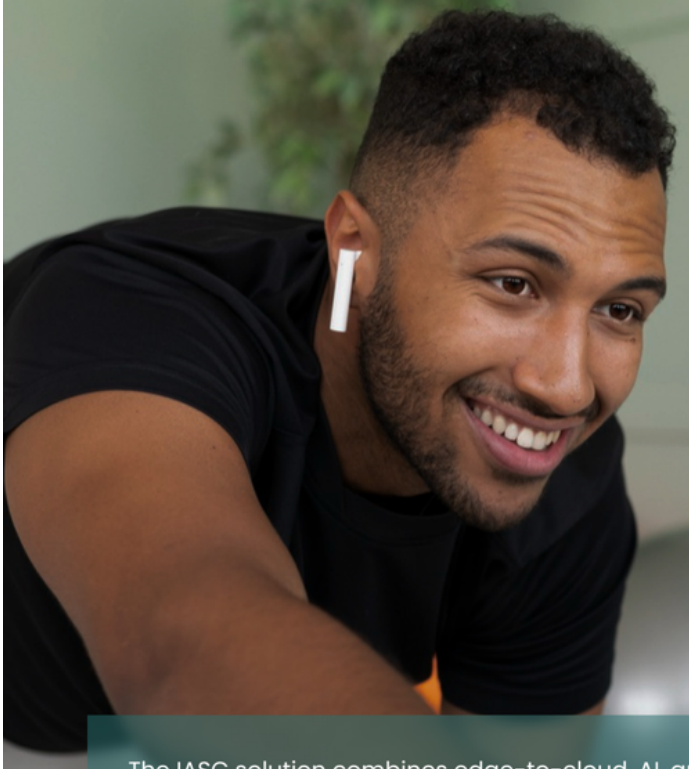


The Future of Health Monitoring

H2TRAIN

Intelligent Assisted Sport Coaching



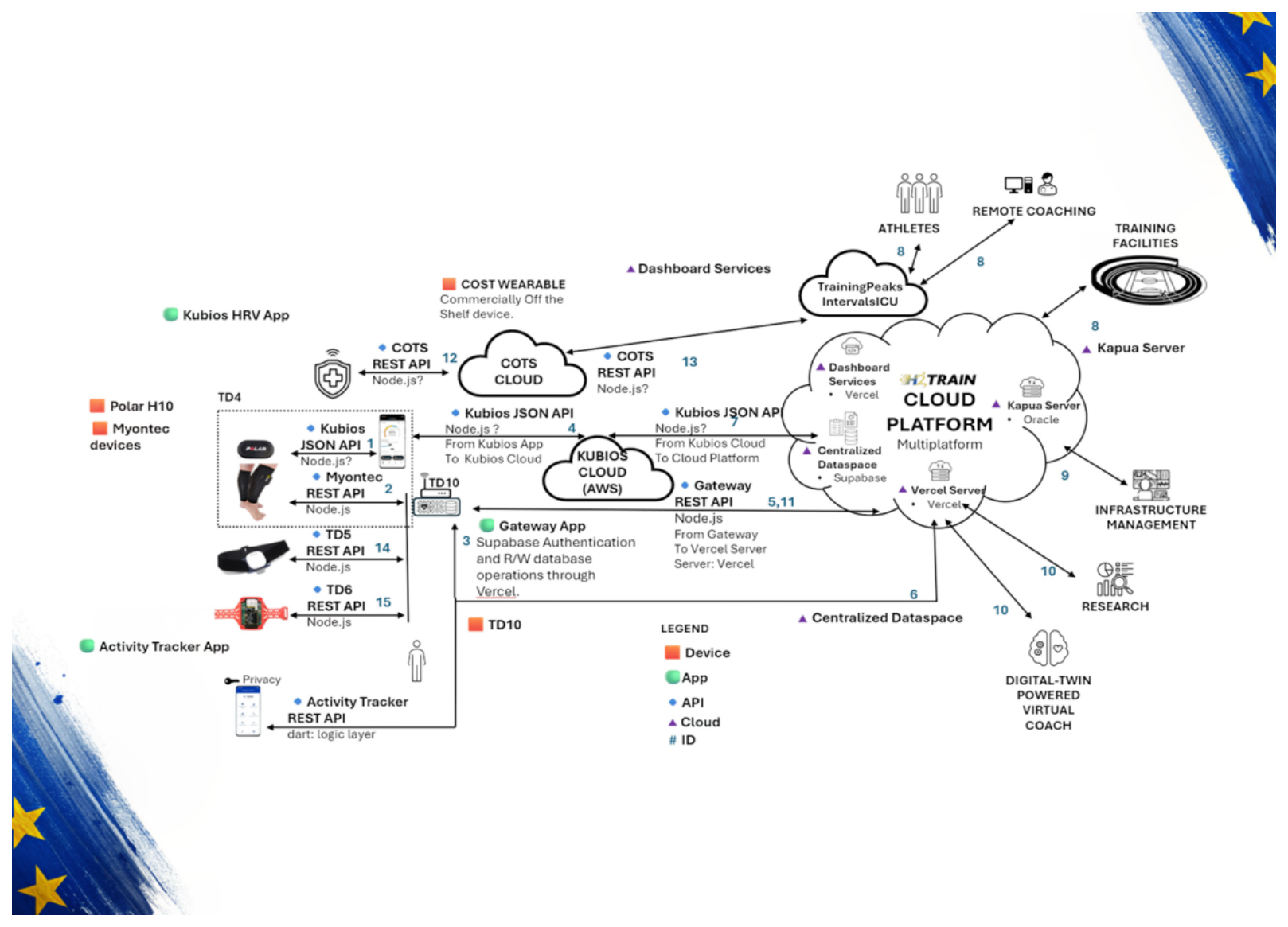
The IASC solution combines edge-to-cloud, AI, and digital twin technologies to deliver a ecosystem of IoT based wearables for real time monitoring of several physiological data for sport coaching.

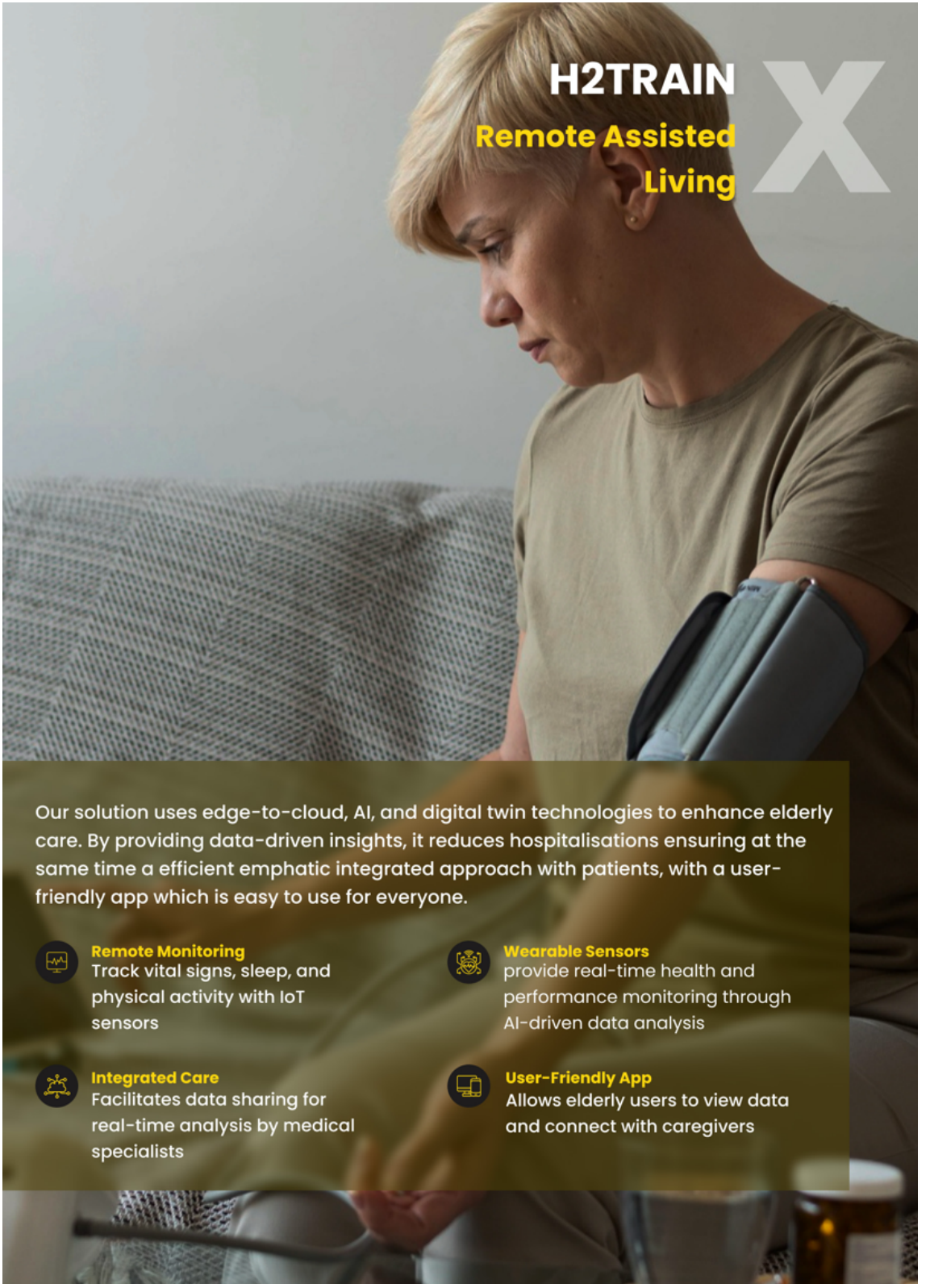
Remote Support
Tracks athletes' health and performance through wearable and sports equipment sensors

Wearable Sensors
provide real-time health and performance monitoring through AI-driven data analysis

User Apps
Offers tools for athletes and professionals to access data, alerts, and performance metrics

Integrated Analysis
Centralizes data processing for both individual and team performance evaluation


ATHLETES
REMOTE COACHING
TRAINING FACILITIES
Dashboard Services
TrainingPeaks IntervalsICU
COST WEARABLE
Commercially Off the Shelf device.
Kubios HRV App
COTS REST API
Node.js?
12
COTS CLOUD
COTS REST API
Node.js?
13
Kapua Server
Dashboard Services
• Vercel
H2TRAIN
CLOUD PLATFORM
Multiplatform
Kapua Server
• Oracle
Centralized Dataspace
• Supabase
Vercel Server
• Vercel
INFRASTRUCTURE MANAGEMENT
RESEARCH
DIGITAL-TWIN POWERED VIRTUAL COACH
Polar H10
Myontec devices
TD4
Kubios JSON API
Node.js?
1
Myontec REST API
Node.js
2
Kubios JSON API
Node.js ?
From Kubios App
To Kubios Cloud
4
KUBIOS CLOUD (AWS)
Kubios JSON API
Node.js?
From Kubios Cloud
To Cloud Platform
7
TD10
Gateway REST API
Node.js
From Gateway
To Vercel Server
Server: Vercel
5,11
Gateway App
Supabase Authentication and R/W database operations through Vercel.
3
TD5 REST API
Node.js
14
TD6 REST API
Node.js
15
TD10
Centralized Dataspace
6
Activity Tracker App
Privacy
Activity Tracker REST API
dart: logic layer
LEGEND
Device
App
API
Cloud
ID



H2TRAIN

Remote Assisted Living

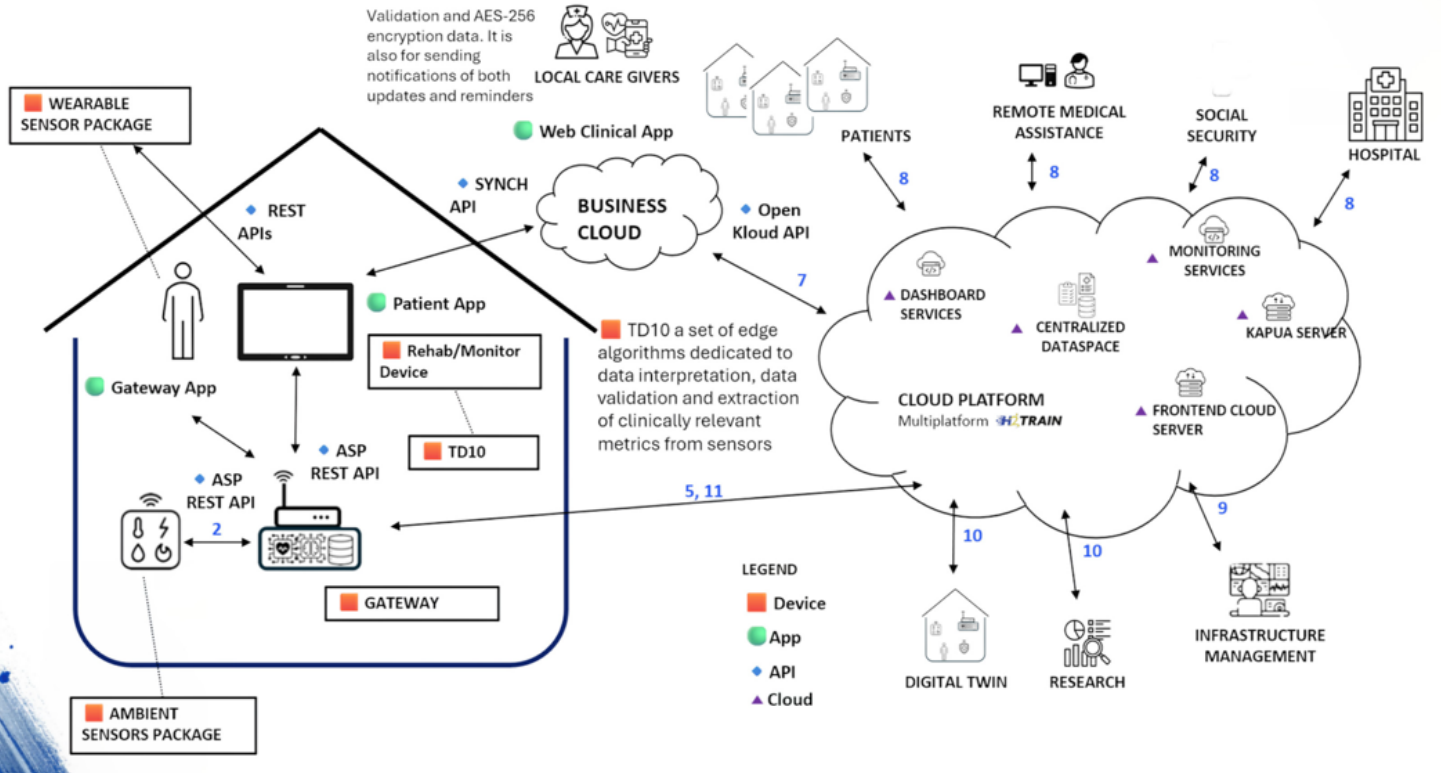
Our solution uses edge-to-cloud, AI, and digital twin technologies to enhance elderly care. By providing data-driven insights, it reduces hospitalisations ensuring at the same time a efficient emphatic integrated approach with patients, with a user-friendly app which is easy to use for everyone.

Remote Monitoring
Track vital signs, sleep, and physical activity with IoT sensors

Wearable Sensors
provide real-time health and performance monitoring through AI-driven data analysis

Integrated Care
Facilitates data sharing for real-time analysis by medical specialists

User-Friendly App
Allows elderly users to view data and connect with caregivers


Validation and AES-256 encryption data. It is also for sending notifications of both updates and reminders
LOCAL CARE GIVERS
WEARABLE SENSOR PACKAGE
Web Clinical App
PATIENTS
REMOTE MEDICAL ASSISTANCE
SOCIAL SECURITY
HOSPITAL
REST APIs
SYNCH API
BUSINESS CLOUD
Open Kloud API
8
8
8
8
7
Patient App
Rehab/Monitor Device
TD10 a set of edge algorithms dedicated to data interpretation, data validation and extraction of clinically relevant metrics from sensors
DASHBOARD SERVICES
MONITORING SERVICES
CENTRALIZED DATASPACE
KAPUA SERVER
CLOUD PLATFORM
Multiplatform
FRONTEND CLOUD SERVER
Gateway App
TD10
ASP REST API
ASP REST API
2
5, 11
9
10
10
GATEWAY
LEGEND
Device
App
API
Cloud
DIGITAL TWIN
RESEARCH
INFRASTRUCTURE MANAGEMENT
AMBIENT SENSORS PACKAGE

H2TRAIN

Clinical Monitoring

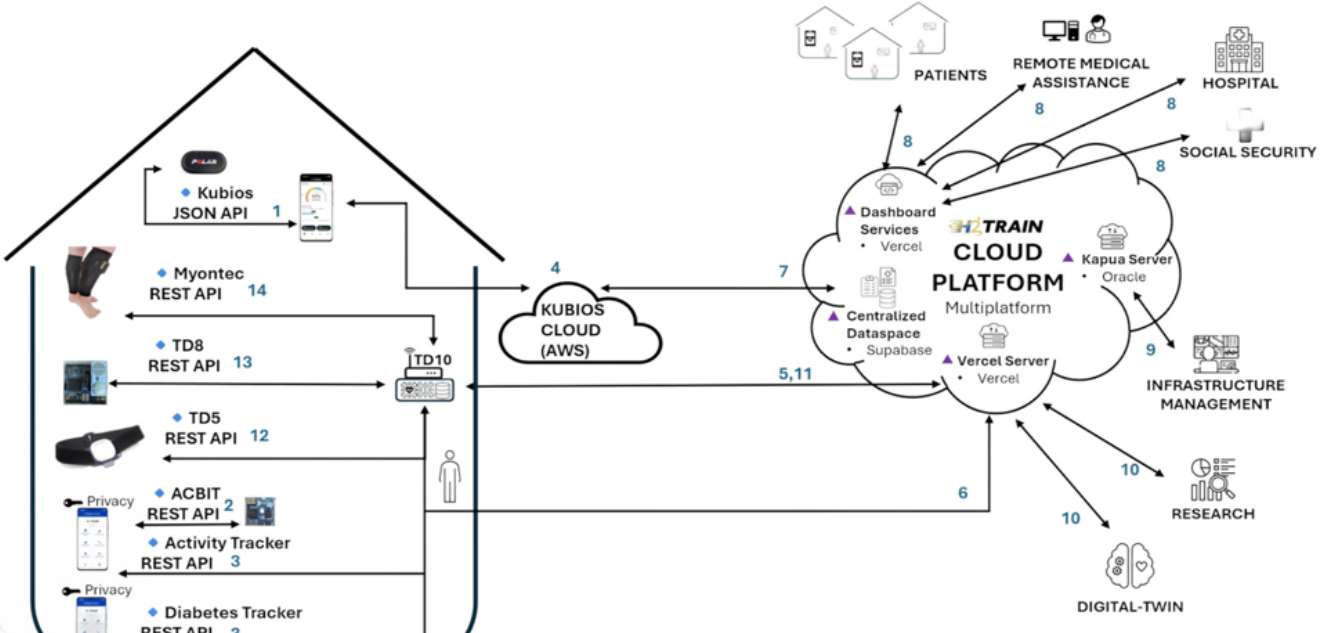
The Clinical Monitoring system integrates standard equipment and sensors in post-surgery and rehab settings for comprehensive patient data collection, cardiac monitoring and diabetes monitoring. The system shall allow continuous monitoring of vital signs (R-R, HR, glucose) with minimal disruption to daily activities.

Holistic Approach
Connects edge computing devices to a centralized system for real-time data processing

Wearable Sensors
provide real-time health and performance monitoring through AI-driven data analysis

User Application
Provides a user-friendly app for real-time data, alerts, and key performance indicators

Team Integration
Enables real-time data analysis by specialists from multiple team members


Kubios
JSON API
1
Myontec
REST API
14
TD8
REST API
13
TD5
REST API
12
ACBIT
REST API
2
Activity Tracker
REST API
3
Diabetes Tracker
REST API
3
Privacy
Privacy
TD10
4
KUBIOS
CLOUD
(AWS)
7
5,11
6
PATIENTS
REMOTE MEDICAL
ASSISTANCE
HOSPITAL
SOCIAL SECURITY
8
Dashboard
Services
• Vercel
HZTRAIN
CLOUD
PLATFORM
Multiplatform
Kapua Server
• Oracle
Centralized
Dataspace
• Supabase
Vercel Server
• Vercel
9
INFRASTRUCTURE
MANAGEMENT
10
RESEARCH
DIGITAL-TWIN

PROJECT EVOLUTION

RP1 — **Foundation Established**

- Framework Established
- Initial Visibility
- KER Identification
- IP Planning

1. RP1 to RP2 KEY PROGRESS

	RP1	RP2	
WEBSITE REACH	890 users, 38 countries	3,999 users, 98 countries	Growth +349 % users
PUBLICATIONS	24 publications	28 publications	Progress towards final KPIs
DISSEMINATION ACTIVITIES	>25 activities	~50 activities	Activity volume doubled
KER MATURITY	10 KERs identified	10 KERs identified	Exploitation planning initiated

RP2 — **Operational Ecosystem**

- Global Outreach
- KER Consolidation
- IP Governance
- Active Exploitation

2. STATUS & PROGRESS

RP1	RP2	RP3
Framework Setup	**Operational Execution**	**Impact Generation**
Website Social Media DCP Initial KERs	Global Visibility Stakeholder Engagement KER Consolidation IP Governance	Commercialisation Sustainability Market Uptake Long-Term Impact

Dissemination fully operational
Visibility KPIs on track
Stakeholder engagement active
Exploitation framework established

Commercialization preparation ongoing

RP3 — **Impact Generation**

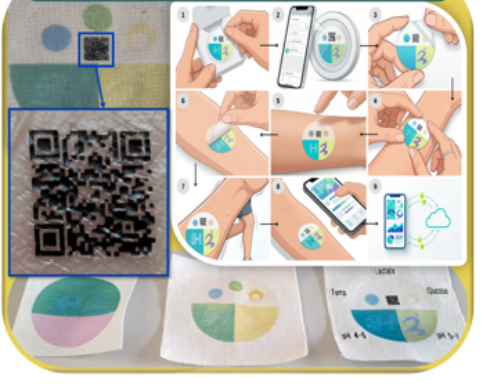
- Exploitation & Sustainability
- Market Uptake
- Commercialisation
- Long-Term Impact

3. MAIN ACHIEVEMENTS (RP2)

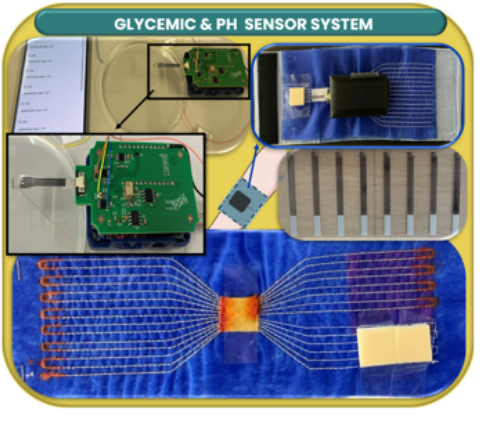
INTERNATIONAL VISIBILITY	*98 countries reached* *Global dissemination footprint*
SCIENTIFIC IMPACT	*28 publications* *Strong conference presence (~50 events)*
STAKEHOLDER ECOSYSTEM	*Clustering activities* *Networking events and community building*
EXPLOITATION & IPR	*Ownership and access rights framework* *Co-ownership procedures implemented*
MARKET PREPARATION	*Competitive positioning analysis* *Exploitation pathways and technology roadmap*

TECHNOLOGY DEMONSTRATORS

TATTOO SWEAT SENSOR



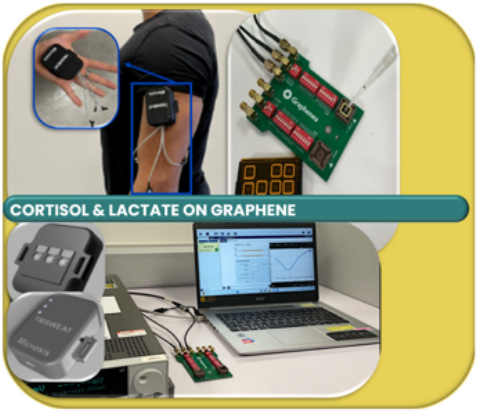
GLYCEMIC & PH SENSOR SYSTEM



ECG, EMG & SpO2



TECHNOLOGY DEMONSTRATORS







TECHNOLOGY DEMONSTRATORS







Partners

The H2Train project features top-tier companies and academic institutions from all over Europe.









































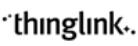


















































H2TRAIN project is supported by the Chips Joint Undertaking (GA 101140052) and its members including top-up funding by the National Funding Agency for Austria, Innovation Funding Agency Business Finland, Bundesministerium für Bildung und Forschung, Ministry of Universities and Research in Italy, Ministry of Enterprises and Made in Italy, National Centre for Research and Innovation in Poland, The Ministry of Economic Affairs and Digital Transformation in Spain and The Agencia Estatal de Investigación in Spain



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Co-funded by the European Union

Chips JU

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