



Smart City 2015

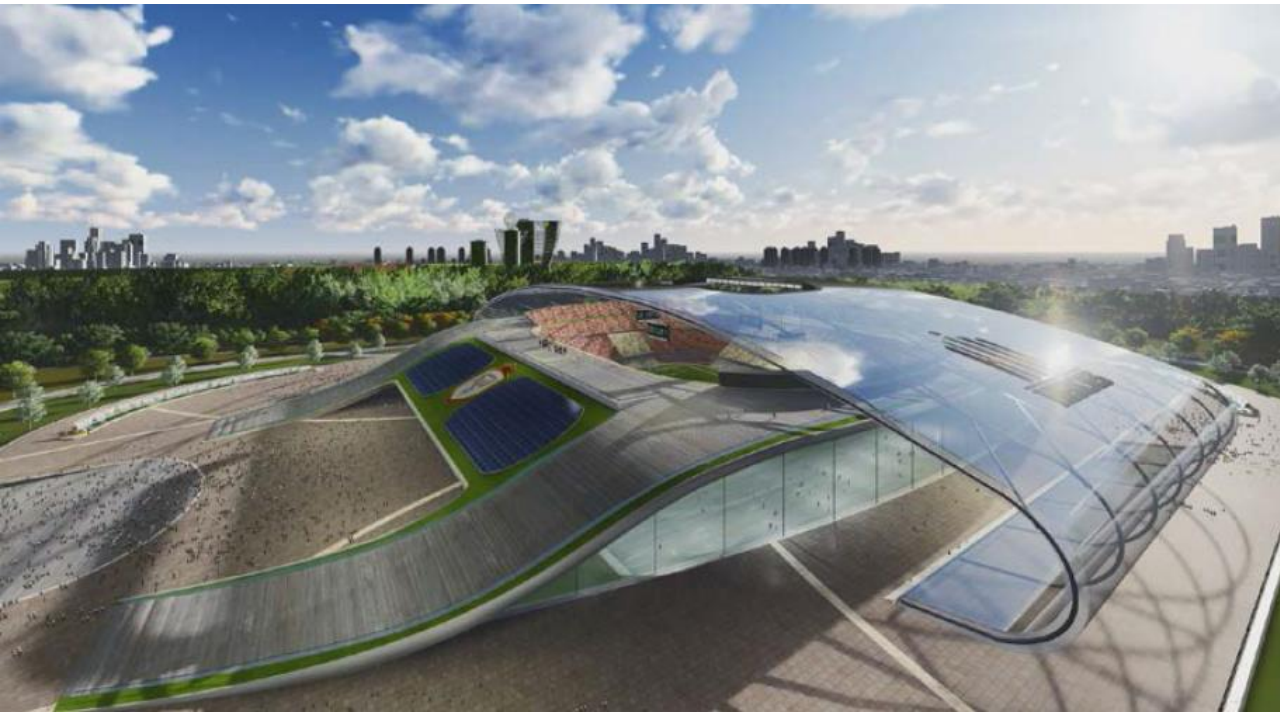




# GREEN TECHNOLOGIES

## The Smart-Village concept

A Smart Village is an urban environment able to actively improve life quality. Smart Village can facilitate life and satisfy the needs of people, companies and organizations, thanks also to the widespread and innovative use of technology, especially concerning communications, mobility, environment and energetic efficiency.



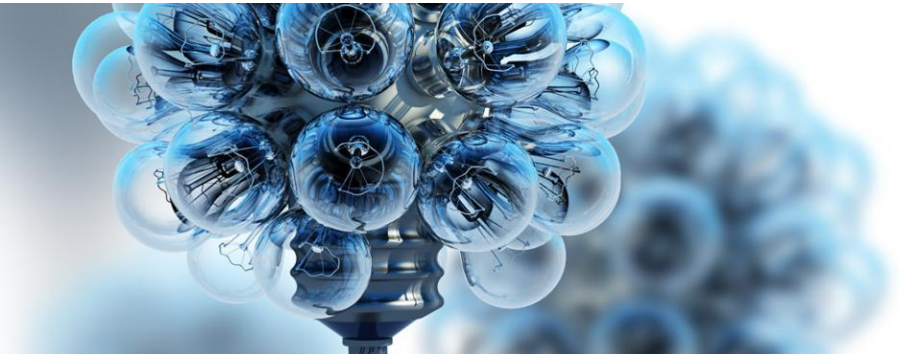
## SMART VILLAGE IS

- Parking lot management
- Smart Lamps – Indoor & Outdoor
- Gas & Water meter management
- Energy Management – Solar panel control
- Air quality sensors
- Vehicle monitoring
- Traffic management
- Environmental monitoring sensors (temperature, humidity, vibration, etc.)
- Access control
- Logistics sensor



### Smart Village

Within urban environment, our products assures the right integration between multiple technologies, allowing to satisfy multiple needs. Thus is it possible to integrate in the same system different types of sensors, which use different communication methods.



### Bulding automation

With our low consumption wireless sensors technology it's possible to create a flexible solutions. The final user can quickly realize a huge amount of home automation applications.



### Parking management

Thanks to extremely performing sensors it becomes possible to put in place a network to wisely manage and control parking lots and traffic flows. The sensor can be installed either underground, hidden underneath the pavement, or glued to the pavement at street level.



The Fusion Project mission is to create an interactive global green sports village that is a unique fusion of athletics, community, charity, learning and growth where everybody involved can realize her or his full potential



## Sp.Net: network evolution

Sp.Net is the new multi-technology sensor network produced by STE. Thanks to Sp.Net you will be able to create your own wireless infrastructure with just few easy steps while saving your money. With Sp.net you will be able to control any kind of sensor within any environment.

A wide range of applications which go from small home sensors to bigger urban systems as well as more sophisticated use, such as checking wheel pressure through a sensor placed into the tyre which sends data directly to your smartphone.

Any object, no matter whether big or small, can be part of your sp.net network.

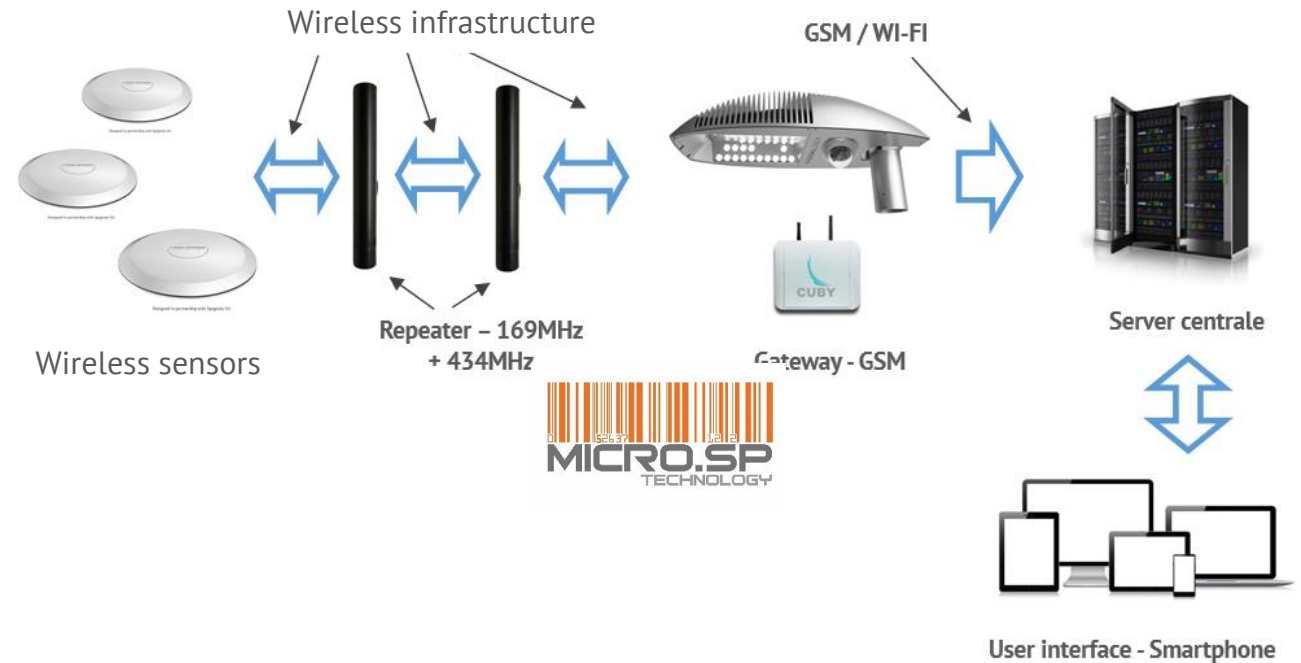
## Sp.Net advantages in Fusion Project

Sp.Net technology has many advantages.

One of the most important is that it can be implemented quickly and easily even in the most complex urban environments.

Sp.Net can manage any infrastructure as it integrates many subsystems: 169MHz, 2.4GHz Wi-Fi or Bluetooth, as well as very low energy Micro.Sp consumption systems (more information on [www.stecom.com](http://www.stecom.com)) or 434MHz interfaces.

Every part of the system is managed dynamically and in real-time.





## Smart village



## Smart Lighting Management

Dynamic control and management of street lighting.  
The gateway can be installed on the lamp post or integrated inside VegaLed lamp made by Spagnolo S.r.l.



## Smart City Repeater

The repeater is a low cost solution to expand a wireless network, which allows spreading sensors over a greater area while maintaining full functionality. The system can be easily installed and is self-configurable.



## Smart Parking

Vosystem is a subset of Sp.Net network. It is an innovative parking control system based on high performance magnetometer wireless sensors.



Magnetometer wireless sensor



## Traffic Management

By using magnetometer sensors, it is possible to monitor and manage vehicle traffic. The gateway can be installed inside traffic lights and is able to control vehicle flow dynamically.



## Alarms and sensors

The sensors based on very low power consumption Micro.Sp technology can be integrated into Sp.Net. They have compact size and extremely high battery duration (more than 10 years) when supplied by a small 3V lithium battery.



## WSN- Wireless sensors

Low consumption sensor to monitor temperature, pressure, vibration, light intensity, air quality, etc.

## 169MHz Social Alarms

Bracelets to monitor elderly people, people with Alzheimer disease, etc. 169MHz frequency band is reliable also for long distance transmission.



## Gas & Water Meter

169Mhz systems for the remote reading of gas and water (based on Wireless M-bus).



## Smartphone App

Vosystem also includes a dedicated app for smartphone and tablet which allows the user to check in real time the availability and position of free parking places, guides the user to destination and manages the reservation of the selected place.

## Management of ambulances and police vehicles

Sp.Net can also locate and guide ambulances and police vehicles in emergency cases by controlling traffic lights in order to assure them the shortest and easiest route to destination.





### SMART VILLAGE & SMART PARKING

Within a future city it is essential to organize daily traffic for best efficiency and optimize parking management. By implementing Sp.Net it is possible to manage quickly and easily parking systems, vehicle transit, automatic traffic lights control and supervise emergency situations such as accidents, roadworks or traffic jams. The use of all of the above solutions improves significantly traffic flow and, in general, enhance living standards in urban environment.

### SMART PARKING APP – STADIUM PARK

The product also includes an app for smartphone or tablet. The app visualizes a map of the area in which the system is installed (e.g. city district, public/private parking lot), displaying in user-friendly format the quantity of free parking places and their locations on the map. Once the desired place is selected, the app guides the user to the destination. The app has also the possibility to check parking availability in real time, notify the user in case the chosen place has been occupied and, in case, assist him/her in making a new selection and guide the user to the new destination.



### SMART LIGHTING – VEGALED

Street lamp becomes smart when CUBY gateway is integrated into it, because the gateway allows to read all data from every installed sensor. Each street lamp is connected to another lamp or to a gateway/repeater. The system can manage over 1000 lamps by using a dedicated wireless infrastructure.

## Where can i park? Check it on your smartphone



COMUNE DI GENOVA

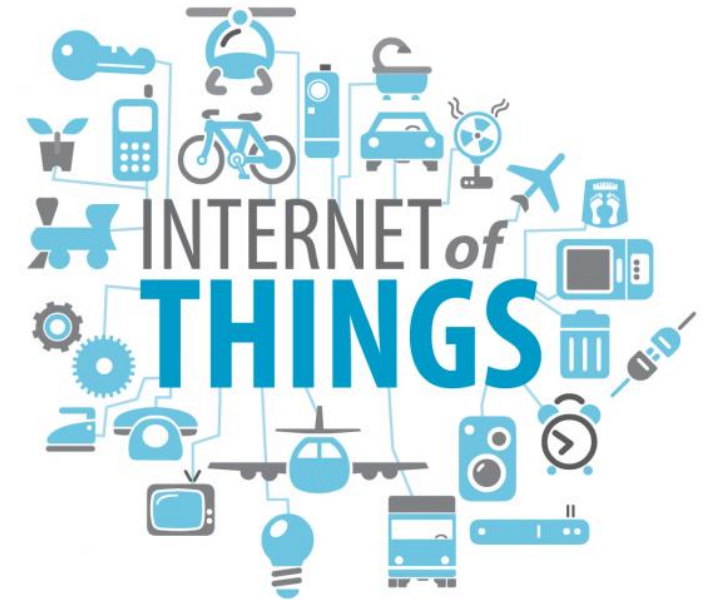
2013 - 2014  
GENOVA INSTALLATION  
SMART PARKING SOLUTION





### Internet of Things in Las Vegas

Internet of Things is the new wireless frontier. Everything will be manageable from remote simply by a click. Sensors connectivity is the key issue here. Today, our technology is the right answer to all connectivity needs.



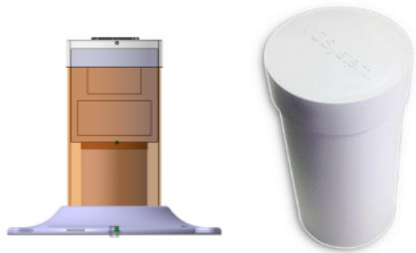


**Magnetometer Wireless Plate Sensor**

STE has developed through the years two different parking sensors:

- Magnetometer embedded in-ground Wireless Sensor
- Magnetometer Surface Wireless Sensor

Both systems take advantage of STE proprietary technologies. Thanks to an extremely intelligent and flexible firmware the sensor can self-calibrate whilst calculating the temperature ratio. All this results in a quite wise management of the magnetometer sensor. The two sensor transmit data through an extremely efficient low consumption radio module at 169 MHz with narrow bands. These features guarantee quite a long life expectancy for the system: more than 10 years for the embedded in-ground sensor and 5 years for the surface sensor.



**IN-GROUND MAGNETOMETER SENSOR**

The in-ground sensor is installed under road surface and can be used to monitor either a parking place or vehicle transit in a certain zone. Transmission range between sensors and gateway can be quite long (typically 100-150m).

**SURFACE MAGNETOMETER SENSOR**

The surface sensor is designed for a quick and easy installation on road surface. It is suitable for private, covered and indoor parking lots.



Designed in partnership with Spagnolo Srl



**169MHz TECHNOLOGY**

The circuit board has been developed entirely by STE. Transmission frequency is 169MHz, with narrow channel bandwidth (12.5KHz).

169MHz frequency band is particularly suitable because it guarantees long transmission range, good permeability and high reliability even in the most critical urban environments.



In the picture above, an installation of the surface mount sensor is shown. Each sensor monitors one parking place. The magnetometer can instantly detect whether a vehicle is parked in that place or not.



# Embedded in-ground sensor

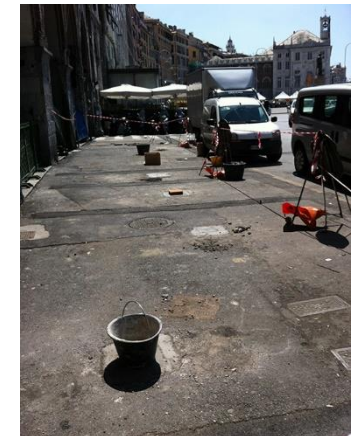
Embedded in-ground sensor suitable for permanent long lasting installations. This sensor is usually used either by municipalities or in case of new parking lots under construction.

The magnetometer reads the magnetic field change which is triggered by a car driving over the sensor. Just a very small hole in the ground is needed to install the sensor.

The sensor is entirely buried under the street surface. The sensor can be used in almost any environmental situation thanks to its extremely small size and to its strong structure.

The 169Mhz technology allows the system to keep track of free/engaged status and to communicate the data within a long distance range. All this results in a limited numbers of gateway needed with a consequent sensible reduction of costs.

## Life time 10 years





## Surface sensor

Disk sensor suitable for street surface installation. The magnetometer reads the magnetic field change which is triggered by a car driving over the sensor.

The disk is easy to install. No drilling on the ground needed. The sensor can be used in almost any environmental situation thanks to its extremely small size and to its strong structure.

The magnetometer reads the magnetic field change which is triggered by a car driving over the sensor. The 169Mhz technology allows the system to keep track of free/engaged status and to communicate the data within a long distance range.

All this results in a limited numbers of gateway needed with a consequent sensible reduction of costs.



Life time 5 years



### Smart-Lamp 169MHz Gateway

With Cuby is possible to manage different sensors at the same time. Cuby has on-board all technologies needed for the accomplishment of typical wireless infrastructure focused on a wireless sensors network.

The system is able to simultaneously handle all on-board peripherals thanks to an extremely performant firmware.

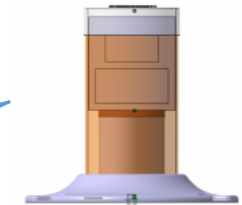
In this regard, either managing monodirectional low-consumption sensors or controlling data collecting hubs within an urban environment it becomes simply possible and real.

User friendliness and the expansion capability turn the CUBY into an essential choice should you wish to realise an highly professional product.



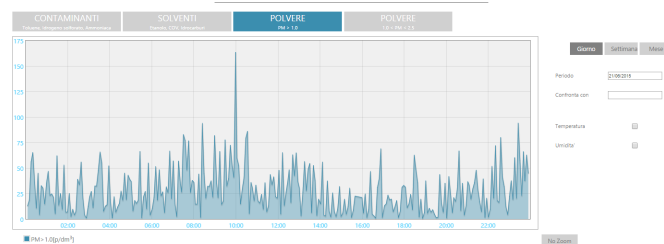
### Smart-Lamp 169MHz Gateway

- Smart Lighting
- Power Meter
- Smart Parking
- Pollution Management
- Complete Wireless Infrastructure



### Parking Sensor

- Wireless
- Magnetometer
- Up to 200mt communication
- 10 Years battery life



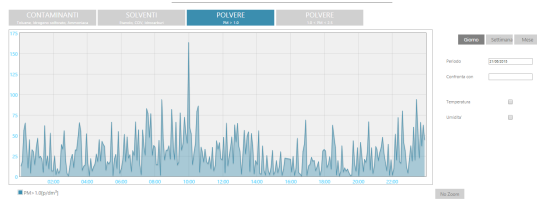
**GATEWAY INTEGRATION**

## The Sp.Net Wireless Sensors

WIRELESS SENSORS INFRASTRUCTURE



Pollution PM10 – Contaminanti, Polveri.



Water and Gas Meter  
169MHz



- Smart Lamp 169MHz
- > Current
  - > Energy Consumption
  - > Video
  - > Parking receiver
  - > Wi-fi
  - > Efficiency

Parking sensor



Micro.Sp Sensors

- > Temperature
- > Vibration
- > Luminosity
- > Inclinometer
- > Humidity
- > Pressure



Gateway & Repeater



Configurazione accesso/spento dispositivo n. 35

Modalita':  ACCESO  SPENTO  ASTRO  AEEG  MANUALE

	Spento:	Acceso:
Progr. aeeg:	05:35	21:45
Progr. astro:	05:42	21:19
<b>Progr. manuale:</b>		
Lunedì	05:35	21:45
Martedì	05:35	21:45
Mercoledì	05:35	21:45
Giovedì	05:35	21:45
Venerdì	05:35	21:45
Sabato	05:35	21:45
Domenica	05:35	21:45

Salva

TPMS

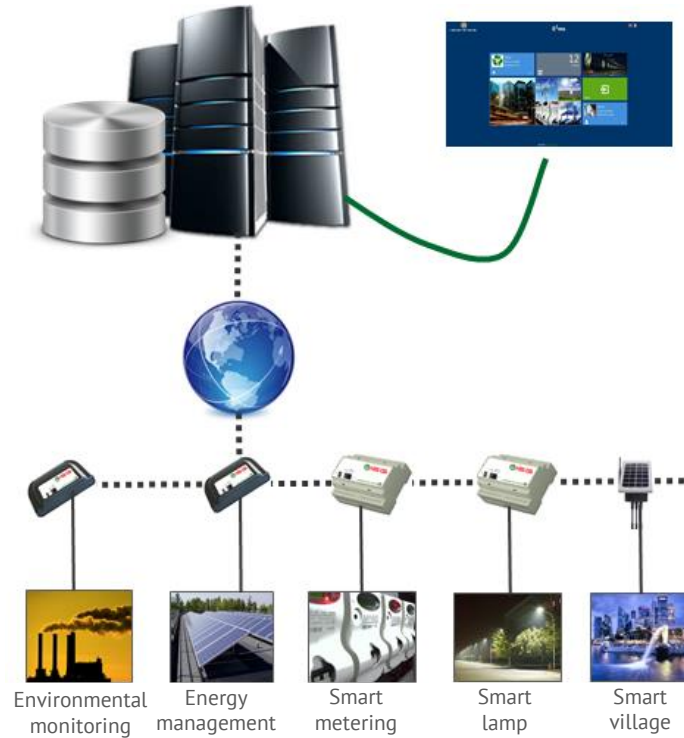




## Energy Management Sp.Net Cloud

Sp.Net Cloud Management is an operative centre developed by Ste to allow the control and management of several remote device deployed all over the world.

- > High performance level
- > Easy to use
- > NON-homogeneous data integration
- > Statistical and previsional data analysis



## High efficiency Solar Panel

1. Innovative high efficiency Solar Panel
2. Integrated ( at PV panel ) Storage ( Supercap + Battery )
3. Integrated power electronic and communication
4. Distributed sensors to control the whole system

The 70,000 seat stadium is infused throughout with green technology including photovoltaic cells as well as kinetic energy panels, as marketed by Pavegen Systems



Siti  
Numero totale Siti gestiti  
5

22  
Lunedì

Accesso

Utenti  
Numero totale utenti registrati  
6

Login page

Configurazione accesso/spento dispositivo n. 35

Modalita':  ACCESO  SPENTO  ASTRO  AEEG  MANUALE

Progr. aeeg: Spento: 05:35 Acceso: 21:45  
 Progr. astro: 05:42 21:19  
 Progr. manuale:

Lunedì	05:35	☒	21:45	☒
Martedì	05:35	☒	21:45	☒
Mercoledì	05:35	☒	21:45	☒
Giovedì	05:35	☒	21:45	☒
Venerdì	05:35	☒	21:45	☒
Sabato	05:35	☒	21:45	☒
Domenica	05:35	☒	21:45	☒

Salva

Smart Lighting Management

sp.Cloud Allarmi

E<sup>2</sup> Management System

Spagnolo srl

Spagnolo Selezione misure

## Smart City Control Panel

1. Parking
2. Lighting Management
3. Pollution Management
4. Efficiency
5. Environmental Sensors  
Temperature, Pressure, Lighting, Inclinometer, Water Meter, TPMS, Humidity, Traffic Management, Level Measurement.

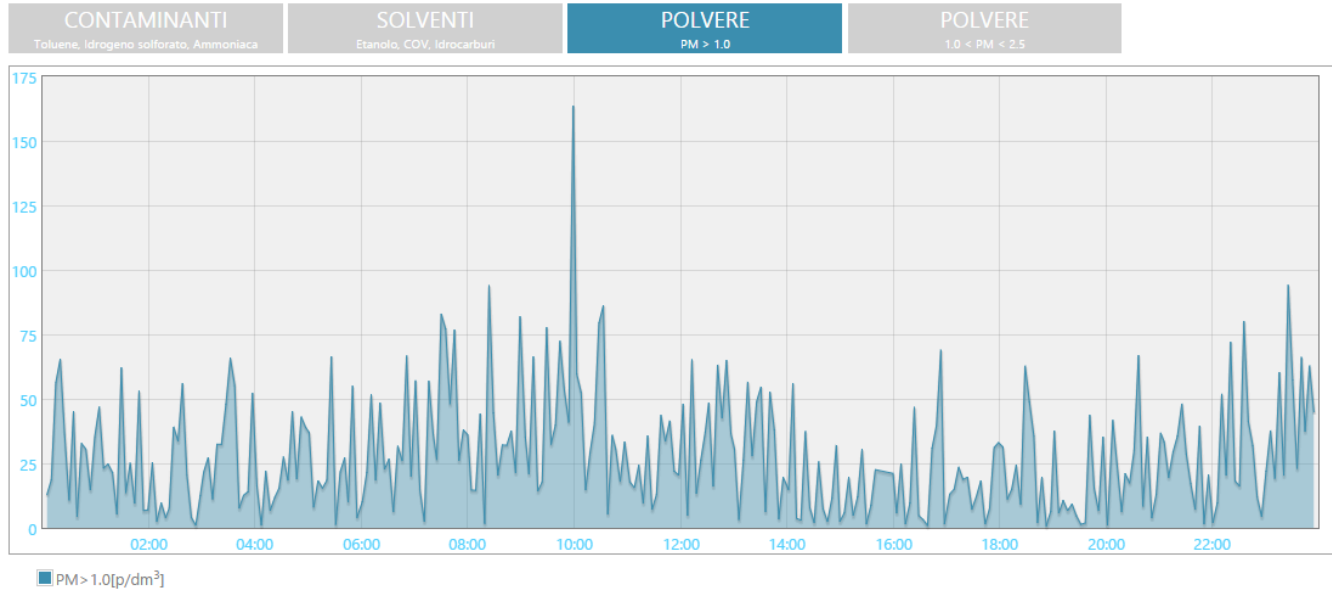
Parcheggio

Illuminazione

Inquinamento

Efficienza

Ambiente



Giorno    Settimana    Mese

Periodo:

Confronta con:

Temperatura:

Umidita':

No Zoom

## Statistics Data Export



## Wireless Sensors



### Spagnolo srl

Parcheggio Esterno	
SP (N. 10003701)	
SP (N. 10003702)	
SP (N. 10003703)	
SP (N. 10003704)	

# Tire Pressure Monitoring System FORMULA E applications



## A new tire revolution

Energy efficiency and integration in autonomous wireless sensors matters greatly. STE is leading the pace of innovation: a technology that serves future trends in sensing a world of things is now available. And this “new tire revolution” means bringing intelligent innovation to a world where energy efficiency makes the difference: micro.sp™ is the innovation that makes the tire technology intelligent.



Fusion Project management team has already had several talks with Formula E representatives. With the inclusion in the project of a Grand Prix Circuit capable to host major international motorsport events, the possibility to see in the future these amazing electric cars competing in Las Vegas seems to be more than concrete



## TPMS – tire monitoring

When moving from standard packaging attached to tyre stems to a mechanical complex inside the tyre carcass, the form factor becomes a key feature: STE, recently designated as R&D partner of one of the world’s largest tyre maker, is committed to develop an innovative method of data transmission applied to tyres. According to recent experiments conducted by STE on radiowave propagation in carcass, a new PPM modulation scheme has demonstrated an extremely higher energy efficiency along with a greater RF robustness.







**sky SPORT HD** 14° Roma

Home Calciomercato Calcio Italiano **Calcio Estero** Baku 2015 F1 MotoGP Statistiche

scopri il mondo di vantaggi, eventi ed esclusive che Solo per te di S

**CALCIO ESTERO**

## Il soccer a Las Vegas, una scommessa made in Italy

21 giugno 2015

L'Heroes Hill Stadium, l'impianto che nascerà a Las Vegas

L'idea sviluppata Daniele Fortunato, ex talento nelle giovanili della Roma e da Gaetano Di Renzo è quella di creare il Green Sport Village, il cui fiore all'occhiello sarà l'Heroes Hill Stadium, un impianto da 70mila posti

Sarà pure una scommessa, da vincere, ma le premesse ci sono tutte. Il calcio nel deserto, non in Qatar dove si giocheranno i Mondiali di calcio nel 2022, ma dall'altra parte del mondo, oltre l'Atlantico, nel Nevada, oltre i confini di una pur fervida immaginazione. Perché se negli Stati Uniti ognuno può realizzare il proprio sogno, a Las Vegas si può anche azzardare di più. È ciò che ha fatto Daniele Fortunato, 34 anni, un passato nelle giovanili della Roma e una vita da giramondo del calcio in Italia, in Europa e nel mondo, a cui il calcio, appunto, è rimasto appiccicato addosso anche in un altro ruolo, quello di imprenditore. L'idea è quella di creare un complesso sportivo, il Green Sport Village, il cui fiore all'occhiello sarà l'Heroes Hill Stadium, un impianto da 70mila posti destinato al soccer, zero impatto ambientale e green technology pronto ad accogliere una nuova squadra (gli Heroes) laddove il soccer non si era mai affacciato. Uno stadio incastonato in un'area delimitata, su un lato, dalle originalissime tre torri dell'Heroes Hill Hotel. Due strutture progettate dallo studio veneto "Area progetto" secondo concezioni architettoniche mai viste altrove.

**LIVE STREAMING**  
EUROPA QUALIFERS  
In diretta le Qualificazioni UEFA Euro 2016

Le classifiche dei giorni

Tutti i VIDEO curiosi dal mondo

**GLI HIGHLIGHTS**  
FOX HD  
I gol di Fox Sports

Bundesliga, tutti i gol

**CALCIOMERCATO**  
GERRARD

**IL TABELLONE**  
Mondo Mercato  
Le iniziative all'estero

**Green technology** - La società Ste Ksolutions di Milano, inoltre, in collaborazione con l'energy manager del complesso sportivo, l'ingegnere Elisa Rivieccio, ha traslato il concetto di Smart City all'interno dello Sport Village, trasformandolo di fatto in uno *Smart Village* in cui le green technologies rappresentano il fiore all'occhiello dell'intero complesso, in modo tale da permettere la gestione di tutte le strutture con un bassissimo impatto energetico.

# Heroes Hill Saturday !

**CALCIO A LAS VEGAS CHE SCOMMESSA**

20 June 2015

**SW SPORTWEEK**

**La Gazzetta dello Sport**  
Tutto il nuovo della vita

