Factors Affecting On-Time Delivery in Large-Scale Agile Software Development

*Note: Sub-titles are not captured in Xplore and should not be used

I. Introduction

Late delivery and cost overruns have been common problems in the software industry for decades. On average, software projects run around 30 percent overtime LaTeX. Effort estimation is also a major challenge in agile software development. we study different Journals, Conferences etc from IEEE, ACM and Scopus and finds solutions of these late delivery issues.We identified that the teams at ING develop software using an agile development process. They work with epics to manage interdependent software deliveries across multiple iterations.

II. Research Questions

Factor identification: (**RQ1**).Which factors are perceived to affect the timeliness of deliveries? (**RQ2)** what is their perceived level of impact? (**RQ3**) what are the perceived types of interactions between these factors and on-time delivery? .Factor validation: (**RQ4)** How do the perceived influential factors impact schedule deviation in deliveries?

III. Study selection and quality assessment

We excluded articles based on titles and abstracts and collected software late delivery data from different articles, as well as full-text reading and quality assessment. Studies also have been added through agile sampling. The application of inclusion and exclusion criteria to titles and abstracts was conducted by the second author. Thus, each article was only reviewed by a single author, which poses a threat to the reliability of the mapping study.

IV. Data extraction

To extract data from the identified primary studies, we developed a template. Each data extraction field has a data item and a value. All extraction of data depends upon keywords related to domain and issues that we want to focused. So data is extracted from multiple libraries using ACM, IEEE and Scopus. We have taken a lot of papers, journals, conferences and articles in order to search main issues of late delivery of software and extracted results from that.

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V. Analysis and classification

To design and for analysis, we followed methodological guidelines from Kitchenham and Pfleeger, and Kasunic.We developed two self-administered surveys of different forums. The **first survey's** purpose was to identify influential factors and their interactions, and the **second survey** was used to assess the perceived level of impact of each of the identified factors from the first survey. The surveys were organized into **two sections: A:** Section aimed at gathering demographic information and a section targeting the research questions.

VI. Validity Evaluation

We have applied number of validations in which external validity, internal validity,construct validity, are included to generalize our results.

VII. Repeatability

The repeatability requires detailed reporting of the research process. We reported the systematic mapping process followed, and also elaborated on actions taken to reduce possible threats to validity. Repeatability was also aided by the use of existing guidelines.

VIII. Results

We found that factors such as requirements refinement, task dependencies, organizational alignment and organizational politics are perceived to have the greatest impact on on-time delivery, whereas proxy measures such as project size, number of dependencies, historical delivery performance and team familiarity can help explain a large degree of schedule deviations. [1]

[1]https://drive.google.com/drive/folders/1QeGTEaGgZDGEvShc5zzZj94A5BRVP9-p?usp=sharing