

QUENTIQ: Health platform encourages personal fitness

Staff at Ergon have managed to develop the QUENTIQ mobile health platform from scratch within a very short time. Here they relied on cutting-edge technology. This reduces programming effort compared with conventional web solutions, ensures optimum data backup and scales the system so it can provide a flexible response to increasing user numbers.

In this day and age people are competitive and health-conscious. Wouldn't it be nice to be able to monitor your own state of health in real time and express it as a single score? This has prompted Zurich-based start-up QUENTIQ to launch a mobile health platform which encourages people to adopt a healthy lifestyle in a fun way. This solution calculates an energy model for sporting activities and includes the so-called QUENTIQ Health Score®, which has been developed with the help of physicists and health professionals. This is a figure on a scale of 1 to 1,000 which is based on some 30 different parameters that describe a person's overall state of health. It takes into account factors such as age, gender, height and weight, genetic and psychological aspects as well as physical exercise and blood values. The healthier your lifestyle, the fitter you are, the higher your Health Score will be.

A platform for all and sundry

All health data required here can be entered via the Internet. Values from digital accessories such as blood pressure monitors or bathroom scales can also be used online. Sporting activities can either be captured automatically via GPS-enabled smartphones or input manually on the website. As QUENTIQ's site is set up as a social network like Facebook, users can list their sports performance in the form of personal results and to-do tables or share them with friends and acquaintances in competition forums. This allows them to directly compare themselves with each other. QUENTIQ's offer is rounded off with a discussion forum.

QUENTIQ was launched in Germany, Austria and Switzerland at the end of 2011. Science and industry are also supposed to benefit from this platform and the statistical material gathered here. All data remains anonymous.

The target audience includes insurance companies, which will be able to differentiate between applicants more easily with the help of the test data, as well as telecoms

providers, who can hope to enjoy greater customer loyalty by incorporating QUENTIQ's offer.

As safe as houses – or a Swiss bank

Software engineers at Ergon were responsible for developing this platform. They had to reconcile conflicting factors here: A start-up like QUENTIQ typically only has limited financial resources at its disposal and a limited timescale for selling its products. This meant that everything had to be programmed swiftly and at low cost. Project leader and Business Development Manager André Naef explained that the platform needs to be as safe as a Swiss bank given the volumes of sensitive data involved here. It also has to be sufficiently flexible so it is scalable with high user levels, efficient and permanently available.

According to André Naef, they managed to pull this off: The project was completed in less than nine months. Compared with conventional web solutions, programming effort was reduced three or fourfold thanks to the application of cutting-edge technology. Instead of a Java-based component framework the scripting language Lua was used for frontend programming. This guarantees simple extensibility and high run speeds. Instead of a relational database the developers relied on the open-source document-oriented MongoDB database. This high-performance, schemaless database has only been available since 2009. It does without predefined table schemes and thus has no problem in dealing with frequent changes in structure and high data volumes. The system architecture is designed for maximum security, i.e. for complete anonymisation and encryption of sensitive data about health. The user's identity and the data remain entirely separate. It is nevertheless possible to index data and analyse it anonymously as required using the integrated management information system.