



DOMO
Health

**Harnessing the power of
digital health for all, to
improve our quality of life**

Connecting patients and their local
healthcare ecosystem, bringing
more efficacy in healthcare

Guillaume DuPasquier, CEO
April 2023



DomoHealth in a nutshell

What we do

Digital / Data health platform
to improve care efficacy and
bring safety to the patients at
home

USP: predictive analytics in
medicine

Foundation

Founded in Lausanne, CH
Office in Paris, France



Client & partners



Regulatory Credentials



IEC / ISO
62304:2015
Medical device
software life cycle
process



Intellectual Property

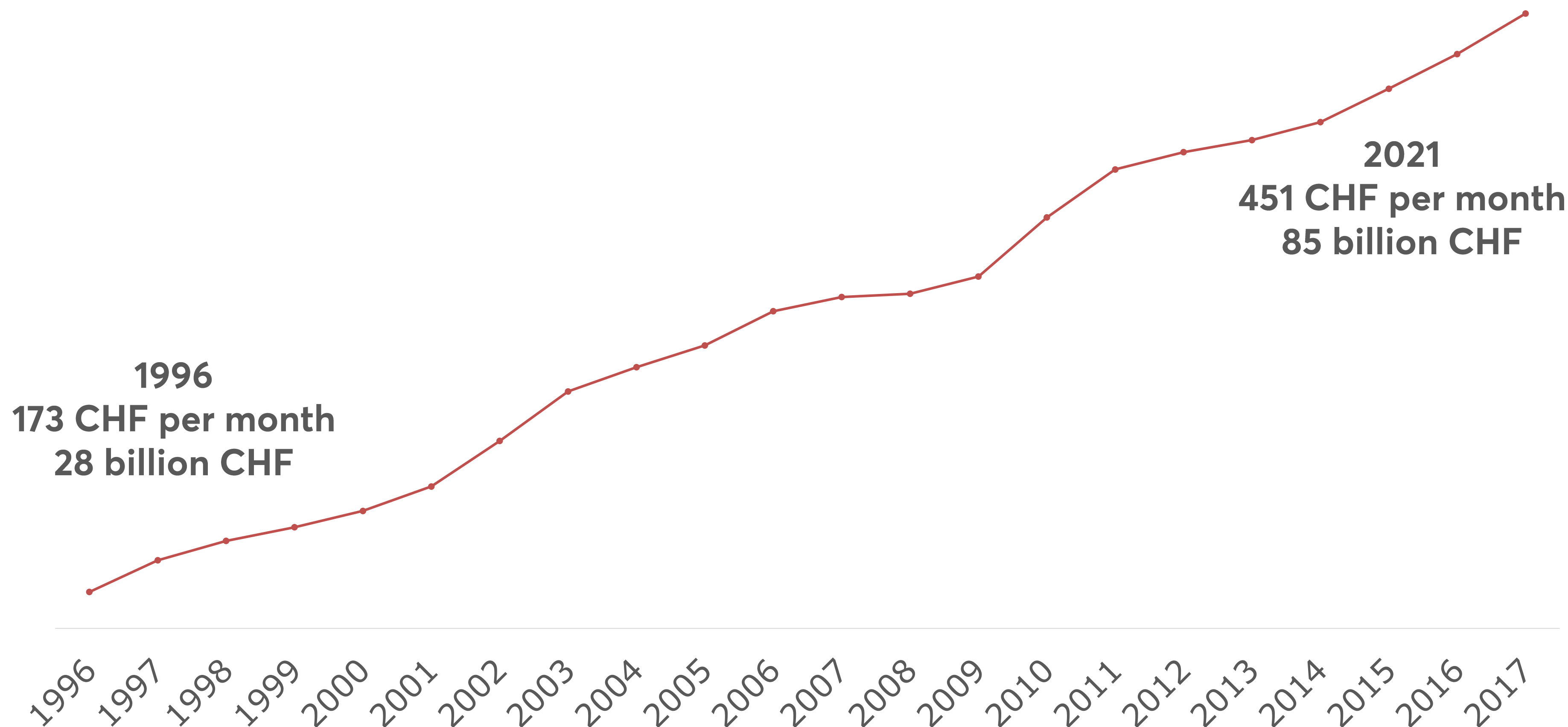
3 patents
17 scientific publications
20 billions data points
7 clinical studies

Our mission

We help people **to live in their own environment** surrounded by caring medical services and close family.

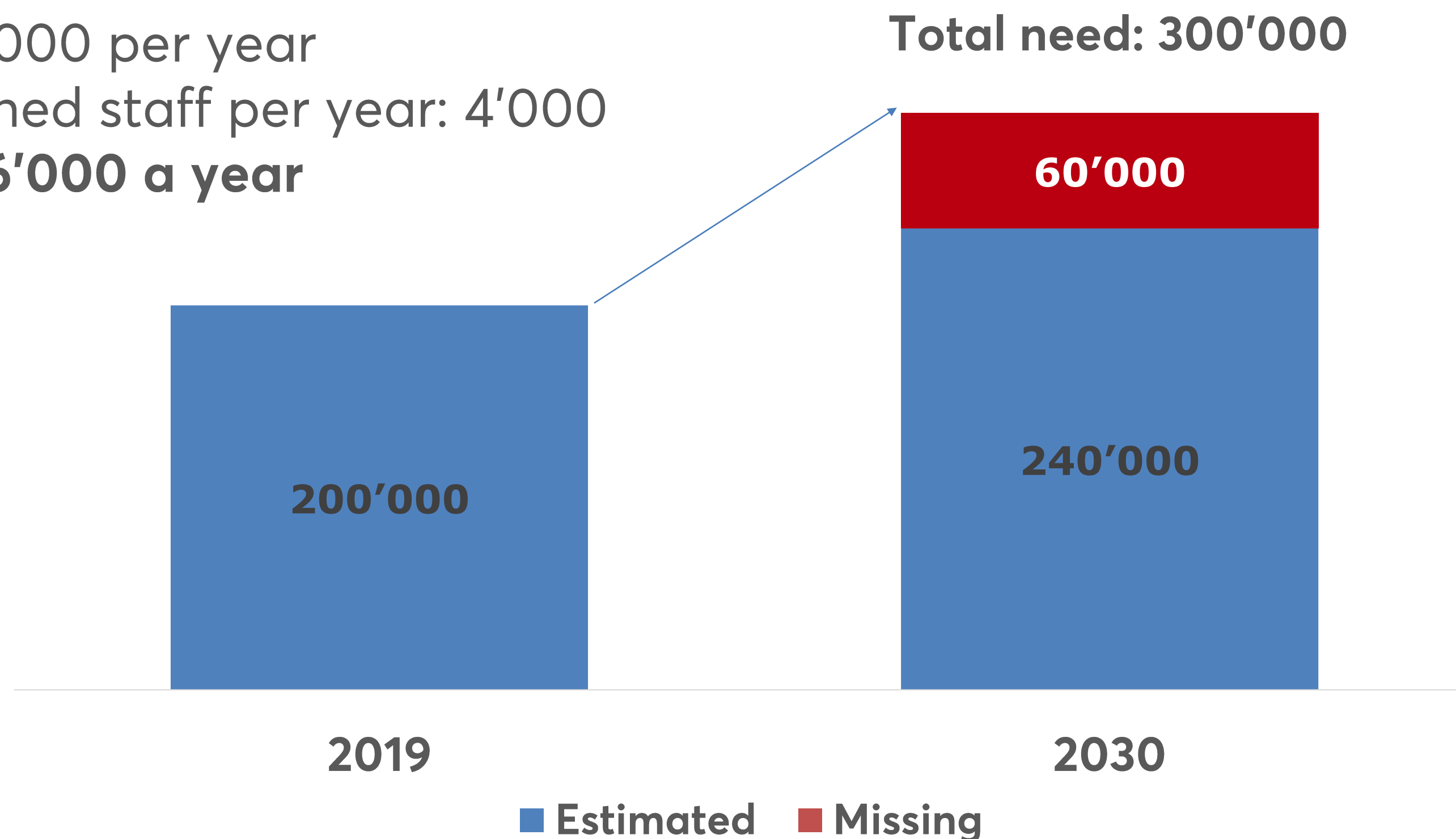
They can enjoy **a good quality of life as long as possible.**

Insurance costs has increased 3 times in 20 years, same for health costs

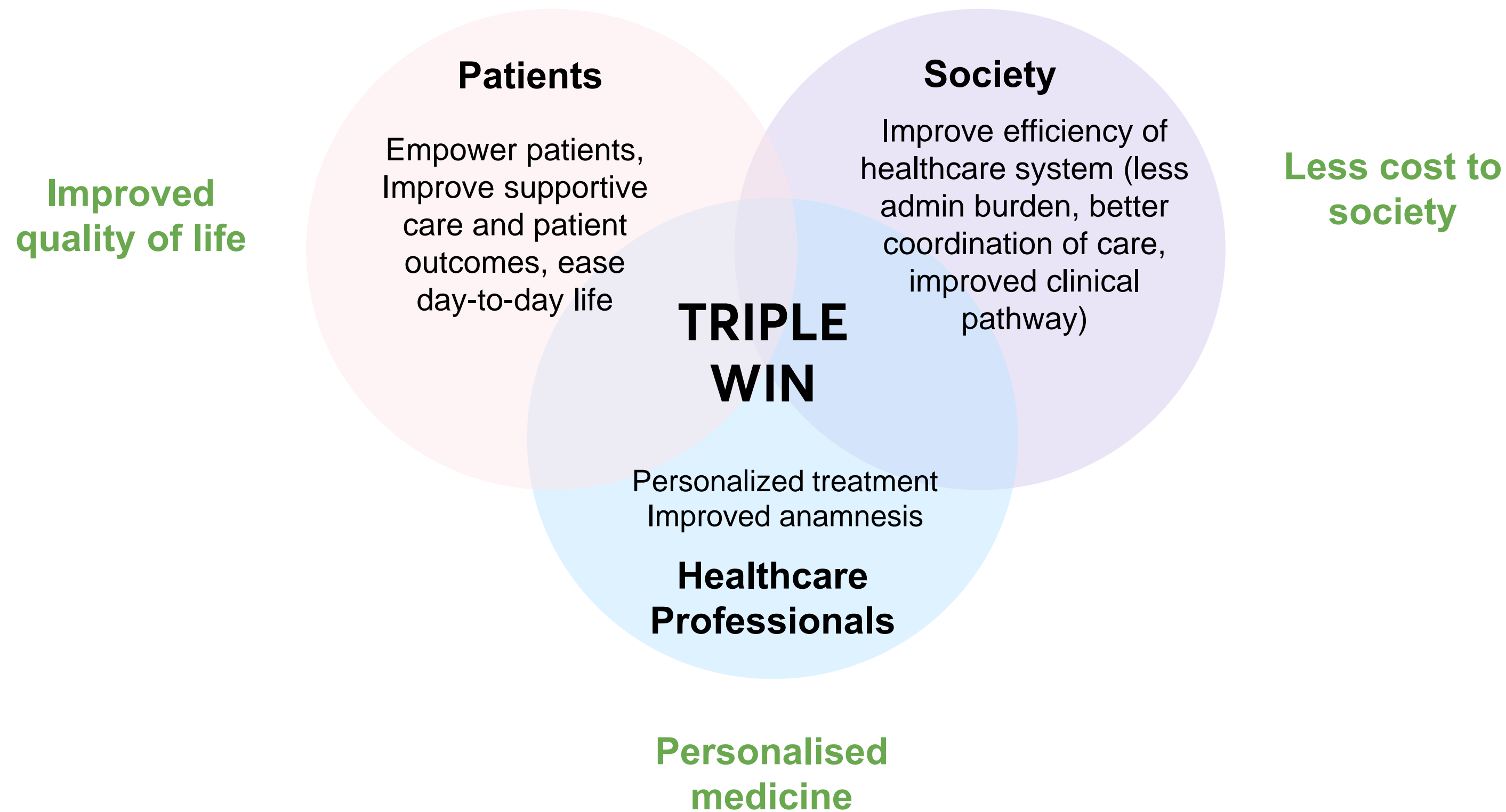


Healthcare resources need: estimation from 2023 to 2030 in Switzerland

Need 10'000 per year
 New trained staff per year: 4'000
Missing 6'000 a year



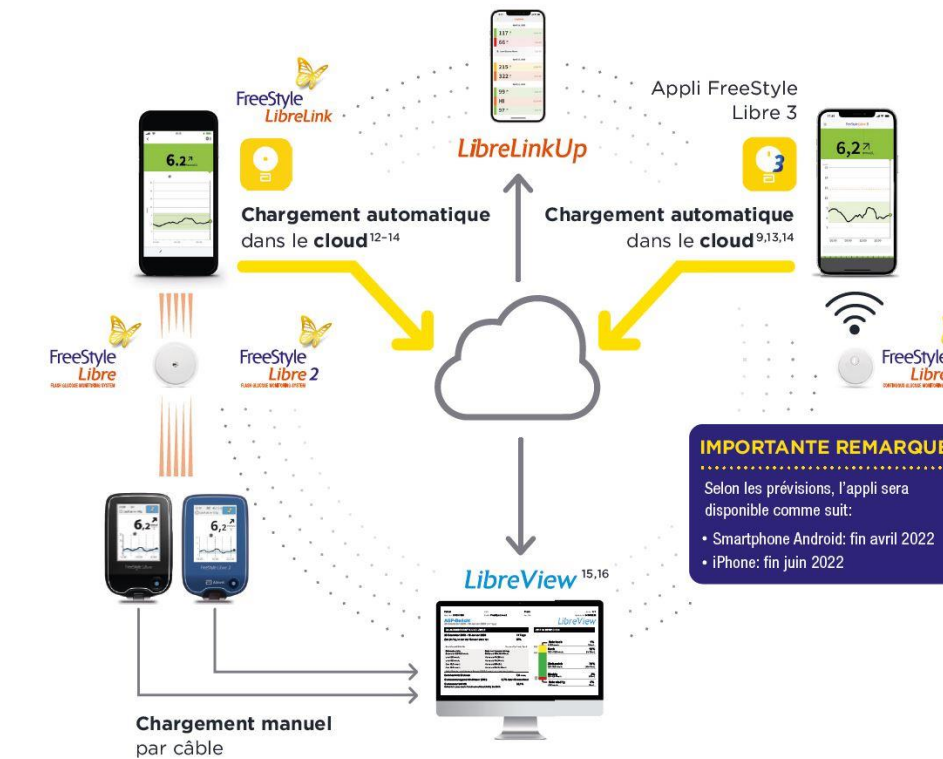
Digital Health is an enabler for improved patient & societal outcomes



Digital health tools are already used massively

Example: Abbott FreeStyle for Diabetes management

- Direct access to longitudinal data
- Less administrative tasks
- Direct relation with patients



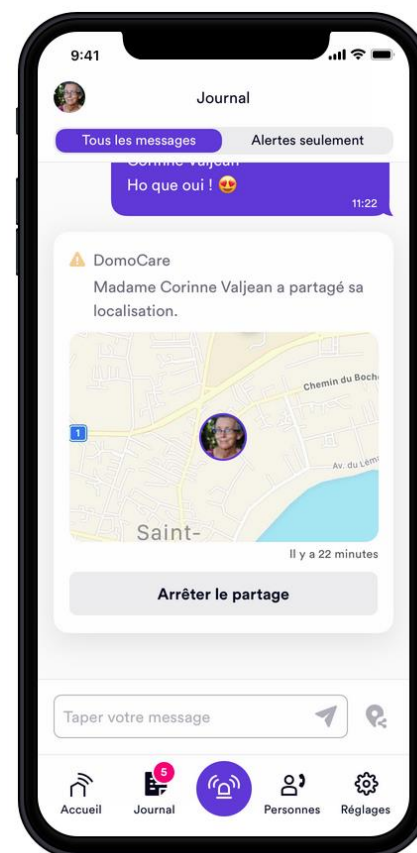
DOMOHealth's platform connects the patients to the carers and medical players involved in their health and well-being



Coordination & Safety
of at-home care



Family
Peace of mind



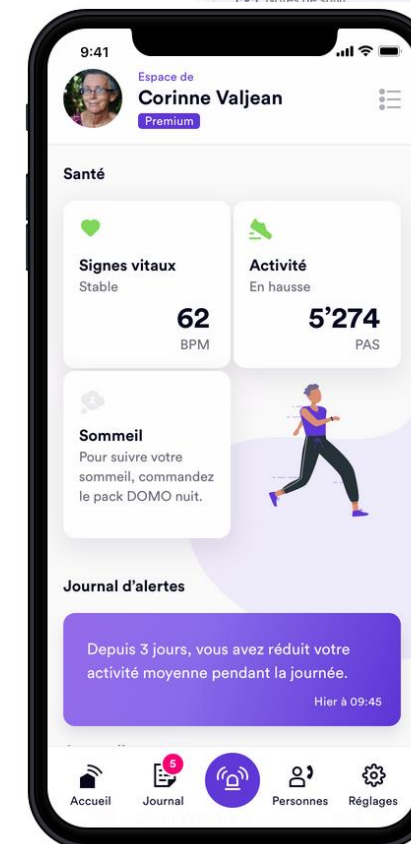
Pharma Industry

Real World Evidence (RWE)
Decentralised clinical trials



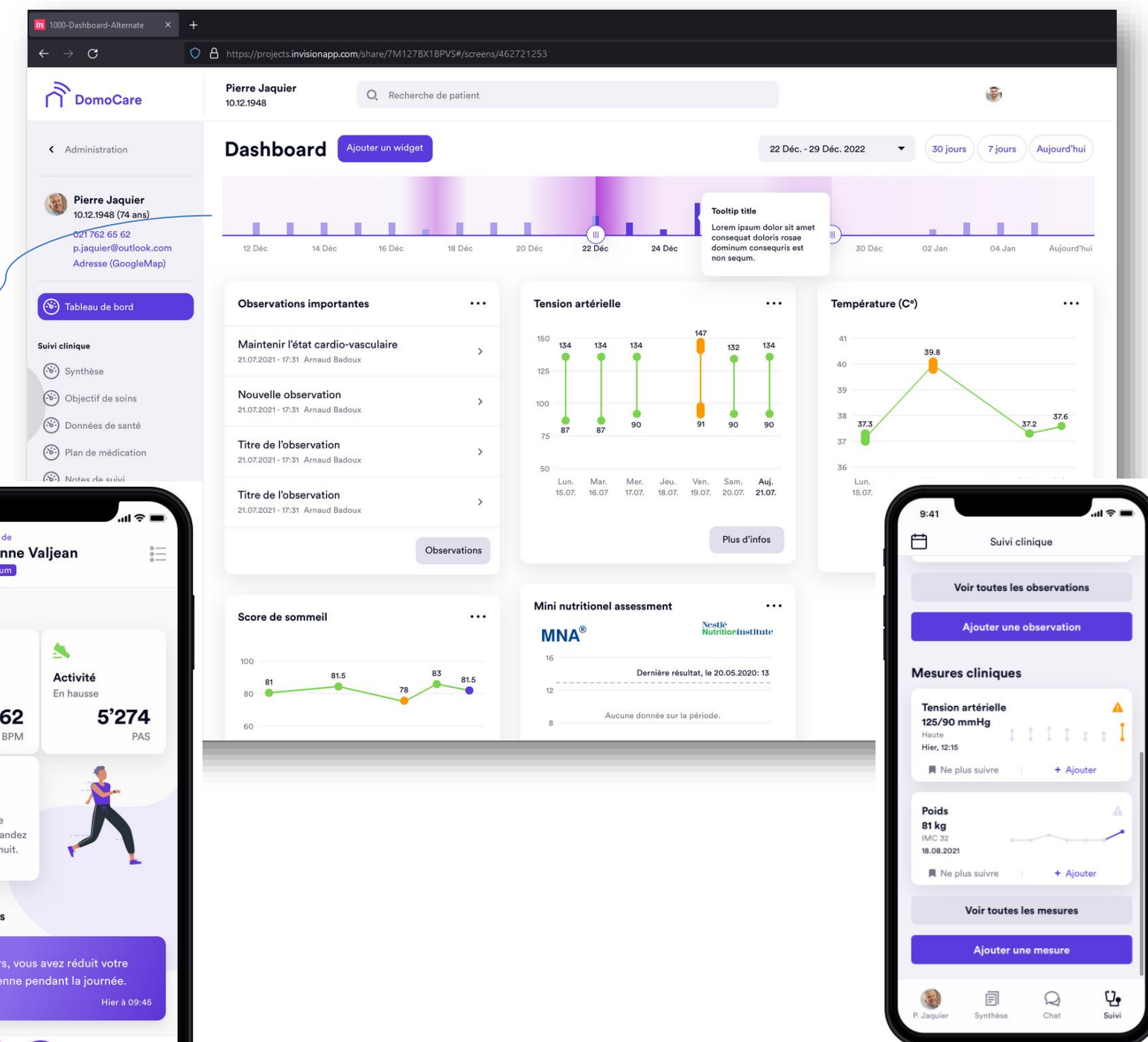
Patient

Visualize health performances and interact with GPs



Health care professionals

Care quality and efficiency

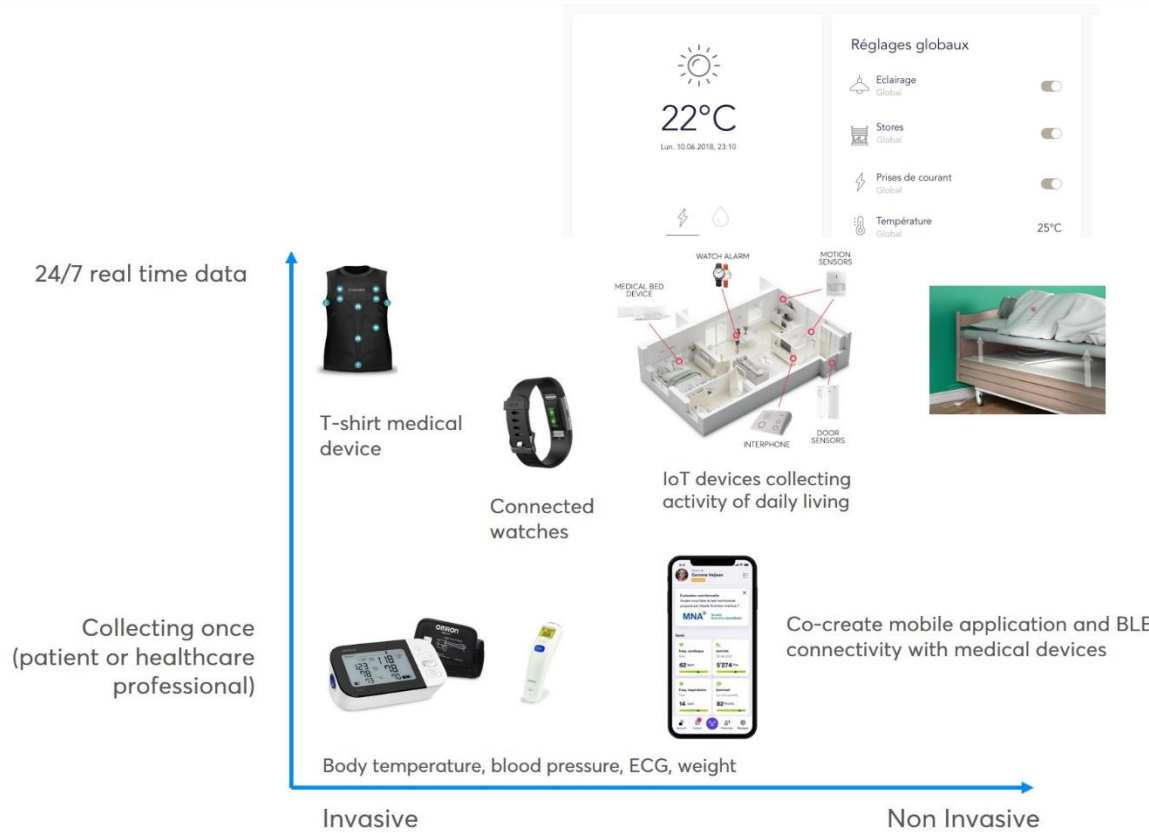


Our methodology to identify improvement of the patient journey for a given disease

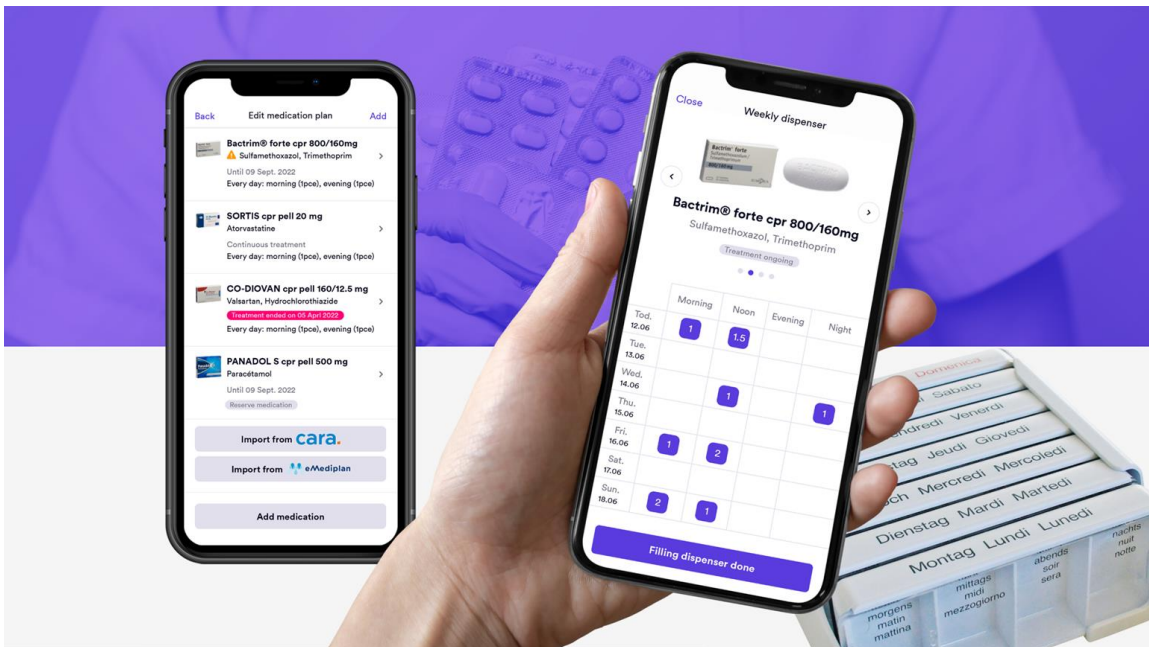
STEP 1: Qualitative & Quantitative study

Understand the disease
Conduct interviews with healthcare professionals and patients
Understand the patient journey

STEP 2: Co-create the solutions with patients and professionals



STEP 3: Validation & deployment



Benefit from a fully integrated framework along the patient journey



Prevention & safety

Health data visualization
alert system 24/7

Diagnosis

Integrated care
medication plan, real-
time scores

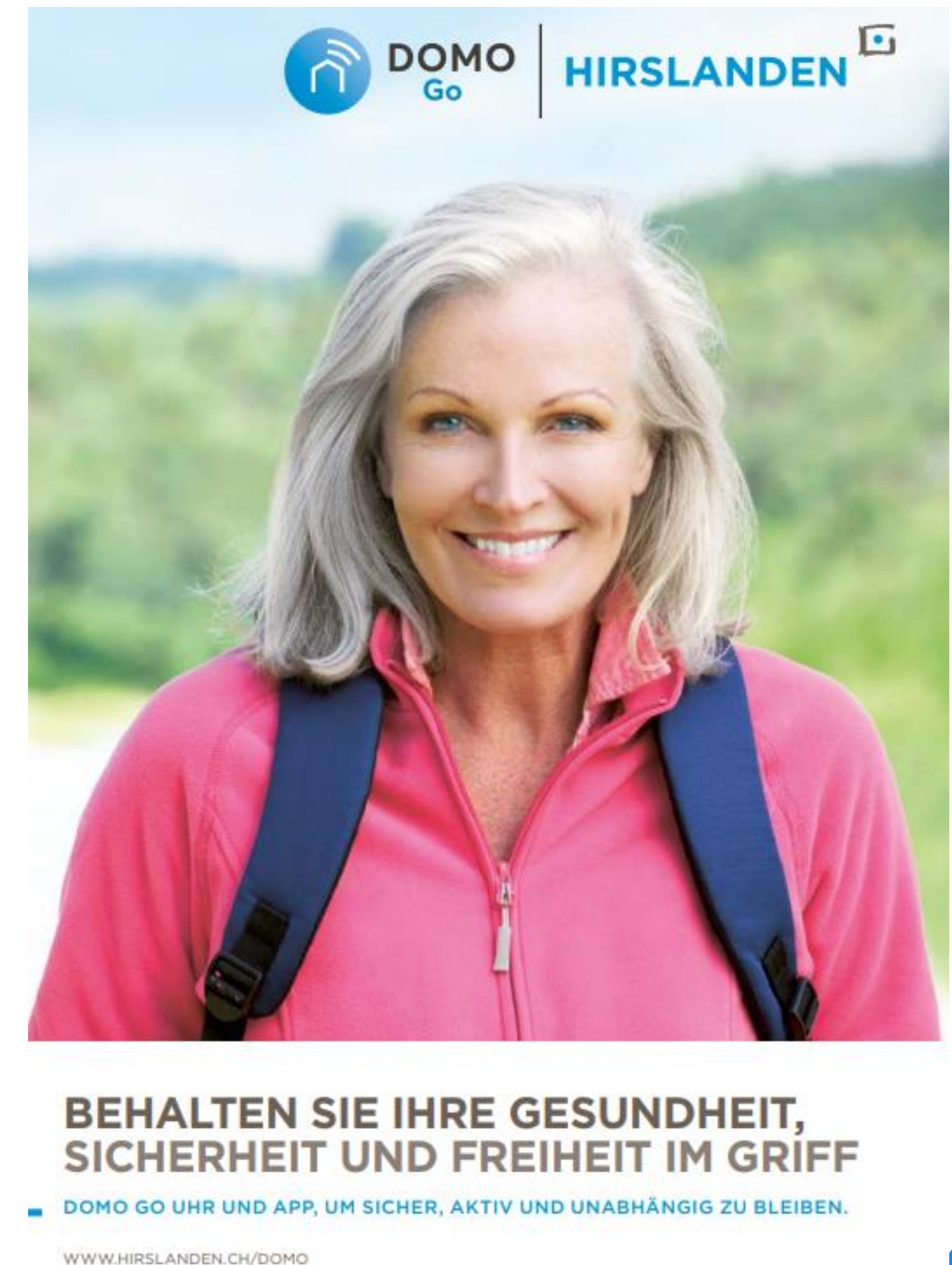
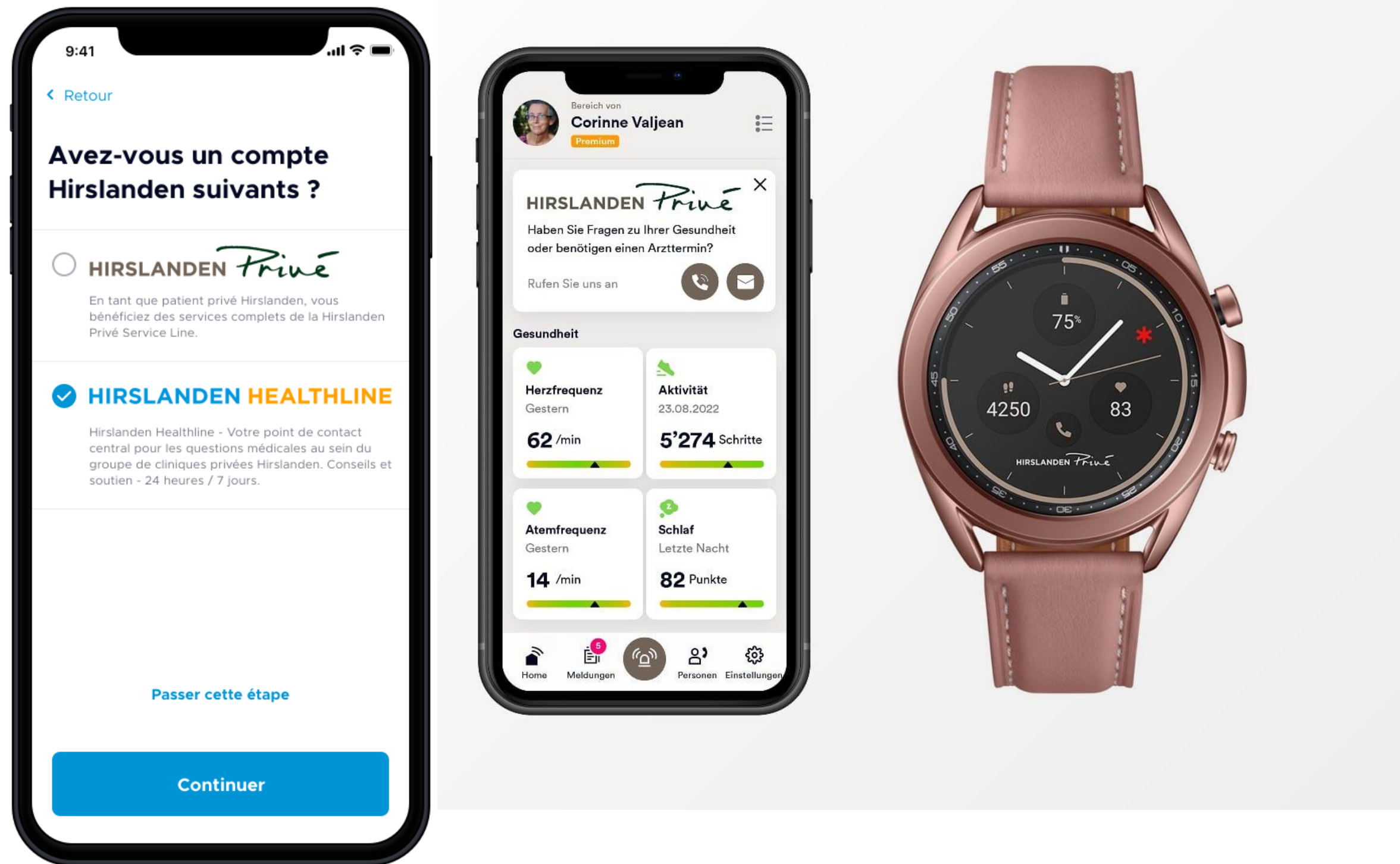
Treatment

Patient management remote
coordination agenda, report,
chat

Monitoring

Medication plan real-
time chat, survey

Hirslanden's* case, working on white labelling individual services along the continuum of care



* Hirslanden: #1 Private Hospital group in Switzerland, 100'000 hospitalisation per year

Lucien: Living with Parkinson's disease since the age of 80



Symptoms

**Tremor, loss of movement,
rigidity**



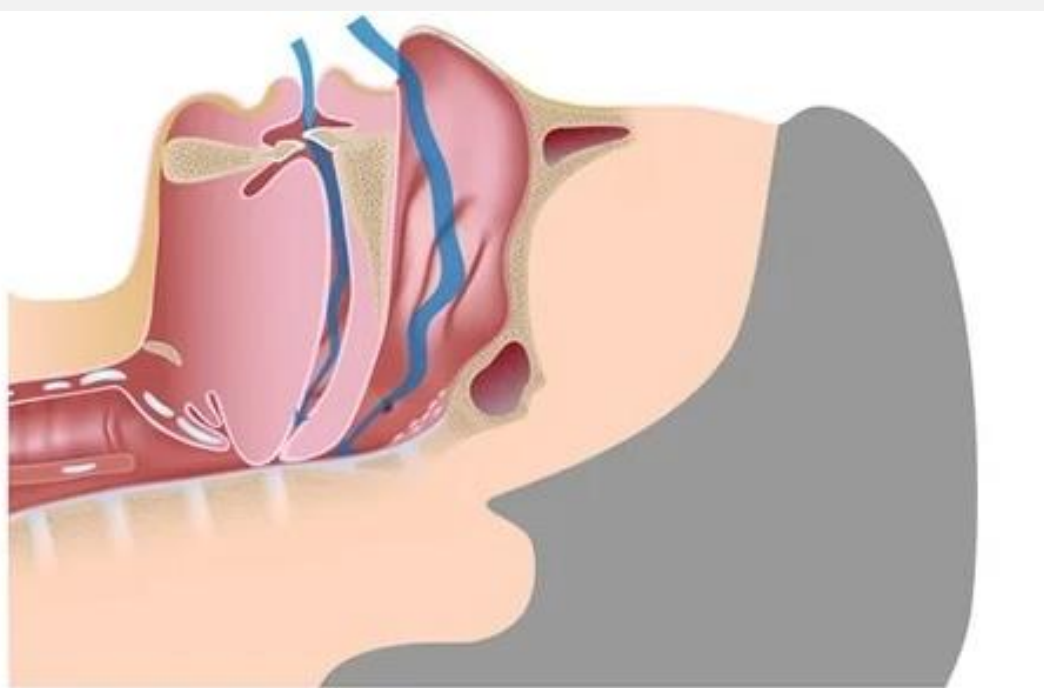
Restless Leg Syndrome



Falls



Sleep problems



Depression



Pain



Large impact on quality of life & independence

Cooking



Dressing / Hygiene



Mobility



Loss of mobility
Loss of autonomy
Loss of sleep, depression
Loss of self-esteem
Burden for the family


Co-create a digital biomarkers supporting the physicians in their anamnesis and personalised treatment



Dr. Julien Bally
Movement disorder specialist



Prof. Philipp Ryvlin
Head of the Dept. of Clinical Neurosciences

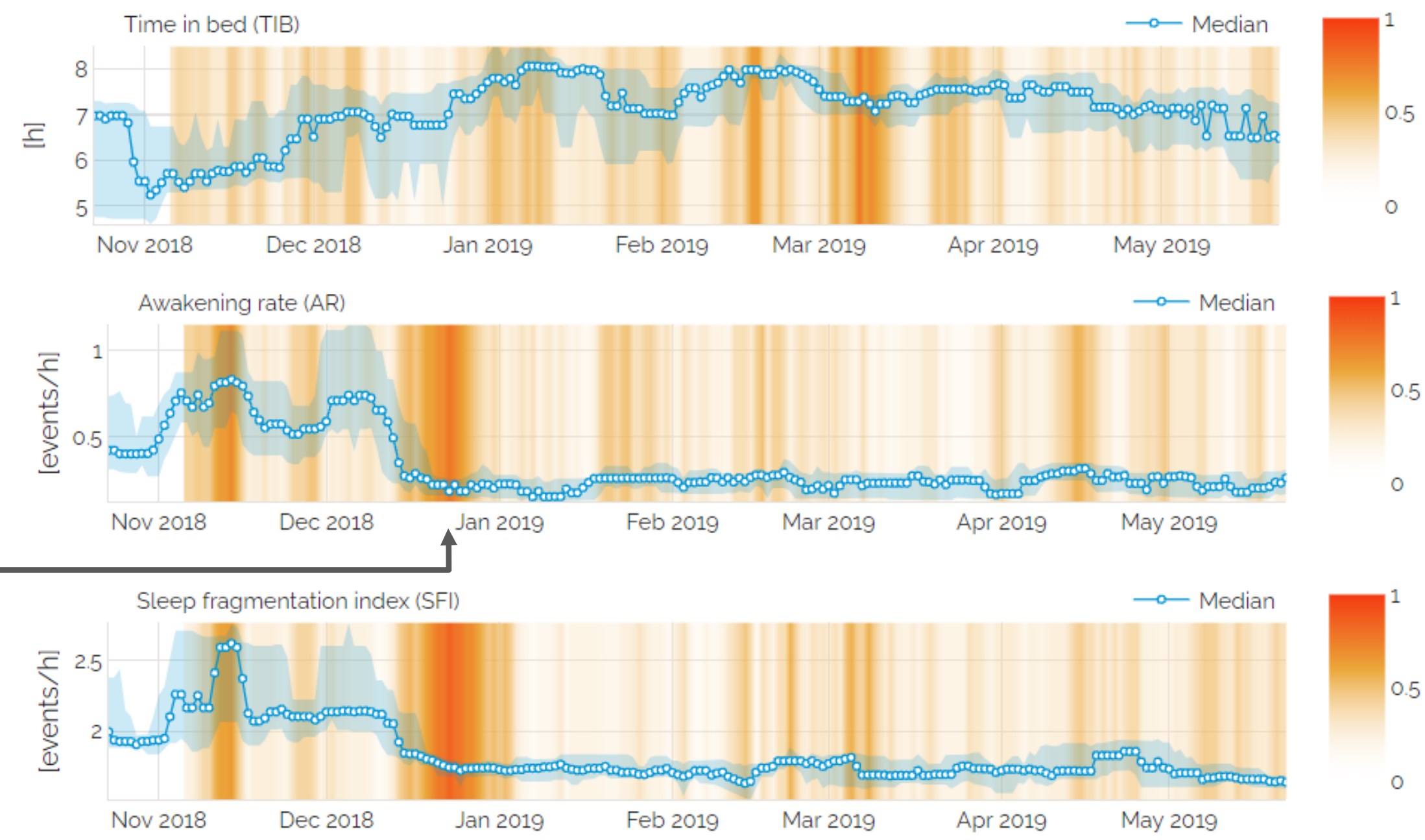
Madopar® 
Madopar increase by **250mg** in mid-December followed by a clear measured improvement in sleep quality

Continuous Nocturnal Monitoring of Parkinson's Disease

DOMO's Clinical Decision Support Engine

Patient ID: 1
Aggregation timescale: 14 days

 **DOMO Health**
DomoSafety S.A.
EPFL Innovation Park, Building D
1015 Lausanne
Switzerland
T +41 58 800 58 00
www.domo-safety.com



Change index output by our machine-learning engine

Speeds up change identification by clinicians

Outcome of qualitative & quantitative research: applied in Spinal Muscular Atrophy



Coordination

Time-consuming admin (to secure reimbursement etc)

Facilitate sharing of motor function scores + goals with team and patient

Tool to facilitate follow up of appointments with different physicians, shared agenda

Information

No idea of potential medications or care plan set up by GP etc

Real-world data from the patients to inform decision making



Safety

Button + speech to call for help

GPS localization in case of issues

Early detection of health issues (respiration...)

Monitoring

Easy way to monitor themselves (scores incl individual items + PROs)

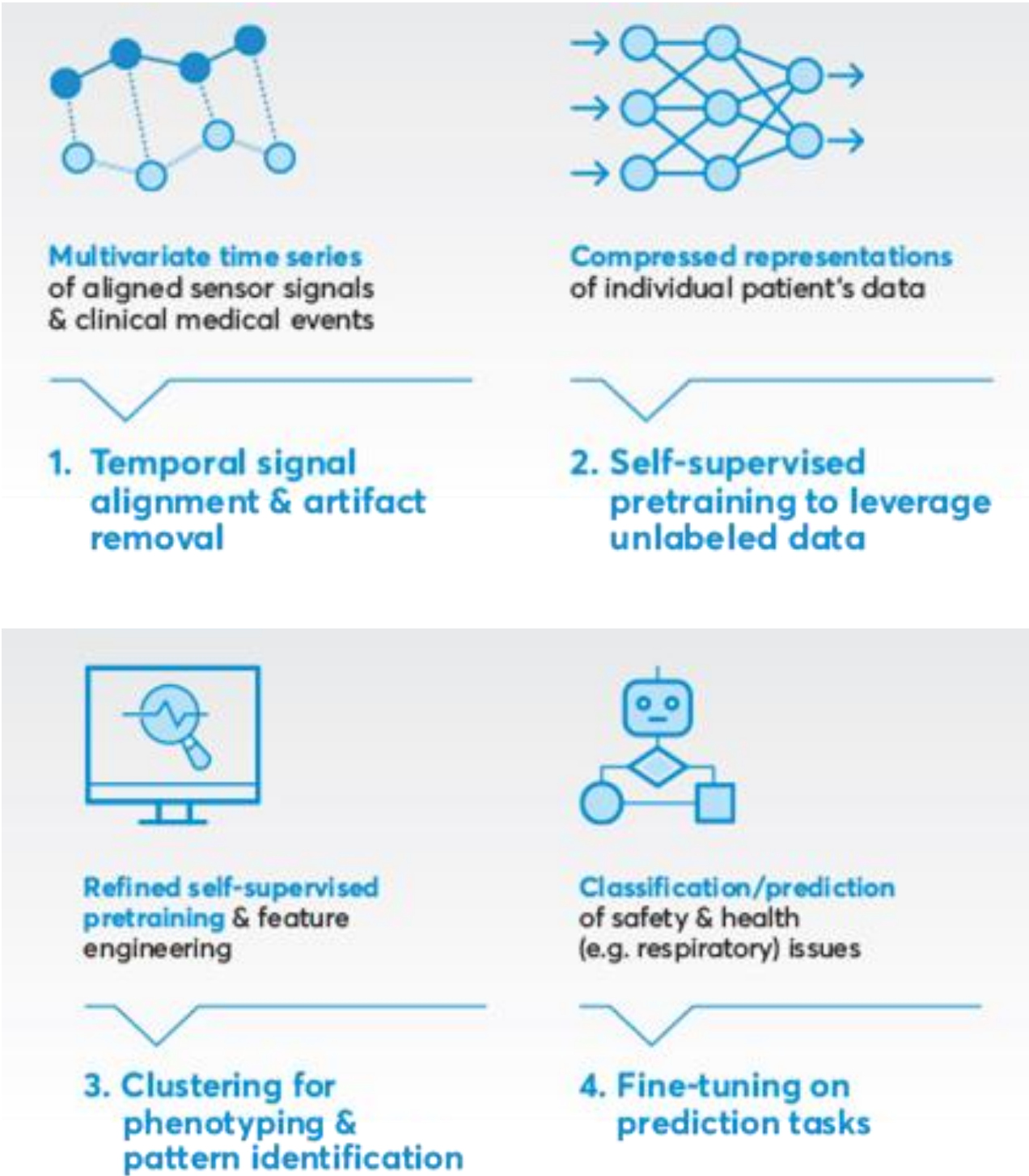
Tool to facilitate making appointments, shared agenda
Wish to share data in between visits with HCPs

Digital health clinical study in SMA

6 months, at-home only assessments

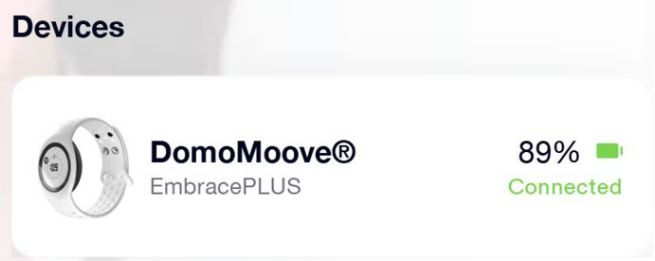
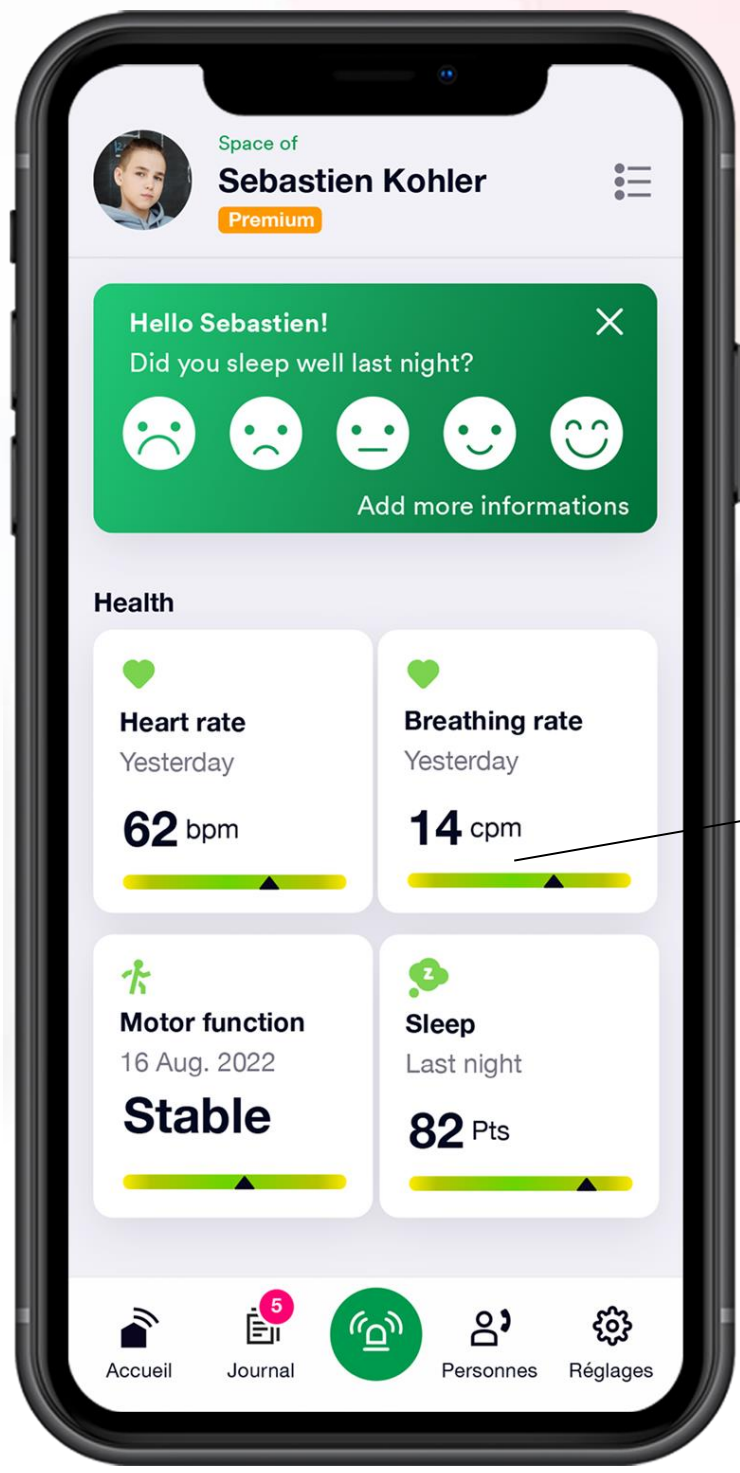


Outcome	Assessment	Schedule
Functional independence	SMA Independence Scale (SMAIS) ¹	Start - middle - end
Fatigue	PROMIS Fatigue ²	Weekly
Caregiver burden	Zarit Burden Interview ³	Start- end
Well-being	WHO Well-Being Index (five) ⁴	Start - middle - end
Respiratory function	Structured interview & clinical tests (FVC, FEV1, PCF, etc.) Clinical-grade at-home ventilatory polygraphy and capnometry	Weekly / at baseline 3 nights at start, middle and end points
Emergency situations	Structured interview	Weekly
Satisfaction & utility	Semi-structured interview	Middle - end

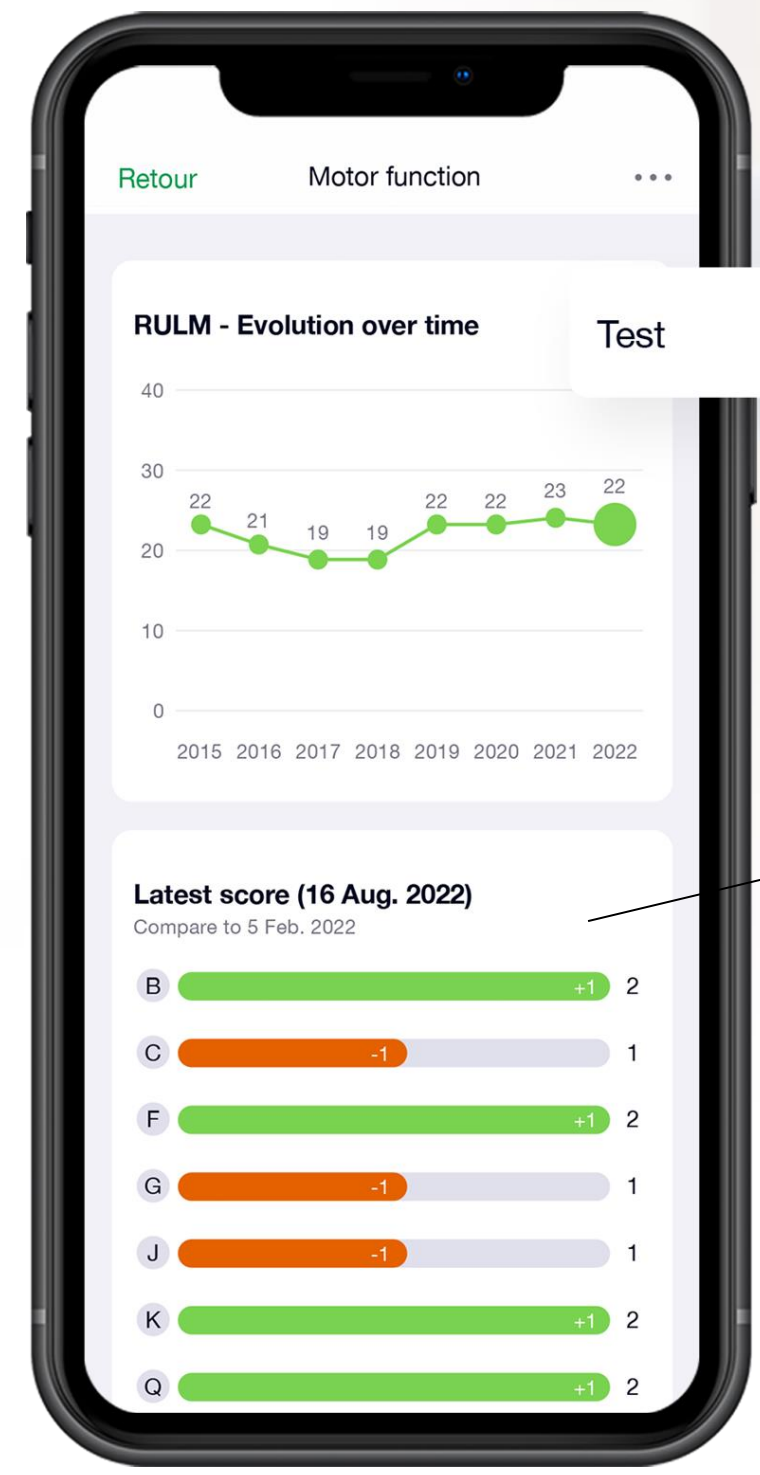


Patient-facing app for SMA

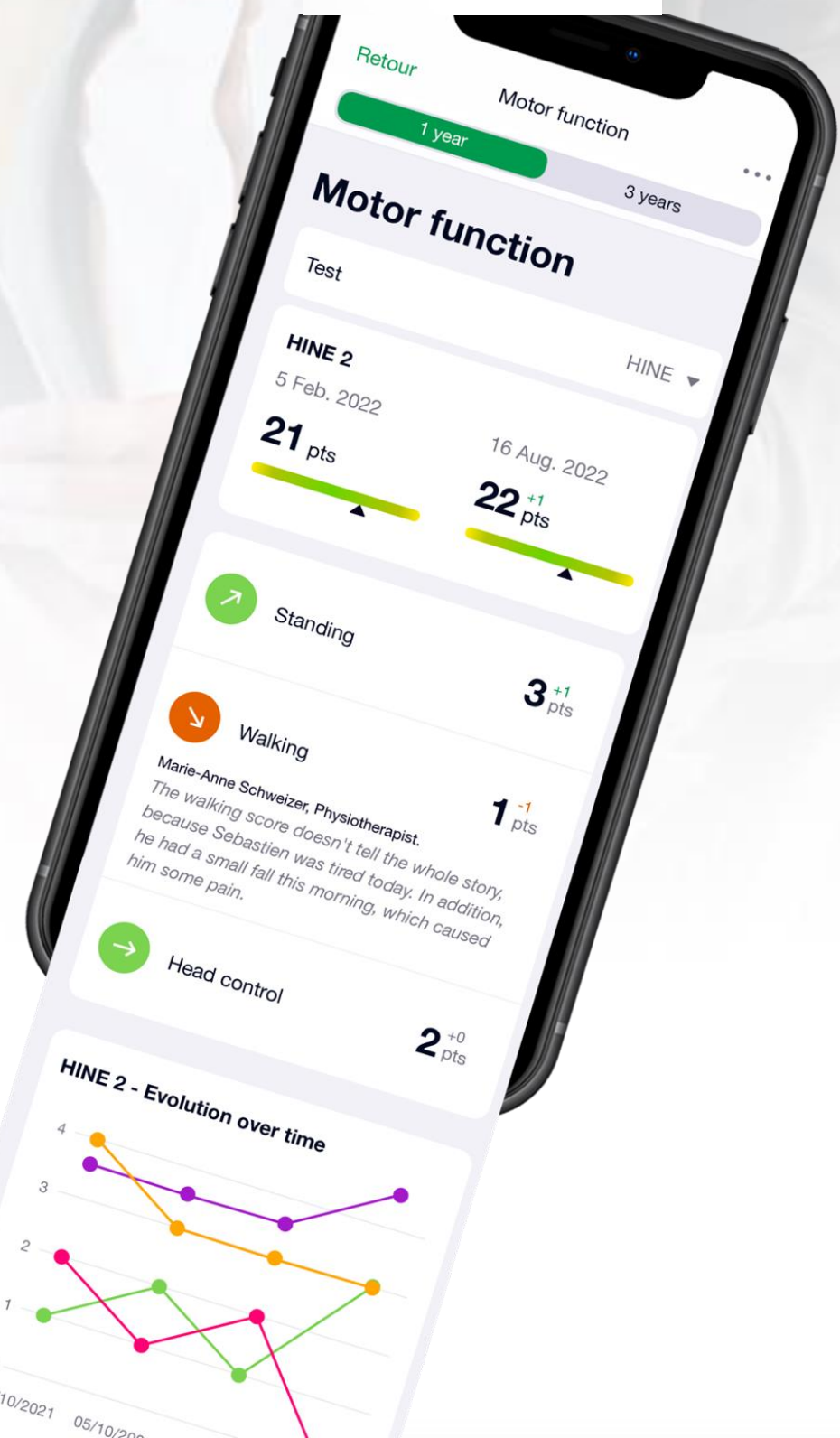
Real-time connection with health data



Monitor health parameters



Access to the scores and share them with caregivers



Mock-ups only

Integrated care and medication plan

All in one place and accessible by all healthcare professionals around the patient

DOMO Care

Patients Utilisateurs Arnaud Ducommun

Medication

Medicheck ☒ Duplicate ☒ Allergy ☒ Interference ☒ [+ Add medication](#)

Date: 21/07/2022

Current medication (21/07/2022)

	Mon 17/07	Tue 18/07	Wed 19/07	Thu 20/07	Today	Fri 22/07
Per Oral						
Candesartan Sandoz cpr 8 mg 1-0-0-0 pc. p.o. -	1	1	1	1	1	1
ASS Axapharm Filmtabl 100 mg 1-0-0-0 pc. p.o. -	1	1	1	1	1	1
BILOL Filmtabl 2.5 mg 1-0-1-0 pc. p.o. after meal	1	1	1	1	1	1
Torem 5mg 1-0-1-0 pc. p.o. -	1	1	1	1	1	1
METFORMIN 1000 mg 1-0-1-0 pc. p.o. -	1	1	1	1	1	1
Augmentin 1-0-1-0 pc. p.o. -					1	
Ringerfundin 1000ml 1000ml/24hr ml/24hr as infusion -					1000ml/24hr	
Novalgine 4g/24hr g/24hr in infusion -					4g/24hr	
Tramal Inj L8s 300mg/24hr mg/24hr in infusion -					300mg/24hr	
Liquemin Inj L8s 15000 IE/24 hrs IE/24h i.v. -		15000 IE/24h				
Augmentin 1.2g 1.2-1.2-1.2-0 g i.v. -		1.2	1.2	1.2	1.2	1.2
Januvia 50mg (08:00) mg s.c. -	50	50	50	50	50	50
Perfalgan 1g g i.v. max. 3x/day	1	1	1	1	1	1
Morphin 5mg mg i.v. max. 4x/day	5	5	5	5	5	5

Today, 21/07/2022

- Ringerfundin 1000ml**
Ringerfundin
1000ml/24hrs ml/24hr After meal as infusion
- Novalgine**
Analgetikum, Metamizol
4g/24hr g/24hrs After meal as infusion
- Tramal Inj L8s**
Opioid-Analgetikum
300mg/24hr mg/24hr After meal as infusion

Dilution informations:
Novalgine (4g) + Tramal(300mg) / Ringer Lactat(1000ml)

Comment
Please strictly refer to the plan.

Add new medication

Pierre Jaquier, 10/12/1948

Medication ☒ Active ☐ Placed

Administration routes
p.o. i.v. i.m. s.c. as infusion in infusion Administration route: **Per oral**

Medication
Search Medication: EVRYSOI pdr 0.75 mg/ml
EVRYSOI pdr 0.75 mg/ml [View in commanditaire](#)
Ridiplan 0.75 mg
☒ Duplicate ☒ Allergy ☒ Interference

Posology

Treatment Date / Time
Start Date: 30/06/2022 Start Time: 12:00 optional End Date: optional End Time: optional

Intake type
☒ To be used ☐ To be used ☐ To be used ☐ To be used ☐ To be used ☐ To be used

Posology according to scheme
Morning: 1 Noon: 1 Evening: 1 Night: 1 Unit: Pcs optional Duration: optional Min: optional

Comment
After meal.

Reason for use
Linked Care Goal(s): Improve condition after intervention

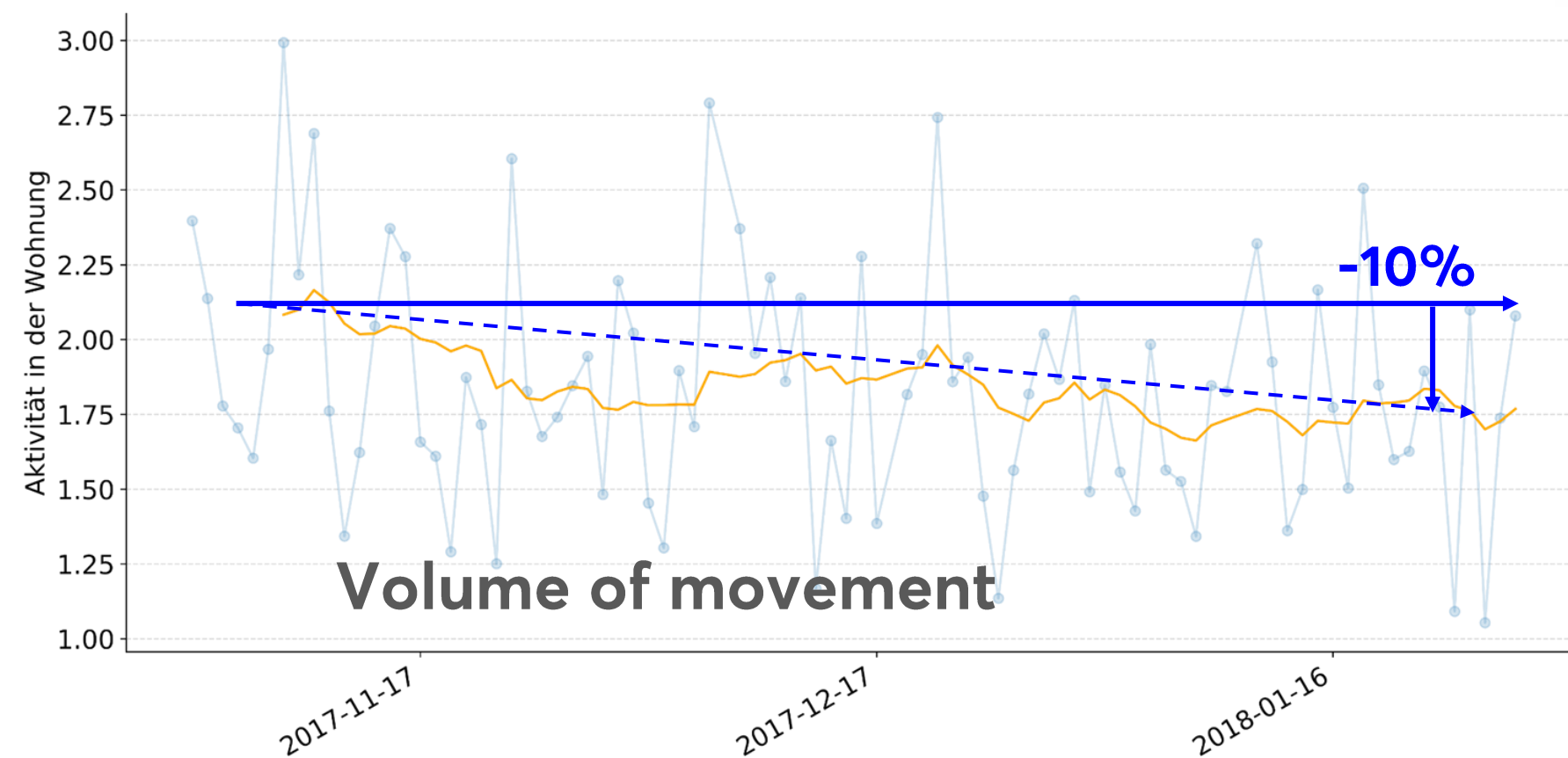
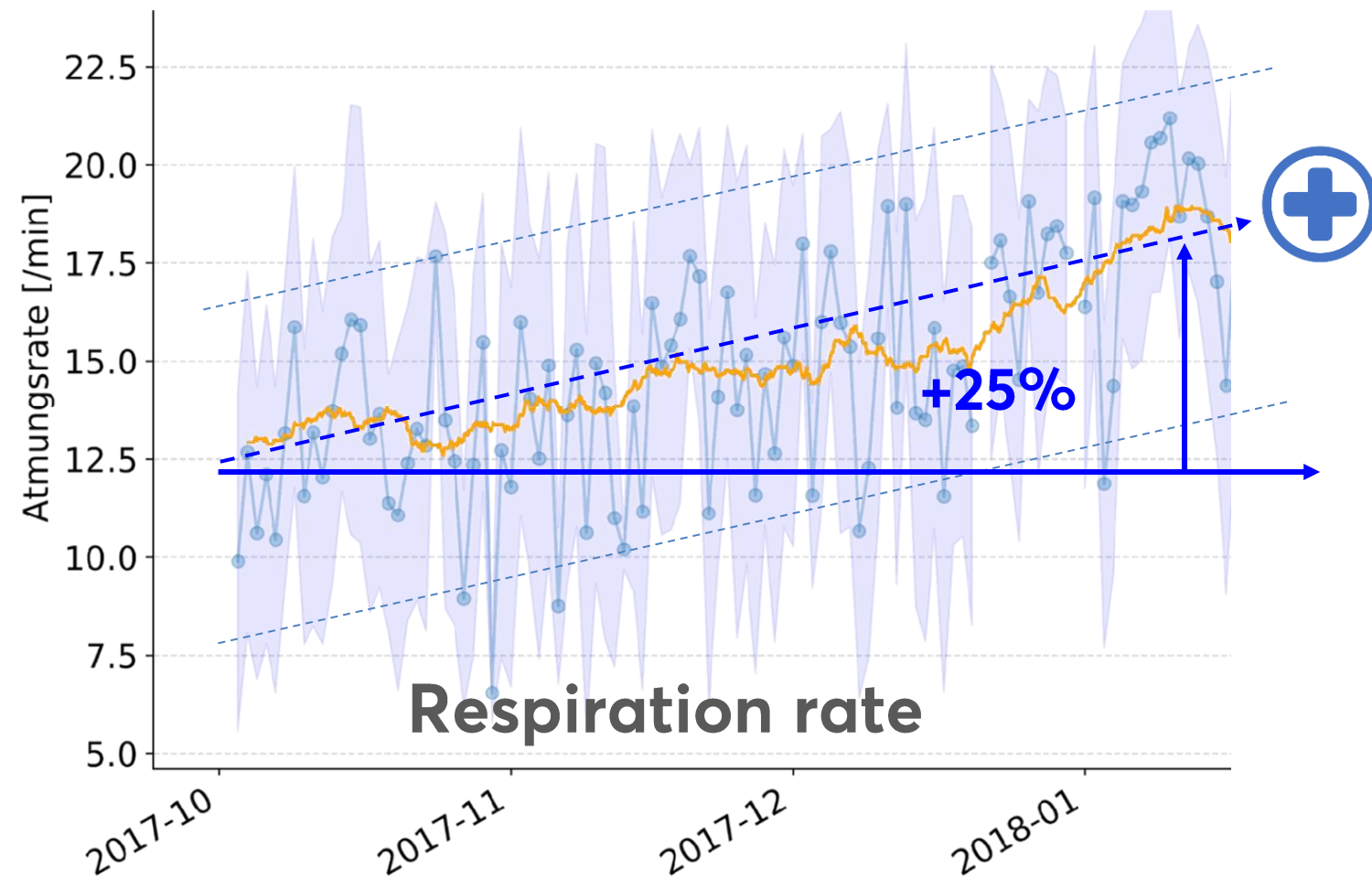
Diagnosis
ICD10: Præsent portiores nulla vitae posuere

Approved by
Dr. Arnaud Ducommun

[Cancel](#) [Add Medication](#)

Digital biomarkers: Early detection and prevention of cardiac decompensation. Costs is 30KCHF per hospitalization

 = Hospitalization



frontiers | Cardiovascular Medicine | Sections | Articles | Research Topics | Editorial board | About journal | Submit | Search | User

CASE REPORT article
Front. Cardiovasc. Med., 02 February 2021
Sec. Cardiovascular Epidemiology and Prevention
<https://doi.org/10.3389/fcvm.2021.617682>

This article is part of the Research Topic
Digital Health in Cardiovascular Medicine
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Case Report: Ambient Sensor Signals as Digital Biomarkers for Early Signs of Heart Failure Decompensation

Hugo Saner^{1,2*}, Narayan Schuetz¹, Philipp Bulushek³,
Guillaume Du Pasquier³, Giuseppe Ribaudo⁴, Prabhitha Urwyler^{1,5} and
Tobias Nef¹

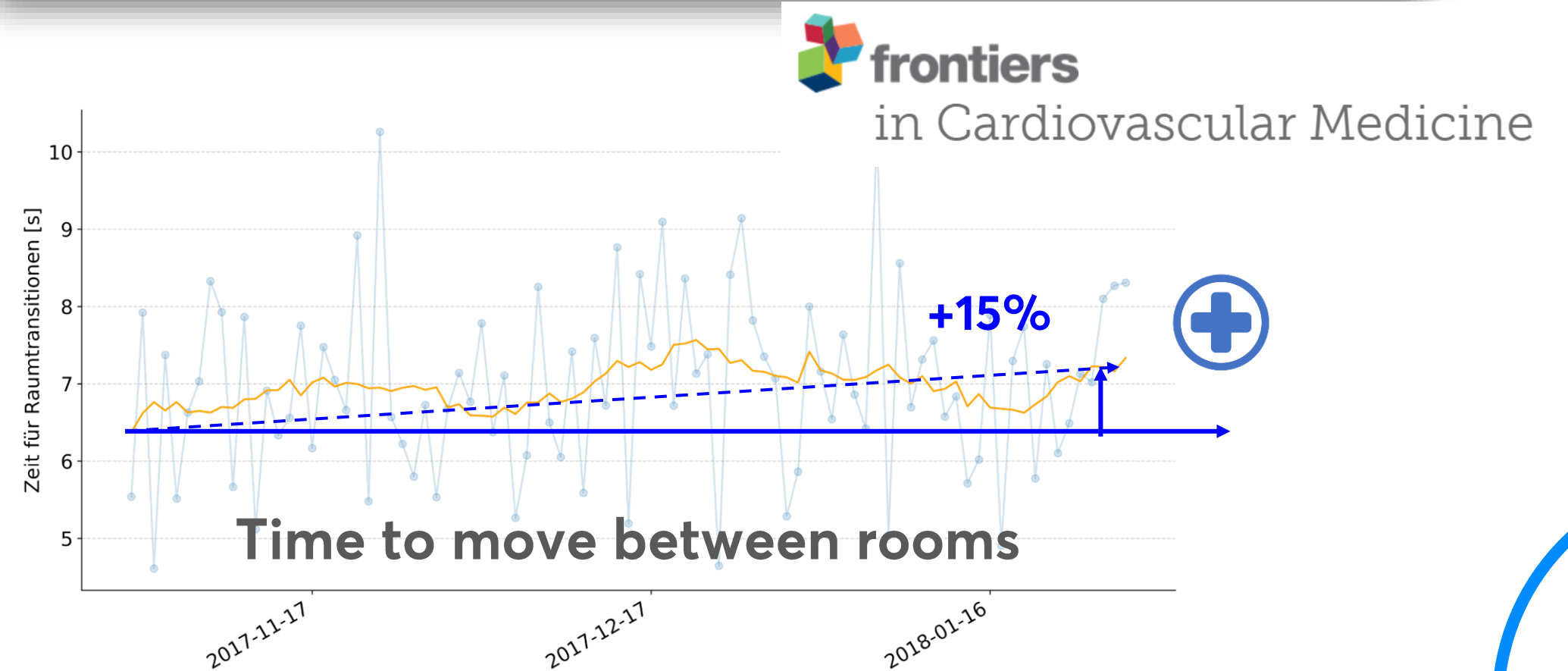
¹ ARTORG Center for Biomedical Research, Gerontechnology & Rehabilitation Group, University of Bern, Bern, Switzerland
² University Clinic for Cardiology, University Hospital, Inselspital Bern, Bern, Switzerland
³ DomoSafety S.A., Lausanne, Switzerland
⁴ Gruppenpraxis Neuhard, Olten, Switzerland
⁵ Neurorehabilitation Unit, Department of Neurology, University Hospital, Inselspital Bern, Bern, Switzerland

Home monitoring systems are increasingly used to monitor seniors in their apartments for detection of emergency situations. More recently, multimodal

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Multi-center study



CHUV Cardiology Department

Principal Investigator:

- Dr Patrick Yerly
Médecin associé,
Unité d'insuffisance et greffe
cardiaque
Spécialiste en cardiologie et en
médecine interne, membre
FMH

A dynamic and collaborative
environment of **excellence in
care, translational research,
and innovation**, including 7
specialized Units

600-700 cases (hospital admissions) of
HF decompensations/yr



Hôpital du Valais
Spital Wallis

Co-Investigators:

- Dr Grégoire Girod (hôpital
du Valais, Sion)
- Dr Raluka Alexe (hôpital du
Valais, Sion)



*Patients will be **recruited directly at the hospital** following an episode of cardiac
decompensation, prior to hospital discharge

Study design

Collaborative study between CHUV's cardiology dpt (study design, clinical coordination) and DOMOHealth (EPFL spin-off, data capturing, coordination and data analysis/mgt)

Non-invasive technologies

12
months



150 HF patients
at risk of hospital
readmission
monitored at home



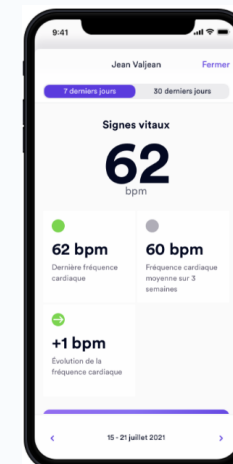
Under-the-mattress
device



Connected scale

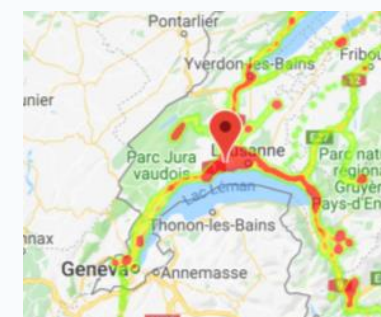
- Body weight monitoring

- Respiratory rate (RR)
- heart rate (HR)
- toss-and-turn rate (TTR)
- time out of bed (TOB)



Patient app

- *Outside behaviour*
- *GPS location*
- *Step count*



Daily data
collection

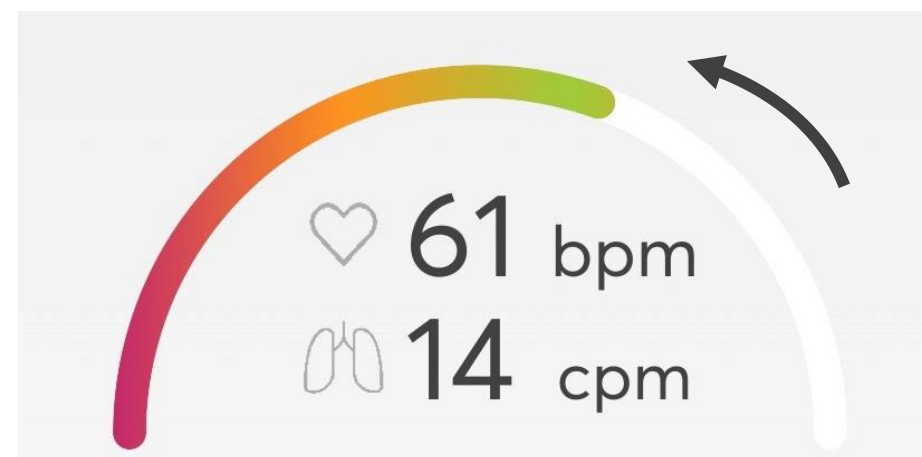


DOMO
Health

Customized
prediction score
based on the
selected
physiological
parameters

Early care support thanks to early signs of respiration issues in COVID-19

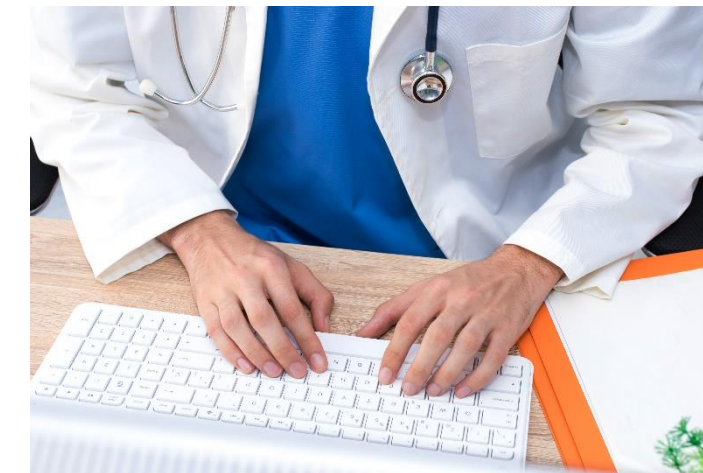
1st Notification sent



Positive PCR test



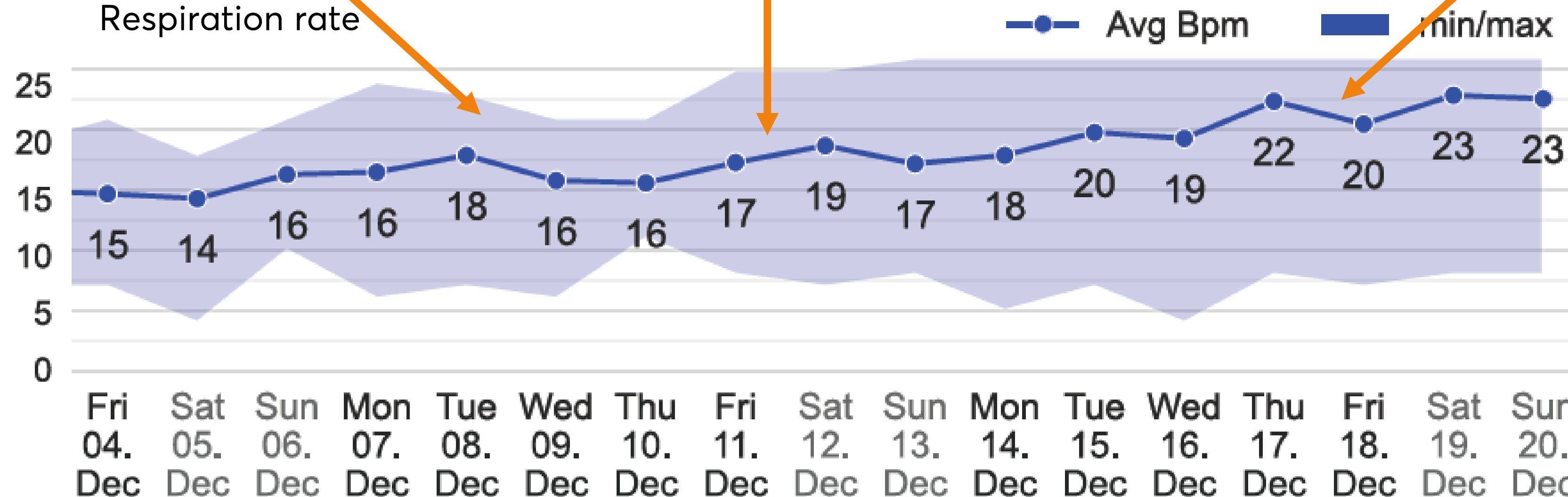
1st symptoms & hospitalisation



Situation worsening
2 weeks hospitalisation

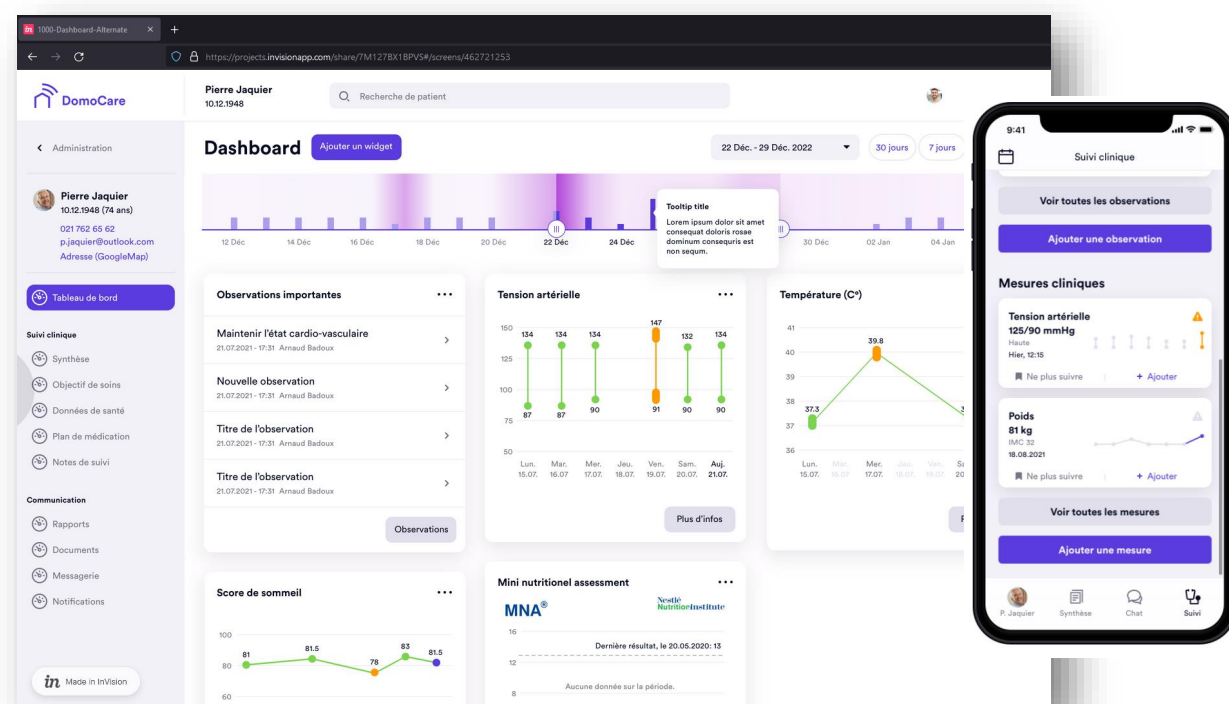


Respiration rate



Our revenue model

Coordination platform

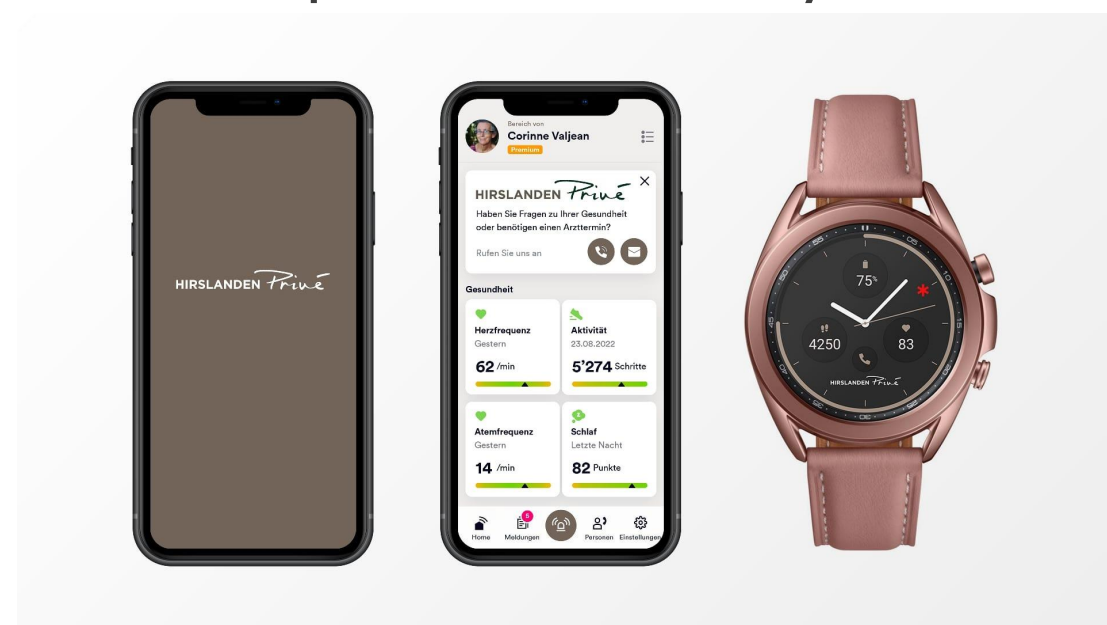


Hospital & Pharma pay yearly
licences + fees per patient



Patient pays
monthly
subscription

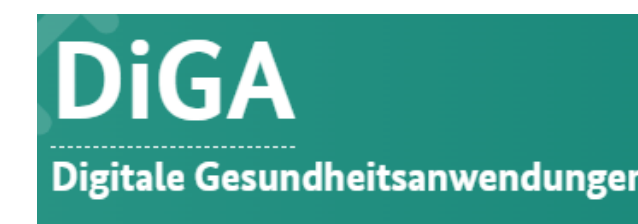
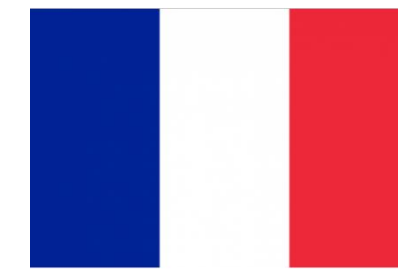
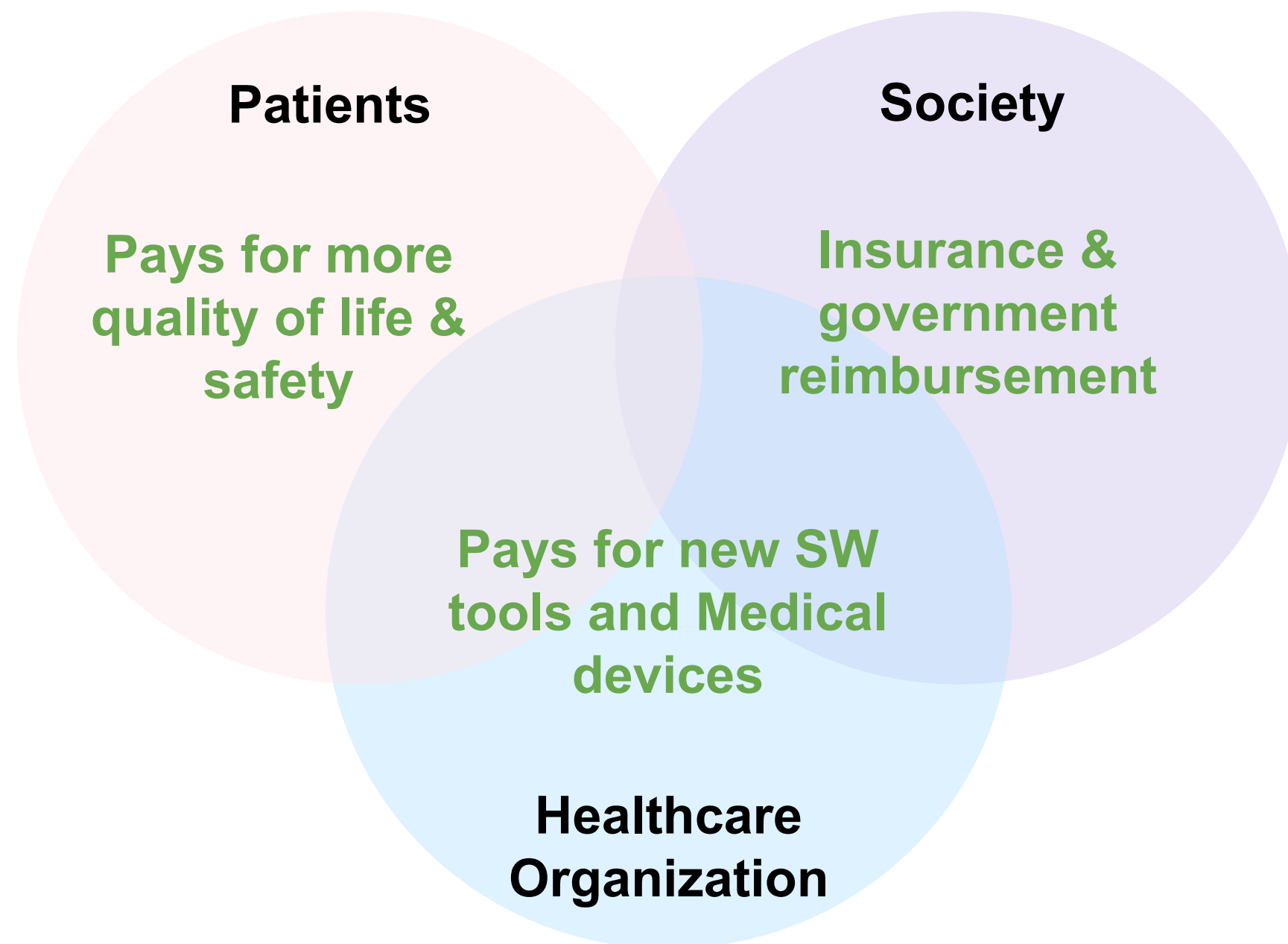
Products to increase
patient's safety



HIRSLANDEN
Croix-Rouge suisse
Schweizerisches Rotes Kreuz
Croce Rossa Svizzera
sak



Challenge for new revenue model - reimbursement



Bundesamt für
Gesundheit



BAG

Take Away

- For **complex diseases**, digital health is a enable for a **better coordination** among **healthcare professionals and the patients**
- Generating **clinical evidences** and advances diseases understanding are key for an adoption of digital health
 - Invest in innovation in the clinical pathway
 - **Value based medicine – objective longitudinal data in the real world**, post market surveillance and personalised treatment
- **Co-creating solutions** with patients and healthcare professionals is key