University of Applied Sciences and Arts Northwestern Switzerland
School of Business

Agile Business Analysis

Report for Sprint 1

Organization: University of Applied Sciences and Arts Northwestern Switzerland

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Student Chatbot for the Module Business Intelligence Documentation Sprint 1

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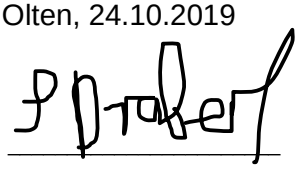
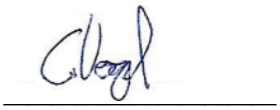
Name	Celia	Simone Drabert	Christopher Vogel
Place and Date	Olten, 24.10.2019	Olten, 24.10.2019	Olten, 24.10.2019
Signature			

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1 Selection of the topic and pitching the idea

At first, the group needed to work on choosing the topic of the project. One of the team members, Chris Vogel, inquired at his company and got offered four possible projects that could be seen as candidates for the project. One of the teachers of the course offered a fifth topic, to investigate the topic of the creation of a student assistant solution via the use of a chatbot for answering course related questions in an automated way.

During a brainstorming session, the team assessed the applicability of each topic to what was expected in the module. Especially important were their level of complexity and whether they were suitable for managing a project in an agile way. This already led to a narrowing of the choice to two topics: The first from Chris Vogel's company, about optimizing a process related to billing, the other the investigation of the chatbot solution.

After that, each team member reflected on his own for a couple of days. Then, the team had a conference call where the pros and cons of the two topics where listed and weighted. In the end, it came to a vote and the topic of the chatbot solution was chosen.

Following that, Franck Polin prepared a few slides for the pitching session of the 4th of October and presented his ideas to the group. After some rework in a group workshop, the team was ready for the pitch.

The pitch was very useful, as it allowed to get first feedback from the teachers and also to observe the pitches from the other groups and their respective feedback. Thus, the team was able to determinate the scope of the project more and to start working on an approach for the first sprint.

2 The first sprint of team 5

As the experimentation on a chatbot student assistant solution would primarily be focused on one specific course, business intelligence, the two students following this course this semester approached the teacher Friedrich Witschel and asked for his thoughts on the matter and whether he would be available for a skype interview. As a result, a skype conference was set between the team and Friedrich Witschel on the 14th of October.

Before the call, the team had its first coaching on Friday the 11th of October. With one of the coaches, several subjects were discussed. This discussion can be considered to be an interview of a stakeholder, as the teacher and sponsor, Mr. Knut Hinkelmann, is involved in the investigations led at the FHNW on the development of student assistant solutions (cf. *Stakeholder analysis*).

Amongst other things, issues about agility and the potential use of artificial intelligence for developing the chatbot were discussed. The main outcome of the coaching session was that the team decided to focus on a few specific areas of knowledge (that the chatbot would theoretically be able to give answers to). In other words, instead of investigating all aspects of what the chatbot should be able to know, the experimentations would be narrowed down to 2 use cases. The objective of that would be to determine how far the team could get and whether and highlight potential limits to the experiment.

Also, using the provided program *Trello*, the technique of backlog management was introduced. Similar to a Kanban Board, the team's *Trello* table was composed of multiple tasks that were deemed necessary for the first sprint.

The call with Friedrich Witschel on the 14th of October can be seen as the real starting point of the team's first sprint. This call could also be defined as an interview of an expert on the subject but also a stakeholder (cf. *Stakeholder analysis*). Plus, with the use of the techniques that are advised for elicitation purposes like personas, a good understanding of the needs of two stakeholders, the student and the professor was obtained.

The main outcomes of the interview are:

1. A starting point for the experimentation was found:
    a. Quiz about multidimensional modeling of the Business Intelligence module
    b. Questions about the student assignment of the Business Intelligence module
    c. Assistance on where to find knowledge within the course

2. Friedrich Witschel provided an example of a dialog scenario which the team could use a base for the creation of dialogues

Then, an approach for the first sprint was defined (use of the planning workshop technique). Along with the writing of dialogues and related experimentation, the team would make an analysis of the

functional requirements for the chatbot solution and also an analysis of the main stakeholders that had been identified so far.

Each team member worked on a task and delivered their results until the Friday the 18th of October. On that day, the 2nd coaching was done. Maia Spahic, a coach for the assignment, made preliminary explanations of the tool *Dialogflow* (tool developed and provided by Google), which would be used for the experimentation with the dialogues written so far. After some discussion about the project documentation and its expected degree of detail, the team went on to have its first workshop dedicated to the experimentation on a chatbot solution using Dialogflow.

Chirs Vogel, who was already a little familiar with the tool Dialogflow, gave some basic explanations to the rest of the team. Then, the whole team worked together on making its first Q&A with *Dialogflow.* After some successes, the team understood that one area required further investigation. In fact, for the dialogues about the Quiz number 3 of the Business Intelligence module, there was a need to provide knowledge to the chatbot about which answer was correct and which were not.

Incidentally, the future chatbot solution was nicknamed *Dessa* (inspired from the acronym of Domain Specific Software Architecture).

Another interesting outcome of the workshop was the initiation of a reflection about the architecture of the chatbot's knowledge base.

At the end of the workshop, the team agreed on a task assignment until the end of the first sprint (again, use of the planning workshop technique).

The result of the technique was as followed:

1. Report of first sprint (Franck Polin)
2. Documentation: (Simon Drabert)
    a. Requirements analysis
    b. Stakeholder analysis
3. Further investigate possibilities of Dessa using *Dialogflow* (Celia Schmid & Chris Vogel).

During the further investigation of the possibilities of Dessa using Dialogflow, Chris Vogel concluded that another tool *Google Action Console* would be more adapted for the dialogues related to the Quiz questions. From initially one, there was two tools that would be used for the solution. Hence, the solution requirements shifted, adding several tasks to the backlog like for example "find a way to merge the two programs".

3 Feedback on the use of techniques

Planning workshops: Works fine, task assignment is everyone's forte. What about co-creation? For now, mostly happens in workshops.

Backlog management: used via first experimentation with Trello. It sounds good but the added value has, for now, remained limited. Its effectiveness might be raised if used and updated by everybody on a more regular basis. Members of the team use the tools they are used to use for coordination purposes.

Personas: Phrases like "let's say I'm the student, it'll be easier to get motivated if I can ask Dessa about something I'm unsure about" were useful to discuss about stakeholder needs.