Select your challenge for a robot-based scenario

Before you start your challenge

In this short topic, you will get a draft overview of your Challenge as a practical part of this course Robotics and Internet of Things. In your challenge, you will focus mainly on robotics to make it manageable for you. But you are free to integrate some IoT aspects if you want. Your Challenge will be about a concrete problem in your professional/private life that should be better solved using robotics and IoT technologies.

Two challenge options

To better reflect your personal interests, you can choose between a conceptual and a technical focus. Please choose one of the following two different challenges:

> **Challenge #1 – Concept & Design for a robot**. In this Topic, your challenge is to solve a concrete problem in healthcare and develop a concept for a robot called "HealthBot" This challenge is perfect for you if you are interested in solving real-world problems by analyzing and conceptualizing a solution. If you are interested in this challenge, take a look at Topic 5.
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> **Challenge #2 – Building and testing a robot**. This challenge is perfect for you if you are interested in technology and like to tinker with technical problems. For this option, you will build a small scaled robot for farming. Please note: If you choose this challenge, you will need to purchase a robot kit. You can find more specific information in Lesson 6. So if you are interested in this challenge, take a look at Topic 6.

You will be guided through your project:

To address your challenge of developing a robotic solution, you can use the standard process model briefly introduced in Chapter 4. You can use this model as a practical guide to solve your challenge. Depending on the challenge you have chosen, you will be asked to work through two specific phases of the model. At each stage, you will be asked some guiding questions to ensure that all aspects are considered. Answer them and document them briefly and clearly to keep track of your assignment.

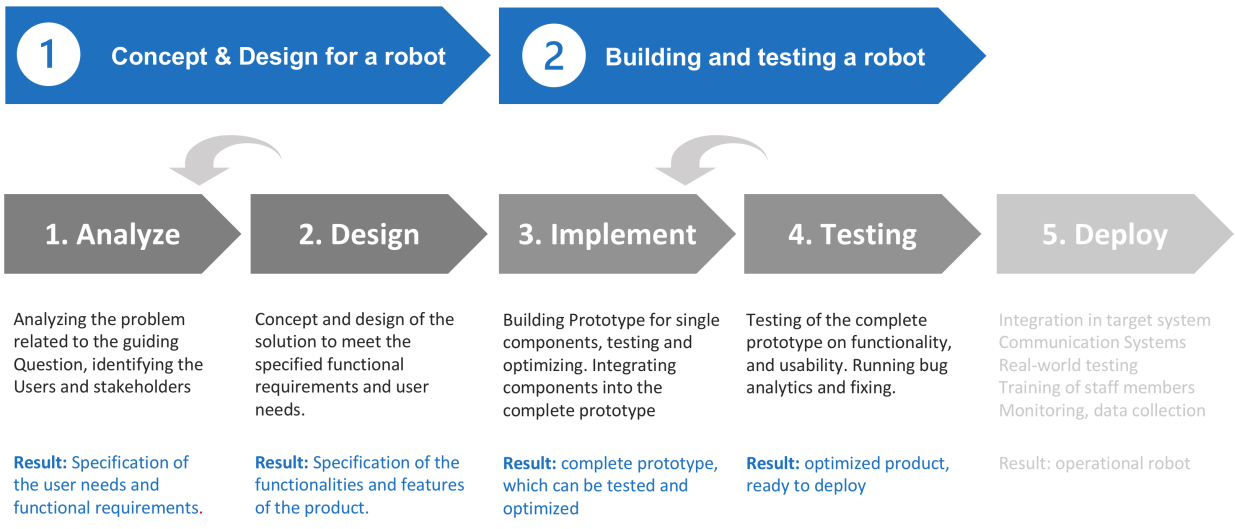

Image: Sequential development process for a robotic solution, based on a software development process, Dickel 2023 based on: Alavandhar, J. Nikiforova, O. (2017) https://www.researchgate.net/figure/Sequential-development-process_fig1_318181157