

ACMIT

Austrian Center for Medical Innovation and Technology

Programme: COMET – Competence Centers for Excellent Technologies

Programme line: K1-Centres

COMET subproject, duration and type of project:

Skill transfer by innovative training concepts, 04/2014 – 03/2017, multi-firm

Objective hand hygiene control

A novel hand hygiene control system—“Hand-in-Scan”—for the direct and objective evaluation of hand rubbing has been developed and validated in the framework of ACMIT. Main target is to effectively reduce healthcare-associated infections and to achieve technology induced behavioural change supporting effective infection control. Hand-in-Scan objectively evaluates and records every hand disinfection event per person, and is able to generate statistics and reporting to the management, insurance companies or authorities.



Technology assured reduction of healthcare-associated infections

Effective hand disinfection has shown to decrease healthcare-associated infections (HAI) by at least 30%, which could manifest in an annual saving of €18bn in the Western world. Hand-in-Scan is the first to provide quantitative, computer-enhanced assessment of hand washing technique. It can be integrated into the healthcare quality management system at any institution. Education and training of the staff can be automated, thus hand hygiene levels can be maintained.

Hand-in-Scan has the unique capability to provide measurable and real-time feedback on the efficacy of hand hygiene. Employing ultraviolet (UV-A) light and digital imaging, the system highlights

disinfected versus unaffected areas after regular hand rubbing. With technology-aided education and objective verification, our solution can significantly reduce infections.



Successful landing

Two generations of Hand-in-Scan prototypes have already been used by 15,000 healthcare professionals in 7 countries. Key opinion leaders have been convinced by the technology, partners include the HUG teaching university hospital in Geneva, NHS Trust Hospitals in the UK and the AKH in Vienna.

14 peer reviewed publications support the technology and the efficacy. Strong collaboration has been built with national

health authorities and a specific campaign was launched targeting Ebola prevention.

The team and the technology received so far 18 innovation awards, most recently the successful technology transfer process with ACMIT was recognized by the Life-science-success 2015 Program's Science2Business Award.



Fig. 1: Current design of Hand-in-Scan

Impact

Technology validation has been achieved through clinical trials in Hungarian and Austrian hospitals. Since 2012 Hand-in-Scan has become an integral part of the medical doctoral training program at Semmelweis University.

The technology has been introduced to app. 100k people directly at the MEDICA Expo (Düsseldorf, 2014), Arab Health

Expo (Dubai, 2014 and 2015), Medtech-Pharma Expo (Nürnberg, 2014), ICPIE Exhibition (Geneva, 2013), SeaTrade (Hamburg, 2013), The Summit (Dublin, 2013) and other events. Over a dozen national and international TV broadcasts and two dozen press articles have appeared about Hand-in-Scan in the professional and general press.

The COMET competence center ACMIT and BME will joined their efforts with company partners to create the subsequent generations of the Hand-in-Scan solution, build use cases, support the clinical trials and to take the next bold step towards commercialization.



Fig. 2: Dashboard of the reporting system.

Contact and information

ACMIT

ACMIT GmbH

Viktor Kaplan-Strasse 2, 2700 Wiener Neustadt

T +43 2622 22859 - 0

E tamas.haidegger@acmit.at, www.acmit.at

Project coordinator

Dr. Tamás Haidegger

Project partners

Organisation	Country
Clariton Ltd.	Hungary
Semmelweis University	Hungary
Obuda University	Hungary

Further information on COMET – Competence Centers for Excellent Technologies:

www.ffg.at/comet

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