User Involvement in Software Development Processes

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The Problem (1998)


- failure to gain user commitment (8%)
- misunderstanding the requirements (7-9%)
- lack of adequate user involvement (7%)
- failure to manage end user expectations (6-7%)
The Problem (2011)

Internal communication

- “Poorly defined applications (miscommunication between business and IT) contribute to a 66% project failure rate”
- “60% – 80% of project failures can be attributed directly to poor requirements gathering, analysis, and management”

External communication

But we are more agile (2014)...

Rigid processes
- Waterfall-Model (1970)
- V-Model (2009)
- Incremental Build Model (2003)
- Spiral-Model (1986)

Agile Processes
- eXtreme Programming (XP) (2005)
- Scrum (2012)
- Feature Driven Development (FDD) (1999)

"the frequent absence of the customer was identified as high project risk", despite the fact that the XP methodology increased the success rate of the implemented software projects

What we usually miss

- Actual user needs and behaviors
- The true market segment (B2C projects):
  - Pool of sample users
  - Wrong incentives (market research)
- Context:
  - Usage context
  - Business goals
  - Target Group (Client, Customer, User)
The CloudTeams project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 644617.

Elements and steps of the CloudTeams methodology

- Personas, Business Model Canvas, Interviews, Questionnaires
- Mockups, Interviews, Videos, A/B Testing
- User Stories, Validation
- Scenarios, Validation
- Idea Validation

Non-Technical Skills

Technical Skills

Customers Population & Profile

Product Manager Involvement

Development Team Involvement

Ideation → Product Validation → Market Test

- User Experience
- System Backlog Definition/Update

Release Validation → User Acceptance Testing Plan

- Build Verification
- Testing Plan

Regression & Functional Testing

User Acceptance Testing (UAT)

Demo/Alpha/Beta/Final Release Tests & Comments

Redeems, Follows, SM mentions

Testing Plan

Backlog Verification

Sprint Backlog Definition

Automated Acceptance Testing

Continuous Integration Testing

Design and Visual Modeling

Model Verification

Coding

Code Verification

Automated Unit Testing
What is CloudTeams?
The CloudTeams project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 644617.
A crowdsourced requirements elicitation

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What is a Persona for us

Personas are **fictional customers** with characteristics that help developers to understand in a better way the context and the needs of their users.

Personas are actually **aggregations of various customer profile details**, with common characteristics, which are displayed to software teams in an anonymous way, while also at an abstraction layer that hides the exact data and works either with meta-data or with data ranges such as age groups or regions.

<table>
<thead>
<tr>
<th>Persona Elements</th>
<th>Identical Attributes</th>
<th>Aggregated Attributes</th>
<th>Cosmetic Attributes</th>
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<tbody>
<tr>
<td>Persona Picture</td>
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<td>Archetype</td>
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A crowdsourced requirements elicitation

Developers Portal

Create campaigns

Select Personas

Questionnaire / Documents

Tech level: “Expert”
Device: Pc
Age: 25..34
Female

Persona

Vicky
Maria
Olga
Georgia

Generated user profiles with pseudonyms representing the characteristics of actual users

Privacy – Real users’ isolation from Developers portal

Anonymization Service

Real users

Alma
Irene
Nicole
Lara

Customer Portal

CloudForward 2016, Madrid, Spain
Project Information

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Duration: 24 months
Work Programme Objective: ICT-07-2014: Advanced Cloud Infrastructures and Services
Coordinator: Fraunhofer Institute for Applied Information Technology – FIT
Prof. Wolfgang Prinz, PhD - wolfgang.prinz@fit.fraunhofer.de

http://www.cloudteams.eu

Consortium Partners

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National Technical University of Athens - Decision Support Systems Laboratory (NTUA – DSS Lab)

SingularLogic (SILO)

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Thank You Questions?

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