

Software Development as an Experiment System (Keynote)

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ABSTRACT

Most modern software development activities are focusing on domains of emergence where experts cannot know a priori what kind of software provides value to users and customers. This is fundamentally different to traditional software engineering for large systems where a priori analysis by experts is used to identify requirements. While the latter is gaining a niche software category, developing and establishing development practices for domains of emergence is becoming significantly important and urgent. A major challenge is to find the right scope for software development. There are many options on what to deliver. Software practices are needed that help in determining what customers want and creating the right capabilities for them. In this talk I introduce an approach for steering software development towards the right scope by continuously conducting experiments. This includes systematically observing users' behavioral responses to stimuli such as features. Insights from experiments directly influence frequent iterative deliveries. Success cases from industry show that such an experimental approach helps companies to gain competitive advantage by reducing uncertainties and rapidly finding product roadmaps that work.

Categories and Subject Descriptors

D.2.1 [Software Engineering]: Requirements/Specifications – Elicitation methods (e.g., rapid prototyping, interviews, JAD)

General Terms

Management, Measurement, Economics, Experimentation

Keywords

Continuous Experimentation, Hypothesis-Driven Development, Product Management, LeanUX, LeanStartup, Cynefin Framework, Agile Software Development, Innovation

1. TARGET GROUP

This presentation is aimed at process engineers, researchers, product managers, startup founders, business people, software developers, and anyone who is interested in making an impact with their products. It shows the relevance of experimentation in software development and how it influences the software process. In addition, new methods and practices are presented that have been tested in different industry environments.

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