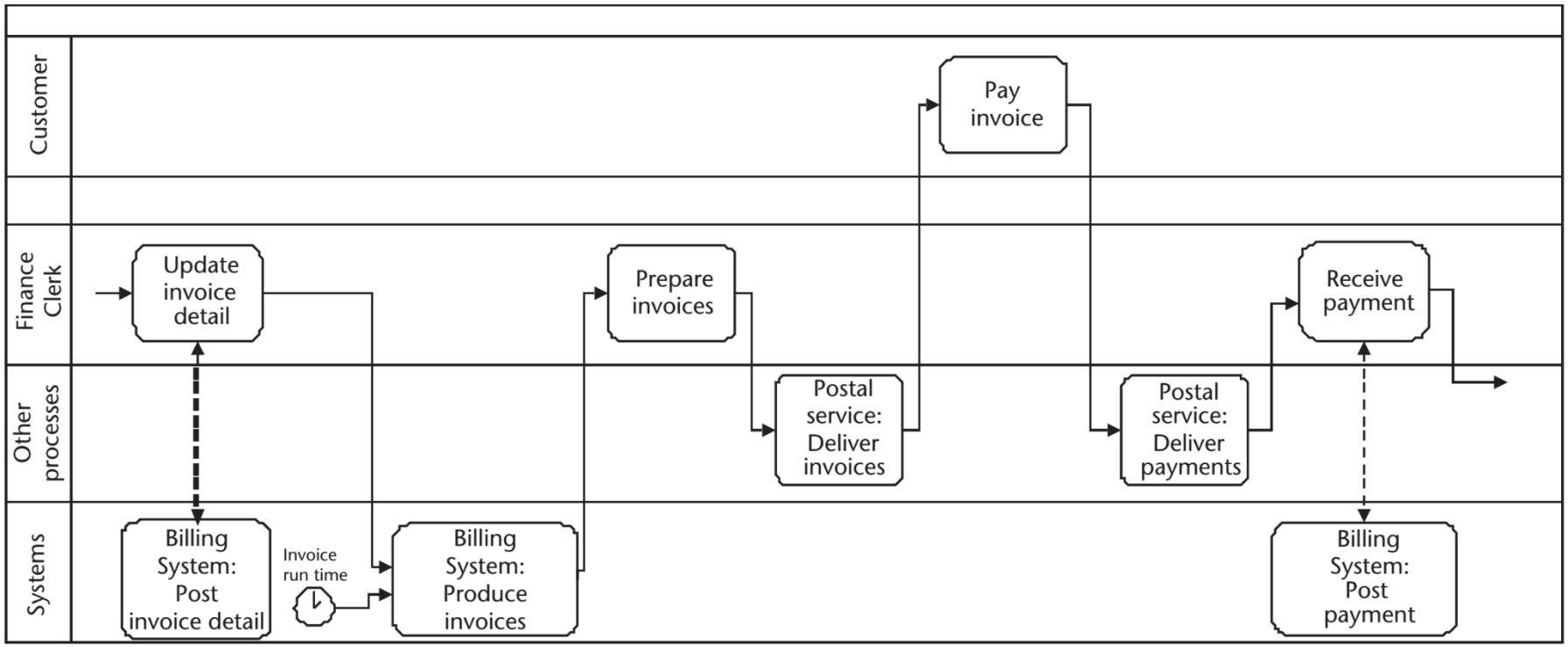
Question 4: "Is anyone or anything else involved?" (a) confusing serial and collaborative work;

- Question 4-a: Activities shown as being serial may actually be collaborative



Question 4: "Is anyone or anything else involved?" (b) confusing solo and collaborative work;

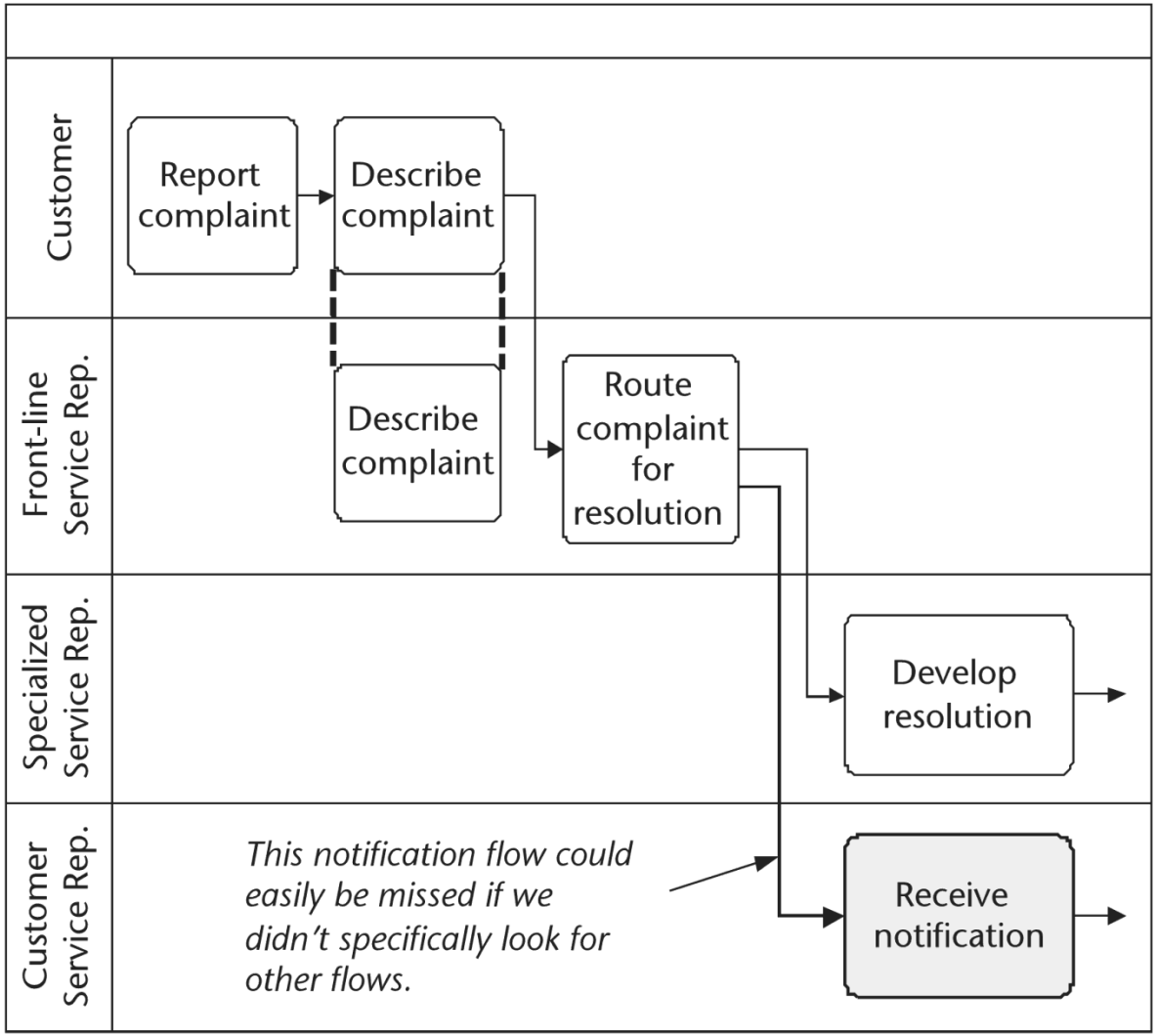
- Question 4-b: Activities shown as being performed by one actor that are actualy collaborative.



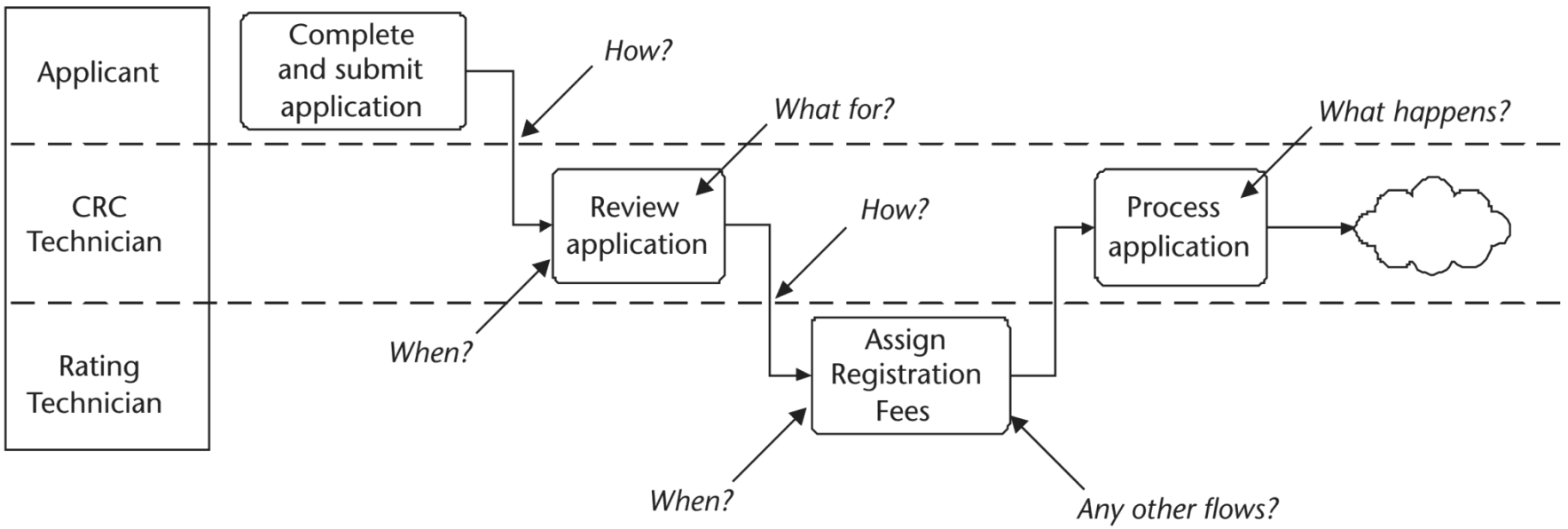
Question 4: "Is anyone or anything else involved?" (c) missing system-supported work.

- Question 4-c: Activities carried out by an actor but with support from a system that has not been shown, e.g., systems operating in a batch mode that have so far been missed.

- Question 5: Look at the right edge of the step. Common errors are: to show only some of the outbound flows; to miss parallel flow line.
- Ask 'does this step initiate work or a notification for any other actors?'

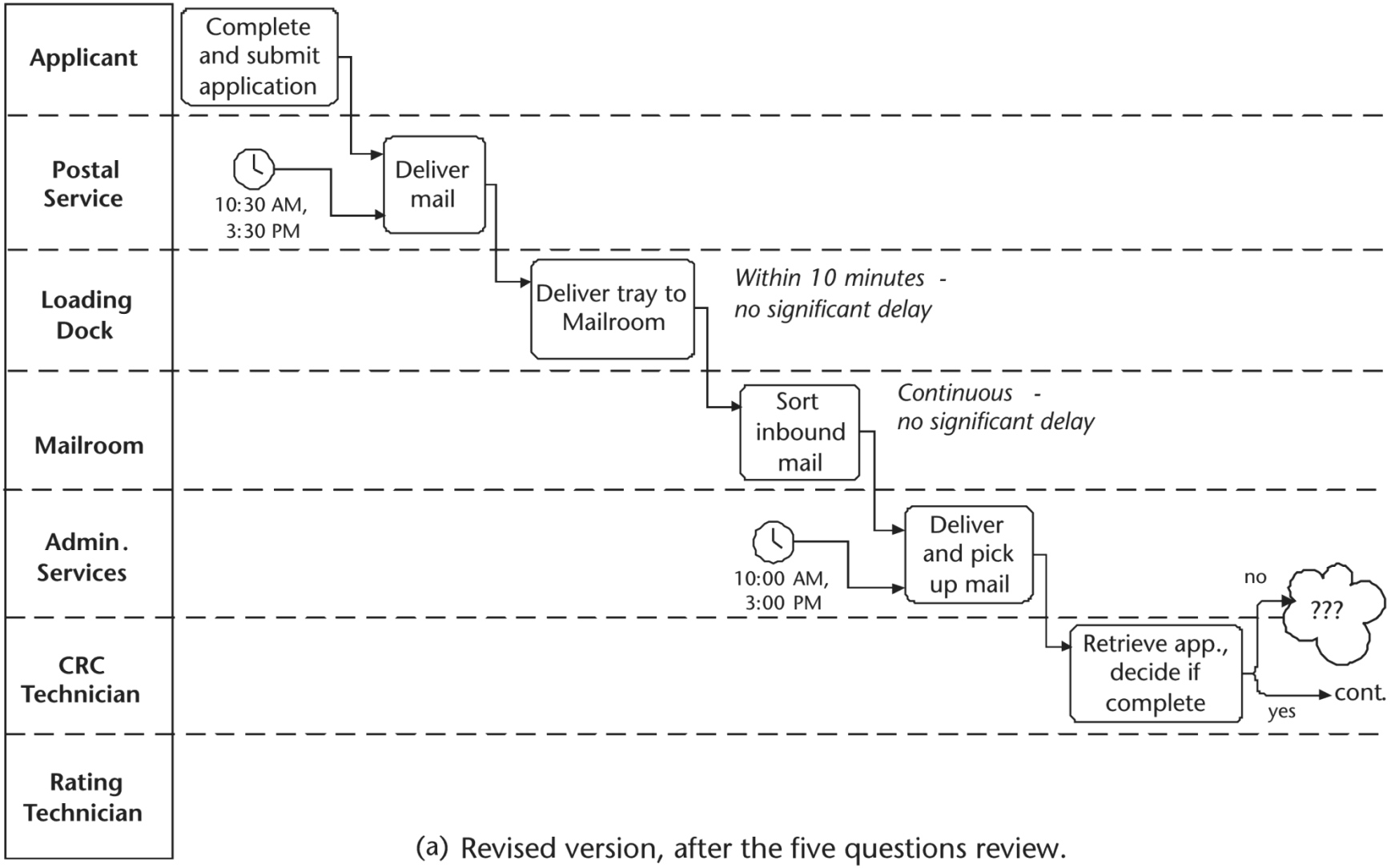


Question 5, "Are all outcomes shown?"

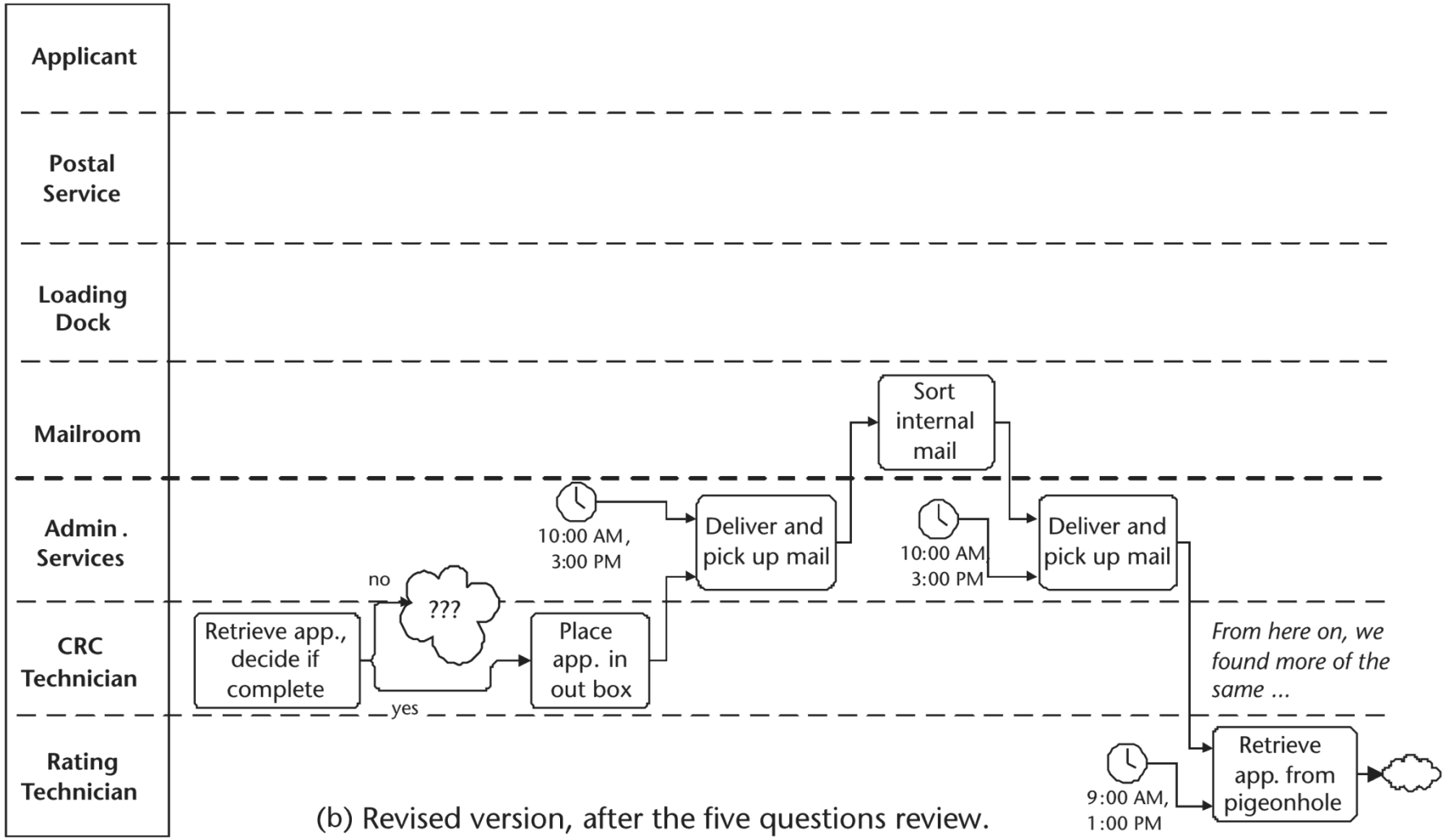


Initial version, before the five questions review.

- A real example of diagram for review. The process takes excessive time between the time an applicant submitted their application for a cross-jurisdictional business license and the time they received their assessment, prorated across the different jurisdictions.
- This initial version failed to show where the delay was occurring. Exercise: ask the five questions.



(a) Revised version, after the five questions review.



(b) Revised version, after the five questions review.

When to stop?

- People working on an overly detailed model will be working harder and harder, but contributing less and less to understanding overall process behavior.
- Ask to yourself: What is the underlying purpose of this model, will more detail further the goal?
- Stop when you understand **why** the process behaves the way it does.
- Example: a handoff diagram does not clarify what is the impacting performance -> yuo need more details. It might not be the overall workflow that is causing unacceptable process performance, but a service-level workflow might provide the key to determine what is causing the problem.
- You might then determine at the service-level: steps that should not even be performed by a specific actor but by a supporting person, steps with an inappropriate performance metric, steps needing IT support.

Producing the service-level diagram

- Begin the service level by looking at each handoff-level step asking ‘what are the significant accomplishments/milestones here?’
- Encourage participants to think in terms of milestones.
- Follow the principle of ‘expanding by five plus or minus two’: each step in a handoff diagram can typically expand to no more than five or so steps at the next level.
- Do not automatically assume you have to draw the service-level diagram. You can only produce a handoff diagram annotated with the service-level steps if sufficient to understand problems.

Producing the task-level diagram

- It is only for a part of the process, generally best described via specialized documents such as procedures or use cases, which is not typically part of as-is modeling and assessment. It support training and implementation in the to-be process.