Exercise for the Lecture Requirements Engineering (Elite)
Summer Semester 2022
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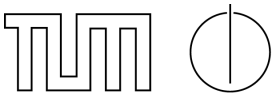

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Tutorial 5: Stakeholders, Elicitation Techniques

This exercise sheet covers the contents of the **4th and 5th lecture**.

Exercise 1 Personas E-Scooter (Homework)

A startup company would like to build an E-Scooter platform. They decide for a smartphone app to allow users to conveniently book the scooters. As you are responsible for the elicitation of requirements you decided to use *personas* for a better collection of the needs of your customers.

Please choose one of the following stereotypes and create a *persona* using the criteria explained in the lecture. Remember to provide a specific scenario how the persona uses the system.

Stereotypes:

1. Business customer who wants to get to his meeting fast
2. Young person who has fun to drive a scooter
3. Retired person with no technology affinity

Exercise 2 Suitability of Elicitation Techniques (Understanding)

Create a matrix that shows for each elicitation technique *interview/workshop, user observation, prototyping, problem report analysis, user studies* and *comparison with competitor products*, how appropriate each technique is to

1. express desires and needs
2. show possibilities
3. analyse the current state
4. clarify market potential.

Exercise 3 Applied Elcitation Techniques: E-Scooter (Hands-on)

You accompany the development of the physical E-Scooter as a requirements engineer. Consult with your team which elicitation techniques are suitable to elicit requirements for the hardware. Then carry out these techniques! If you decide to perform a workshop or other techniques that involve external participants, try to plan the workshop as explicitly as possible and research appropriate participants (e.g. 'we need someone from the transportation department of the city'; figure out the exact contact person and how to get in touch with them.)

Exercise 4 Goal-Question-Metric (Modeling)

Apply the GQM-Approach to the following goals in order to quantify to which extent they are fulfilled.

1. Improve the usability of the smartphone frontend for the user of the booking system.
2. Improve the handling of the hardware scooter device for the operators in charge of maintaining the scooters.

3. Improve the maintainability of the source code of the software backend system.

Exercise 5 Goal Model for Corona-App (Modeling)

Throwback to 2020: To contain the COVID-19 pandemic, many nations are using so-called corona exposure notification apps. In Germany, such an app is currently planned - as a renowned requirements engineer, you were tasked to model the goals of the project.

1. In the app's repository[1] you will find the following statement: *'This project has the goal to develop an app based on technology with a decentralized approach - heavily inspired by the DP-3T and TCN protocols and based on the Privacy-Preserving Contact Tracing specifications by Apple and Google.'*. Comment on this goal formulation from a requirements engineering perspective!
2. Think about which goals motivate a 'Corona App'. Then create a goal model!
   Incorporate the following terms, among others: *Notification of potentially infected people; Containment of the virus; Voluntary use; Avoiding situations where many infections occur.*
3. Expand your goal model by defining appropriate sub-goals
4. Identify justifying super-goals for each goal
5. What conflicts do you identify between goals?
6. Consider apps used by other countries and evaluate which goals are met, partially met, or not met. To do this, use MIT's database[2] and this overview[3] from the SZ.

   Spoiler:

   - China, India, Qatar: Mandatory use of the app.
   - Iceland: Position tracking with GPS
   - Australia: Central data storage

[1] https://github.com/corona-warn-app/cwa-documentation
[2] https://www.technologyreview.com/2020/05/07/1000961/launching-mittr-covid-tracing-tracker/
[3] https://www.sueddeutsche.de/digital/corona-app-stand-1.4918196 (German)