# Maintenance Case Study Analysis

## Group Information

Your Name:

* Martin

Group members that you discussed this case with:

* I did not participate in the meeting. I was sick.

## Instructions

Each person should individually answer each of the following questions. Your responses should be thorough and contain sufficient detail to show your understanding of the issues at hand. Be sure to include specific references to items from the case study reading to support your decisions. This likely cannot be done in fewer than 2 paragraphs per question.

## Questions

1. After the immediate decision and circumstances of this case have passed, what proactive steps should Adaora take to establish processes to mitigate maintenance flaws at the company, so they would be in the best position to respond to a future threat?

**Balance:** Adaora and her team showed skills to solve possible patches. The team works enthusiastically in front of pressure of time and resources. So, Adaora should trust the agility of the automated CI/CD pipeline , leaving behind the old PAC2000. The CI/CD would reduce the risk of human error and improving code quality. Adaora should take into consideration the balance between the faster response of CI/CD (delivering features quickly that could cause technical debt) and the long-term health of the application.

**Prognostic monitoring:** Now, It is important that Adaora should follow the prognostic or preventative monitoring of the system. Adaora asked: Could there be more undisclosed vulnerabilities lurking, waiting to surface? A proper performance monitoring, involving metrics and tools would help to find inefficiencies or bottlenecks of the system.

**Rolling out new features:** The use of feature flags would definitely help to manage the enable or disable the feature when a problem arises.

2. Recognizing the value of having up to date systems, what factors or barriers could keep even a well-run company from keeping their systems up to date?

A good example was the old PAC2000, a robust system, full of electronic and printed forms needed to get the job done.

**Involved a lot of physical or human work**: Increasing the possible human error in code.

**Perfective Maintenance:** It was not centralized but mostly each area was in a form of schedule to perform. **It took a lot of time**: Each manager was always too busy to approve the applications affected. They lost from days to weeks. So many areas involved on the process that did not facilitate to find possible bugs early on the process.

**Adaptative maintenance:** It included strong and strict documentation and protocols , and every step needed to be manually approved in order to move on. It was very rigid so , it was not easy to adapt to new requirements.

3. If you were Adaora, what recommendation would you make? Should you make the requested patches? Articulates well-founded rationale for making a decision that has organizational pressures and explains how to mitigate risks it might cause. (Well-founded means that it is evidence-based and focused in the principles of the learning activity.)

I would recommend making the requested patches. I would go with CTO decision. They did not know how bad this vulnerability would go. According to Bryan Barret´s article, this vulnerability brought millions of hack attacks. Besides the situation was critical, according to John Hansen, the Chief Technological Officer, with over 600 applications at Globemart that use Log4J. Not making the patches now, would cause more technical debt because of poor architectural decisions.

If you chose to prioritize making the patches, what would you do to ensure as much success as possible for the feature work? If you choose not to apply the patches, how would you ensure the safety of your team’s projects?

Involve a greater team: Making the patches and ensuring GP program completion is heavy work. Adaora´s team demonstrated they could finish the path along with their projects, but she should plan so, the pressure on her team could not be affected. Part of that plan is mentioned in question 1, taking account of balance, prognostic monitoring and rolling out new feature flags to get dynamic control of the application. That also included the possibility to eventually include more members on the team.

Even Adaora is facing financial pressure from Darren, Adaora could plan again to solve the new patch during the emergency meeting.

4. Did your opinion regarding the decision in the previous question change after your team discussion? If so, why? If not, what were some of the principles that you felt were most important? Supports a difficult decision with evidence from the situation and forward-thinking for upcoming risks.

I believe in having a clear reputation above my dreams and aspirations. Even though I could make a quick decision and handle technical debt ,but that is not what I have been taught to do.