Digitization in the hospital sector -
What role do hospital information systems play?

Background

As part of the «DigitalRadar» project, an evaluation of the level of digital maturity of hospitals is being carried out in Germany in accordance with § 14b KHG. The maturity model developed with the help of the Chair of Management in Healthcare at the HSG enables a standardized and comprehensive evaluation of the degree of digitization of hospitals by conducting and evaluating a survey or self-assessment of the hospitals. In addition, the data also includes the manufacturer of the central hospital information system (HIS).

The HIS is the central billing and often also treatment & documentation system in hospitals. Thus, the HIS forms the central database for patient data, among other things. Modern HIS serve not only as data storage, but also as a control system and connection point for innovative third-party applications. Holistic digitization of hospitals is therefore only possible if HIS manufacturers focus on interoperability (e.g., through open modern interfaces) and innovations (e.g., new technologies).

However, the HIS market in Germany consists of a few large players whose systems are outdated and monolithic. Due to the Krankenhauszukunftsgesetz (KHZG), the push of politics for interoperable solutions and the dissatisfaction of clinical staff, some competitors with more modern technologies have emerged in recent years.

Data

In the course of the first phase of the «DigitalRadar» project, data points were collected and processed to assess the status quo of the degree of digitization in hospitals. These can now be used for scientific analyses and are available at the chair.

Potential research topics: «*HIS market mapping: interoperability & innovativeness*»

In the context of the bachelor or master thesis, the existing HIS landscape could be described according to e.g. regions, size & type of hospitals. In a second step, the HIS could be exploratively evaluated according to (1) level of interoperability and (2) level of innovation per scorecard. Here, a structured desk research would take place and information found would be logically processed according to categories. Finally, the data of the «DigitalRadar» could be used to show a correlation to the status quo of the degree of digitization.

If you are interested in and/or have questions about the above-mentioned topic area and would like to write your thesis here, we look forward to hearing from you at David.Kuklinski@unisg.ch and Justus.Vogel@unisg.ch. You can also propose your own research topic, we are happy to advise you. We can generally assist students in Medicine (Joint Medical Master), Business Administration, Economics and Internat. Relations.

We are looking forward to your exposé with the proposal of a concrete research question, methodology and approach!