Interview 2 (with EPLAN Software & Service GmbH & Co. KG)

Background: Due to the interview is out of the development team, and focusing on the opinion from the 3rd part, a detailed background knowledge of our student project is needed to be explained firstly.

The student project is from 01.04.2016 until 31.03.2017 to develop the IoT based **Smart Home**. We can see the concept in the figure below. There are 14 bachelor students majoring in software engineering in the project "Smart Home". For a fast feedback, we separate the one year project into 16 sprints (3 weeks/sprint) in the form of Scrum development process. Now we are at the 10th sprint.

To improve our process on integrating safety knowledge into the scrum development process, some modifications have to be investigated. For this reason, we **formulated the questionnaires** for the 14 students in the development team and found 7 points with some weaknesses, see section 2. Furthermore, we **interviewed** 6 students trying to explore the reasons and formulate the initial improvements, see section 3.

In this interview, we aim at gathering the valuable information, opinions and suggestions from the company EPLAN Software & Service GmbH & Co. KG. By doing this, we hope to have more contact with the company and put our student project in the real scenarios to validate the feasibility of the process in the real company projects.
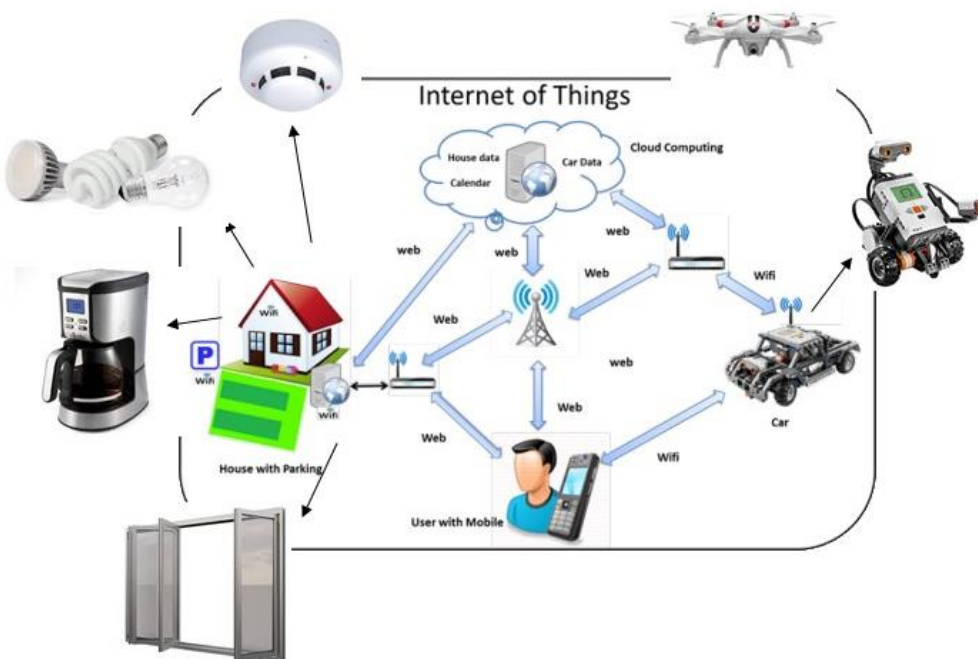

Figure: Concept of Smart Home

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Section 1 (Respondents' information)

Basic questions	Answers
Q1: Job role	
Q2:Other job role except in the agile project	
Q3: Experience in agile technology (years)	
Q4:Experience/Knowledge in safety-critical systems (years)	
*Q5: Experience about other non-functional quality aspects?	
Q6: Main agile techniques (Scrum, XP or others)	
Q7: How many people in your group?	

*Q5 quality aspects: functional suitability, performance efficiency, compatibility, usability, reliability, security, maintainability, portability.

Section 2 (Main questions)

Points with weaknesses	Q8	Q9	Q10	Q11	Q12	Q13
1. Team work composition						
2. Team work management						
3. Communication						
4. Requirements						
5. Planning level						
6. Progress tracking						
7. When do we plan						

Explanation about "Points with weaknesses":

1. Team work composition (Team members are kept as long as possible with non-functional expert)

2. Team work management (Management rarely changes the team's priorities during an iteration, include the non-functional expert's opinion)

3. Communication (The team communicate in a high-bandwidth manner, however, there is still a knowledge gap when someone goes on vacation)

4. Requirements emergency (The non-functional requirements are determined early and good enough to appropriately influence design and testing)

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5. Planning level (At the start of each iteration, the team performs sufficient just-in-time functional/non-functional planning to be confident of what it can complete in the iteration)

6. Progress tracking (Each functional/non-functional feature has a well-defined completion criteria that can be used to determine if the feature is done or not done)

7. When do we plan (Functional/Non-functional upfront planning is helpful without being excessive)

Question:
Q8: What is the state in your company about this point? (How many people, what kind of roles are included, how to keep, the execution)
Q9: Do you think that you have such a problem in your group?

If yes:
Q10: What are the reasons?
Q11: Do you have already some methods to fix this problem? How is that going on?
Q12: Do you plan some methods to fix this problem in the future?

If no:
Q13: Are you following the only original scrum guidance or with some extra methods in practice to avoid/counter this problem?

Section 3 (Initial improvements)

	Q14	Q15	Q16	Q17
Improvement 1				
Improvement 2				
Improvement 3				
Improvement 4				
Improvement 5				
Improvement 6				
Improvement 7				

Improvements:
1. Intern and extern (non-functional aspect) experts
2. Extern (non-functional aspect) expert join in the daily scrum meeting at least 1 per week
3. Extra communication meeting
4. Pre-planning meeting
5. Draft (non-functional aspect) plan
6. Brainstorming the requirements (include non-functional requirements)
7. Form of non-functional requirements
8. Brainstorming the requirements criteria (include non-functional requirements criteria)

Questions:
Q14: Is this improvement feasible in the environment of the company? Or does the improvement have some difficulties?
Q15: Does the improvement have some positive effect?
Q16: Does the improvement have some negative effect?
Q17: Will you try this in the future?

Section 4 (Other suggestions)

Q18: Do you have some experience or suggestions about the agile practices, such as CI, TDD or others?

Q19: Do you have some other suggestions for the execution of the student project in the scrum development process? (Technical design, estimation, customer acceptance test, timing, quality, agile culture, knowledge creating, outcome measuring or others)

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