# Hackathon Brief: Nudging Behaviour Change for Better Health

## The Problem: “What Now?”

Modern tools like wearables, blood tests, and genetic or microbiome data give people deep insights into their health—but most people don’t know what to do with the results. Even when they do, behaviour change is hard.  
  
People often:  
- Struggle with weight  
- Drink too much alcohol  
- Have high cholesterol or blood sugar  
- Feel the consequences of poor sleep or stress  
- Stop and start health trends without consistency  
  
The real issue is that knowing isn’t doing. Health transformation doesn’t come from a one-time decision. It’s a series of micro-actions repeated over time.

## Behaviour Change: Nudges, Not Overhauls

Behaviour change requires:  
- Repetition over weeks or months (ideally min 3 months)  
- Personalisation based on where someone is today  
- Encouragement, reminders, and support—like a trainer or coach on your shoulder  
- Simplicity, agency, and small wins (e.g. “eat one piece of fruit today”)  
  
The trick is in meeting people where they are. And where are people today? On WhatsApp.

## Opportunity: The WhatsApp Wellness Companion

WhatsApp isn’t just for family and friends anymore—it’s used for business, education, and community. Imagine it as a channel for health nudging.  
  
Participants in this hackathon are challenged to prototype a solution that:  
- Uses WhatsApp to nudge users toward micro health actions  
- Feels like a supportive wellness coach, not a nag  
- Can adapt based on inputs like blood data, wearables, surveys, or lifestyle goals  
- Creates a feedback loop between the host system and WhatsApp

## Example Nudges (Micro Tasks)

Your prototype might nudge the user with:  
- "Eat 5 pieces of fruit and veg today"  
- "Walk 6,000 steps—log when you’re done"  
- "Listen to this 5-minute podcast on cholesterol"  
- "Sleep 8 hours tonight—how did you do?"  
- "Log your breakfast here"  
- "Try a 16-hour fast today—want reminders?"  
  
If they don’t respond? Nudge again, differently. Like a coach who never gives up.

## Inputs for Personalisation

Use any combination of:  
- Blood test results (e.g., cholesterol, HbA1c)  
- Wearable data (steps, sleep, heart rate)  
- Survey or symptom data  
- Microbiome or DNA test results  
- Self-reported lifestyle goals (e.g., “lose 5kg” or “sleep better”)  
  
These data points can influence what nudges are sent and how they're framed.

## Hackathon Goal

Build a prototype that mimics a personalised, persistent WhatsApp-based health coach. The prototype should:  
1. Allow users to receive nudges via WhatsApp  
2. Offer multiple micro-goal options daily  
3. Collect responses (e.g., check-ins, logs, voice notes)  
4. Adapt to engagement (e.g., escalate if no reply)  
5. Improve health outcomes through sustained behaviour change

WhatsApp integration is encouraged (via Twilio, WhatsApp Business API, etc.), but the front-end UI is optional unless it is used to surface content beyond WhatsApp. We would expect host system to hold data of the patient including the library of assets

## Assets You Can Use

A shared library of content is available:  
- Articles (e.g. nutrition, sleep hygiene, stress management)  
- Videos (e.g. exercises, explainer clips)  
- Podcasts (short audio nudges or wellness themes)  
- Lifestyle challenges and daily habits  
- Templates for nudges and user flows  
  
You can also simulate blood or wearable data or mock user profiles.

## Judging Criteria

Category | Weight  
------------------------------- | ------  
Behaviour change design | 30%  
Personalisation logic | 20%  
WhatsApp UX & interaction quality | 20%  
Creativity in nudging | 15%  
Technical feasibility | 15%

## Target Audience

- People who start strong, but stop (yo-yo dieters, fad chasers)  
- Users with known health risk factors (weight, cholesterol, sleep)  
- Those overwhelmed by data and looking for direction

## Final Output

You’ll present:  
- A short demo (or flow simulation) showing a user journey  
- A written outline of how personalisation works  
- A description of content flow and how nudging escalates or adapts

## Data Requirements & Suggested Resources

**GLOBEM Dataset: Multi-Year Datasets for Longitudinal Human Behavior Modeling Generalization**

<https://arxiv.org/abs/2211.02733>?