



UNIVERSITY OF  
GOTHENBURG

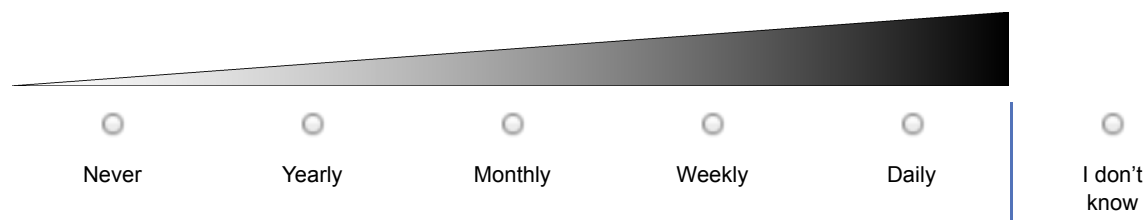


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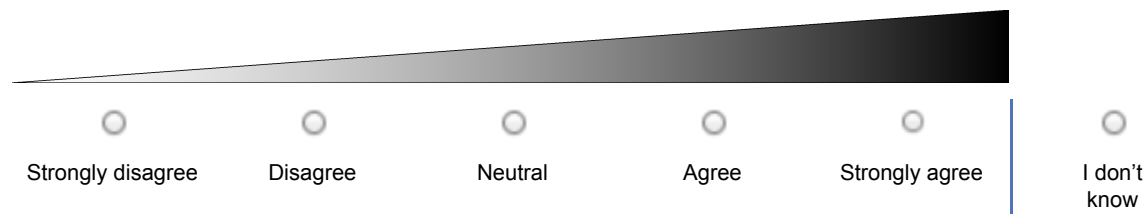
### Problem 1: Lack of Product Knowledge:

People eliciting requirements need a large amount of domain knowledge. Additionally, in early phases of a project, a high level of uncertainty regarding the final product is common. This can lead to vague and unclear, or even obsolete, requirements with greatly varying quality.

#### 12. I experience this problem...



#### 13. Please rate your agreement for the following statement: The named problem is a key problem which needs to be addressed.



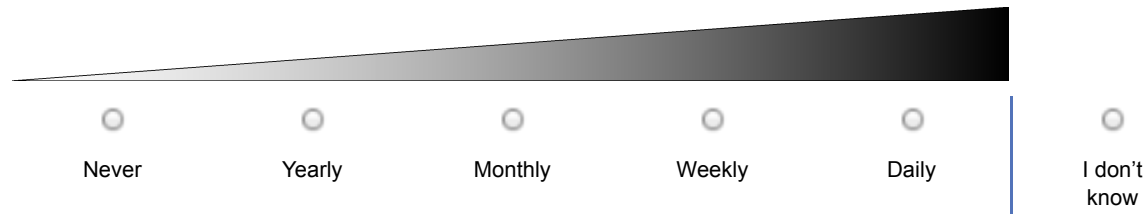
#### Clarifications/Comments:

### Problem 2: Unconnected Abstraction Levels:

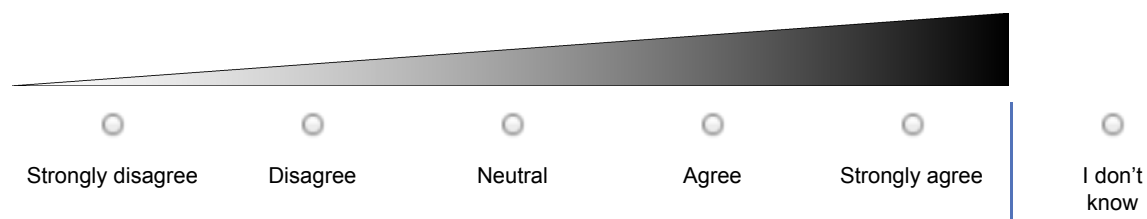
Early in the project, there is a need to document requirements on an abstract level. On the other end, especially because of the tight coupling to hardware and the highly distributed systems with possibly

multiple external suppliers involved, there is a need to describe requirements on a low level of abstraction, close to pseudo-code. However, it is often unclear how these low-level requirements have been derived from the requirements on a high abstraction level. This can result in incomplete tracing, obsolete high-level requirements, or a mismatch between high-level testing and the implementation.

**14. I experience this challenge...**



**15. Please rate your agreement for the following statement: The named problem is a key problem which needs to be addressed.**



**Clarifications/Comments:**

**Problem 3: Lack of Context Knowledge:**

Requirements specifications can easily be several hundred pages long. While they can be overlooked to some extent on a higher level, it is difficult to provide developers or testers on lower levels with enough context information, especially when development is outsourced. Therefore, when receiving requirements, it is problematic to acquire enough knowledge regarding the requirements' context, in order to understand them and the rationale behind them.

**16. I experience this challenge...**



☐ Never
 ☐ Yearly
 ☐ Monthly
 ☐ Weekly
 ☐ Daily
 ☐ I don't know

17. Please rate your agreement for the following statement: The named problem is a key problem which needs to be addressed.

☐ Strongly disagree
 ☐ Disagree
 ☐ Neutral
 ☐ Agree
 ☐ Strongly agree
 ☐ I don't know

Clarifications/Comments:

#### Problem 4: Insufficient Communication and Feedback Channels:

With the high complexity of today's automotive systems, it is not feasible to document every single detail in terms of requirements. This results in a need to communicate, ideally between different organisational levels and roles. It is however not an easy task to establish and maintain the right communication and feedback channels within and across organisations.

18. I experience this challenge...

☐ Never
 ☐ Yearly
 ☐ Monthly
 ☐ Weekly
 ☐ Daily
 ☐ I don't know

19. Please rate your agreement for the following statement: The named problem is a key problem which needs to be addressed.

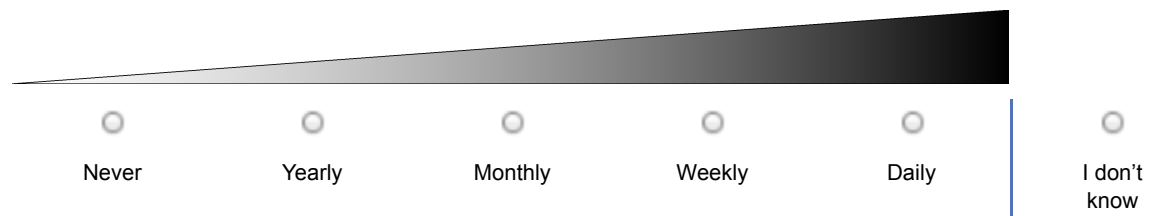
☐ Strongly disagree
 ☐ Disagree
 ☐ Neutral
 ☐ Agree
 ☐ Strongly agree
 ☐ I don't know

**Clarifications/Comments:**

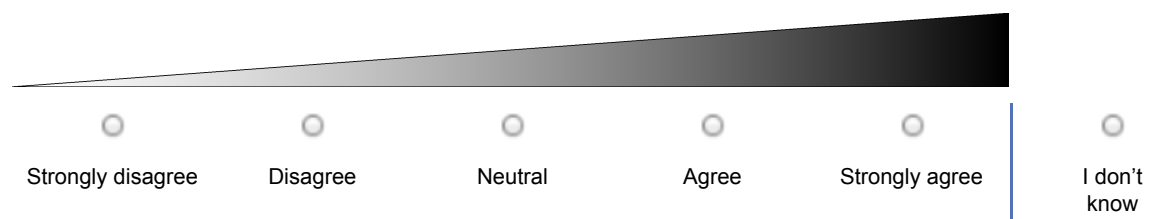
**Problem 5: Lack of Common Interdisciplinary Understanding:**

In the automotive industry, several disciplines are involved in the development. While there are many connection points and while there is a clear need for communication and exchange, most disciplines have their own understanding and their own language. If these languages do not match between disciplines, this can lead to misunderstandings.

**20. I experience this challenge...**



**21. Please rate your agreement for the following statement: The named problem is a key problem which needs to be addressed.**

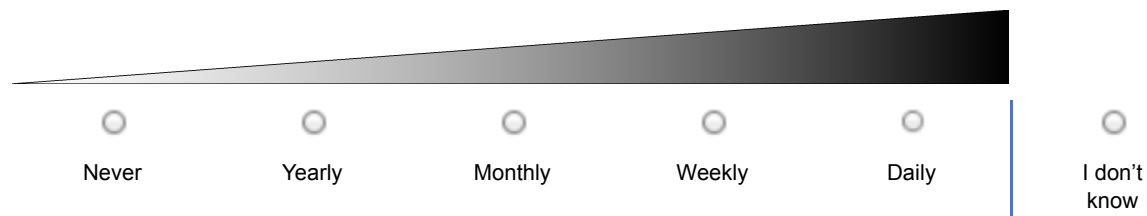


**Clarifications/Comments:**

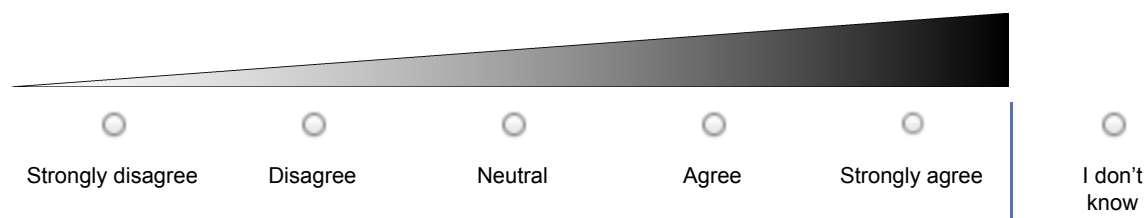
**Problem 6: Unclear Responsibilities and Borders:**

Automotive systems are nowadays developed by numerous globally distributed teams with a high staff turnover. These teams need to communicate and need to be coordinate. Additionally, they are all responsible for a part of the overall system under development. It is difficult to draw organisational borders between these teams, units, or roles, and assign clear responsibilities to individuals.

**22. I experience this challenge...**



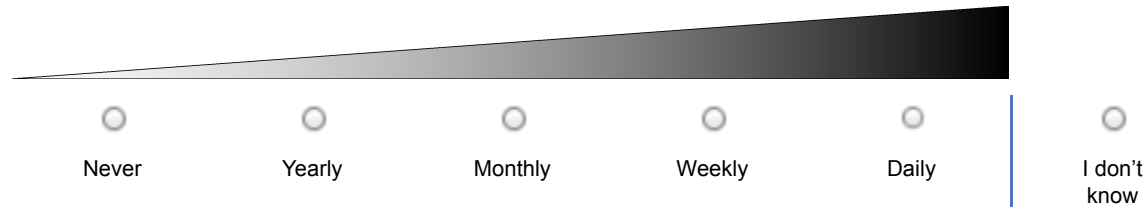
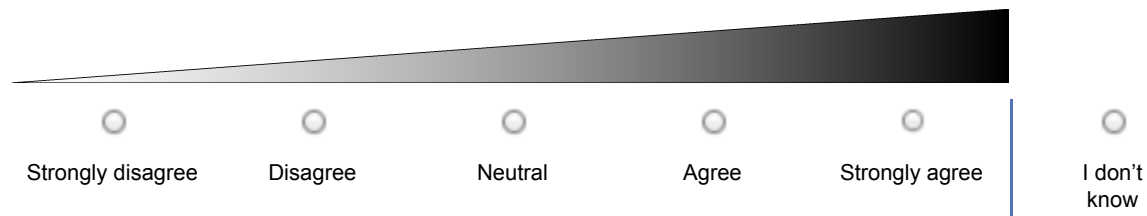
**23. Please rate your agreement for the following statement: The named problem is a key problem which needs to be addressed.**



**Clarifications/Comments:**

**Problem 7: Insufficient Resources for Understanding and Maintaining Requirements:**

Time and money are always pressing factors. Additionally, systems are often built incrementally and built to live for a long time. However, early project phases, where many of the decisions are taken, are often short. Therefore, it is problematic to get a sufficient understanding in early project phases and to maintain or even improve the quality of the specifications later on.

**24. I experience this challenge...****25. Please rate your agreement for the following statement: The named problem is a key problem which needs to be addressed.****Clarifications/Comments:**[Next](#)

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