

Attachment C – Risks

ID	Name	Type	Description	Likelihood	Impact	Possible mitigation
SHD – TH	Knowledge gathering risks					
SHD – TH – 01	Incorrectly chosen theory	Skill	We chose the wrong books to study from, and now we are missing knowledge.	Low	High	Study more books; Use filters for searching books; Consult with someone experienced; Have knowledge beforehand
SHD – TH – 02	Misunderstood theory	Skill	We understood theory wrong	Medium	High	Consult with someone experienced; Use multiple sources, Learn by example
SHD – TH – 03	Insufficient theory	Skill	We have not learned enough to understand the problem or methods.	High	Medium	Use multiple libraries and the internet; Consult with someone experienced; Use agile methods
SHD – TH – 04	Missing books in the library	External	We chose good libraries, but the books are taken, and there are none left.	Low	Low	Use online library; Borrow the books in advance; Buy the books in a store
SHD – TH – 05	Sources are paid	External	We chose suitable sources, but they are too expensive.	Medium	Medium	Use different sources; Look for the same books in different libraries; Borrow the book from someone who has it
SHD – CS	Current situation assessment risks					
SHD – CS – 01	Misunderstood current situation	Business	We did not understand the current situation.	Medium	High	Consult; More interviews; Personal experience; Create and present a diagram
SHD – CS – 02	Wrong current situation description	Business	We understood the current situation correctly but misdescribed it.	Medium	Low	Should have no impact on the project.

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SHD – CS – 03	Wrong current situation analysis	Business	We understood the situation correctly, but we analysed it wrong. The possible improvements and threats of the system are different to the real ones.	Medium	Medium	Consult results; More interviews
SHD – CS – 04	The reality is different	External	We understood the situation at the interviews correctly. However, the described situation is different to the real one.	Low	High	Conduct interviews with more people, Personal experience
SHD – CS – 05	Wrong tools for current situation analysis	Business	We understood the current situation correctly, but we used the wrong tools for the analysis.	Medium	Low	If the situation is understood, then the analysis output is irrelevant.
SHD – CS – 06	Changed current situation	External	It can be something irrelevant, like a change in the organisation's structure, but it might be something big, like the unification of help desk tools.	Medium	Medium	Assess the current situation continuously; if a product's need ended, it is a big problem. Otherwise, we can embrace the problem.
SHD – FS	Desired situation description risks					
SHD – FS – 01	Wrong presentation of the desired product	External	ANS CR described the product in the wrong way. They said that they want something that does not make sense or lower the quality of the product.	Low	High	More interviews; Consults the requirements; Agile project management method; Internal development
SHD – FS – 02	Misunderstood requirements	Business	We misunderstood what ANS CR wants.	Medium	High	More interviews; Consults the requirements; Agile project management method; Internal development

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SHD – FS – 03	Badly processed requirements	Skill	We understood the requirements correctly, but the created specification is wrong.	Low	Medium	Consult the requirements; Knowledge or skill with requirement management; Internal development
SHD – FS – 04	Change in requirements	External	The requirements change during the project.	High	Medium	Requirement management during the project; Agile project management method; Internal development; We can expect this problem to arise, but it might even help the product to achieve a higher customer experience
SHD – FS – 05	Missing requirements	Requirement	ANS CR described the product as they want it. We understood it and correctly processed it. Nevertheless, some requirements are missing.	Medium	Low	Requirement management during the project; Agile project management method; Internal development; We can expect this problem to arise, but it might even help the product to achieve a higher customer experience
SHD – FS – 06	Irrelevant requirements	Requirement	ANS CR described the product as they want it. We understood it and correctly processed it. However, there are some irrelevant requirements.	Medium	Low	Agile project management method; Good analysis and design; Consult the requirements
SHD – PM	Project management proposal risks					
SHD – PM – 01	Wrong work breakdown structure	Management	We divided the project into parts which does not make any sense. They are not functionally nor logically related.	Medium	Medium	Use different methods for creation of WBS; Consult with someone experienced

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SHD – PM – 02	Wrong time plan	Management	The team created a time plan which is hard for them to follow and fulfil. The team might be under time pressure or have too much time.	Low	High	Agile project management method; Experience with time management
SHD – PM – 03	Missed risks	Management	We missed some crucial risks of the project.	Medium	High	Risk management; Experiences
SHD – PM – 04	Missed WBS	Management	We missed some WBS, which might be essential for the project.	Medium	Low	Agile project management method; Consultations
SHD – MO	Modelling / Designing risks					
SHD – MO – 01	Insufficient knowledge of the diagrams	Skill	We do have not enough experience or knowledge of the diagrams' elements. We do not understand how they work together and which to use.	Medium	High	Study more; Consult with someone experienced
SHD – MO – 02	Wrong diagrams chosen	Technical	We chose diagrams that are irrelevant for the developers.	Low	Medium	Consult with someone experienced; Use more types of diagrams; Almost all models have at least some value
SHD – MO – 03	Incorrect detail of modelling	Technical	We modelled the system with a lousy level of detail. The model is either too general or too specific.	Medium	Medium	Consult with someone experienced; Submit the models periodically
SHD – MO – 04	Missed use cases	Technical	Though we have reasonable requirements, we missed some use cases.	Medium	High	Consult the use cases; Correct requirements; Agile project management methodology
SHD – MO – 05	Missed needed data	Technical	We will model the data incorrectly, and we miss some critical data, or the database has some faults.	Low	High	Consult the database; Correct requirements; Agile project management methodology

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SHD – MO – 06	Wrong optimisation	Technical	The functions or database are not optimised, and the application is taking more resources than it should.	Medium	Medium	Experienced help; Review diagrams
SHD – MO – 07	Missed functions	Technical	Some processes could have been made into functions, or the processes are missing.	Medium	Medium	Consult the functions; Agile project management methodology; Correct use cases
SHD – MO – 08	Unclear diagram	Technical	The model we created is unclear and causes more problems than good.	Low	High	Consult diagrams; Study more
SHD – MO – 09	Another mistake in modelling	Technical	We made another mistake in the modelling.	Medium	Medium	Consult with someone experienced
SHD – DE	Development risks					
SHD – DE – 01	Not enough programming knowledge	Skill	The developer is missing knowledge of some needed technology.	Low	High	Use different technology; Hire new developer; Let the developers learn (course/self-study)
SHD – DE – 02	Insufficient funds	Management	There are not enough funds for the team.	Medium	High	Outsource; Prolong the project; Hire junior developers
SHD – DE – 03	No time	Management	There is not enough time for the developers to create the system.	Low	High	Hire more developers; Outsource
SHD – DE – 04	Developer leaving project	Business	A developer leaves the project, and now there is knowledge missing.	Medium	High	See SHD – DE – 01
SHD – DE – 05	Incorrect choice of technology	Skill	The development team chose the wrong technology for the development of the system.	Low	High	Assess the possible technologies; Use verified technologies; Consult someone experienced
SHD – DE – 06	Unreadable code	Skill	The code created by the developers is unreadable for future use or modification.	Low	High	SCRUM; Experienced developers; Review code

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SHD – TE	Testing risks					
SHD – TE – 01	Insufficient knowledge for testing	Skill	The testers do not know some tests or how to do them.	Low	High	Hire new testers; Let the testers learn (course/self-study)
SHD – TE – 02	Missed tests	Technical	The testers missed some tests which would discover some faults.	Low	Medium	Experienced help; Review tests
SHD – TE – 03	Undiscovered fault	Technical	The testers missed some fault, maybe because it is a time-based fault, an optimisation problem that will turn up with more users, or a common problem that has not been discovered.	Medium	Medium	Modify testing strategy
SHD – IM	Implementation risks					
SHD – IM – 01	Unable to connect to other systems	Technical	The system is missing connections which it or other system needs to function correctly.	Low	High	Agile project management methodology; Good design
SHD – IM – 02	Incapable users	External	The users are incapable of using the system.	Low	High	Teach users; Develop with users
SHD – IM – 03	System no longer needed	External	The customer no longer needs the system.	Low	High	Create the solution as soon as possible
SHD – IM – 04	Not enough space	Technical	There is not enough space for the system to be implemented on servers or devices.	Low	High	Replace other systems (if unused); Create space (buy servers or new devices)
SHD – IM – 05	Clashing software	Technical	There is software that causes the system to crash or the opposite.	Low	High	Proper testing; Agile project management methodology; forbid the use of the other system
SHD – IM – 06	Too much data	Technical	The operators cannot configure the system.	Medium	High	Import data from other sources; Easy-to-use interface
SHD – OP	Operation risks					

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SHD – OP – 01	Operation turned expensive	Business	The system became more expensive than the original solution.	Low	High	Return to the original solution; Almost impossible
SHD – OP – 02	Missing features	Technical	The system is missing some features.	Medium	Medium	Agile project management methodology; Readable code
SHD – OP – 03	Closed system	Technical	The system does not communicate with any other systems, and it is impossible to export or import any data from or to the system.	Low	High	Agile project management methodology; Readable code