# WiSense IoT at the Scrovegni Chapel

## Connected light: innovative sensors to improve the colour rendering of Giotto’s frescoes

Innovation, Internet and interaction are the keywords around which WiSense s.r.l. operates. This innovative start up was founded in 2014 with the aim of marketing the results of research conducted in the Internet of Things (IoT) sector. WiSense has created a complete Wireless Sensor Network (WSN) solution for the Internet of Things based on an IPv6 (Internet Protocol version 6) structure of sensor nodes that can be configured to meet customer requirements by personalising sensing and activation functions. At the heart of the solutions the proposes is the so-called WSNode, a concentration of technology that allows any object, person or animal to be connected to the Internet by assigning it a globally unique address. A network of sensors is then set up, which allows direct interaction to take place via a normal Internet browser, smartphone app or WiManager web application. These tools allow devices to be configured without specialised assistance and for information or commands to be exchanged with the sensors installed.

This technology is so versatile it can be used in any number of sectors and with numerous applications developed over the years from Ambient Assisted Living to high precision agriculture and smart cities.

One issue that is particularly dear to WiSense is energy saving and consumption optimisation via the careful monitoring and management of public, industrial or private lighting systems. This interest in the world of lighting has brought WiSense into contact with iGuzzini Illuminazione S.p.A., a leading international company in this sector. One particular example of the synergic, innovation-focused collaboration between these two companies is the lighting system for the Scrovegni Chapel in Padua, where the lighting solution designed by iGuzzini Illuminazione S.p.A has been combined with sensor-based monitoring and a WiSense control system. To use an expression coined by iGuzzini Illuminazione, the result is a “restoration of perception” thanks to which the Giotto frescoes have been noticeably enhanced and given new life. The perfect illumination of every wall, in terms of both intensity and colour rendering, is achieved by varying the artificial light according to the level of natural light so that no shadow zones or visual dips are present whatsoever. The result is a unique experience for all visitors who can finally appreciate the full magnificence of these paintings at any time of day and during any season of the year. This is a concrete and tangible example of a highly successful project in which the innovations produced by the WiSense start up meet the experience of a major company like iGuzzini Illuminazione to benefit the general public by creating a more satisfying and exciting experience thanks to the use of light and the IoT.

For more information please visit

*the WiSense website*: [*www.wisense.it*](http://wisense.it/)

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| **WiSense S.r.l.** |  |  |
| Paola Pierleoni Chief Executive Officer (+39) 0712204847  (+39) 3358116563 [p.pierleoni@wisense.it](mailto:p.pierleoni@wisense.it) | Alberto Belli  Chief Operating Officer  (+39) 339 2399406  [a.belli@wisense.it](mailto:a.belli@wisense.it) | Lorenzo Palma  Chief Technology Officer  (+39) 347 788378  [l.palma@wisense.it](mailto:l.palma@wisense.it) |