**Summary Post on Collaborative Discussion 1: Project Failures Study**

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

* **Lack of appropriate allocation of resources and schedules**:Typically, to maximise the return on investment, a few resources are allocated to work towards tight schedules, which results in software engineering projects not being delivered on time and with lack of or poor quality (Vidgen & Wang, 2009; Lehtinen *et al*., 2014).
* **Incorrect priorities**:Especially at early phases of software engineering projects, the backlog may be defined incorrect by Product Owners without consulting key users and stakeholders, i.e., solely based on their understanding of potential customers’ needs; this results in software engineering teams focusing on incorrect priorities, which, although they may result in technical features being delivered and in a user interface, may not solve the business problems for actual customers (Lehtinen *et al*., 2014; Sedano *et al*., 2019).
* **Poor quality**:Considering the pressure a few resources in software engineering teams to deliver against tight schedules, this results in the lack of or poor quality, e.g., characterised by the lack of unit and integration testing, and/or regression tests. This results in unexpected bugs downstream and a hidden technical debt that continues to increase and then unnecessarily reduces the capacity of software engineering teams considerably (Lehtinen *et al*., 2014; Niazi *et al*., 2016).

**Question 2**: Give two examples of failures that support your choices

* **NHS Connecting for Health**: Started in 2002 and ended in 2011, this software development project resulted in significantly high delays and associated costs, and the software was never completed (Campion-Awwad *et al*., 2014). The government was criticised as significant public money (£12bn, instead of the expected £2.3bn) were spent without yielding any value for that amount of expenditure (Campion-Awwad *et al*., 2014). Although this project failed, contractors, who did not have adequate resources to deliver the project on time and budget, did not end up paying any hefty fines as set by the contracts with the government (Campion-Awwad *et al*., 2014).
* **Försäkringskassan SAP**:Started in 2007 and ended in 2010, this dental health service system in Sweden was not deemed fit for purpose by the purchaser (the Social Insurance Agency) despite various delays and trying to insource the project to save it; it exceeded the allocated budget significantly (costing SEK 10bn instead of 1.18bn) and it was eventually cancelled (Murphy, 2019).

Smart procurement and contracting, as well as more standardised methodologies to guide them, can help in mitigating those risks, e.g., by leveraging different types of contracts, conducting market research, leveraging performance-based contracting techniques, and using quantifiable standards informed by adherence to service level agreements and other key performance indicators (Antonenko, 2021). Whilst different types of contracts could also be useful, it is worth noting that large-scale multinational companies are also quite experienced in leveraging loopholes to avoid facing some consequences, as in the case of the failure of the software development project “NHS Connecting for Health” in the UK (Avison & Young, 2007).

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