

We talked to Founder and CEO Raphaël Heraïef, to learn how this success came about and how we can better embrace the exciting and challenging evolution of AI.

What is Vima's vision?

Vima was founded in 2015 as a spinoff from the Idiap Research Institute affiliated to the Swiss Federal Institute of Technology EPFL.

To improve human-machine interactions (and more broadly [ambient intelligence](#)), Vima focuses on the growing need to have a more precise, multimodal, multicultural and minimally biased behavioural understanding of people, notably personality traits and interpersonal skills. In comparison, current emotion AI is mostly unimodal (e.g. only facial expressions) and therefore inaccurate and discriminative.

For over 10 years, researchers have combined their expertise in social computing, behavioural psychology and AI to create an advanced method to understand human behaviour using state-of-the-art speech processing, computer vision, AI/machine learning (ML) and psychology.

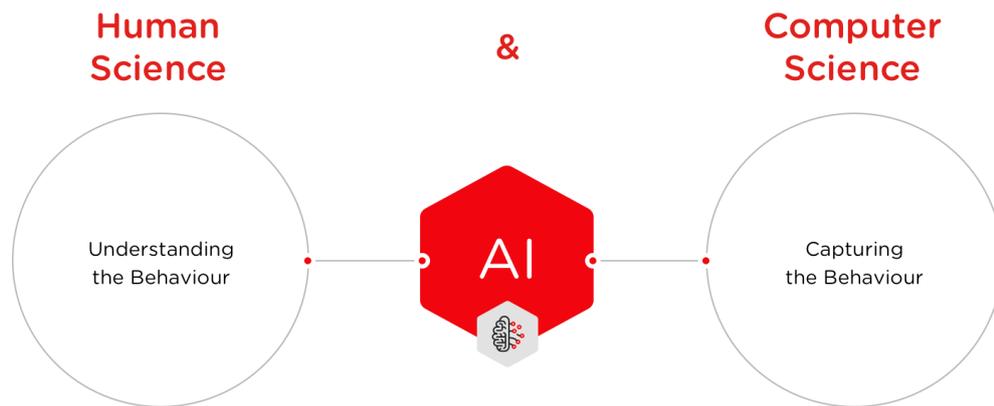
Behavioural intelligence will be a required platform for the creation of ambient intelligence.

How does behavioural AI work?

Technically, the development of an algorithm, or prediction model, typically has three steps.

1. A human reference group (psychology experts) evaluates video recordings of expressions (e.g. video CVs, self-presentation videos) on key questions relating to particular skills and traits.
2. The recorded expressions are analysed by several audio and video feature extraction tools taken from so-called libraries of independently developed algorithms.
3. Steps (1) and (2) are integrated in the training of a machine learning model that aims to predict the human reference evaluations based only on the extracted behavioural features. The final test of the system is performed on video material that was not included in the training phase. If the prediction model is accurate, it means that this type of human evaluations of the skills and traits are reliably and systematically correlated with the extracted behavioural features, and that the model can be applied to any other new set of video recordings showing similar type of expressions.

From a broader perspective, Vima captures the behaviour on the one side (using speech processing, computer vision, fusion techniques, etc.) and understands it on the other side (behavioural psychology). It then uses AI and ML to bridge the new to develop next-generation behavioural intelligence tools that can appraise people's behaviour trustworthily, accurately, automatically quickly, at scale and with minimum bias.



Critics argue that these systems introduce bias, inaccuracy and lack accountability. What do you say to sceptic psychologists or recruiters?

Our technology is not here to replace professionals but instead to enhance their capabilities. We automatically provide the additional human layer that contains valuable information about people. This can be done at scale without individual bias.

In many cases, AI can reduce humans' subjective interpretation of data because machine learning algorithms learn to consider only the variables that improve their predictive accuracy, based on the training data used. In fact, Vima's algorithms do not take into account any socio-demographic characteristics such as name, ethnicity, gender, educational background etc. It only focuses on the recorded person's behaviour, that is, a large array of vocal, facial, and bodily correlates of the variables of interest (personality, skills, emotion, or other), which have been evaluated by trained experts instructed to focus only on the behaviour of the recorded person.

Vima stands for trust, accuracy and scientific validation. Its research partners are world-renowned scientists that have pioneered their respective fields.

How can we embrace the future of AI?

Most people may be unaware how much AI has become part of their lives. From GPS and predictive text on smartphones to search engines and customer service chatbots, AI is changing the way people live and work. There are three ways we can ensure people embrace AI: through education, instilling trust, and providing transparency for people to understand what AI does.

Why did you decide to approach the Swiss Business Hub UK + Ireland and what followed from your collaboration?

The high-level and diverse network of the Swiss Business Hub UK + Ireland was very attractive as it has helped Vima to get in touch with key players in the HR industry. In addition, the continuous efforts of SBH allowed Vima to stay on the pulse of several opportunities that were beneficial for its business development (e.g. fairs, events, etc.).

We were able to get in touch with decision makers at large organisations and converted opportunities into paying clients.

Having done business both in Switzerland and in the UK, how do you think the AI perception, offering, opportunities and challenges, differ?

Throughout our business journey, we noticed that the use of AI can be perceived as more widespread in the UK as it is the #1 European hub of leading AI companies that come from the US. Also, we can note that smartphone penetration is higher in the UK than in Switzerland, which is a catalyst for the adoption of AI tools. That being said, Google's biggest office outside of the US is located in Zurich.

Moreover, we notice that both countries are at the forefront of AI research (notably thanks to the work performed at the two Swiss Federal Institutes of Technology ETH Zurich and EPFL and Idiap Research Institute and its sister centre the Swiss AI Lab IDSIA, and in the UK the OxBridge universities and Deepmind/Alphabet)

How do you deal with the cultural differences given that AI is not easily translated in terms of language, culture and customs?

To ensure that our algorithms are truly effective on different populations (i.e. they infer the correct soft skills from specific behavioural cues in video CVs independently of the origin of interviewees), we are making sure to train our AI systems on a wide pool of people that statistically represent society as a whole.

What are the next steps for Vima?

Develop our platform technology that will allow for enhanced human-machine interactions and industry-specific applications (e.g. HR, Automotive, Fintech, others). We also want to widen our network and continue business outreach in Europe, China and the US.

It has been a pleasure for the Swiss Business Hub UK + Ireland to support Vima throughout their business growth journey and we are delighted to see them thriving in the UK market. We look forward to continuing our collaboration and wish Raphael and his team the best of success. To find out more about Vima visit: <https://vima.swiss/>

The Swiss Business Hub UK + Ireland (located within the Embassy of Switzerland in the UK) provides localised support, market information, consulting and networking services to Swiss companies venturing into the UK or Irish market. An experienced team stands ready to support inquiries of all kind and serves as a first-hand local contact for companies - new and experienced – that wish to embark on the internationalisation journey. Its wide network of contacts and its strategic position between industry and Government makes the SBH UK + I an ideal partner for international expansion. To find out more about projects and services contact london.sbhuk@eda.admin.ch