## Task 7 (13,3%)

What can be some potential challenges of using agile software development in larger public-sector IT projects?

Students should show a basic understanding of agile software development. Rather than emphasizing extensive up-front planning and a linear process of requirement specification, development, and implementation, agile involves iterative design, development, and implementation. This often begins with an MVP, and each cycle delivers useful increments with new features. The aim is to secure early evaluation of the relevance of what is being built, and the ability to accommodate continuous changes in requirements and technological possibilities. Further, students should be able to discuss some challenges associated with agile, particularly in larger public-sector IT projects. We discussed this specifically in the lecture on software engineering, but also touched upon related challenges in some of the other lectures. The key point we discussed is that funders, clients, and project managers require some level of predictability in terms of resource investments and outcomes - i.e., a “plan”, whereas agile promotes a process where details of both the process and its outcomes emerge through iterations. In larger projects, public sector organizations often favor highly plan-driven development processes in their procurement processes and contracts by requiring detailed specifications for the development process and the outcome at the outset of the project. Further, it is difficult to identify and develop MVPs for highly complex software solutions such as an EHR.

## Task 8 (13,3%)

Discuss similarities and differences between “IT” projects and “digitalization” projects

This question is intended to invite students to engage in an open discussion based on what we have discussed in the lectures and seminars. There is no explicit answer to this question in any of the course readings, but we explicitly discussed it in the first lecture of the module. Accordingly, we cannot expect students to have a detailed and aligned view on this, but that they can offer some relevant reflections on what an IT project is, and how “digitalization” project may be a useful distinction. In the lecture and seminar, we discussed the distinction in relation to why many IT projects fail, and that one reason may be that IT projects are treated as pure “IT” projects, and do not explicitly and sufficiently acknowledge the organizational aspects. To contrast this, we discussed a definition of “digitalization” projects that emphasize “organizational improvement with a basis in digital technologies”, and that this would require “sociotechnical” design beyond a pure focus on technology. Students are awared points for showing an understanding of what an IT project is, but to get a full score, we expect a discussion that somewhat touches upon the issues outlined above.

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## Task 9 (13,3%)

Outline a set of challenges that you argue contribute to the high failure rate of larger IT projects in the public sector

For this assignment, students can draw broadly from what we have discussed in the whole module, including the syllabus. There are many relevant things to discuss here, and students should be awarded points as long as it relates to the overall topics of the module. Some key points to make are:

* The sociotechnical complexity characterizing these projects and organizations.
* Difficulties in accommodating diverse organizational and user needs
* That IT projects are too “IT-oriented” and fail to acknowledge larger projects as organizational change and improvement efforts.  This could both be related to insufficient focus on end-users in the design of user interfaces and functionality, but also a failure to design both technology and organizational arrangements in tandem (sociotechnical design).
* Plan-driven software processes failing to respond to changes in organizational practice and technological possibilities (little use of agile) - organizations and technology are constantly moving targets.
* Systems are cross-cutting organizational boundaries - politics in deciding what to build and how to build it.
* The adoption of generic software solutions (buy versus build) that do not fit “everyone”