**What is the problem you want to solve?**

We want to create learning applications that help patients learn about the personalised nature of their own diseases and how it responds to treatment. We are focussing on gastrointestinal disease, which is common, but where patients have difficulty tracking their symptoms, understanding their disease, and relating symptoms and treatments. Inflammatory bowel disease(IBD) is a particular chronic inflammatory condition of the gut with high healthcare utilisation that is particularly problematic with regards to symptoms and treatments and will be an excellent proof-of-concept setting to develop these approaches.

**Why do you want to solve this problem?**

To empower patients and patient groups with an opensource platform to create personalised solutions to their own diseases. Ultimately this will lead to improved quality of life and health care utilisation. This will be particularly important for patients suffering from IBD.

**What do you envision as the ideal solution for this problem? If you had unlimited resources**

An interoperable opensource platform that incorporates patient reported symptoms as well as data from wearable tech to create personalised content consisting of existing knowledge of relevant specialist care for patients’ diseases as well as their own personalised response to changes in care. This should be a standardised, interoperable system that can learn and inform so that it has future utility in multiple disease sets and can be integrated with existing medical services.

**What sort of Open Source solution do you think can be created in 48 hours, by a small team of developers, designers and data analysts?**

Home page, phone app linked to wearable tech which utilises standard disease related nomenclature (SNOMED-CT) within a searchable and relational database (SQL DB) to provide a solution to be taken up by disease specific interest groups. The data capture needs to recognise patient entered symptom data as well as geo-spacial accelerometer + pulse type information to learn patterns and patterns of information that would be useful for patients and care providers. This should be presented in a visual format that is informative and easy to interpret.

**What are the current solutions for handling this problem?**

Current platforms include apple research / Watson / Google and other closed source solutions. The interest here is to provide a platform that specialist interest groups (inflammatory bowel disease) can use computer science solutions without reinventing it everytime. As an open source solution its potential is to bring computer science and medicine together in a truly open and innovative way to provide personalised disease learning for patients