

Home Exercise: Eliciting Excitement Requirements



ATLEX

Come up with
requirements for least
three exciting features
of the goggles not
mentioned so far.



Requirements Interviews

As we know from analyzing the Kano categories, if we interview the customer, she will tell us performance requirements only (or almost only).

Type	Skill	Method
Basic	Watch	Prototype, Agile Development, Observation
Legal	Read	Document Analysis
Excitement	Think	Creativity Methods
Performance	Talk	Interview

But that does not mean that everything we hear in such an interview is really needed by the customer. **How can we find those unnecessary requirements?**



The Top-10 RE Problems in Practice

In a perfect world, we have **one** customer who provides us with high-quality requirements. In practice, however, we need to cope with questions like ...

1. How can we find **all** sources of requirements?
2. What can we do if the requirements sources disagree?
3. How can we elicit the requirements the customer has but doesn't tell us?
4. How can we find out if the customer **really** needs what she says?
5. What is the best prioritization method for requirements?
6. What is the best table of contents for a big requirements document?
7. What can we do to get **precise** natural language requirements?
8. What are the best diagram types for visualizing requirements?
9. What are the most important requirements attributes and relationships?
10. What can we do to keep the requirements up-to-date for years?



Requirements Rationale

Asking for the **requirements rationale**
(„Why do you have this requirement?“)
helps filtering out unnecessary requirements.



The Requirements Rationale



RATIONALE

The rationale should be kept up to date and include the following information:

- **Reason for the Requirement:** Often the reason for the requirement is not obvious, and it may be lost if



Requirement 2 (Priority: B)

At flight speeds of 1200 km/h or higher the thrust may not be increased, even if the pilot has expressed the desire to do so. **The reason is that the airplane has not designed for speeds beyond the sound barrier.**

Requirement 3 (Priority: B)

At flight speeds of 400 km/h or lower the thrust may not be decreased, even if the pilot has expressed the desire to do so. **The reason is that the airplane would stall.**



Source: https://www.nasa.gov/wp-content/uploads/2018/09/nasa_systems_engineering_handbook_0.pdf_2025



The Library Project



A Requirements Interview

The requirements engineer is not just a passive recorder of requirements. Instead, she actively challenges the requirements, asking the customer for the reason for the requirement („*requirements rationale*“). **This leads to requirements that better suit the customers's needs.**

Librarian: „I want each customer with at least one overdue book to be marked with an asterisk on the customer list.“.

Requirements Engineer: „Why with an asterisk?“

Librarian : „To recognize them faster.“



Requirements Engineer : „Then maybe boldface
would be better. Why do you want to recognize them?“



A Requirements Interview / 2

Librarian : „To write them faster to address labels.“

Requirements Engineer : „Then some automated address label printing function would be better. But why do you need address labels?“

Librarian : „To send dunnings (German: *Mahnschreiben*).“

Requirements Engineer: „Then some automated sending of dunnings via e-mail would probably be better. But why do you want to dun at all?“



Librarian: „Because I want fewer books to be overdue.“



A Requirements Interview / 3

Requirements Engineer: „Then sending reminder e-mails in advance would probably be a good idea, too. But why do you want to have fewer overdue books?“

Librarian: „ To offer our customers more books for lending.“

Requirements Engineer: „You could try to increase the lending opportunities without increasing the number of physical books, e.g. by digitalizing the books thereby making each book available to more than one customer.“

