Deliverable D4.1

Identification of the best solutions for an easy installation and disassembly of panels based on architectural evaluation and costs

WP4

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InnoWEE D4.1 “Identification of the best solutions for an easy installation and disassembly of panels based on architectural evaluation and costs”

**Document History**

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The Deliverable 4.1 “Identification of the best solutions for an easy installation and disassembly of panels based on architectural evaluation and costs” is a confidential report delivered in the context of WP4, Task 4.1: “Definition of installation/dismantling technologies and methodologies” concerning the definition of a method of installation of prototyped panels.

The aim is to identify the best solution in term of ease and quality of installation to obtain the final insulating geopolymeric panel surface. An in-depth study was be done in relation to the usable fastening systems, especially for the ventilated façade for which fixings play a main role in the installation. In this document a remarkable part is dedicated to a detailed description of the installation test of the panels carried out in Padua, Italy, on April 2018.

Furthermore, particular attention will be given to the costs of operation, evaluation that will be useful to the whole costs cycle analyses that will be developed.

The report includes the following information: description of the ETICs, Ventilated and radiant ceiling/walls panels, an accurate description of the anchoring systems, explanation of installation and dismantling of the panels, mention of pilot and real demo installation sites and an evaluation of costs always related to installation.
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### Abbreviations

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<td>InnoWEE</td>
<td>Innovative pre-fabricated components including different Waste construction materials reducing building Energy and minimising Environmental impacts</td>
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<tr>
<td>CDW</td>
<td>Construction and Demolition Waste</td>
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<tr>
<td>EoL</td>
<td>End of Life</td>
</tr>
<tr>
<td>EPS</td>
<td>Expanded PolyStyrene</td>
</tr>
<tr>
<td>ETICs</td>
<td>External Thermal Insulation Composite System</td>
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<tr>
<td>FEM</td>
<td>Finite Element Modelling</td>
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<tr>
<td>HDG</td>
<td>High Density Geopolymer</td>
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<tr>
<td>PGA</td>
<td>Peak Ground Acceleration</td>
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<tr>
<td>SRM</td>
<td>Secondary Raw Material</td>
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<tr>
<td>WGP</td>
<td>Wood Geopolymer Panel</td>
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<tr>
<td>WP</td>
<td>Work Package</td>
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<tr>
<td>XPS</td>
<td>Extrude PolyStyrene</td>
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### Symbols

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<tr>
<td>$f_y$</td>
<td>Yielding Strength</td>
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<tr>
<td>$q_p$</td>
<td>Wind pressure</td>
<td>[N m$^{-2}$]</td>
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<tr>
<td>$v_{b0}$</td>
<td>Basic Wind Velocity</td>
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