



FP7- SME-2012

ClimawinDA 315324



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Project full title: Demonstrating the effectiveness and commercial potential of CLIMAWIN intelligent windows for energy efficiency in retrofit of buildings in Europe
Project Acronym: ClimawinDA
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Organisation name of lead contractor for this deliverable	Solearth Ltd SAL
Participants(s)	Brian O Brien
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Project co-funded by the European Commission within the Seventh Framework Programme (2007- 2013)

Dissemination Level

PU	Public	
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	X
CO	Confidential, only for members of the consortium (including the Commission Services)	X

ABBREVIATIONS

FP7; EU 7th research Programme
Ho; Horn Vinduer (SME)
Rau; Rauh Fensterbau (SME)
SAL; Solearth (SME)
SME: Small to medium enterprise partner
RTD; Research partner.

1. Publishable Summary (Overview)

CLIMAWIN is an advanced ventilation window system developed by Solearth Architecture in Dublin, Ireland, Rauh Fensterbau in Sassendorf, Germany and Horn Vinduer in Lunderskov, Denmark with funding from the EU FP7 Programme's Research for the Benefit of SME initiative and with the (previous) R&D assistance of Fraunhofer Institute, Aalborg University, Denmark and The Electronics Department of the University of Minho, Portugal

Windows and ventilation are a significant source of heat loss, and discomfort particularly in older buildings, across Europe. The new technology improves energy efficiency by direct (passive) heat recovery through windows in cooler climates or seasons and in warmer climates or seasons by emitting daylight without heat gain. It also improves comfort and air quality greatly. Climawin technology is suitable for both residential and commercial buildings, is ideal for renovation and is particularly appropriate for renovation of older domestic buildings in which energy efficient ventilation systems are rare. The new windows have static U values as low as 0.7W/m²K and can reduce annual energy consumption by 20% annually on an average modern European house.

The Climawin DA Project has completed its 36 months work and the partners have succeeded in perfecting the earlier window prototypes, evolving them into high quality wooden and aluclad frames for different architectural styles and applications, developing bespoke components (valves, controls and electronics) specific to Climawins functioning and have developed state of the art manufacturing facilities at in Lunderskov and Sassendorf.

In the second period of the project, 7 pilot demonstration testbeds have been installed in Denmark, Ireland, Portugal, Germany and Italy and site monitoring of their performance is being carried out. Results show the windows performing as expected (preheating incoming air by up to 10 degrees and maintaining air quality (CO₂ and RH) at a comfortable level) and most are available to see online. Monitoring will continue until at least 12 months data has been gathered on each site. Open days have been held at each of the pilot sites and interviews about the experience of ordering, and using the windows, and the benefits experienced, have been made and are also online at <http://climawin.eu/links-to-testimonials/>

Climawin will be made available to customers in 2 ways, firstly by direct production and sale of completed Climawin windows (by 2 of the founding partners) and subsequently by sales of Climawin technologies to licenced production partners to enable them to offer their own Climawin windows (with full quality control) in local markets across Europe. Marketing, enquiries and IP protection will be managed by a central company owned by the 3 partners. A business plan with a tool for assisting customers and others to make informed cost benefit evaluations about whether to, or how to install, Climawin has also been developed.

The partners have achieved a number of significant milestones in terms of marketing and promotion of Climawin as well as trailing and soliciting feedback from testbed users, visitors to expo stands and at the Open Days held at the Pilot Sites. During the project, Climawin window products (of all architectural styles) and components were put on exhibit at 12 major trade fairs/expos in Denmark, Norway, Germany and Italy. Brochures have been made and translated into 6 languages and are available at <http://climawin.eu/brochures/>

Patent and trademark protections have been activated for the products.

Climawin has now been brought to market as a high quality certified and guaranteed window product available across Europe through www.climawin.eu/ Climawin is intended to be scaled up in terms of market availability by the creation of licensed partnerships with window manufacturers across Europe and companies who wish to incorporate CLIMAWIN technology and know-how in their product catalogues. Applications from companies are invited www.climawin.eu/ The manufacturing partners are reporting the beginning of order pipelines being developed based on these and other dissemination efforts.