Intelligent and resource-efficient monitoring system of process quality of disinfection and cleaning along the health care supply chain (abbr: ImproClean)

Press release for the project launch

Smart hygiene and cleaning monitoring: Another step towards the digitization of the healthcare system

The digital transformation of healthcare is one of the greatest scientific challenges of the 21st century. The challenges in healthcare have been steadily increasing worldwide for years. The costs are exploding, and the quality of patient care is declining. The devastating global effects of the CORONA pandemic alone show how vulnerable the healthcare value chains are to outbreaks of infections, without the cleaning and hygiene problems being detected in a traceable and reproducible manner. Based on this reason, the consortium of the project "ImproClean" - namely Gebrüder Heyl Vertriebsgesellschaft für innovative Wasseraufbereitung mbH, GERA-IDENT GmbH, STATCON GmbH and Hohenstein Institut für Textilinnovation gGmbH – striving towards the goal to develop effective, intelligent, and digital monitoring systems for the hygiene and cleaning processes. The project started on 02/01/23 and the project duration is two years. The project is supported by the Federal Ministry for Economic Affairs and Climate Action (BMWK) on the basis of a decision by the German Bundestag.

With such innovative quality assurance concepts in cleaning and hygiene, the typical challenges can be effectively tackled, such as the shortage of skilled workers, the fight against pandemics and nosocomial infections. In this moment, many important quality and hygiene data are missed as they are not recorded. As a result, companies and research entities with optimally bundled expertise collaborate to build an innovative technological

platform for intelligent monitoring of cleaning and hygiene measures along the healthcare value chain. The innovation consists of the following issues: (1) Establishment of sensor networks for monitoring of process water quality and (2) surface-related process parameters that are linked to smart threshold value detection, (3) development of soft sensors for prediction of hygiene and cleaning performance and (4) design and development of AI-based cloud applications. With these innovative steps, an important technological platform should be established to digitize cleaning and hygiene processes in the healthcare sector and further industrial areas.

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