PROJECT SMILES AWARDED FOR UN NATIONAL ENERGY GLOBE AWARD 2014

Project FP7-SME-2007-2: **Sustainable Measures for Industrial Laundry Expansion Strategies: Smart Laundry - 2015 – SMILES,** in which the Faculty of Health Sciences, University of Maribor, Slovenia participated as a partner, received the **UNITED NATIONS NATIONAL ENERGY GLOBE AWARD 2014** in the category **WATER**.
The solemn National Award Ceremony was held at the Old Vine House in Lent, Maribor (SI) on June 17th, 2014. Slovenian Radio, Newspapers and TV paid attention to this event.

ENERGY GLOBE NATIONAL AWARD CERTIFICATE 2014

Energy Globe Award is the most prestigious Energy - Environmental Award of the United Nations Environmental Programme, which includes more than 165 countries all around the world.
Energy Globe's aim is to create awareness of the necessary solutions to our environmental problems and shows that each of us can contribute their part.

The campaign is carried out under the patronage of UNESCO and in cooperation with UNEP under the slogan **'SAVE THE WORLD BY ACTING NOT BY TALKING - SUSTAINABILITY STARTS WITH YOU'**.
Please, do visit www.energyglobe.info
(*On this website you can select 'Slovenia' under 'Select Country' and wait: then project SMILES will appear; thereafter you can push the button 'More about project'*)

Project **SMILES** was selected by Slovenia from over 1000 project submissions as the best ecological and sustainable project for the '**UN Energy Globe National Award**'.

JURY-RATING FOR PROJECT SMILES

Jury-Rating
Responsible resource consumption including energy efficiency and efficient use of water are important to leave an intact environment for future generations. This year's winner of the National Energy Globe Award in Slovenia has developed 16 new sustainable key technologies for industrial laundries that will contribute towards saving both water and energy. Implemented on a large scale across the EU or even globally, this initiative has the potential to lead to significant energy savings as well as CO2 and water reductions. Congratulations for this initiative!

AWARD CEREMONY in LENT, MARIBOR (SI) on JUNE 17th, 2014
***from left to right*:**
Dr. Peter Hasslacher (*Energy Globe Awards, AU*);
Prof. Dr. Sonja Šostar Turk (*Faculty of Health Sciences, University of Maribor, SI*)
Ing. Walther den Otter (*Project director SMILES, Institute ACT, NL*)
Assoc. Prof Dr Majda Pajnkihar (*Dean of the Faculty of Health Sciences, University of Maribor, SI*)
Dr. Andrej Fištravec (*Mayor of Maribor, SI*)

The Slovenian project team was led by **Prof Dr Sonja Šostar Turk**, Vice Dean for Postgraduate Study, Faculty of Health Sciences, University of Maribor, SI.
The Faculty of Health Sciences of the University of Maribor, SI was the applicant for the Energy Globe National Award 2014.

PRICE WINNER PROF DR SONJA ŠOSTAR TURK with AWARD CERTIFICATE

The Project Consortium included 16 partners from 8 EU Member States (Belgium, Netherlands, France, Germany, Denmark, Poland, Slovenia and Croatia).
The project was coordinated by **Federatie Belgische Textielverzorging (FBT), Belgium** and was directed by **Walther den Otter (ACT) and Maarten Van Severen (FBT);** and at the start also by the late **Prof Dr Ir Foppe de Walle (PROMIKRON3**).

RTD-PERFORMERS OF PROJECT SMILES AT AWARD CEREMONY
***from left to right*:**
Prof. Dr. Ivo Soljačić *(TTF-UZ, University of Zagreb, HR)*
Assist. Prof. Dr. Sabina Fijan (*Faculty of Health Sciences, University of Maribor, SI*)
Božo Emeršič – Insurance company GRAWE, AU
Prof. Dr. Tanja Pušić *(TTF-UZ, University of Zagreb, HR)*
Dr. Peter Hasslacher (*Energy Globe Awards, AU*);
Prof. Dr. Sonja Šostar Turk (*Faculty of Health Sciences, University of Maribor, SI*)
Dr. Andrej Fištravec (*Mayor of Maribor, SI*)
Ing. Walther den Otter (*Project director SMILES, Institute ACT, NL*)
Assoc. Prof Dr Majda Pajnkihar (*Dean of the Faculty of Health Sciences, University of Maribor, SI*)
Ir. Carina de Walle-Zegwaard *(Promikron3, NL)*
Ir. Joke de Walle-Sevenster *(Promikron3, NL)*

Project **SMILES** investigated, developed and implemented 16 new sustainable Key Technologies for water and energy savings and CO_2 reduction of EU industrial laundries with its practical utilisations.
The project findings have resulted in a realistic future reduction of **45% energy usage, 30% water usage and 60% CO_2-emissions** of the Industrial Laundry sector in EU-28, serving both the ecological as well as the economical issue.

The *AVERAGE* EU consumption of 21 L of water and 6,5 kWh of energy for washing of 1 Kg Laundry can be lowered now to 14 L of water and 2,9 kWh of energy.
And even lower reductions in *INDIVIDUAL SITUATIONS* are possible:
the current lowest **measured** levels are **3 L OF WATER** and **0,9 KWH OF ENERGY FOR WASHING OF 1 KG LAUNDRY**.
Furthermore, new experiments with levels of 2 L Water and less are still on going.

Moreover, the project results did also prove that these substantial savings can be achieved while maintaining **GOOD HYGIENE/DISINFECTION** as well as **GOOD QUALITY** aspects of the Laundry.

POTENTIAL SAVINGS by 16 SUSTAINABLE KEY TECHNOLOGIES

Key Techno -logy	Title	Expected savings WATER Consumption (*single technology*)	Expected savings ENERGY Consumption (*single technology*)
1	**Water reduction**	**71 %**	**20 %**
2	**Water reuse / Membranes**	**20-40 %** **70-80 %**	**5-10 %** **20 %**
3	Reduction of microorganisms in reused-water	-	13 %
4	Supercritical water gasification	*Expected 90 %*	10 %
5	Low-temperature washing	-	15 %
6	**Direct-gas-heated laundry**	**-**	**40 %**
7	**New textile drying**	**-**	**25 %**
8	Combined-heat-power	-	25 %
9	CO_2-emissions reductions	-	45 %
10	Energy buffers	-	5-12 %
11	Chemicals reduction	10 %	20-25 %
12	Cleavable detergents	10 %	-
13	Electrochemical bleaching	5 %	Higher consumption level
14	Ultrasonic cleaning	Higher consumption level	Higher consumption level
15	Reliable textile hygiene		
16	Synthesis Smart Laundry-2015	>30 %	>45 %
	TARGET SMILES	**30 %**	**45 %**

Project SMILES main GOAL was the development and design of the **SMART LAUNDRY-2015** for EU Industrial Laundries through combinations of the RTD results of the 16 sustainable Key Technologies resulting in lower usages of both water and energy as well as less CO_2-emissions.
SMART LAUNDRY-2015 is a **GUIDELINE** for each individual industrial laundry in the EU-28 for the savings of its water and energy consumption as well as for reduction of its CO_2-emissions.

Any European Industrial Laundry - *small and medium enterprises, as well as large enterprises* - can make its own selection with this Guideline for the **ROADMAP** of its

own future equipment and process investments.

The new knowledge and insights of less water and energy consumptions as well as reduction of CO_2-emissions by implementation of **SMART LAUNDRY-2015** can be disseminated to the Industrial Laundering sector for building **THE SUSTAINABLE WORLD OF TOMORROW**.
The entire Industrial Laundry Sector can be motivated to become active in the sustainable area by using this **TOOL**.

New build Industrial Laundries can apply the design of SMART LAUNDRY-2015 immediately.
Existing individual EU industrial laundries can make use of a phased implementation of the new Key Technologies for their **selected investments in the near future** by a **COMPUTER EXPERT MODEL**, specifically developed in project SMILES.

Furthermore, with this Computer Expert Model it is also possible to **COMPARE CURRENT with PAST CONSUMPTION LEVELS** of Industrial Laundries as well as **BENCHMARKING** own consumption values with the consumption values of other Industrial Laundries in other EU Member States.

COMPUTER EXPERT MODEL
SIMULATION TOOL for WATER and ENERGY REDUCTION

The Consortium of project SMILES consisted of 16 partners in the entire value chain of the Industrial Laundry sector in EU-28, selected from 8 EU Member States:
8 RTD-Performers (Universities and Knowledge Centres) cooperating with 8

industrial partners, among which end-users as Industrial Laundries, Laundry Associations and Detergent Supplier. Their logos are shown hereunder.

LOGOS of 16 PROJECT PARTICIPANTS of EU FP7-PROJECT SMILES

The RTD-Performers with their pro-active industrial laundry partners are also presented in in the Table hereunder.
They have carried out their work and their part of contribution for the **sustainable world of tomorrow**.
Now it is time for the other Industrial Laundries in the Laundry Sector worldwide to embrace the design of SMART LAUNDRY-2015 and to invest in the application of the 16 Sustainable Key Technologies.

SMILES RTD-PERFORMERS *(green)* with PRO-ACTIVE LAUNDRY PARTNERS

PROJECT PARTICIPANT SMILES	COOPERATING INDUSTRIAL LAUNDRIES	COUNTRY
FBTvzw *(Laundry Association)* **project coordinator**	Wasserij De STER, Herselt Nieuwkuis De ZWAAN, Brugge Wasserij PERFECTA, Brussels RAPID industry, Ingelmunster MALYSSE, Kortrijk Wasserij CWS-BOCO Belux NV, Puurs (Mechelen) Blanchisserie A&M, Vottem (Herstal) Wasserij De WITTE VLINDER, Passendale	Belgium
URBH *(Laundry Association)*	Public hospital Laundry, Perigueux Hospital Laundry of Le Havre Groupement de Cooperation Sanitaire du Pays d'Aix (GCSPA), Aix-en-Provence Public hospital Laundry, Chartres Public hospital Laundry, Sedan Public hospital Laundry, Vichy Hospital Laundry CTTH, Beauvais Public hospital Laundry, Moulins-Yzeure Public hospital Laundry, Sarreguemines Public hospital Laundry, Blois	France
SPP *(Laundry Association)*	Various Industrial Laundries	Poland
CCS-MT *(Laundry Association)*	Pralnica LUCIJA d.o.o., Portoroz Laundry SALESIANER MIETTEX PERITEKS, Trzin	Slovenia
CCE-ITD *(Laundry Association)*	Laundry SALESIANER MIETTEX LOTOS, Zagreb Laundry DORATEKS d.o.o, Zagreb Laundry PLAT d.d, Dubrovnik	Croatia
HOGESCHOOL GENT *(RTD-Performer)*		Belgium
SCHIEKE BVBA *(RTD-Performer)*		Belgium
CTTN-IREN *(RTD-Performer)*		France
WFK-CTRI *(RTD-Performer)*		Germany
UM (*RTD-Performer)*		Slovenia
TTF-UZ *(RTD-Performer)*		Croatia
PROMIKRON3 *(RTD-Performer)*		Netherlands
ZEEKANT (*Industrial Laundry)*	Stomerij ZEEKANT, Middenbeemster	Netherlands
KREUSSLER & Co *(Detergent supplier)*		Germany
Institute for ADVANCED CLEANING TECHNOLOGIES *(RTD-Performer)* *+ Subcontractant SPARQLE (RTD-Performer)* *+ Subcontractant TI (RTD-Performer)*		Netherlands Netherlands Denmark
BD VASK A/S *(Industrial Laundry)*	BD VASK A/S, Bjerringbro	Denmark

Ing. W.A.J.L. den Otter
Project Management Team SMILES