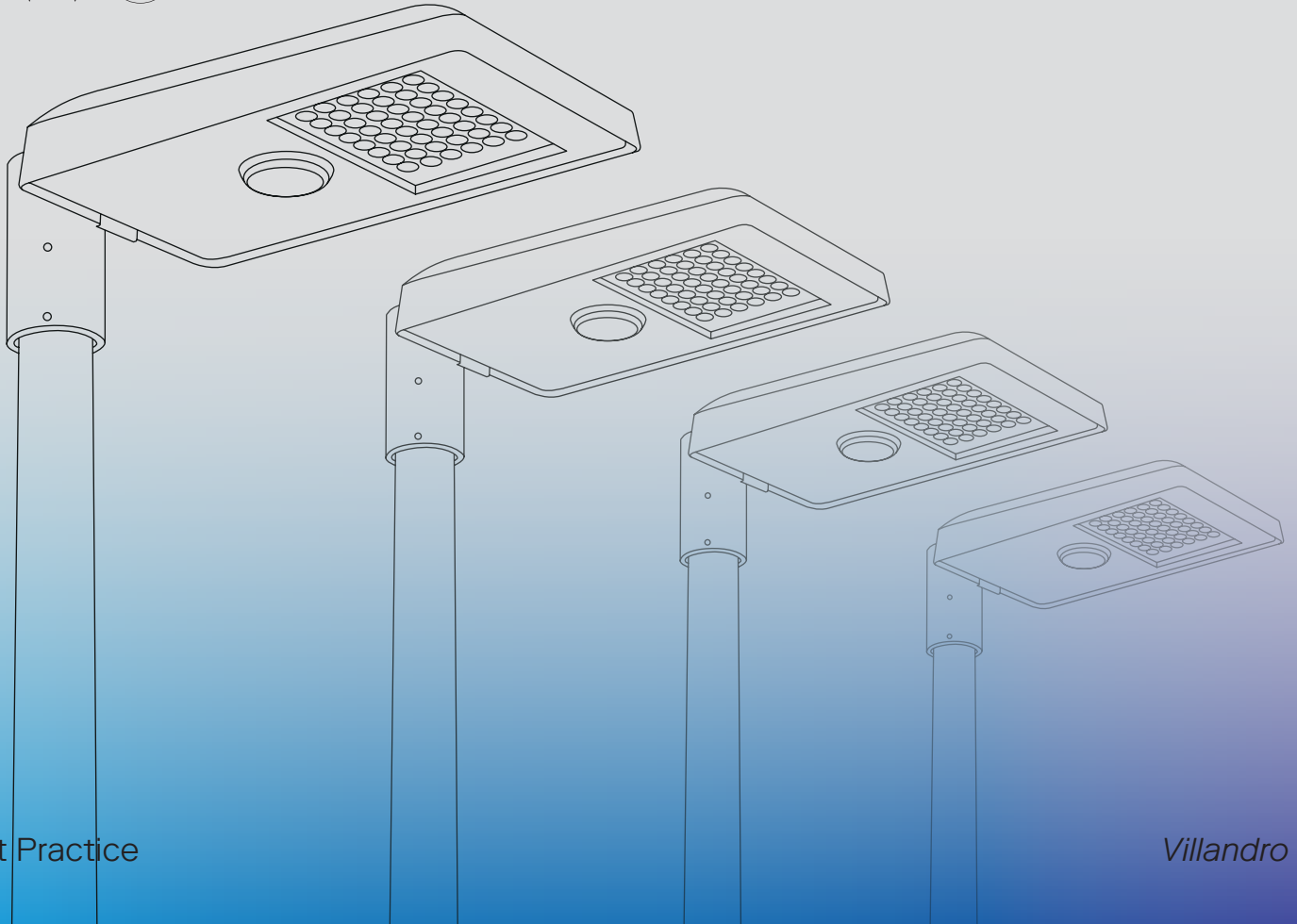


eWO



Best Practice


Villandro



PROJECT OVERVIEW

Villandro, Italy

<i>Type</i>	Roads and Traffic, Public Space
<i>Location</i>	Villandro, Italy
<i>Client</i>	City of Villandro
<i>Lighting System</i>	F-System XS, nodexx smart units
<i>Years of Installation</i>	2019-2020
<i>Quantity</i>	> 130



Why choose
a smart system?

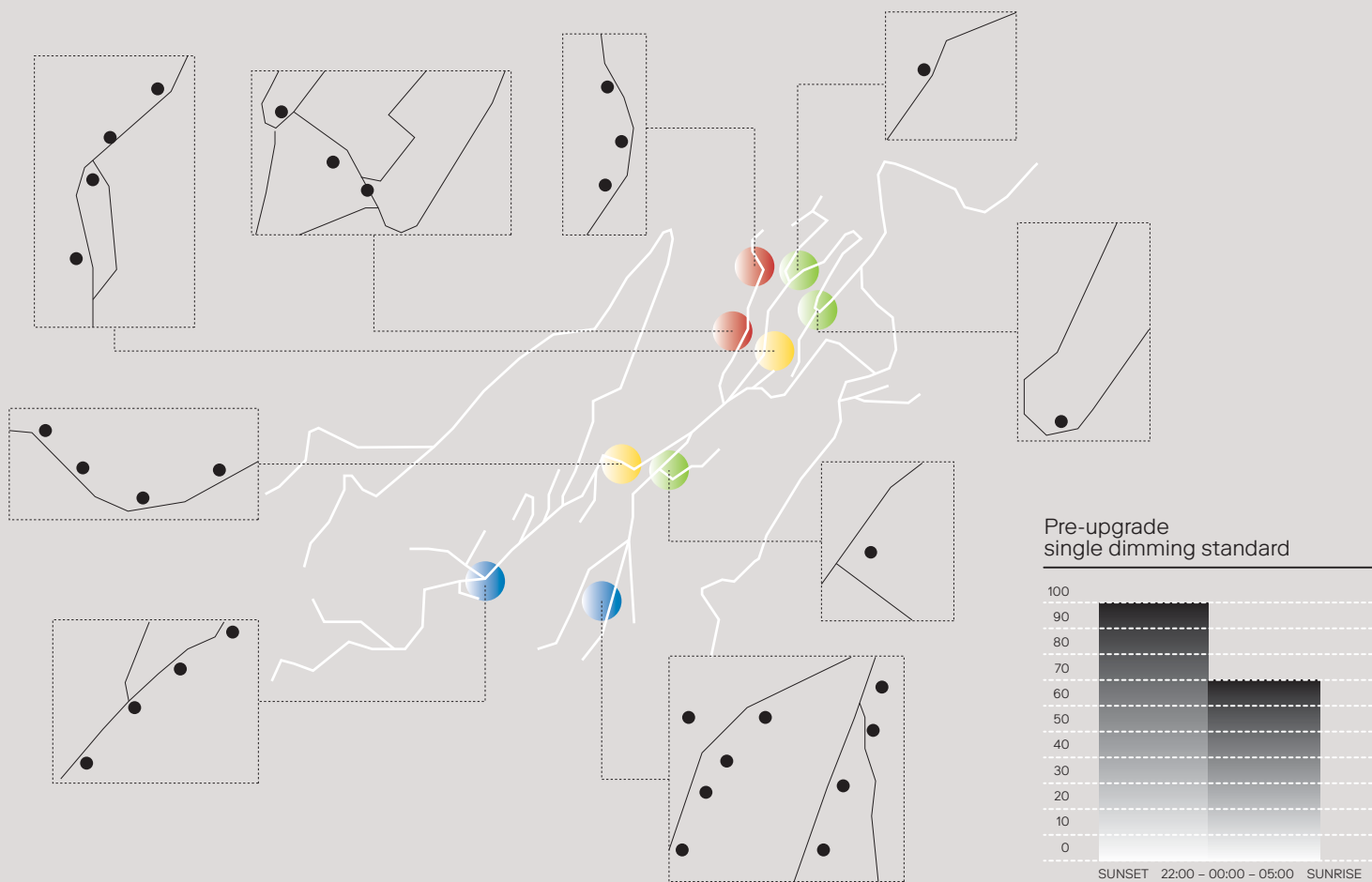
SMART CITIES & SUSTAINABILITY

Light control to save resources

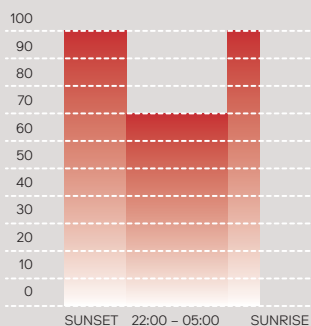
“One of the features that convinced me instantly was the possibility of attaching power sources at any point within the lighting system, which allows us to connect and manage other devices and systems – from temperature or speed sensors all the way to Christmas lights.

An intelligent lighting system means you can use infrastructure in a way that reduces consumption and offers additional services to our citizens. And the positive reactions from the public have shown that opting for a smart concept was the right choice.”

Walter Baumgartner, Mayor of Villandro

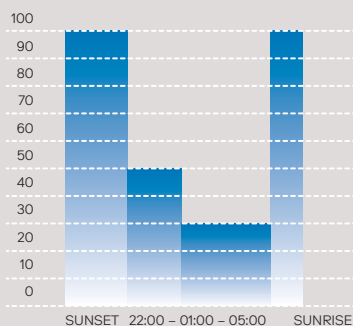


Intersections and crosswalks



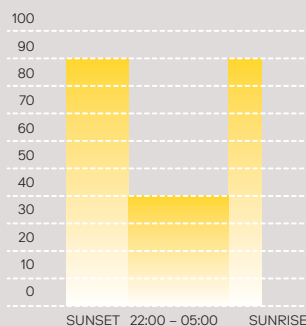
- 20 % kWh

Residential areas



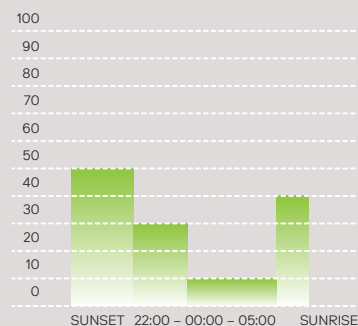
- 42 % kWh

Main roads



- 33 % kWh

Sidewalks and pedestrian areas



- 68 % kWh

CITY LIGHT ZONING

A key to lower energy consumption

Dimming is an excellent way to save money and electricity without sacrificing safety. It allows optimal management of resources, going on to dramatically cut both costs and consumption.

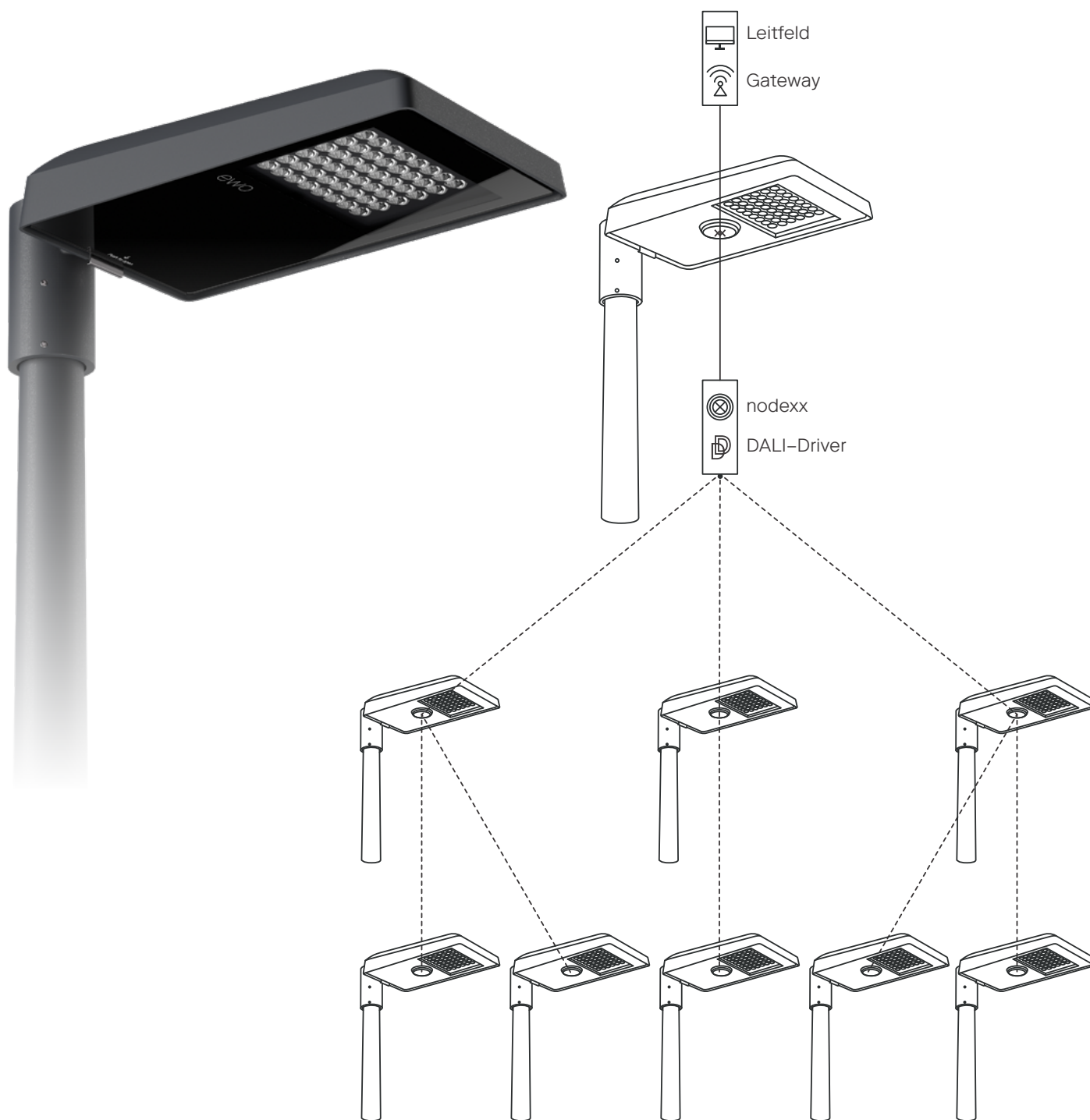
A functional lighting system was developed for Villanders to drastically minimise energy waste by up to 45% and to reduce light pollution in accordance with regulations. For pedestrian and residential areas, for instance, it was possible to introduce up to three different stages of dimming between 10 p.m. and system shutdown.

CONNECTIVE COMMUNICATION

Short reaction times

connexx, ewo's smart lighting brand, developed a novel technology that through the Wi-Fi mesh enables communication between multiple luminaires with a short response time.

The competitive advantages to the simplification of lighting systems management and lower maintenance costs are found in its flexibility, the option to control both individual and group lighting fixtures, and to receive swift alerts in case of errors.



FLEXIBLE STRUCTURE

A smart system

A gateway and smart modules (nodexx) embedded in the luminaires form the basis of smart connexx systems' architecture. The combination of gateway and nodexx results in a communication network (mesh) that can be controlled via the specially developed software called Leitfeld. Starting from a gateway equipped with a data SIM card and connecting to a nodexx, further connections of nodexx points are created.

Thanks to this Wi-Fi mesh network, the operation of the installation is not disrupted in the event of an interruption. In fact, if a luminaire node goes off-line, the network recreates itself by excluding the disconnected luminaire and maintaining the interconnection between the others.

EVENT LIGHTING

For every purpose

Flexibility creates the possibility of grouping luminaires by manually managing and dimming the lighting. This allows squares, streets, and pathways to be lit in any desired or preferred pattern. In addition, software programming responds to changing needs, such as Christmas lighting or one-off events.

In Villanders, relays have been installed to which – for example – Christmas lights can be connected. Via a grouping, said luminaires can be specifically controlled during the required period.



ABOUT LEITFELD

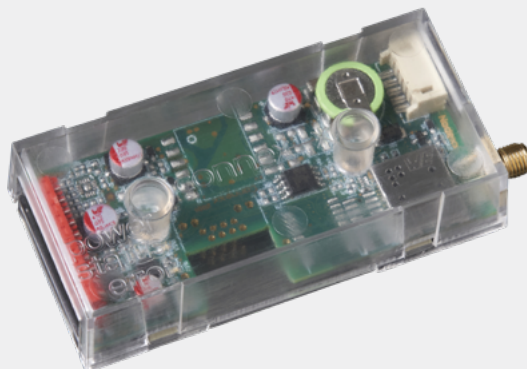
One software, many functions

Leitfeld is an open IoT platform that can control and collect data from different nodes and sensors. It can be used to visualise a lighting system and set rules for different groups or individual luminaires, change their behaviour in real time for events or special occasions, and optimise power consumption.

Thanks to Leitfeld, it is possible to collect data and run analysis on the luminaires. It also allows the remote management of individual or groups of luminaires, smart scene set-up, and the integration of smart devices into the system.

F-System XS

nodexx



PRODUCT

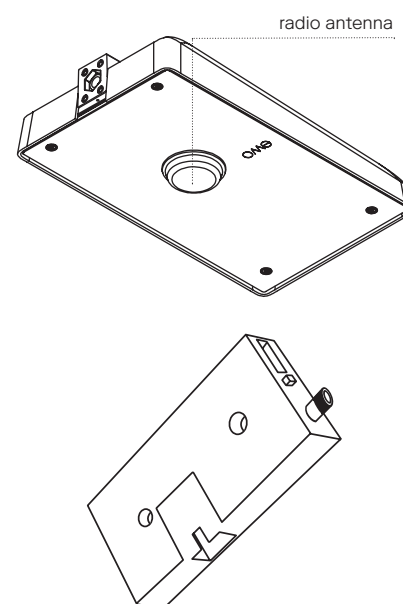
Model	F-System XS equipped with nodexx smart module NX01_1.2.1 WOE
Pole	single, double
Wall-mounted	
Driver	Xi SR 110W, Xi SR 40W
Smart lighting software	Leitfeld
Controlled system	DALI
LED	16/32/48 per luminaire, 3,000 K, CRI ≥ 80

MATERIAL

Housing	Die-cast aluminum
Pole adapter	Aluminum
Cover	Single-pane safety glass (ESG)
Finish	Polyester powder coating, anthracite (DB 703)

OPTICS

A-Series	AP07 Asymmetric Extra Forward
	AS07 Asymmetric Side Throw
	AS06 Asymmetric Extra Side Throw



TECHNICAL DETAILS

Smart Body of Light

The power line that controls the facility is always energised, and the smart module – one per luminaire – is able to turn them on and off at fixed times. To have power all day may help to integrate other devices, such as security cameras, Wi-Fi routers, etc. Another important feature of this system is the integration of one nodexx that is able to manage other non-smart luminaires, switching the power line they are attached to on and off.



ewo creates high-quality lighting systems for public spaces. At the main facility of this family-run business, headquartered in South Tyrol, ewo develops products which illuminate streets, squares, buildings and walking trails, urban gathering points and airports. A modular LED unit forms the basis of the company's sustainable and efficient lighting projects, irrespective of scale.

The company's progressive technology, know-how and open creativity made it a trendsetter for the sector. Even in the most challenging scenarios, ewo provides custom-tailored products and lighting designs for distributing and controlling light, features that are a notable standard of quality in the design of public spaces.

connexx is a start-up based in Bolzano' s NOI Tech Park with a clear mission to connect the impossible. In-house hardware and software development allow connexx to deliver custom-made solutions for a connected city.

connexx srl
info@connexx.it
+39 340 60 25 094

via della Mendola, 21
39100 - Bolzano - IT
P.IVA IT 028 433 10218

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*Photography: Oskar Da Riz,
Christian Guffler (nodexx)*
Version 1 – We reserve the right
to make technical changes.

ewo srl/GmbH
Via dell'Adige/Etschweg 15
IT-39040 Cortaccia/Kurtatsch
Tel +39 0471 623087
mail@ewo.com

ewo Deutschland GmbH
Gotzinger Straße 8
DE-81371 München
Tel +49 (0)89 52030729
germany@ewo.com

ewo Austria GmbH
Grabenweg 3a
AT-6020 Innsbruck
Tel +43 (0)650 3064 799
austria@ewo.com

ewo France SAS
Cardinal worksite
60 quai perrache
FR-69285 Lyon cedex 02
france@ewo.com

