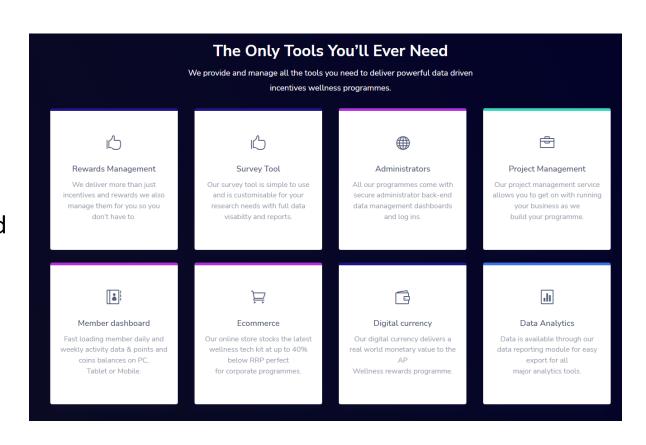


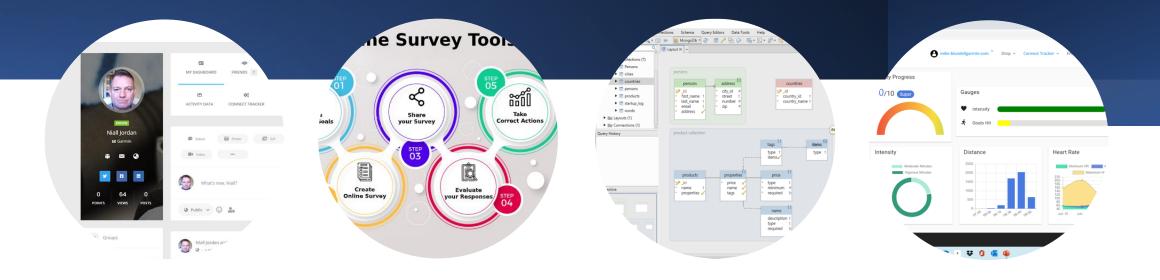


### What is AP Platform?

AP Platform is an innovative solution to support medical research, diagnosis, treatments, remote patient monitoring and rehabilitation using data collected from wearables and other monitoring devices.



## Platform Features



Fitness tracker integration

Data Research tools

Client data dashboards

Be-spoke client networks

User frontend

Incentives & rewards platform

Digital currency

Wearables store

• The AP Healthcare solution enables Hospitals and Medical Institutions to automatically collect and analyse data.

Patients can be (remotely) monitored 24/7 based on wearable data to support medical diagnosis, treatments and research.

## Data

### **Datapoints**

Intensity based on minutes, fairly active, minutes very active, min heart rate, average heart rate, max heart rate, daily steps, calories burned, distance, active minutes, sp02 and sleep data.

### **Data Reports**

Exported data is provided as Rest API, CSV or JSON download for daily, hourly and minute-level data, either anonymized or individualized.

Tracking devices use a 3-axis accelerometer to count steps. This sensor also allows a device to determine the frequency, duration, intensity, and patterns of your movement.

Active Zone Minutes Time Series provides a user's heart-pumping activity throughout the day.

Activity and Activity Time Series provides information about a user's activity and their activity goals. The time series endpoints can be used to observe trends.

Body and Body Time Series provides data on a user's weight and body fat percentage. The time series endpoints can be used to observe trends.

Breathing Rate provides a user's average breaths per minute at night.

Cardio Fitness Score (VO2 Max) returns the maximum or optimum rate at which the user's heart, lungs, and muscles can effectively use oxygen during exercise.

Electrocardiogram contains information about the user's on-device electrocardiogram readings.

Heart Rate Time Series returns a user's heart rate and resting heart rate values. The time series endpoints can be used to observe trends.

Heart Rate Variability provides the room mean square of successive differences values recorded during a user's period of sleep.

Intraday provides a daily, granular-level of detail to a user's active zone minutes, activity, breathing rate, heart rate, heart rate variability and SpO2 metrics.

Nutrition and Nutrition Time Series allows a user to record the foods they consumed and include the food's nutritional metadata. The time series endpoints can be used to observe trends.

Sleep returns information about a user's sleep patterns.

SpO2 provides a user's blood oxygen levels.

Temperature returns a user's core and skin temperature.

# Data application

### **Example**

AP provides real-time health data monitoring that allows care providers to adapt exercises and rehab activities based on patient data.

#### Dashboards

• AP platform displays collected data on multiple dashboards for analysis and patient monitoring in real time.

#### Dataflow

AP provides 24/7 real-time data to medical experts when they need it. Data is provided in various aggregation levels

## Partners





















Institute for Information and Communication Systems Science

# Partnership goals

- Build digital health platform
- Access funding and research
- Share knowledge
- Innovate new solutions
- Data Library
- Demonstrate effectiveness & ROI
- Raise Product awareness & availability to NHS

Deployed	Q2 2023	Prototype	Pipeline
Website		A1/ Machine learning system	Data Management dashboards
Database	April 2023	Fatigue Monitor App	Data Analytics
User UI	New User Dashboard		IOS app
Device API	Polar API		Android App
Rewards			
Online store			

GDP Project 2022

## Partnership Case Study

Supporting Innovate UK funded project to develop a fatigue monitoring mobile app.

- Supervisor: Dr Age Chapman
- 2nd Examiner: M.C. Schraefel
- Front-End Team:
- Velimir Anastasov (vna1u19, Front-End Lead)
- Joseph Hough (jh9n19, VPRisk Analysis/Secretary)
- Back-End Team:
- Manbir Singh (ms13n19, Back-End Lead)
- Kaloyan Spirov (kcs1u19, VP Assessment/Documentation)
- Oliver Burgess (osb1g19, Project Manager/Customer Interaction)

GDP Project 2022

# Partnership Case Study







SURVEY AUTHORING SYSTEM
CONNECTED TO EXISTING
DATABASE

ACTIVITY DATA
PRESENTATION ON PHONE

PUSH NOTIFICATION SYSTEM
REMINDING USER TO
COMPLETE DAILY SURVEYS



ADVANCED COLOUR ACCESSIBILITY OPTIONS



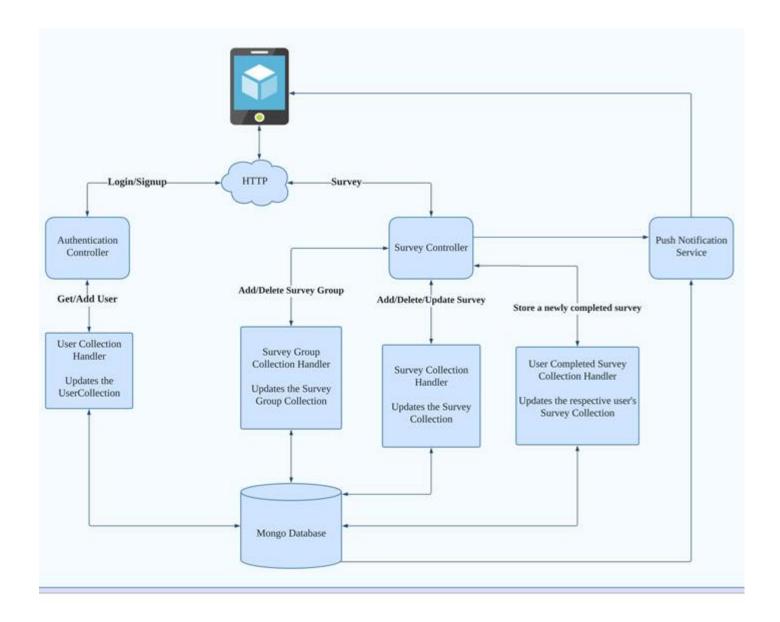
BUILDING UPON AN EXISTING CODEBASE



EASILY SCALABLE CODE FOR FUTURE DEVELOPERS

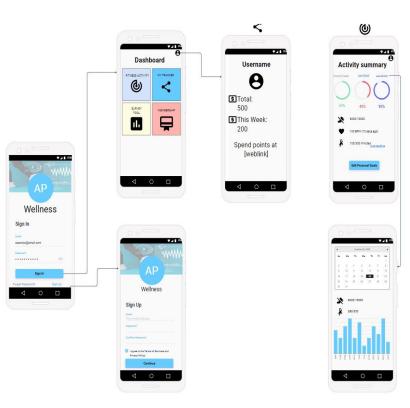
GDP Project 2022

# Partnership Case Study



GDP Project 2022

# Partnership Case Study









Where are you at the moment?

Out of Home

What were you mainly doing in the last 10 minutes?

Exercising

How much did you enjoy this activity?

Selected Value: 2 (0 min / 10 max)

How effortful was this activity mentally?

Selected Value: 3 (0 min / 10 max)

How effortful was this activity physically?

Selected Value: 4 (0 min / 10 max)

How much energy do you have at the moment?

Selected Value: 4 (0 min / 10 max)

How fatigued are you at the moment?

Selected Value: 4 (0 min / 10 max)

How would you describe your fatigue?

Physical fatigue

**IP Address** 

XXXXXXXXXXXX

Name

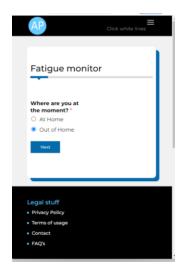
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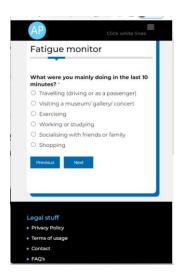
**Email Address** 

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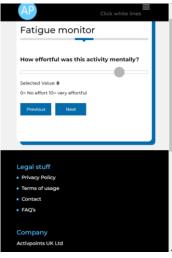
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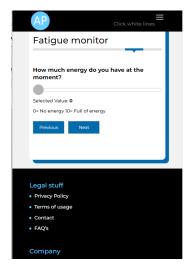
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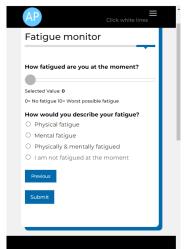


















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