

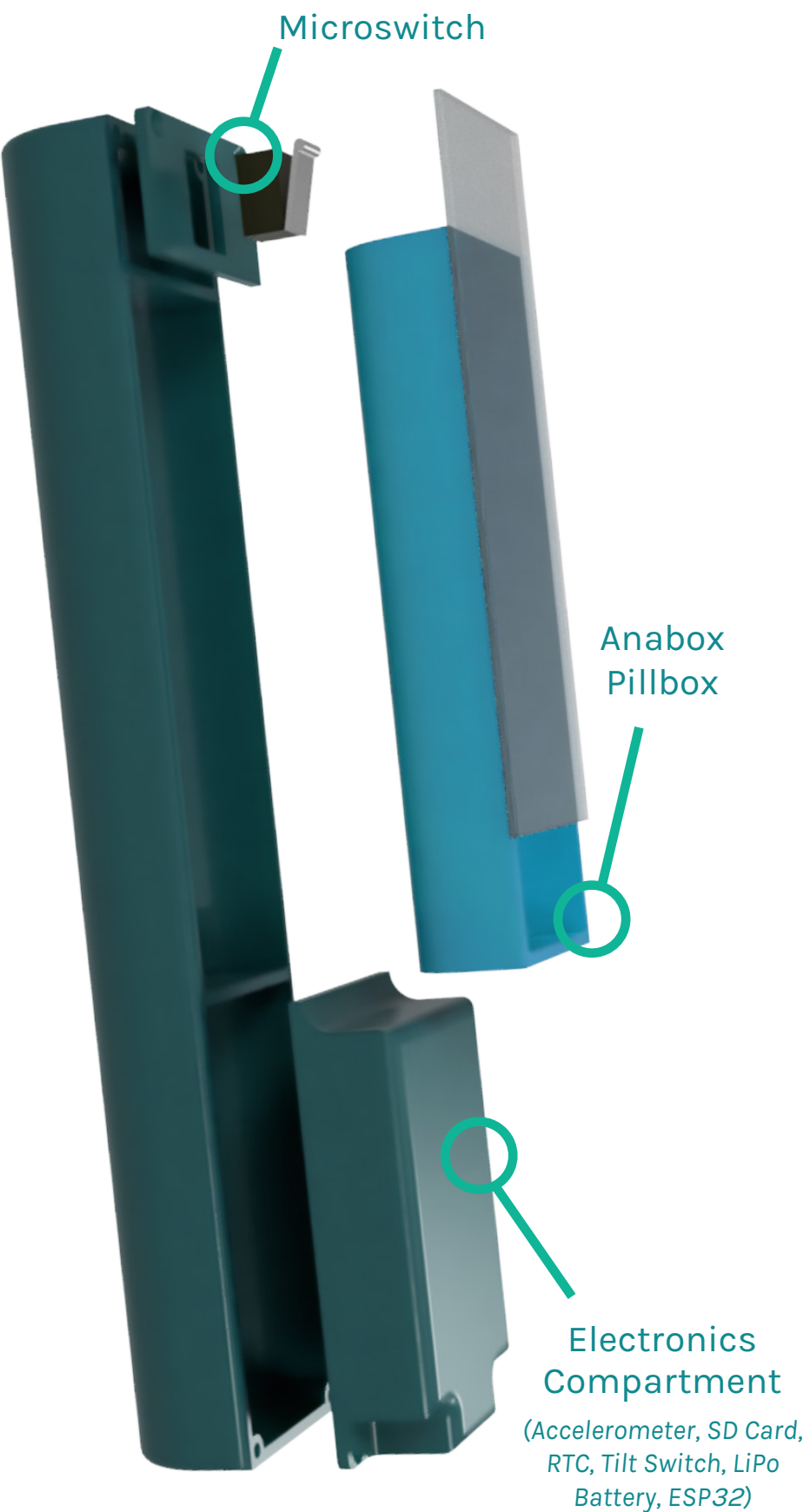
# Understanding Routines Around Medicine Intake through a Data-Enabled Design Approach

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## MEDIC ADHERENCE

Adhering to the prescribed medical schedule is one of the crucial steps that leads to a successful recovery or treatment for chronic diseases. However, more than 50% of prescription medicine is not taken as instructed. Existing interventions that focus on reminders often lack detailed insights into people's daily intake routines. Ubiquitous sensor systems can facilitate the observation of everyday behaviors and provide detailed insights into medication routines.

## DATA ENABLED DESIGN

We use the Data Enabled Design framework [1], employing the contextual step to investigate the possibilities of this method in the field of medical adherence. We explore the routines and behavior of the user through a combination of quantitative sensor data and qualitative interview sessions. To this end, a sensor-enriched pillbox attachment was designed and deployed, to gather data on the movement and opening times of the participant's pillbox. The researchers' findings were discussed with the user, uncovering novel insights into medical adherence.

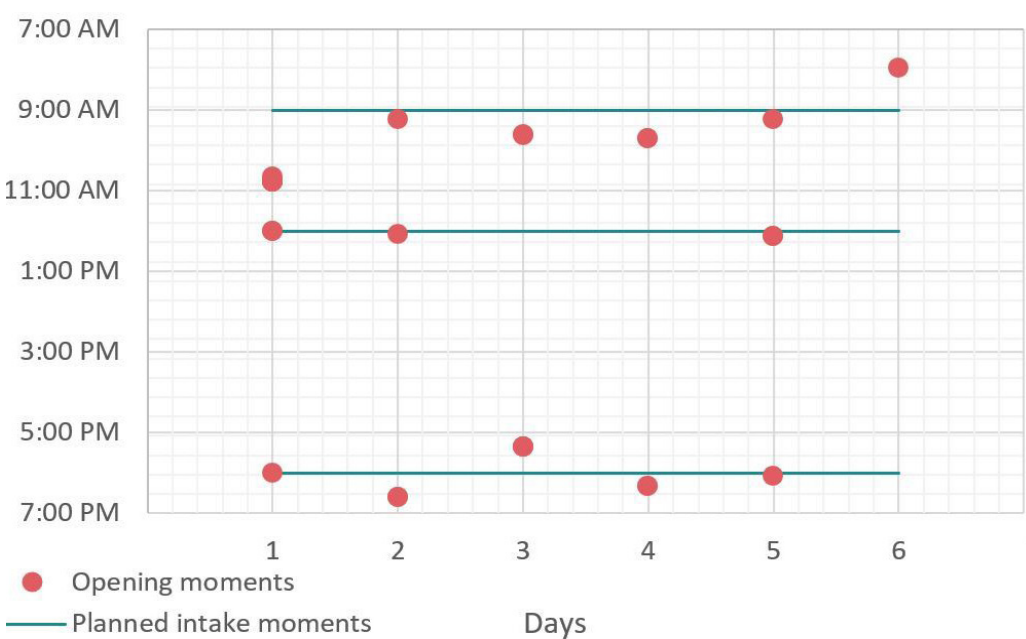


Figure 1. Daily opening times and planned intake moments

## A WAY TO MOVE FORWARD

The probe was deployed for one week, in the home of one participant, and served as a pilot study. Despite its limitations, insights were revealed, such as highlighting that the participant thought she was less adherent in the afternoon rather than the morning, but this was shown to be the other way around. Moreover, the study shows that a Data Enabled Design methodology can serve as a way forward in designing interventions for increasing the medicine adherence, using data as a creative material.

[1] Van Kollenburg, J. & Bogers, S. J. A. (2019). Data-enabled design : a situated design approach that uses data as creative material when designing for intelligent ecosystems. Eindhoven: Technische Universiteit Eindhoven.

