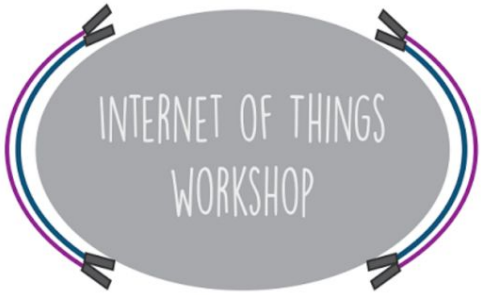


**Start Date :**
9-13-2016
**End Date :**
1-25-2017

**PM :** Joey van der Bie & Bas Pijls van Kooten
**Product Owner :** Joey van der Bie & Bas Pijls van Kooten
**Scrum Master :** Axel Kiebooms
**Scrum Team :**

- Axel Kiebooms
- Michelle Rotter
- Wilco Wijdenes
- Arnout Schekkerman
- Nick Leijenhorst

# Risks Analysis Retrospective

## TOP RISKS DURING THE ALL PROJECT

| ID | Name | Description | Factor |
|---|---|---|---|
| | Methodology | Failure to follow the methodology | 75 |
| | Schedules Respect | Failure to respect schedule and plan based on metrics estimates | 70 |
| | Team communication | Team members do not spend enough time together and do not communicate | 60 |
| | Teacher rejects ideas | Teachers does not approve ideas | 60 |
| | Schedule Estimates | Estimates were done badly or there was not enough information for proper estimates | 56 |
| | stability | Technology components lack stability | 50 |
| | Team members eaten | Some team members might be too shy to express themselves and feel like their ideas or opinions are not listened | 48 |
| | Overwritten code | Correct code was overwritten with wrong one | 45 |
| | Stand up meetings not respected | Team does not have daily communication | 45 |
| | Wrong UI design | The GUI of the frontend does not look like the GUI design | 45 |

## FULL RISK ANALYSIS

| ID | Name | Description | Probability | Impact | Factor | Mitigation | When ? |
|---|---|---|---|---|---|---|---|
| **Technical Risks** | | | | | | | |
| | Stability | Technology components lack stability | 10 | 5 | 50 | Every decision about picking adding technical components to the project should be discussed by the team members so it will be | Sprint01 Sprint03 |

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|---|---|---|---|---|---|---|---|
| | | | | | | stable and not cause troubles in unexpected moments | |
| | Internet | Connecting arduino box to internet | 9 | 4 | 36 | We need to prioritize our effort on developing an internet connection which is reliable and that participant can recreate at home otherwise a part of the scope of the workshop will not be worth it | Sprint03<br>Sprint04 |
| | Technical changes | Technical changes impacts the project | 12 | 3 | 36 | Technologies used in the project should be compatible with previous versions and or other technologies, so we must choose it carefully, that it will not affect the project | Sprint01<br>Sprint02<br>Sprint03 |
| **Design Risk** | | | | | | | |
| | Documentation | Inception documentation might take too long or be develop on odd data | 5 | 5 | 25 | We need to put emphasis on communication between team members but also with the client to be sure to make worth docs | Sprint01 |
| | Scope | Error or omission in scope definition | 9 | 5 | 45 | The scope definition must be effect of the work of the team, so everyone have to share their fears and opinions while the scope is being defined. Brainstorming, studying about scopes of the successful projects, looking deeply into all matters that are included, these are the methods that project team should apply | Sprint01<br>Sprint02 |
| | Scope2 | Project team realised, that there were some activities which were not needed initially in the project but they became relevant | 9 | 4 | 36 | BE AGILE : the project should be done in a way that allows applying changes and performing additional activities easily : Team members should discuss about unplanned things that can occur in the latter stages of the project and be prepared for handling well with them | Sprint02<br>Sprint03 |
| | Requirements | Requirements are incomplete or unclear | 14 | 4 | 42 | Before coding phase, project team should determine how does every part of application should look and work like then requirements should be specified with the adequate precision without ommitting details | Sprint01<br>Sprint02<br>Sprint03<br>Sprint04 |
| | Integration | Failure to integrate components | 12 | 3 | 36 | Doing integration research before coding part, writing some basic integration components that will define integration in later stages of the project | Sprint03<br>Sprint04<br>Sprint05 |

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|---|---|---|---|---|---|---|---|
| | Requirements2 | Project team misunderstand requirements | 9 | 4 | 36 | When ther are some doubt about project requirements, team members should discuss it and determine how each requirement refers to the project and why | Sprint01<br>Sprint02 |
| | Architecture | Architecture lacks flexibility | 9 | 4 | 36 | We can avoid lack of flexibility by appying design patterns which allow adding new functions to the product while not damaging existing ones. The box and the frontend / backend should be open not only for minor hotfixes but also for bigger changes | Sprint01<br>Sprint02 |
| **Contractual or Legal risk** | | | | | | | |
| | Teacher rejects ideas | Teachers does not approve ideas | 12 | 5 | 60 | Constant communication of the project advancements with the teachers | Sprint01<br>Sprint02<br>Sprint03 |
| **Schedule Risks** | | | | | | | |
| | Schedules Respect | The teammember do not take seriously the schedule estimates and do not respect the plan making schedule estimates deprecated and useless | 14 | 5 | 70 | Team members should respect the plan agreed by the team during the scrum planning and/or other meeting. Tasks should be communicated to the rest of the team during the daily stand up or remotely if the daily stand up does not take place. | Sprint 03<br>Sprint 04<br>Sprint 05<br>Sprint 06 |
| | Schedule Estimates | Estimates were done badly or there was not enough information for proper estimates | 14 | 4 | 56 | Every decision about picking adding technical components to the projects should be discussed by team members so it will be stable and not cause troubles in unexepected moment | Sprint 03<br>Sprint 04<br>Sprint 05<br>Sprint 06 |
| | Metrics communication | The metrics necessary to produce the monitoring data necessary to make schedule estimation is not provided by team members making scheduling impossible | 14 | 3 | 42 | Team members should be aware, through a correct communication, of how to monitor themselves and the effort they need to achieve task in order to produce clever metrics. This includes taking project monitoring task seriously | Sprint 03<br>Sprint 04<br>Sprint 05<br>Sprint 06 |
| **Quality Risks** | | | | | | | |
| | Wrong UI design | The GUI of the frontend does not look like the GUI design | 9 | 5 | 45 | The front end needs to be develop while respecting the GUI designed during the mockup creation. The mockups have been developed upon the expectations of the clients, it is necessary to take them seriously ! | Sprint03<br>Sprint04 |
| | Bugs/Defects | Users found | 9 | 4 | 36 | TESTING ! TESTING TESTING ! | Sprint03 |

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|---|---|---|---|---|---|---|---|
| | | undetected defects | | | | | Sprint04 |
| | Bad gui | Users hate gui | 12 | 3 | 36 | A special communication should be established with the client and through user feedbacks in order to make a GUI matching with users and client expectations | Sprint02<br>Sprint03<br>Sprint04 |
| **Productions Risks** | | | | | | | |
| | CAD takes too long | The CAD takes too long to develop | 9 | 5 | 45 | Enough time should be given to Nick to create the CAD in order to make him possible to hand in quality work | Sprint03<br>Sprint04 |
| | Soldering | Soldering takes too long | 5 | 4 | 20 | Enough time should be given to Michelle in order to solder all the components so she can do it on time | Sprint04 |
| | Components delayed | Components required for the workshop are late to be delivered | 9 | 3 | 27 | We need to pray for components to be delivered on time | Sprint02<br>Sprint03 |
| **Team & Managerial Risks** | | | | | | | |
| | Team communication | Team members do not spend enough time together and do not communicate | 12 | 5 | 60 | We should put emphasis on team building and communication plan in order to keep track of the team and achieve performant communication | Sprint02<br>Sprint03<br>Sprint04 |
| | Methodology | Failure to follow the methodology designed by the scrummaster | 15 | 5 | 75 | By education, studying and consulting with teachers and experienced people we can understand and use methodology as mean of help for our project in a good way | Sprint 02<br>Sprint 03<br>Sprint 04<br>Sprint 05<br>Sprint 06 |
| | Conflicting tasks | Due to bad communication, two different pair or team members work on the same solutions | 5 | 4 | 20 | We need to have a good communication plan for dealing with tasks | Sprint02 |
| | Team members eaten | Some team members might be too shy to express themselves and feel like their ideas or opinions are not listened | 12 | 4 | 48 | We should be careful that strong personnalities of our group do not speak for shyer team members and take time to give to anyone the time to express themselves. However, shy team members should also be pro active to express themselves | Sprint 01<br>Sprint 02<br>Sprint 03 |
| | Stand up meetings not respected | Team does not have daily communication | 15 | 3 | 45 | We should try to have daily communication, it is not that hard to communicate remotely in case we cannot attend a meeting. | Sprint 02<br>Sprint 03<br>Sprint 04<br>Sprint 05<br>Sprint 06 |

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|---|---|---|---|---|---|---|---|
| | Assignements takes too long | Documentation required for the school assignments take so long that the project itself is delayed | 14 | 3 | 42 | Strong schedule estimates, working longer than expected | Sprint02<br>Sprint03<br>Sprint04<br>Sprint05 |
| | Lack of PM and control | Project team lack discipline, control and management | 15 | 2 | 30 | Holding a control talk every week or more often, determining rules that everyone must obey and respect | Sprint 02<br>Sprint 03<br>Sprint 04<br>Sprint 05<br>Sprint 06 |
| | Team motivation | Team members are not enough motivated | 15 | 2 | 30 | We should keep motivation high by meetings not related to work, monitoring progression of the project and rewarding ourselves after reaching a milestone, splitting work time in a proper way (not too much, not too little) | Sprint 02<br>Sprint 03<br>Sprint 04<br>Sprint 05<br>Sprint 06 |
| | | | | | | | |
| | Negative attitude | Team members with negative attitude towards the project | 12 | 1 | 12 | Team members should motivate each other by helping, being open minded. Appropriate usage of the group agreement can help ! | Sprint01<br>Sprint02<br>Sprint05 |
| **Version Control Risks** | | | | | | | |
| | Hardware destroyed | One of the hardware is destroyed and cannot be replaced on tume | 5 | 5 | 25 | Version control, keeping extra hardwares | Sprint03 |
| | Documents losts | Important documents for the report are deleted by mistake | 5 | 4 | 20 | Strong rules for the use of google drive | Sprint02 |
| | Overwritten code | Correct code was overwritten with wrong one | 9 | 5 | 45 | Strong rules and supervision of GIT use | Sprint03<br>Sprint04 |