

# **Project Management Office & IoT in Healthcare Academy Assignment**

**Borda Academy 2025**

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# Contents

Introduction .....	3
Questions.....	4
Question 1 – Self-introduction recording .....	4
Question 2 – Developing the risk management plan for the project.....	5
Question 3 – Implementing tag assignment process .....	5
Question 4 – Using IoT in hospital processes .....	6

## Introduction

Dear Borda Academy applicants,

Thank you for your application to our Academy 2025 program. This document is prepared for the candidates who are interested in Project Management and IoT in Healthcare. Please read the instructions carefully before working on the questions.

1. The questions are prepared to give us an idea about your understanding of the problem, research skills, problem solving capabilities and willingness to learn.
2. Almost all of the questions are inspired from real-world problems we face every day, so they should also give you a glimpse of what we are doing in the company.
3. This document contains 4 questions. Among these, we expect a minimum of 2 questions to be answered. Answering as much as you would like, is more than welcome.

Questions	Answers
Question 1 – A video recording	Answer required
Question 2 – Developing the risk management plan for the project	At least one answers required
Question 3 – Implementing tag assignment process	
Question 4 – Using IoT in hospital processes	

4. We are not expecting you to solve all of the questions. Even if you do not solve all the questions, it is very likely that we will call you for next steps.
5. If you decide that you cannot solve a question, you do not have to solve it at all. If you can solve a question only partially, just send us the part you solved and noted that on your answer.
6. We care about your research abilities and problem-solving skills. Your answer does not have to be correct. We like talented and creative people. What we care are your ideas, way of thinking and research abilities.
7. We would be happy to use different tools or techniques instead of wall of text while answering the questions. Be creative and think out of the box!
8. If you use different tools other than Microsoft or Google tools, please be sure that you added the screenshot of your answer into a document so we can read and evaluate your answer.
9. When you complete the assignment, send a single ZIP file named as "Name\_Surname.zip" containing your answers and all the question related folders.
10. Do not hesitate to ask any questions about the assignment. Reply the e-mail you received to ask questions. You will get a response as soon as possible.
11. Last but not least, plagiarism is not appreciated. If plagiarism is detected, the application will be rejected.

## Questions

We will be happy if you answer the following question.

### Question 1 – Self-introduction recording

Please record a maximum of 3-minutes long video, which you describe yourself and your future plans in English (you can add any topic that excites you). **Please do not put the video in a ZIP file.** Share WeTransfer link of the video within a document that included your other answers.

You don't have to answer all of the following questions. Please select at least one question to answer.

## Question 2 – Developing the risk management plan for the project

IoT in Healthcare Company is a technology company that has been operating in Turkey for more than 15 years and in recent years, in the process of expanding globally, aims to scale through vendors in target markets. In Canada, one of the target markets, the selected vendor sold the Staff Duress product to Toronto's most established hospital. Within the scope of the sale, the web-based Staff Duress software product and the hardware and the localization algorithm designed by the company itself will be used. Since this is the first project of the vendor, you will be the Consultant Project Manager of the project along with the vendor. The vendor will handle all operations in Canada, while you will provide remote support and on-site assistance at some critical milestones.

At this stage of the project planning process, you are required to create detailed Risk Management Plan documents to be presented to the customer, outlining potential risks in this project. Please provide your views on what risks could arise in this project and fill out these documents accordingly. Also, include risk scores, risk responses, and risk responsibilities within the document.

## Question 3 – Implementing tag assignment process

With IoT in Healthcare Company's Infant Safety Product, mothers and infants are being tagged to ensure safety in the hospital. With this system, tags attached to mothers and infants' wrists are used in RTLS tracking throughout the hospital and trigger hospital-wide alarms if an infant is detected out of their designated safe zone.

While implementing this product, you need to structure the process of assigning tags to patients and infants.

- a) Determine where and when a mother should be tagged with Mother Tag and explain your thought process?
- b) Determine where and when an infant should be tagged with Infant Tag and explain your thought process?
- c) Before going live with this project, a presentation for the hospital about systems and processes implemented with it is required. During this presentation, an alarm is triggered not from the room you are currently in, but the next-door room. What would your response and next action would be in this situation?

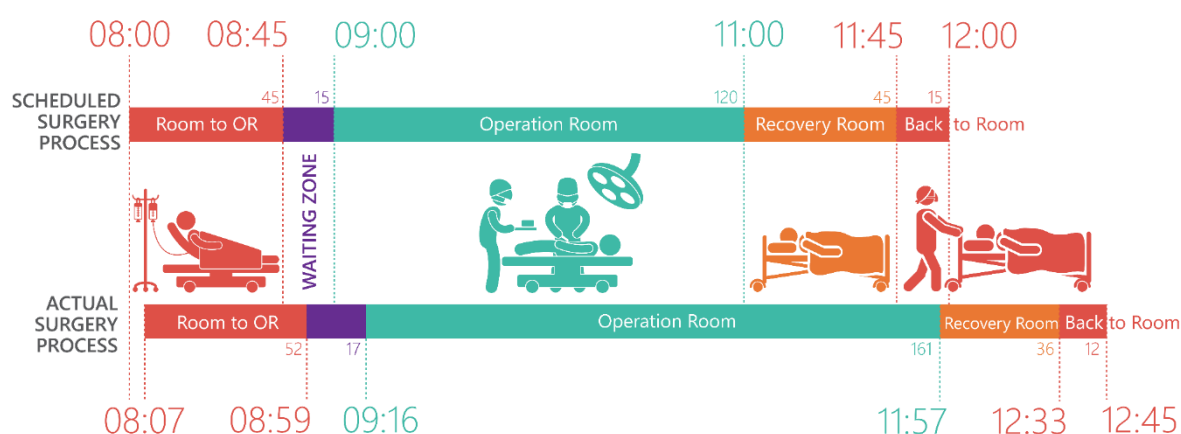
Please do not exceed 500 words in total.

## Question 4 – Using IoT in hospital processes

Hospitals need to improve their operational processes and this is impossible to achieve without the help of digital transformation. Patient throughput management is one of the solutions that Borda patient tag is being used, in order to boost this transformation. Optimization of operating rooms not only enhances the patient service, but also decreases costs.

To implement IoT infrastructure, the readers and locators are mounted to the relevant areas, such as patient rooms, pre/post-op areas and operating rooms. Patients are given a tag, which is a component of this IoT infrastructure, and will be tracked by these readers and locators. This tracking information benefits the hospital in several ways:

- Providing key insights on bottlenecks via the BI reports for process optimization by tracking each phase of clinical operation. The phases are shown in the infographic below.
- Ensuring that the right patient is taken to the correct operating room, by creating an alarm if the patient enters another operating room than previously defined.
- Informing patients' relatives about the operation process by creating dashboards that show real time tracking data of the patient.



The solution that Borda provides is also able to

- Make integrations with third party software, such as Hospital Information Systems (HIS) or CCTV security cameras.
- Notify the relevant personnel by push notifications, SMS or e-mail.
- Draw attention to the alarm by visual and audible warnings via flash beacons.

By the use of this data generated by the BI reports, it is seen if the operating rooms are being used efficiently. If not, hospital management reevaluates operational processes in the hospital to improve efficiency.

Patient throughput management is one of the various benefits that Borda patient tag provides. What other benefits can we bring to the hospitals with Borda patient tag, in order to improve their processes? Give examples of solutions that can be applied using IOT Technology.

Please do not exceed 500 words in total.

Healthcare,  
operationally aware.



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