

Process Mapping Case Study

1. Create the Process Profile and BPMN diagrams for the Conduct CPR process described below.

The Do CPR process is based on cardio-pulmonary resuscitation (CPR) instructions developed by the Canadian Red Cross. The process is somewhat oversimplified here, because CPR typically occurs within the context of providing first aid, but first aid activities other than CPR steps are not described here. At best, other first aid activities are presented as subprocesses whose steps are not described in detail (hint: this means you can model them as collapsed subprocesses; all other subprocesses should be expanded).

CPR should only be administered by a person trained in CPR techniques. From this point forward, we'll call such a person a "first-aider." When a first-aider notices someone who appears to be in need of CPR (we'll call this person a "casualty"), he will assess the casualty. If the casualty requires CPR, the first-aider will provide CPR until emergency medical services (EMS) personnel arrive on scene or until the casualty revives.

What follows is a description of the specific steps to be undertaken by the first-aider.

Before administering any aid, the first-aider must ensure his own personal safety. He checks for hazards (e.g., gas leaks, broken glass, downed power lines, fire, or dangerous traffic) and looks for gloves. If any hazards are present or if the first-aider has no gloves, the situation is unsafe and the only action the first-aider can take is to activate EMS. By "activate EMS" we mean call the local emergency services number or assign a bystander to contact emergency services. Once EMS is activated, the first-aider must wait for EMS to arrive. If the first-aider can find gloves, he puts them on before proceeding.

The next step is to assess the casualty to determine whether CPR is required. (Just for your information, CPR is required if the casualty is a) unconscious and not breathing, b) unconscious and taking agonal respirations, or c) conscious and taking agonal respirations, but you don't need to model these criteria). If CPR is not required, the first-aider performs other first aid (the details of which are out of scope of your diagram).

If CPR is required, the first-aider activates EMS then proceeds to do CPR. CPR is a repetitive process. Once begun, it continues until either the casualty revives or EMS arrives to take over first aid.

The CPR process proceeds as follows:

- Administer 30 chest compressions
- If a CPR barrier is available, administer two breaths
- Repeat

A CPR barrier is a filter device that protects the first-aider from contact with the casualty's bodily fluids. If a CPR barrier is not available, CPR consists of continuous chest

compressions, only. Since chest compressions are the most important component of CPR, the procedure can still be valuable without the administration of breaths.

Whether the casualty revives or not, the first-aider must stay on the scene until EMS arrives, at which point EMS takes over first aid.

- 2. Create two separate BPMN diagrams to model the following permit processing scenario. In the first diagram, use a throw-catch pattern to model error handling. In the second diagram use a gateway to model error handling.**

In the state of California, collection, possession, transplantation or propagation of rare, threatened or endangered plants or manipulation of their habitat requires a Rare, Threatened or Endangered Plant Collecting Permit. These permits are free and are required for activities conducted on both private and public land.

Once an applicant submits her application, the California Department of Fish and Wildlife reviews the application then issues the permit. Sometimes, applicants submit incomplete applications, an issue that is discovered during the review. If this happens, the applicant is sent a request for additional information. If the information is received, the permit can be issued. If the requested information is not received within 14 days, the permit is rejected. The applicant is notified of the rejection.

(Note: The California Department of Fish and Wildlife really does require such a permit, but the preceding process description is entirely fictional.)

- 3. Create a BPMN diagram to model the following college assignment administration scenario.**

Lake Superior Community College mandates that a professor must publish assignment guidelines (on the college's student web portal) two weeks prior to the assignment's due date. Once the guidelines have been published, the professor begins collecting completed assignments up until the due date.

When the due date arrives, the professor can grade assignments. For each assignment, the professor marks each of the items on the assignment then calculates the grade by adding up all the item marks.

During the assignment grading process, the professor may discover instances of academic dishonesty. If this happens, the professor assigns a grade of zero to the assignment. He also completes a standard Academic Dishonesty Notice and sends a copy of the notice to the student.

When all of the assignments have been graded, the professor records each grade in his grade record (a spreadsheet). The professor then returns each assignment to the student who submitted it (yes, this also includes the students who were assigned a grade of zero due to academic dishonesty).

The Dean also counsels each of the students who committed academic dishonesty. This may happen concurrently with the professor recording the assignment grades and returning assignments. The counseling process is complex and we have chosen not to document the many steps in the process at this time. Once counseling is complete, the Admin Assistant files documents related to student counseling (this includes the Academic Dishonesty Notice).

4. Correct the errors

The BPMN diagram below depicts the Produce Magazine Article process. The Writer and Researcher are freelancers who work together to write articles for various publications (mostly magazines, but sometimes newspapers). The diagram includes many errors. Correct the errors that you are able to correct. If you spot an error, but don't have enough information about the process to correct it, briefly describe the error and explain why it needs to be corrected.

Produce Magazine Article – BPMN Diagram

