Life HEROTile Project – High Energy savings in building cooling by Roof TILEs shape optimization toward a better above sheathing ventilation (LIFE14 CCA/IT/000939) – aims to innovate construction sector in terms of cooling during summer season, involving partners all around Europe. More info on **www.lifeherotile.eu**

Life HEROTile Newsletter Project: let's start!

Life HEROTile team will be happy to send all contents three times per year, every four months period, to everyone should be interested (to subscript, **click here**!). The aim of this project is to create a Life HEROTile community, able to share all project updates. The Newsletter is expected to be the main tool to disseminate the best practices concerning pitched roofs and roof tiles technologies, at the national and international level. The Newsletter will involve contents about *ongoing activities, technical interviews and scientific on-depth analysis* concerning Life HEROTile Project; it will be published in January, May, September. All contents will be available via mail, by subscription; on **Life HEROTile Project website**; on Life HEROTile Facebook and Twitter Homepages.

PRESS RELEASE

Life HEROTile at KLIMAHOUSE 2017

Bozen, January 2017, 26th -29th

The 12th edition of ***Klimahouse fair*** has just ended. Klimahouse – an international fair about energetic saving and building technologies – has been confirmed as a reference for the construction sector, thanks to the participation of Institutions, opinion leaders, architects, and the most innovative companies. Klimahouse took place in Bolzano, a town in the heart of South Tyrol and Middle Europe.

The strategic location of the trade show provides the perfect meeting point for European countries to exchange ideas, innovations and insights on the latest trends in the energy-efficient and sustainable construction sector. Thanks to a good mix of exhibition offerings presented by more than 450 exhibitors, and a comprehensive information program, that included congresses, workshops and guided tours to energy-efficient buildings, Klimahouse positioned itself as the leading trade show on sustainable construction. To better understand what we are dealing with, here below **a few numbers of the fair**. At 2017 edition, LHT team carried out several dissemination activities, as Klimahouse fair is a reference concerning environmental sustainability technologies and solutions. At the fair there were four exhibition stands, corresponding to the following LHT Partners: ANDIL, Industrie Cotto Possagno, MONIER and TERREAL.

Concerning activities, there were:

- 3 roll-up
- 2 mock-up with Marseillaise and Portuguese bricks.
- 250 brochures ITA/EN

Furthermore, the LifeHEROTile Project has been mentioned during an interview to ANDIL, held by **INGENIO**, available online on **YouTube**.

Click here to go to the Photo Gallery!

INTERVIEW

Meet Life HEROTile Coordinator!

Interview to Mario Cunial – Industrie Cotto Possagno

Mario Cunial was born in Bassano del Grappa (VI) in 1962. He has always been in touch with roofing tiles, as he has grown in Possagno, that is renowned for terracotta roof tiles district. ***Industrie Cotto Possagno*** *was born in 1998 as the merge of historical Possagno companies. Here, he currently is Vice-president and executive Manager. Since 2012 he is one of ANDIL Vice-*

presidents and member of TBE Executive Committee. He is Life HEROTile Project coordinator.

You're are both Industrie Cotto Possagno Vice-president and Life HEROTile coordinator. Could you explain why you decided to invest in this project, thus in research and innovation? What was your purpose? What are the expected results? Industrie Cotto Possagno, which is a leader in roofing tiles and ventilated roof systems, constantly invests in economic and human resources, devoted to future products and services development. Particularly, ICP team believes in research and innovation as opportunities to progress in buildings and roofs sustainability. Several analysis highlighted the performances of pitched roofs covered with discontinuous elements, which are better than those covered with continuous elements. This evidence came with doubly ventilated photovoltaic tiles and shingles, whose summer performances were 25% higher - in terms of electrical production - than traditional solar panels merged in the roofs. Each small copy or shingle has a natural unlimited ventilation. Life HEROTile project aims to realize of high breathability tiles, protecting blanket coverage from bad weather. The clay roof tiles obtained by first experimentations give 40% of consumption lower than metal coverage, and 60% lower than flat roofs.

What is the state of art of the project? Marseillaise and Portuguese tiles have been realized, and they will be installed in a few months in two buildings. Meanwhile, compared analysis on the two mock-ups in Ferrara (ITALY) and Yerucham (ISRAEL) are carrying on. These data are the basis to realize the computing program SENSAPIRO (Software Energy SAvings PItched Roofs), property of ANDIL. The program will be distributed *free licence* to European architects and heating engineers. Thanks to SENSAPIRO, performances of the roof will be calculated in relation to the site, the slope, and the blanket coverage.

You chose Yerucham (ISRAEL) to build up two of the four mock-ups previewed by the project. Why did you choose this site? How are you able to collect data as far as you are from the site? The team chose Yerucham to collect data as much as possible: particularly, a wetter and colder weather in Ferrara; windier and hotter weather in Israel.

Yerucham is in Negev Desert – 30 kilometers far from Beersheba City, 400 meters on sea level with typical desert's weather (windy and with great thermal excursions). As far as measurement is concerned, the experimental buildings have been connected to corresponding data transmission stations. They are constantly monitor by the control room, that are managed by University of Ferrara – coordinated by Professor Zannoni and Professor Bottarelli.

Have you already had any results? How could they affect the construction sector?

As far as lab findings are concerned, analysis on new tiles and consumption measures showed that prototype tiles have double breathability compared to the traditional ones. Moreover, energetic savings are effective, particularly compared to cooling consumption during summer. For these reasons, Life HEROTile team is optimistic about the achievement of the expected results. Tiles to be projected and produced in pilot plants represent 60% of roof tiles European production. In this sense, Life HEROTile products should cover a great part of the market, above all in Mediterranean area, with 130 Million of inhabitants in South-Europe (almost 5,2 Billion square meters of roofs). Here below the aims of reducing environmental damages in South-Europe buildings:

- 10% greenhouse gas emission
- 50% carbon footprint related to cooling (compared with pitched roof standard)
- 5% atmospheric pollution
- 5% electric consumption due to air conditioning in urban areas
- 25% highest temperature under-tile air
- 50% strengths of specific cooling

The project complies energetic European policies - that have the aim to reduce CO_2 emissions – by guarantying energetic saving in air conditioning (40% of total demand of buildings consumed energy). The purpose of the project is to reduce the energy needed

by cooling. This need is not yet regulated by governments in the majority of European countries – above all in South Europe, where it is important to care about summer energetic consumption. Roofs become strategic elements to achieve the aim of reducing energetic consumption of buildings by 2050. Life HEROTile Project will support the construction sector (restoration and new buildings) to reach the aim of efficiency required.

As an International company – nowadays you have to face several challenges due to Global Warming, climate change, sustainability, global crisis. Life HEROTile Project apart, are you focusing on other projects? Challenges in construction sector consist in creating buildings and sustainable cities with highly performing houses. These previsions will need a definition of EPBD, in which performances and durability will be related. As an International company, ICP believes that developing these solutions will drive to an effective emission reduction. The achievement to build "smartly and sustainably" – particularly in Mediterranean countries – must merge insulation levels and thermal inertia. It allows to control winter and summer air conditioning, without affecting summer energetic consumption. The use of construction systems based on clay bricks (thanks to its mass value and thermal capacity), guarantees the controlling of thermal flows coming in the building (sunlight, conductive transmission of external walls) and the management of internal loads (people, home appliances), that are the principle reasons of houses discomfort. Next challenge to face will be to restore our territories as "Mediterranean NZEB area", that will be able to merge energetic saving, house comfort and healthy environment. Marco Vitruvio Pollione, in his treaty *De architectura liber I, 2* underlines:

"Haec autem ita fieri debent, ut habeatur ratio firmitatis, utilitatis, venustatis."

namely

"In all things that must be done, the aim is solidity, utility and beauty"

Life HEROTile Project apart, we are analyzing new products that should be able to merge performances useful to houses energetic saving, on one hand; on the other side, they should guarantee direct benefits to environment, by previewing blanket coverage able to reflect solar radiations. Coverage whom reflectance is guaranteed will allow to reduce heat insulation effect and energetic consumptions.

(LIFE14 CCA/IT/000939)