

# Innovation Academy 2011

*With the kind support of*

**SARAYA**

**Teleflex**

## 1<sup>st</sup> Prize: Tamas Heidegger

The Hand-in-Scan objective hand hygiene assessment device received the grand prize at the 1<sup>st</sup> ICPIC Innovation Academy in July 2011.



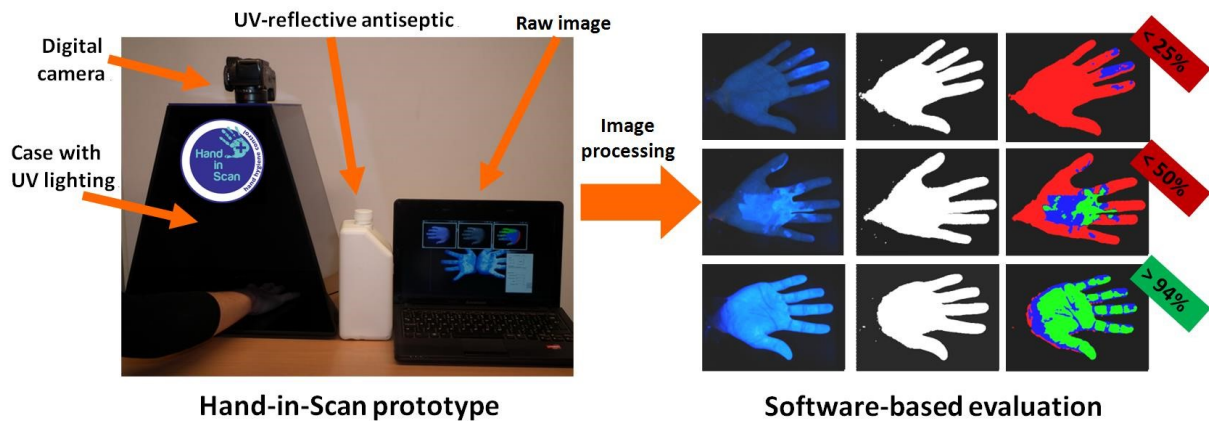
The Hungarian team and its international partners develop, validate and commercialize a hand hygiene system (Hand-in-Scan) for the direct and objective evaluation and control of hand washing.

The original idea—to use a non-invasive UV-marked commercial alcoholic hand rub—leave the medical hand washing workflow intact, and digital imaging and image processing was introduced to objectively determine the effectiveness of one's hand washing technique. Images are taken in the prototype box that gives repeatable and immediate

measurement of hand washing quality, based on the UV traces of the solution.

The Budapest University of Technology and Economics' (BME) spin-off company, together with the Semmelweis University and the Austrian Center for Medical Innovation and Technology (ACMIT) had been working on the system for two years, yet the ICPIC event was a major milestone for the project.

With the professional and financial support of the award and the committee, the team has successfully negotiated a venture capital investment, to develop the market-ready version of the prior prototype. In the meanwhile, the ICPIC fund enabled the team to continue its prototype development, leading to better technical solutions, while becoming an integrated part of the Semmelweis University's MD program. Having conducted initial microbiological studies, they are now ready to launch a major assessment campaign. The prestigious award opened many door for the innovators, who can now claim global partners on three continents, and also received further acknowledgment for their efforts, most recently, the LISA MedTech award at the Best of Biotech business plan competition in Vienna. The Hand-in-Scan team's main focus and mission remains to crack down on hospital acquired infections, and they continue to synchronize their work and educational programs with the WHO guidelines.



More information: [www.handinscan.com](http://www.handinscan.com)  
 Contact: Tamas Haidegger at [info@handinscan.com](mailto:info@handinscan.com)

## LATEST UPDATE ON THE PROJECT

# The Hand-in-Scan project

HandInScan Ltd.  
[www.handinscan.com](http://www.handinscan.com)



Founded on the heritage of Ignaz Semmelweis, our Hungarian start-up develops, validates and commercializes a novel hand hygiene control system—Hand-in-Scan—for the direct and objective evaluation of hand rubbing. Our mission is to effectively reduce healthcare-associated infections, and to eradicate contamination incidents at high-risk industrial procedures. Hand-in-Scan has the unique capability to provide measurable and real-time feedback on the efficacy of hand hygiene. Employing ultraviolet light and digital imaging, the system highlights disinfected versus unaffected areas after regular hand rubbing, providing an integrated quality assurance concept for medical care institutions and clean manufacturing sites. The original idea and validation results received strong interest from professionals, and the project was merited with the 1st ICPIC Innovation Academy Award in 2011, which gave a tremendous boost. In the past year, the system has performed in extended trial in many institutions, clearly showing the major improvement achieved by the staff in the quality of hand rubbing while employing the system. Hand-in-Scan received CE marking, and became the first system to offer computer-enhanced hand hygiene control at the point of care.



In the advent of the UNESCO Semmelweis year, the Hand-in-Scan team now doubled their efforts to create the brand new version of the device, ready to be distributed across continents and market domains all requiring a boost in hand hygiene. Having realized the general need for support in organization of hand hygiene campaigns, Hand-in-Scan now offers an official, accredited hand hygiene training program for hospitals and the general public. The team even ventured into kindergartens to start early on proper education. Further, a new version of the system is specially tuned for visitors of critical care units, providing them a basic education and verification on their hand hygiene, thereby extending the protective care to the neonatal babies or recently operated patients. In the past years, we have not lost the focus and the drive, to provide technology-aided solution to significantly reduce infections.

**Image caption:**

The Hand-in-Scan training tuned for kindergarten kids: a playful way of introducing personal hygiene best-practices at an early age.



Gloves do not provide 100% safety. Proper hand hygiene is essential in fighting Ebola.

## STAY SAFE!

## PROTECT YOUR STAFF!

Latex glove micropores

Vinyl glove micropores

Ebola Virus

### Hand-in-Scan ensures 100% hand hygiene

- Computer-enhanced evaluation
- Real-time feedback on hand rubbing
- Intuitive training through visual feedback
- Equally efficient for professionals and laymen
- Integrates to institutional quality management system
- Tested on 15,000+ healthcare workers
- Affordable daily solution

www.handinscan.com  
info@handinscan.com

**Hand-in-Scan advertisement to help in the fight against Ebola.**

**Have a look at the latest press releases on Hand-in-Scan by [clicking here](#)**



## Innovation Academy 2011 – 2<sup>nd</sup> Prize: Marc Rocklinger

### Device for the prevention and treatment of orthopaedic trauma

Since ICPIC2011, many improvements have been made to the product and business, e.g., in terms of development (software and hardware), manufacturing (suppliers selected, procedures & quality system established), and business (market entry strategy with podiatrist and physical therapist).

Clinical trials have been set up in the UK and a health economics study needed for reimbursement pointed out that the Powersens solution can save up to GBP 1.4 billion over 5 years to the National Health Service.

Once again, I want to thank you very much for all your support in our venture.

More information: <http://www.powersens.com/>



### "Power Insoles" The public health care device for the foot !



Foot pressure monitoring with Android software running on smart-phones and Pads.

Powersens develops smart electronic shoe-insoles called "Power Insoles" for the prevention and treatment of orthopaedic trauma.

The patented insoles placed inside the shoe, monitor plantar pressure throughout the day. The insoles help people to walk and prevent orthopaedic complications by informing the user through biofeedback signals on a smart-phone. They also retrieve foot data which enables health care providers to give better treatment. The innovative pressure sensors mean that the insoles are:

- Reliable
- Stand alone
- Simple, comfortable, washable

Contact  
Marc  
Rocklinger  
at:  
[marc@powersens.com](mailto:marc@powersens.com)



Marc Rocklinger, CEO  
EPFL 1995  
[marc@powersens.com](mailto:marc@powersens.com)

*"Power Insoles helps you to monitor your physical activity safely, anywhere, anytime ! This enables you to prevent foot and orthopaedic disease, and to treat yourself. There is something powerful in getting this feedback yourself !"*

*"Powersens market in Europe and USA each year is of:  
7 million diabetic foot ulcers  
5 million orthopaedic prosthetic implants  
3 million cerebral palsy & stroke rehabilitation"*

*"A foot plantar ulcer has a high treatment cost EUR20'000 and high recurrence rate 56% per year that leads, in most cases, to a lower-limb amputation. For instance, at Switzerland's Geneva Hospital we have 3 amputation each week. This means we definitely need Powersens solution !"*

*"Power Insoles is a low risk medical device that fits easily in any shoe. Also, the electronic components are highly integrated which makes it affordable for everyone. Furthermore, the multiplatform software deployed in mobiles, pads and PC's is easy to use with a friendly user interface, so that everyone enjoys it !"*



Pascal Vacherand  
VP Sales & Marketing  
ESSCA1987  
[pvd@powersens.com](mailto:pvd@powersens.com)



Mathieu Assal, PD Dr  
Foot surgeon  
[m.assal@powersens.com](mailto:m.assal@powersens.com)



Frédéric Brönnimann, CTO  
EPFL1994  
[f.bronnimann@powersens.com](mailto:f.bronnimann@powersens.com)



2009 HUG  
Innovation  
trophy



Venture 2010  
Top25 Business  
Idea Finalist



Supported  
project

### Awards

venture leaders  
2010 winner  
CTI Startup

Swiss National  
Start-up Team



2011 Startup  
competition winner



2<sup>nd</sup> @ Innovation  
Academy ICPIC2011



Headquarters  
**Powersens SA**  
c/o Fongit SA  
Chemin des Aulx 18  
1228 Plan-les-Ouates  
Switzerland  
CH +41 79 788 9251  
[info@powersens.com](mailto:info@powersens.com)

Subsidiary  
**Power Insoles Sàrl**  
Chemin des Loies 21  
74380 Bonne  
France  
FR +33 676 120 206  
[www.powersens.com](http://www.powersens.com)

## Innovation Academy 2011 – 3<sup>rd</sup> Prize: Dick Zoutman

In the two years that have passed since ICPIC 2011, the peer-recognition, review, and subsequent industry and media awareness resulting from the Innovation Academy prize awarded to me, has played a profound role in the advancement of AsepticSure.



It [AsepticSure] has gone from being the subject of an innovative Canadian research project to a market-ready, globally-patent protected, internationally viable commercial venture – a venture that promises a massive reduction in hospital acquired infections [including tuberculosis] and the certainty of saving thousands of lives annually, worldwide.

The Academy's thorough peer review, excellent feedback and constructive criticism of my work on the AsepticSure project has proven to be as rewarding as it has been valuable. It afforded the opportunity to have my work subjected to intense scientific scrutiny as well as an in-depth analysis of its business merits.

For me personally, being the recipient of such a meritorious prize has provided clear validation that my work was *and is* of solid scientific merit and value. For the rest of our research team, it has given them the stimulus to not only further refine the AsepticSure system, but to push new boundaries in the field of HAI research.

More information: [www.medizoneint.com](http://www.medizoneint.com)  
Contact Dick Zoutman at:  
[zoutmand@queensu.ca](mailto:zoutmand@queensu.ca)



## Innovation Academy 2011 – 4<sup>th</sup> Prize: G. Lacey

SureWash:Training is a mobile hand hygiene training and assessment system that teaches staff how to wash their hands in accordance with the WHO protocol, giving them real-time, on-screen feedback on their technique.



In recent months we have enhanced the system to incorporate a 3D depth camera, in addition to the normal colour camera used for hand hygiene assessment. The new camera allows SureWash to be used in a completely touch-free manner, and will facilitate the development of SureWash:Surgery, our system to guide staff through surgical preparation. It also allows our over-sink unit to recognise cases where a tap was turned off using fingers instead of elbows. The housing for the two cameras has been completely redesigned to provide better lighting, to be aesthetically more pleasing and to be easier to clean.

SureWash has also been working with manufacturers of alcohol-based hand rub to refine the steps that comprise a hand hygiene event. We will shortly be performing trials to determine the relative effectiveness of different hand hygiene routines.

More information:

[www.surewash.com](http://www.surewash.com)

Contact Sean Bay at:

[sean.bay@surewash.com](mailto:sean.bay@surewash.com)





## Innovation Academy 2011 – 5<sup>th</sup> Prize: Alain Gervais

Our project was initiated with our partner Professor J Corbeil and his research group at the University of Laval, Quebec, Canada, in collaboration with Autogenomics (Vista, CA, USA), a company that had developed a microarray-based, multiplexing, molecular platform named Infinity®.



The objectives were to develop and produce a molecular diagnostic solution for the serotyping of *Streptococcus pneumoniae* directly from clinical samples and to obtain the necessary United States Food and Drug Administration clearance/approval to market the product in the USA.

Our results from clinical trials showed that this diagnostic solution could be used satisfactorily on blood, cerebrospinal fluid, and nasopharyngeal samples.

However, for this technique to be completely automated and usable on a large scale, we required that Autogenomics produce cartridges containing primers and different master mix solutions.

Unfortunately, due to financial considerations in 2012, the company did not put this project on their priority list. At present, we continue to use this genotyping system for research purposes only in the expectation of a further positive development in 2013.

Contact Alain Gervais at: [alain.gervais@hcuge.ch](mailto:alain.gervais@hcuge.ch)

