

Matricola _____
Surname _____
Name: _____

Information Systems 01PDWOV

24 June 2020

Books, notes are not allowed. Write only on these sheets.

Covid exam management

In all universities, and notably at Polito, courses are completed by an exam. Exam sessions are defined, in them students can perform exams.

AS IS process (pre Covid)

The administration defines exam periods, and for each course and exam period, one or two exam sessions. An exam session takes place in a certain classroom, in a certain time slot. Students decide to enroll in an exam session for a certain course, and do it using the university IS. To enroll the student must have followed the course. Two days before the exam session enrollment closes, and the teacher of the course receives from the IS the list of students enrolled.

The exam text (containing one or more questions, open or close) is defined by the teacher and printed on paper.

At the day and time of the exam session the teacher identifies the students, check if they are enrolled, admits them in the classroom. Then she distributes the exam text to each student, and starts the exam. When the time is over she collects the exam texts. Then she corrects them, publishes the results and records them in the university IS.

TO BE process.(current)

Exam text becomes digital.

The administration defines exam periods, and for each course and exam period, one or two exam sessions. An exam session takes place in a virtual classroom, in a certain time slot. Students decide to enroll in an exam session for a certain course. To enroll the student must have followed the course. Two days before the exam session enrollment closes, and the teacher of the course receives the list of students enrolled.

The exam text is defined by the teacher on an exam platform (ex Respondus + Moodle).

At the day and time of the exam session the university IS sends to all students enrolled a URL to access the exam platform. The student logs into the platform. The platform identifies the student (via an ID shown to the web cam), who then can perform the exam on the platform. At the end of the exam the teacher corrects the exams, on the platform, and publishes the results and records them in the university IS.

In the following model the TO BE situation.

- 1 Organizational model: list roles or organizational units involved

2 Functional model: Design and model (using BPMN + UML class diagram) the TO BE process

3-a IT Model / Technological model: describe the hardware architecture of the system
(use **UML deployment diagram**)

3-b Business rule: define (in English, or formally) at least one business rule for the process

5 Define the KPIs, considering these high level business goals (or CSF), CSF1 assure fairness (no cheating), CSF2 reduce the cost of exam management.
If needed, define also indicators that are not KPIs.

| CSF name | KPI Category (General, cost ..) | KPI Name | KPI Description | Unit of measure |
|----------|---------------------------------|----------|-----------------|-----------------|
| | | | | |

6 Compare the previous and the current situation, using the KPIs defined above

| KPI | AS IS | TO BE |
|-----|-------|-------|
| | | |

- 7 Considering the university and the infrastructure it has to build or acquire for the TO BE, define the software functions needed

| Process /Activity | Software function(s) needed |
|-------------------|-----------------------------|
| | |
| | |

- 8 Considering the comparison in point 6, summarize pros and cons for the actors in the TO BE situation

| | PROS | CONS |
|----------------|------|------|
| Students | | |
| Administration | | |

9 Consider the case of exercise 1. Frame the TO Be situation in terms of the outsourcing dimensions. Assume that the IT infrastructure (Respondus + moodle) is developed by company Z, all machines to run the application are owned and maintained by the university.

10 List a few principles to be applied in process redesign

11 List the key factors to consider in selecting a software product to support an IS

12 Describe the concept of IT alignment, and provide an example

13 Describe the long tail business model, and provide an example of it