

Appendix B – Choice of Models and Methods

| What | Why | Which Level | Which Method / Technology | Who | Estimated workload |
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| What is the purpose of monitoring the forecast system? What is the current solution for monitoring the forecast system? | It is important to understand the purpose of the solution from the user's point of view, as well as the reason a new solution is wanted. As the new solution then can be designed and implemented with better understanding of the functional requirement. Hence these questions are formulated in the problem formulation. | This question should be answered to the certain level, that all the developers have clarity for, why the solution is needed. | Qualitative method of interviewing | Ophelia | Four meetings of around one hour each |
| What type of data will be monitored? How should the data from the forecast system be retrieved? How often should the new data be retrieved? What type of graphical representation is needed to visualize the performance? How should the performance data be stored? | In order to build a solution, that can act according to the business logic and function correctly under expected normal circumstances, it is important to know what technical requirement it has to fulfill, and how it can integrate to the existing system. Hence these following questions are formulated in the problem formulation. | These questions should be answered to a very detailed level, as they serve as base requirements for designing the entire infrastructure. | Qualitative method of interviewing | Ophelia | Two meetings in the beginning to have a basic understanding and as many as needed later in the process |

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| How can the system be designed so it is extensible? How can the system be implemented so it is maintainable? | In order to build a system that is robust under the test of time and changing need. The system should be designed with maintainability and extensibility in mind, hence these questions of how to achieve the certain qualities are very relevant to ask. | These questions should be answered to a very detailed level, as the answers will serve as base for design of the entire system. | Design patterns (Larman, C. 2004) | All | The design phase (Read for implementation) for all features |
| What existing technology of similar purpose is already in use in Systematic? | Understanding what technologies of similar purpose are already in use is needed when choosing the technologies for this project | This question should be answered to a certain level, that all the developers have clarity, for what technologies are already used and why they must use similar for this project | Currently Angular and C# are the technologies used in Systematic for processing and visualizing the data coming from the forecast pipeline | Tomas | One meeting with the Product owner |
| What technology will be most suitable for the purpose? | Choosing a technology that best suits the purpose of the project is needed to come up with the optimal solution to the problem | This question should be answered to a certain level, that all the developers have clarity, for why the chosen technologies are best suited for the purpose | Angular is the technology chosen for the data representation (frontend), C# is the technology chosen for the data processing (backend microservice) | Georgi | One meeting with the Product owner |
| What development method will be useful in this certain development context? | The development method must be specified to keep the development process structured and the progress monitored | This question should be answered to very specific level, so all the developers understand why the chosen method is used | Feature Driven Development (FDD) and Scrum (Highsmith, J. 2002) was chosen for a development method for this project | Ophelia | One meeting with the supervisor and product owner [T11] |