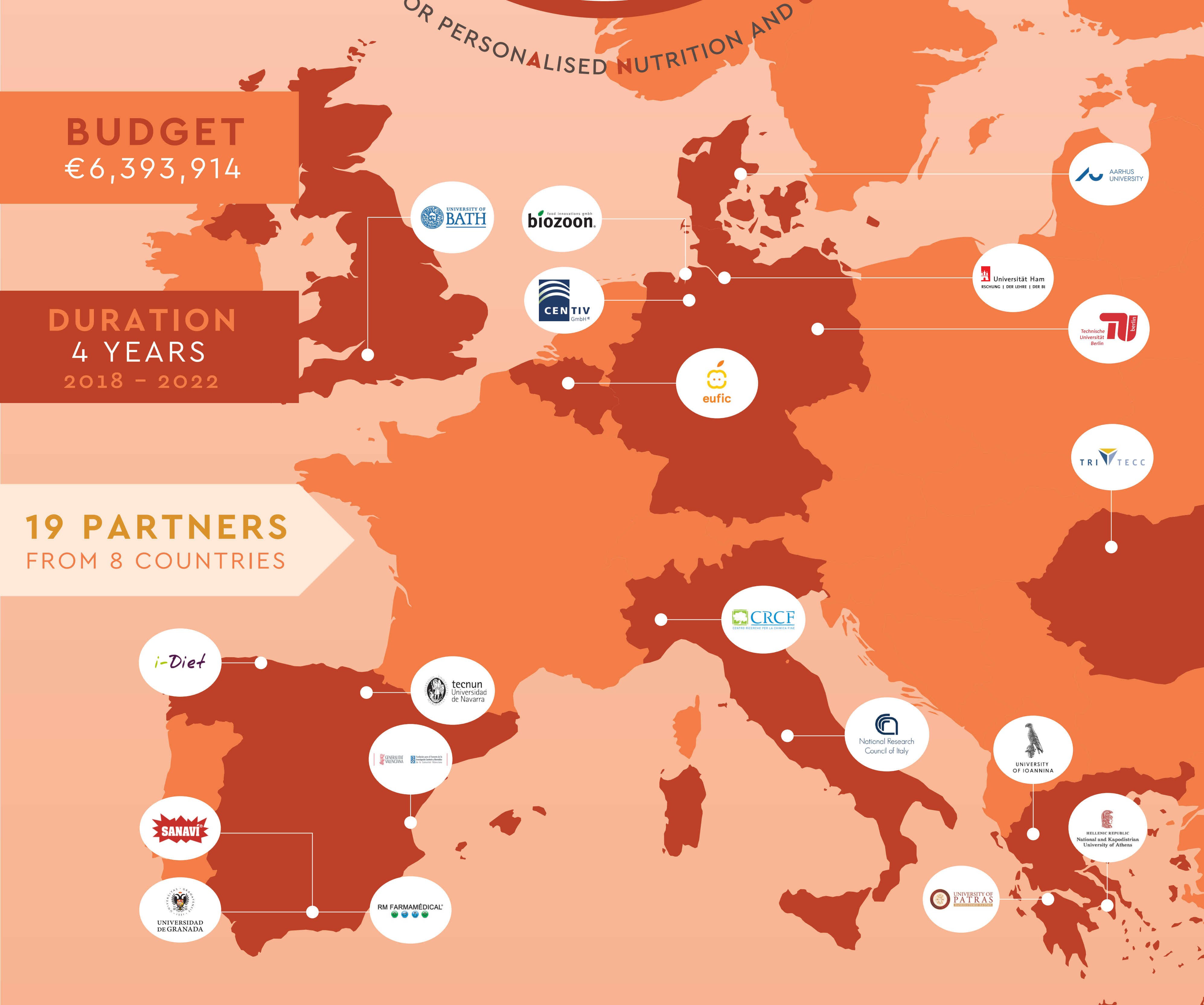
Stance4 HEALTH

SMART TECHNOLOGIES FOR PERSONALISED NUTRITION AND CONSUMER ENGAGEMENT



BUDGET
€6,393,914

DURATION
4 YEARS
2018 – 2022

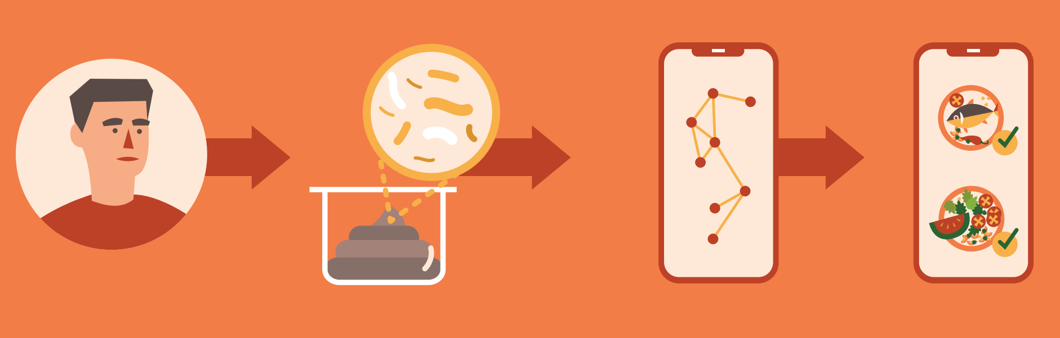
19 PARTNERS
FROM 8 COUNTRIES

SMART PERSONALISED NUTRITION APP

A personalised nutrition app will be designed to provide nutrition advice linked to an individual's gut microbiota and to support long-term dietary behaviour change.

1 PERSONALISED DIETARY ADVICE

An algorithm will provide personalised dietary advice based on an individual's gut microbiota.



2 FOOD DIARY

A food diary will monitor nutrient and phytochemical intake.

3 FOOD ENVIRONMENT MONITOR

A GPS tracker will monitor the food environment and provide advice on places to eat and buy foods.

4 SMART BAND

When paired with a smart band, the recommendations can be modified based on sleep time, physical activity level and body composition.

CITIZEN ENGAGEMENT

Consumer research will provide insight into how food preferences, lifestyle and socio-economic status influence health eating patterns

WILL PERSONALISED NUTRITION INCREASE HOW MUCH PEOPLE SPEND ON FOOD?

ARE PEOPLE WILLING TO USE PERSONALISED NUTRITION APPS?

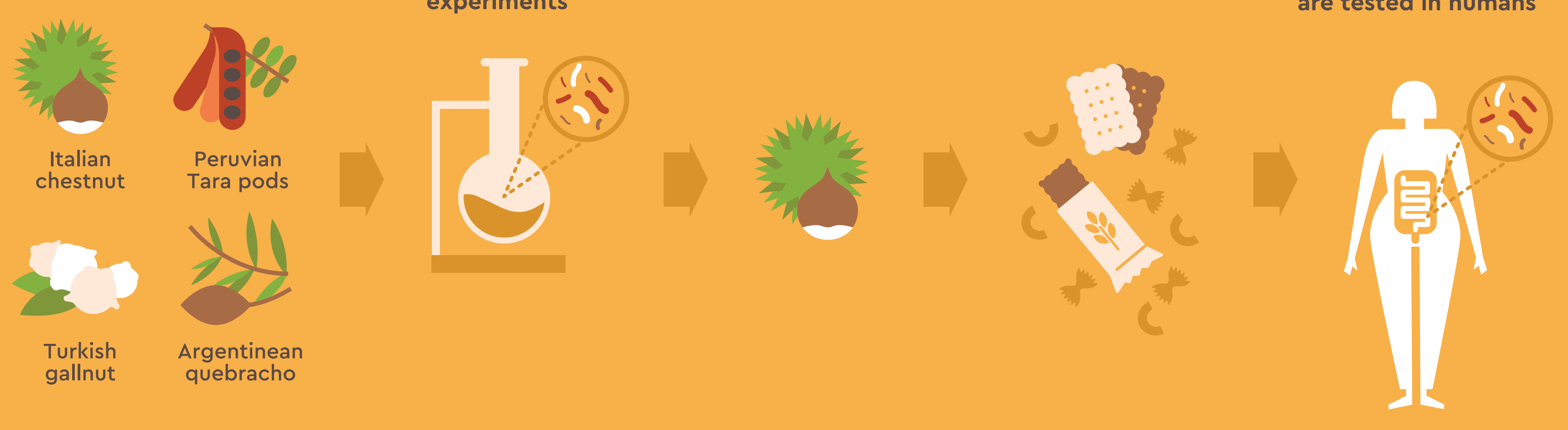
WHAT DO PEOPLE THINK ABOUT PERSONALISED NUTRITION?

WHAT INFLUENCES ADOPTION AND LONG-TERM USE OF PERSONALISED NUTRITION APPS?

PERSONALISED FOOD PRODUCTS FOR SPECIFIC GROUPS

Personalised foods and nutritional supplements will be designed to modify the gut microbiota and improve health.

1. Tannin extracts are selected
2. The extracts ability to modify the gut microbiota are tested in laboratory experiments
3. Extracts are chosen for food formulation
4. Cereal products fortified with tannin extracts are produced
5. The effect of the cereal products on the gut microbiota are tested in humans



VALIDATION STUDIES

Two intervention trials will test whether smart personalised nutrition can improve the health of adults and children.

TRIAL IN ADULTS

Adults aged 20-65
Two groups
healthy weight + overweight

TRIAL IN CHILDREN

Children aged 6-12
Four groups
milk allergy + coeliac disease + healthy weight + obesity

MAIN MEASUREMENTS

GUT MICROBIOTA COMPOSITION
for adults and children

METABOLITE ANALYSIS
for adults and children

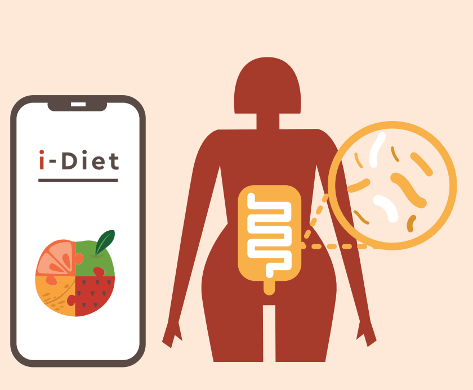
IgE LEVELS
for children with milk allergy

TRANSGLUTAMINASE ANTIBODIES
for children with coeliac disease

TWO LEVELS OF PERSONALISATION

LEVEL 1 PERSONALISATION

CONTROL
controls will receive no dietary advice



LOW DEGREE INTERVENTION
(level 1 i-Diet app)
The i-diet app will provide personalised dietary advice based on an individual's gut microbiota

LEVEL 2 PERSONALISATION

CONTROL

- i-Diet app (Level 1)
- wearable smart band
- *in vitro* urine diagnostic
- placebo foods & nutraceutical

HIGH DEGREE INTERVENTION

- i-Diet app (Level 1)
- wearable smart band
- *in vitro* urine diagnostic
- personalised foods
  cereal foods fortified with tannin extracts and AlcaLip nutraceutical

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