

Software Engineering Project Management

June 2022

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« Collaborative Discussion 1: Project Failures Study



[Pavendran Wimalendran](#)

Initial Post

72 days ago

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Discussion Topic: Project Failures Study

Please read the Lehtinen et al. (2014) paper and then answer the following questions:

Question 1: What do you believe are the three most common reasons for project failure?

It is difficult to define software project failures since different stakeholders have different perspectives. A software project failure, on the other hand, might be defined as a clear failure to meet the project's cost, time, scope, or quality objectives (Lehtinen et al, 2014).

As for these software project failures, there is no single root cause; instead, a software project failure is the result of several causes (Verner et al, (2008).

That being said about the project failure and its causes, it can be shown from high-profile failures that some causes are prevalent (Why Projects Fail, n.d.), and the most common ones, in my opinion, are as follows:

1. Organizational and planning failures.
2. Underestimation and analysis failures.
3. Engagement, teamwork and communications failures.

Question 2: Give two examples of failures that support your choices (there are several examples in the lecturecast)

One project failure case is the failure of planning and time estimation of replacing the US Federal Aviation Administration (FAA) Advanced Automation System: the project failed due to problematic procurement procedure and vague requirements. It also sought to make a "Big Bang" change in a short period of time to replace the old outdated system. (Bar Yam, 2003).

another project failure case is the failure of Estimation and analysis related to the IBM System 360 project: IBM embarked on this ambitious effort to develop a single operating system that would run on all of the company's mainframes. However, the software development team struggled to meet the project's primary purpose, and additional challenges began to arise. IBM responded by employing 1,000 more developers to help with the project, spending more money in a single year than the entire product development process had been budgeted for! This failure led to the publication of the Mythical Man Month (Brooks, 1975).

References:

Lehtinen, A., Mäntylä, V., Vanhanen, J., Itkonen, J. & Lassenius, C. (2014) Perceived causes of software project failures – An analysis of their relationships. *Information and Software Technology* 56(6): 623–643.

J. Verner, J. Sampson and N. Cerpa, "What factors lead to software project failure?" *2008 Second International Conference on Research Challenges in Information Science*, 2008, pp. 71-80, doi: 10.1109/RCIS.2008.4632095.

Why Projects Fail. (n.d.). A resource for organizational learning focused on improving project success rates. Available from: [Accessed 18 Jun 2022]

Bar-Yam, Y. (2003) When systems engineering fails-toward complex systems engineering. *SMC'03 IEEE International Conference on Systems, Man and Cybernetics*. 1(2): 2021-2028 DOI: 10.1109/ICSMC.2003.1244709.

Brooks, F. P. (1975). *The Mythical Man-Month: Essays on Software Engineering*. Reading, Mass.: Addison-Wesley Pub. Co.

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1



Post by [Doug Millward](#)
feedback

[69 days ago](#)

Hi Pavendran

I enjoyed reading your post and I have a couple of questions for you. As you say the mythical man month was written almost 50 years ago now - do you think any of the lessons in there are still applicable today? Do you think project managers today have learned anything from these older epic failures?

Reply.

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Post by [Sathira Padukka](#)
Re: Initial Post

[9 days ago](#)

In my opinion the IBM 360 problem was caused due to multiple factors, including poor project management, poor decision making, poor communication and many more.

I think this project failure is a great example for why we should always plan ahead and follow a methodology such as agile.

If this project was following an Agile methodology, the management team would have caught the issues the team was facing early on and helped them overcome the problem. In any team or methodology communication is a key component to success and this team was lacking that.

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Post by [Babatunde Ahmed](#)

Peer response

[5 days ago](#)

Hi, Pavendran I found your post interesting and quite resourceful, especially in the area of your discussion cause of the cause of project failure while citing the examples you gave using; *the US Federal Aviation Administration (FAA) Advanced Automation System and the IBM System 360 project*.

My observation can be summarised in what is termed as the "6 p law." Which stands for; Proper prior planning prevents poor performance. I believe that if these failures have been addressed before their effect while using the required project management, it won't result in such results.

Robert Buttrick, the author of Project Workout, wrote an article on project management best practices in Ultimate Business Library Best Practices. This suggests that organizations must follow the basic principles of project management which are;

Make sure your project develops in line with your strategy. Show how each project you take on fits into your business strategy and get rid of unnecessary projects as quickly as possible.

Engage stakeholders. Ignoring stakeholders often leads to project failure. Involve stakeholders at every stage of your project and remember to always encourage teamwork and collaboration. Use leadership and open communication to make a difference.

With these in place, the outcome will be a success.

Reference:

Ultimate Business Library, 2003, "Best practice: ideas and insight from world foremost business thinkers," New York: Perseus, p.1

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