



Sentigrade

Data Captatie en Track & Trace

Logicare AI

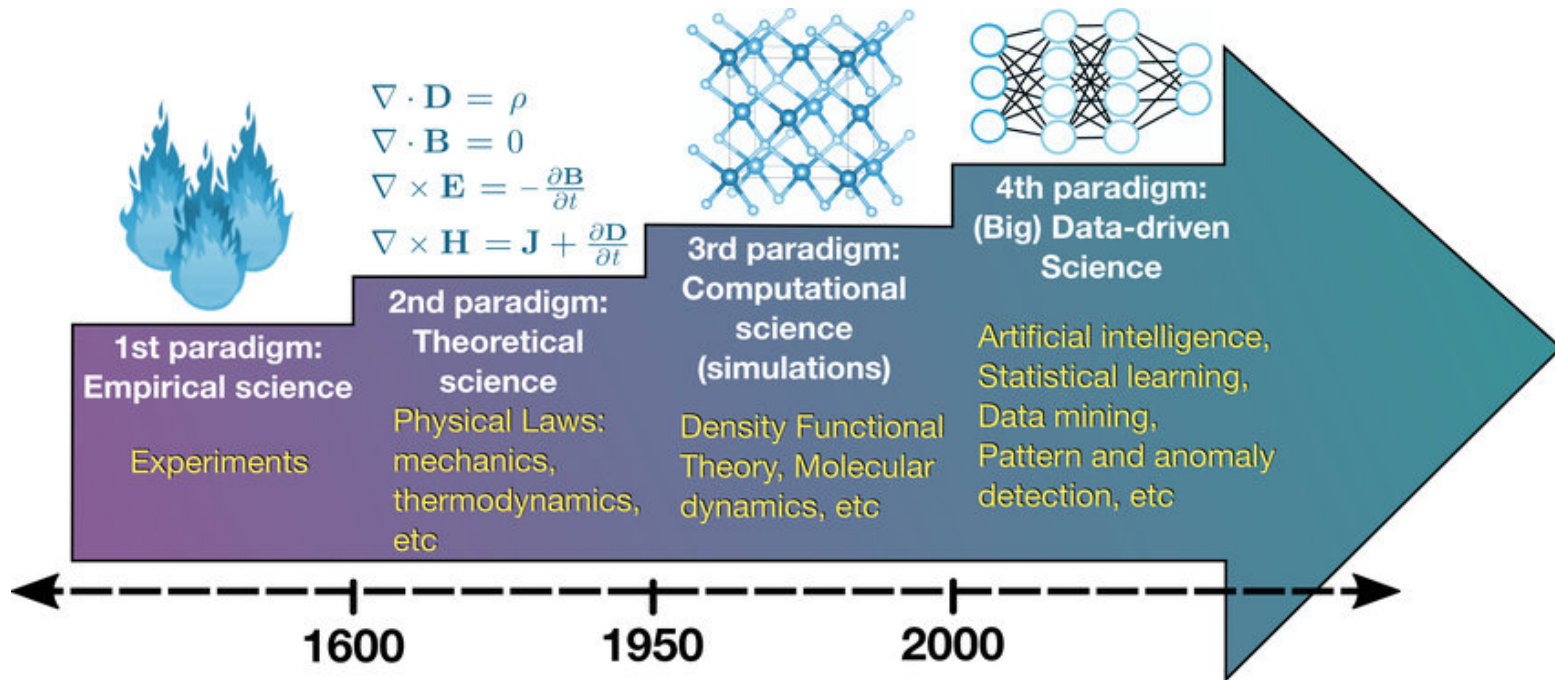
28th of November 2022 | Thomas De Moor

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●●● The Fourth Paradigm



I have a hypothesis → I need data to check it



I have data → Which hypothesis can I check?

● ● ● Sensor data integrator

Making sensor data comprehensible



01 **Founded in 2016**
By Thomas De Moor
and Gert Trekels.

03 **+15 Team members**
And a broad network of
freelancers and partners.

02 **Based in Leuven**
On the KU Leuven and
Imec high-tech campus.

04 **International**
Active in 11 countries from
Argentina to the UAE.



●●● Solutions

Sensor Data Analytics and management

We extract helpful and pragmatic know-how out of the compiled data of our customers.

01

Data Processing

We collect and manipulate data to prepare it for further analysis.

02

Data Modelling

We apply mathematical algorithms and machine learning on the data, reaching the desired output.

03

Data Accessibility

We collect and manipulate data to prepare it for further analysis.

●●● Industry

From sensor to insights

Our network of clients span across different sectors and countries, each with their specific needs.



Health

Connected healthcare systems can significantly reduce costs and improve treatment outcomes.



Agriculture

Sensors enable the development of precision agriculture and increase the transparency of the industry.



Industry 4.0

Connected manufacturing improves quality, increases efficiency and optimizes performance.



Smart City

IoT devices are becoming part of a smart city infrastructure that can combat the city growth.

●●● R&D collaborations

Flexibel sensors for wearable medical robots



Use of self-management app by post obesity surgery patients.



Context-aware automated learning for time series



A.I. On single board computers for medical devices



Smart devices en Artificiële Intelligentie voor REvalidatie



Logicare AI



Distributed artificial intelligence systems



Wireless Secure Link Efficient Energy Performance



●●● Industry

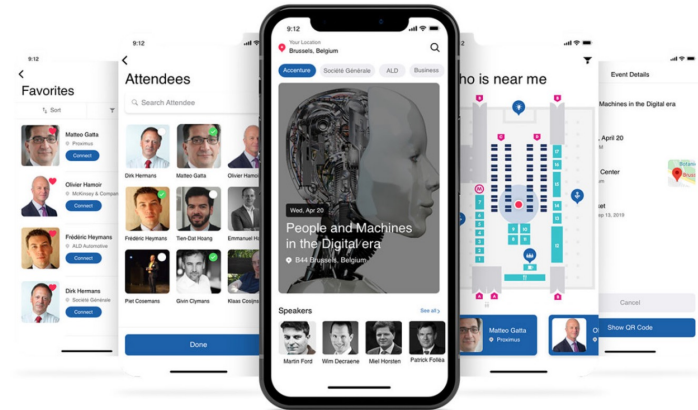
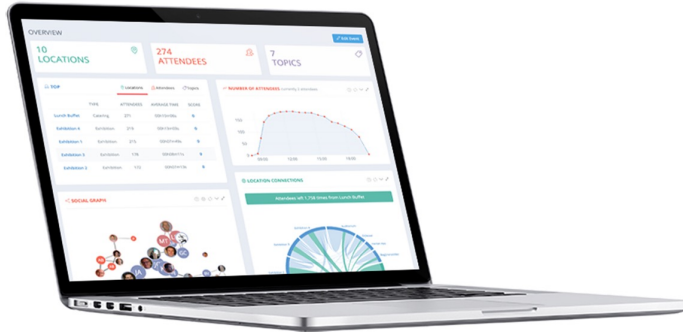
Track & Trace





Help organizers make sense of their event data

Eventigrade brings context- and location-based information to every stakeholder of a business event. Real-time and post-event analytics offer relevant insights enabling the event organizer and the venue to optimize their event.



●●● WMW Hub

IoT application technology to develop single-purpose apps and fully tailored data platforms

WMW offers a personalised IoT hub that works in a device and connection agnostic way.

Sentigrade helped WMW to build a device agnostic positioning engine for remote construction sites.



●●● The Retail Factory

Counting and analyzing your visitors

Thanks to a specially developed technology and a data portal, The Retail Factory measures your visitors 24/7.

The number of passers-by, their behavior and how often they return is all analyzed.

Afterwards the results can be used to optimize shops, shopping centers or cities.

Sentigrade helps The Retail Factory with processing and analyzing the signals and the counts from a variety of hardware devices and offers it in a user friendly and understandable way to the end-client.



●●● Hospital counter

Counting and analyzing your hospital visitors

Sentigrates crowd counter allows your hospital to analyze foot traffic patterns, visitor behavior and manage the occupancy levels. This data can improve the visitor experience at various facilities in your hospital.

Input sources

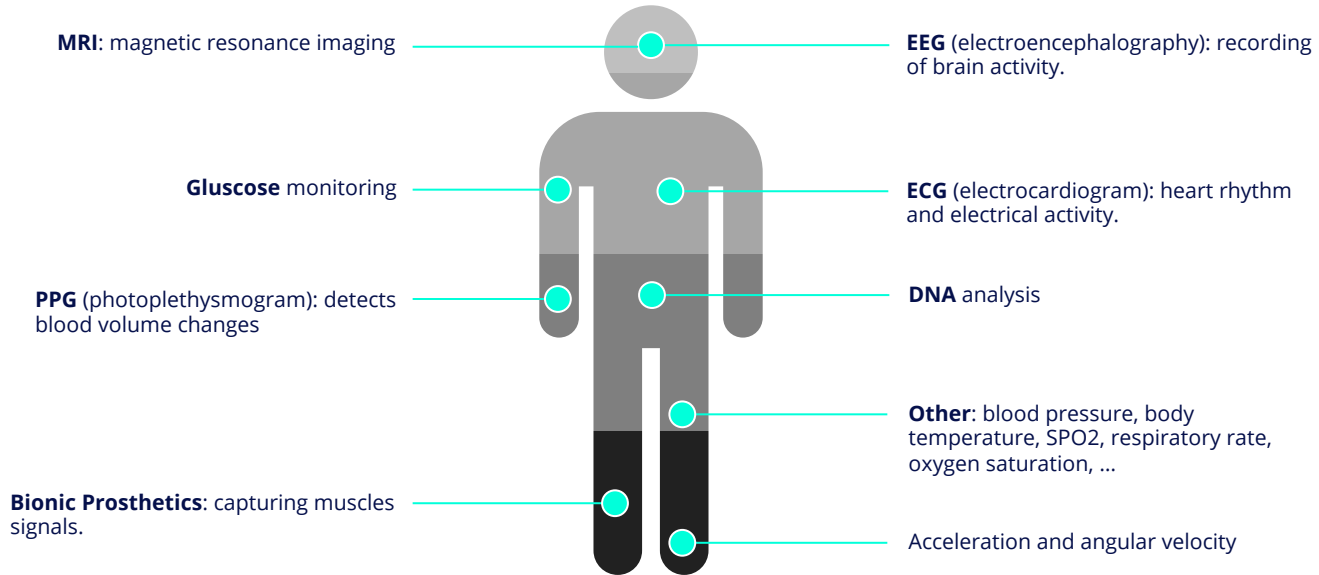


A grayscale photograph of an operating room. Several surgeons in scrubs and masks are visible, some looking at a large monitor displaying vital signs. The room is filled with medical equipment, including monitors, IV stands, and surgical lights. The overall atmosphere is clinical and professional.

●●● Industry

"Track & Trace" in Digital Health

● ● ● Areas of expertise





Invisible seizures now visible.

Epihunter detects absence epilepsy seizures based on EEG signal.

While wearing a thin headset, the EEG signal is transferred to the mobile phone of the user, where a local machine algorithm performs pattern recognition to detect the seizure, enabling a light and sound notification, so the environment of the user is notified of the seizure.

All information is transferred to the cloud, for further analysis by the user, companions and neurologists.

Sentigrate helped Epihunter with building the complete technology stack, ranging from training and tuning the machine learning model, to developing the mobile application for the user and the online portal for the neurologist.



●●● Axiles Bionics

Changing the way the world thinks about prosthetic feet.

A company that strives to improve the quality of life of people with assistive robotics. Today, their focus is on amputees and bringing them the next generation bionic feet.

Sentigrade helped with setting up the complete cloud infrastructure. This includes setting up a reliable connection from edge devices to the cloud, providing a scalable data storage layer and creating the environment to develop machine learning algorithms on the bionic foot data.

University spin-off:  VRUJE
UNIVERSITEIT
BRUSSEL



●●● Wolk Airbag

Preventing hip fractures by wearing a smart hip- airbag.

A company based in the Netherlands developing a smart airbag that inflates when fall detection occurs. They provide analytics to all caregivers involved so the benefits of a Wolk Airbag can be quantified objectively.

Sentigrade helped with the onboarding workflow for new hardware consisting of a sleeve and a board. The onboarding consists of several steps, such as coupling the two modules, activating a SIM card and performing quality control.

University spin-out: **TU Delft**

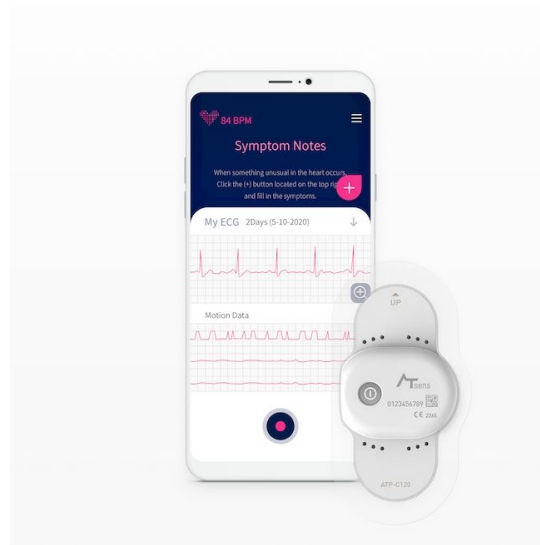


●●● Rythm Diagnostic

Real-time monitoring of cardiac and respiratory parameters

A company based in Paris monitors 11 vital parameters with only one sensor, to monitor patients post surgery on the one hand and to diagnose patients on the other hand.

Sentigrate helped with cleaning and analysing their sensor data. When wearing the sensor and moving around, a lot of noise is introduced. Sentigrate developed an algorithm to filter out this noise, so other machine learning algorithms are able to learn and run on clean data.



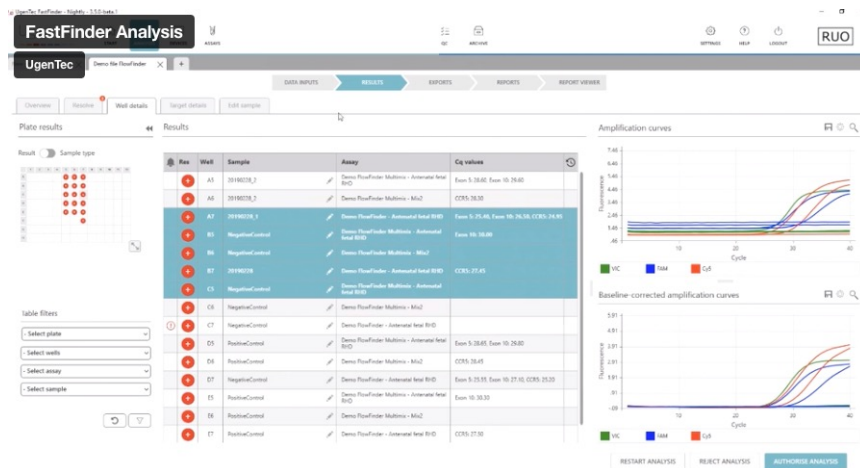


Pcr workflow and analysis optimization

Ugentec works together with diagnostic companies and molecular laboratories to seamlessly integrate and connect the different components of the PCR workflow, support interpretation of their test results, and in the end, decrease the time they need to perform this interpretation.

Sentigrade helped Ugentec in improving its genotyping algorithms by introducing new clustering and classification techniques into their data analysis pipeline.

University spin-off:



Acquired by: SUMMAEQUITY

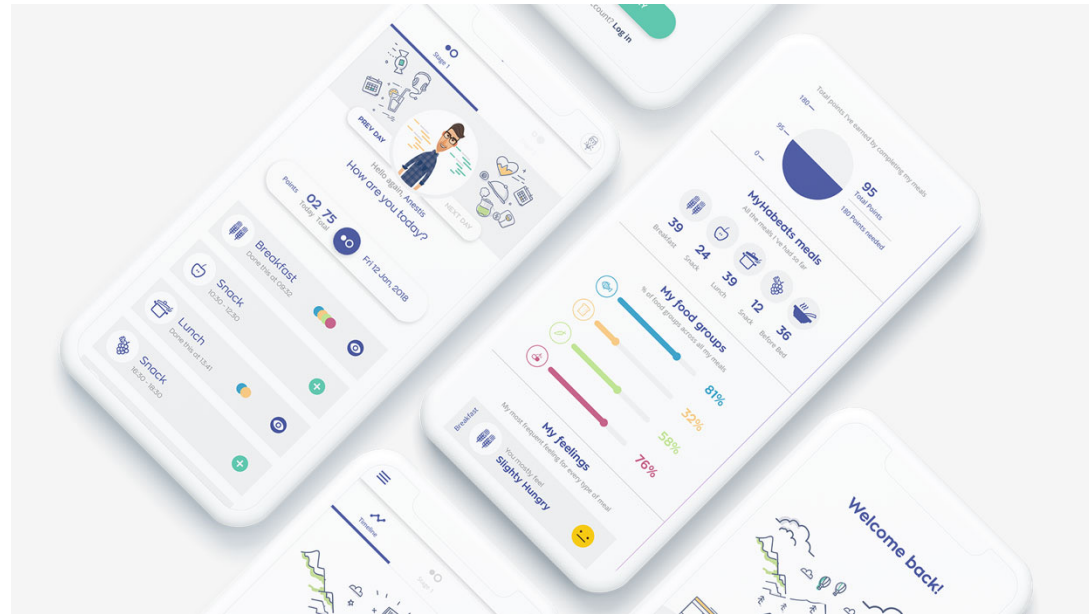
●●● Patient monitoring

MyHabeats is a digital tool that maximizes patient adherence to post obesity surgery guidelines

MyHabeats is a greek company that developed algorithms to scientifically follow up patients post obesity surgery.

Sentigrate helps MyHabeats to acquire the right data, to optimize the algorithms and to integrate other sensors, e.g. smartwatches, into their data flow.

University spin-off:  HELLENIC REPUBLIC
National and Kapodistrian
University of Athens
EST. 1837

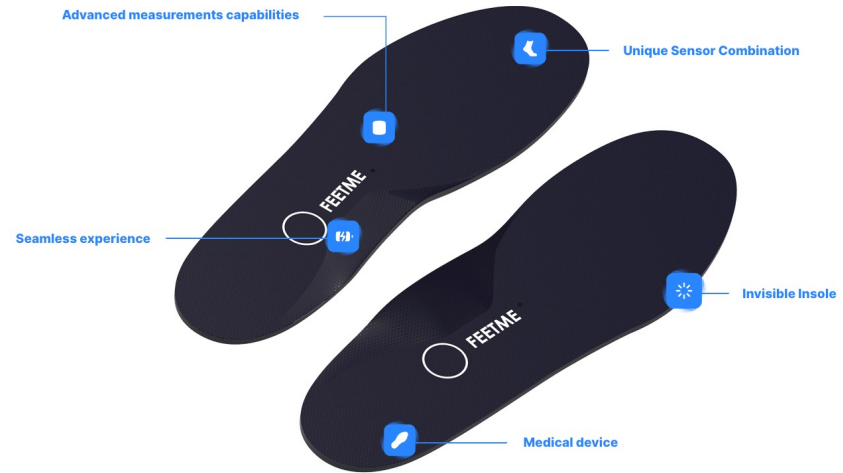


●●● Clinical trials

The most advanced platform for real-time and real-world step-by-step analysis.

FeetMe provides real world gait analysis for improved diagnosis, monitoring and rehabilitation of chronic diseases with smart insoles.

Based on an extensive literature study, **Sentigrade** did a statistical analysis regarding sample size and accuracy that will be used in the next clinical trial of FeetMe.

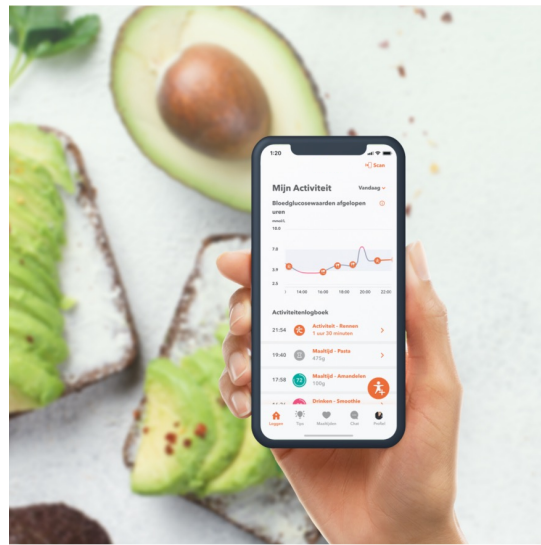


● ● ● Glucose monitoring

Everybody reacts differently to food.

A Dutch company measures glucose levels continuously with a sensor placed on the upper arm. However they use a commercial sensor, which they were not able to understand the protocol for.

Sentigrate helped with integrating the protocol into their system. Next to that, Sentigrate developed a model that can predict the glucose level up to 5 minutes in advance.





Let's start building connections

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