

SHOWCASE

Project name: cloud4health

Description: The "cloud4health" research project, is being funded by the German Federal Ministry of Economics (BMWi) for three years. The coordinator is Averbis GmbH and the partners are Fraunhofer-Institut SCAI, University Erlangen-Nürnberg, RHÖN-KLINIKUM AG, TMF.

It is known that Cloud computing allows flexible, scalable utilization of resources such as processing power, data storage, and applications over the intranet and Internet. Based on this technology, solutions have been within the cloud4health project with which large amounts of anonymized treatment data can be evaluated to address many different medical issues. For this purpose, resources are used which are located on computers distributed throughout an organization – in a "cloud".

The use of data from the Electronic Patient Record has so far been almost solely restricted to the use of structured data. However, most medical information is still only available as free text in medical reports and doctors' letters. Cloud4health now opens completely new opportunities to access this information from electronic patient records and use it to expand medical knowledge. With the aid of text analysis and data warehouse technologies, which are made available as a private or public cloud, as required, we intend in this project to address many different issues arising from research, development, and health economics. Three application scenarios have been developed initially: First, the evaluation of anonymized patient data with regard to the consequences of hip joint surgery, second, the development of procedures for automated investigation as to whether medical treatments are plausible and economical, and third, early-stage recognition of adverse side effects due to newly launched drugs with the aid of automated procedures. The project also aims to generate product solutions that can be used commercially.

For users, such as medical equipment and pharmaceutical manufacturers, health insurance companies, hospitals, and doctors, cloud4health offers potentials for cost reductions and improvements in their own offerings. Current market surveys confirm that the cloud offers enormous market potential, especially for secondary use of clinical routine data, and they see a billion euro market merely in the use of primary clinical

The cloud4health infrastructure is to be offered by a neutral non-profit organization – that is an idea crucial to the project. It is assumed that institutions in the healthcare sector will have more confidence in such a structure than in commercial providers who are already in the market with cloud services.

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