

**WEBINAR**

Aspetti della gestione nell'impiantistica sportiva

# Tecnologie smart: la gestione delle luci nello sport

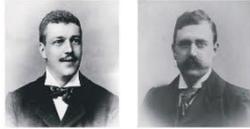
Gianni Coppari , Ing. Federico Maria Barbaglio

TSPORT

SPORT & IMPIANTI

14/10/2024

# Key Milestones



## PHILIPS 1891

### The conception of Philips

Philips & Co was founded in 1891 in Eindhoven, the Netherlands, by Frederik Philips and his son, Gerard. The pair soon conceived a bold but timely plan: cost-effective, reliable electric incandescent light bulbs.

1907

Philips began production of tungsten filament lamps



1913

Start of production of gas-filled incandescent lamps



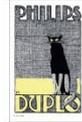
1917

Neon glow lamps  
The first Philips-produced gas-discharge lamps



1924

Philips creates the Duplo car light, combining two bulb filaments in one, one for the main beam and the other for the dipped beam



1931

Philora sodium lamp  
Famously introduced by lighting a 16km stretch of the road between Beek and Geleen in Holland – the world's first sodium streetlighting installation



1945

Infraphil infrared lamp  
Incandescent light bulbs and armatures that provided muscle pain relief through deep heat penetration



1967

SON-lamp  
High pressure sodium lamp



1915

Arga-lamp

Philips introduced light bulbs filled with argon, which resulted in a longer lifetime for the filament



1925

Metalix- X-ray tube

The Metalix was the first X-ray tube with a metal housing to provide protection against harmful X-ray radiation



1939

Start of production of low voltage fluorescent tubes (TL)



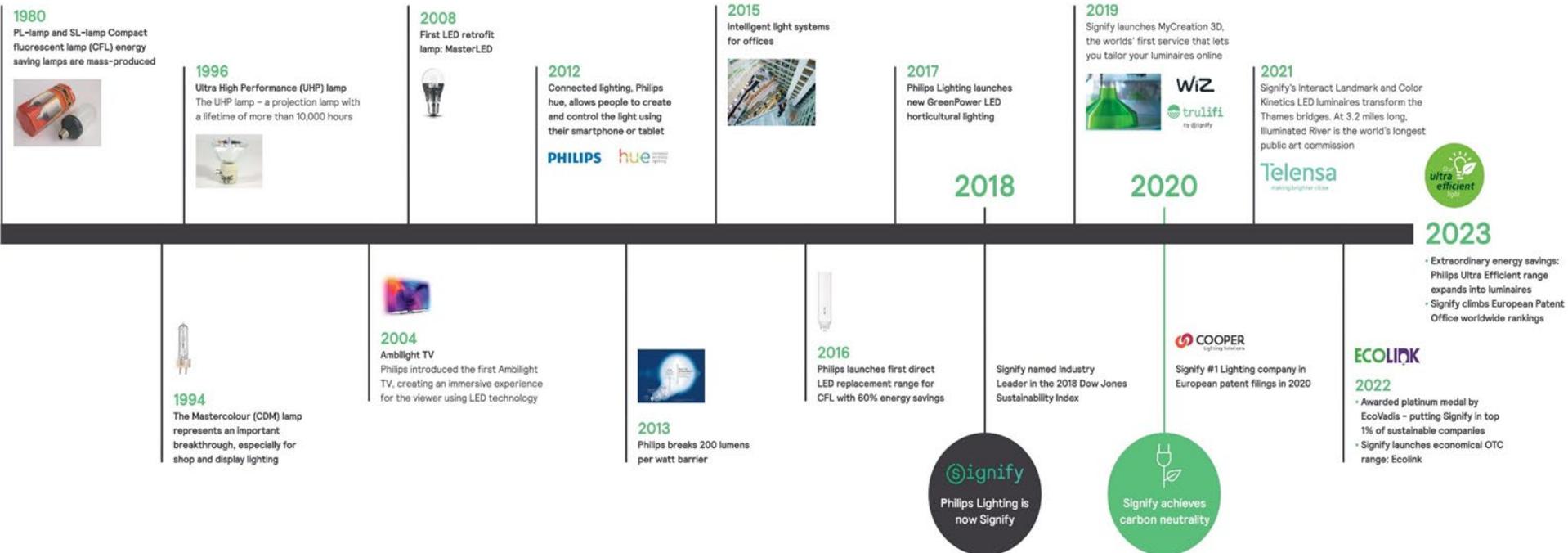
1962

Halogen lamp

1970

Duplo halogen car-lamps (H4)

# Key Milestones



# Signify è leader mondiale nell'illuminazione

Prodotti, sistemi e servizi di illuminazione ad alta efficienza energetica

## Sorgenti luminose



**No. 1**

LED, Connected LED

## Apparecchi di illuminazione



**€6.7Mrd**

vendite nel 2023

## Sistemi e Servizi

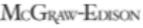


**32,000**

persone in oltre 70 Paesi

# Signify commercializza i migliori marchi di illuminazione del mondo



Global brands	     			
Technology brands	   			
Specialty brands	<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p style="margin: 0;"><b>VARI*LITE</b> </p>  <p style="margin: 0;"><b>bodine</b></p>    </div> <div style="width: 35%; text-align: center;"> <p style="margin: 0;"><b>ADVANCE</b> by @ignify</p>      </div> <div style="width: 30%; text-align: center;"> <p style="margin: 0;"><b>GENLYTE SOLUTIONS</b></p> <p style="margin: 0;">indoor</p>     </div> <div style="width: 30%; text-align: center;"> <p style="margin: 0;"><b>COOPER</b> Lighting Solutions</p>         </div> <div style="width: 10%; text-align: center;">   </div> </div>			
Value brands	    			

# Orgogliosi di portare sul mercato i migliori brand di illuminazione al mondo...



I nostri brand a livello globale:

**PHILIPS**



**Illuminazione per  
professionisti e  
consumatori**

**PHILIPS**  
hue personal wireless lighting **WiZ**



**Vivi le tue  
emozioni con la  
massima  
esperienza di luce  
connessa**

**PHILIPS**  
dynamalite



**Soluzioni di  
controllo integrate**

**interact**



**Piattaforma  
software  
professionale per  
la gestione della  
luce**

**COLOR KINETICS**



**Soluzioni di  
illuminazione  
architettonica  
dinamica**

**VARI\*LITE** **Strand**



**Intrattenimento  
scenografico con  
teste mobili**



# .... e di servire i nostri clienti con innovazioni e servizi rivoluzionari



## Le nostre più recenti tecnologie ed iniziative

 **truLifi**  
by @signify



**Tecnologia LiFi**

**BrightSites**  
by @signify



**Soluzioni per la  
connettività di  
rete**

**PHILIPS**  
MYCREATION



**Stampa in 3D di  
apparecchi  
d'illuminazione  
personalizzati**

**NatureConnect**  
by @signify



**Luce che si ispira  
alla natura**

## I nostri servizi

**Signify Lighting  
Services**

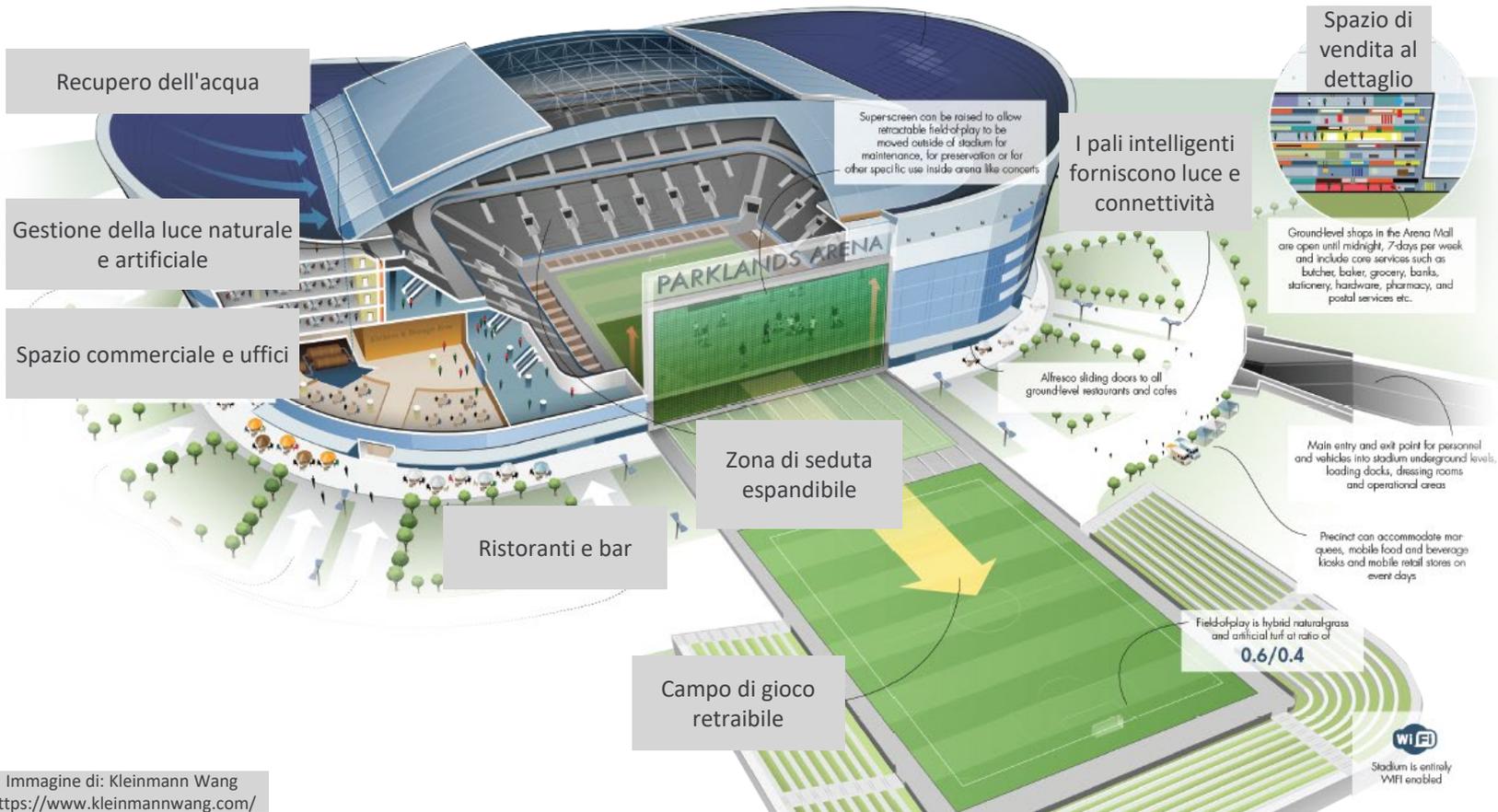


**Servizi per tutto il  
ciclo di vita**

# interact Sports

A wide-angle, high-angle shot of a large stadium at night, filled with spectators. The stadium is illuminated by bright lights, and the field is visible in the center. The text "interact Sports" is overlaid at the top of the image. The word "interact" is in a pinkish-red color, and "Sports" is in white. The background shows a soccer game in progress, with players on the field and a large crowd of fans in the stands. The stadium's architecture is modern, with a curved roof and multiple tiers of seating. The overall atmosphere is one of excitement and energy.

# Spazi polifunzionali diventano uno **standard**





## Interact Sports & Arena

### Benefici:

-Offrire esperienze integrate end-to-end, con un'illuminazione intelligente dall'ingresso all'uscita.

-Godetevi la tranquillità, grazie alle informazioni in tempo reale sul sistema e alla gestione efficiente dell'illuminazione.

-Rendere il vostro stadio più attraente - con una splendida illuminazione negli spalti, nelle aree per gli spettatori, nei campi di allenamento e di prova e nelle aree di vendita al dettaglio e di ospitalità

-Sostenere i programmi di marketing e intrattenere i tifosi con spettacoli e schemi luminosi personalizzati.

-Attrarre gli sponsor con opportunità pubblicitarie uniche.

-Generare nuovi flussi di entrate e opportunità commerciali, grazie a un impianto flessibile e multifunzionale che può ospitare diversi tipi di eventi.

-Semplificare la manutenzione - Gestire, monitorare e controllare tutte le luci collegate con un cruscotto

## Are di Applicazione

Stadi

Arena

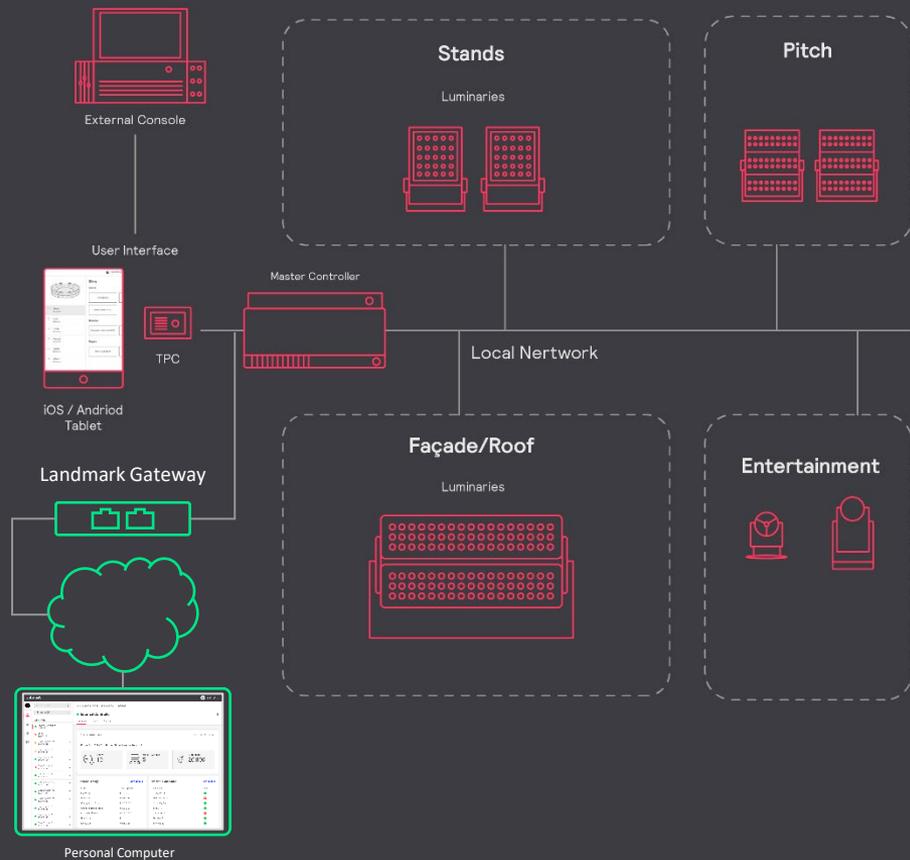
Impianti Sportivi Ricreativi



# One Arena Dashboard

Tutti gli elementi combinati offrono un unico cruscotto in grado di **controllare localmente** e monitorare **a distanza** quattro aree di un'arena

- Pitch (using ArenaVision)
- Façade / Roof (using Color Kinetics)
- Stands / Concourse (using DALI luminaires)
- Bowl (using Entertainment group lighting and controls)



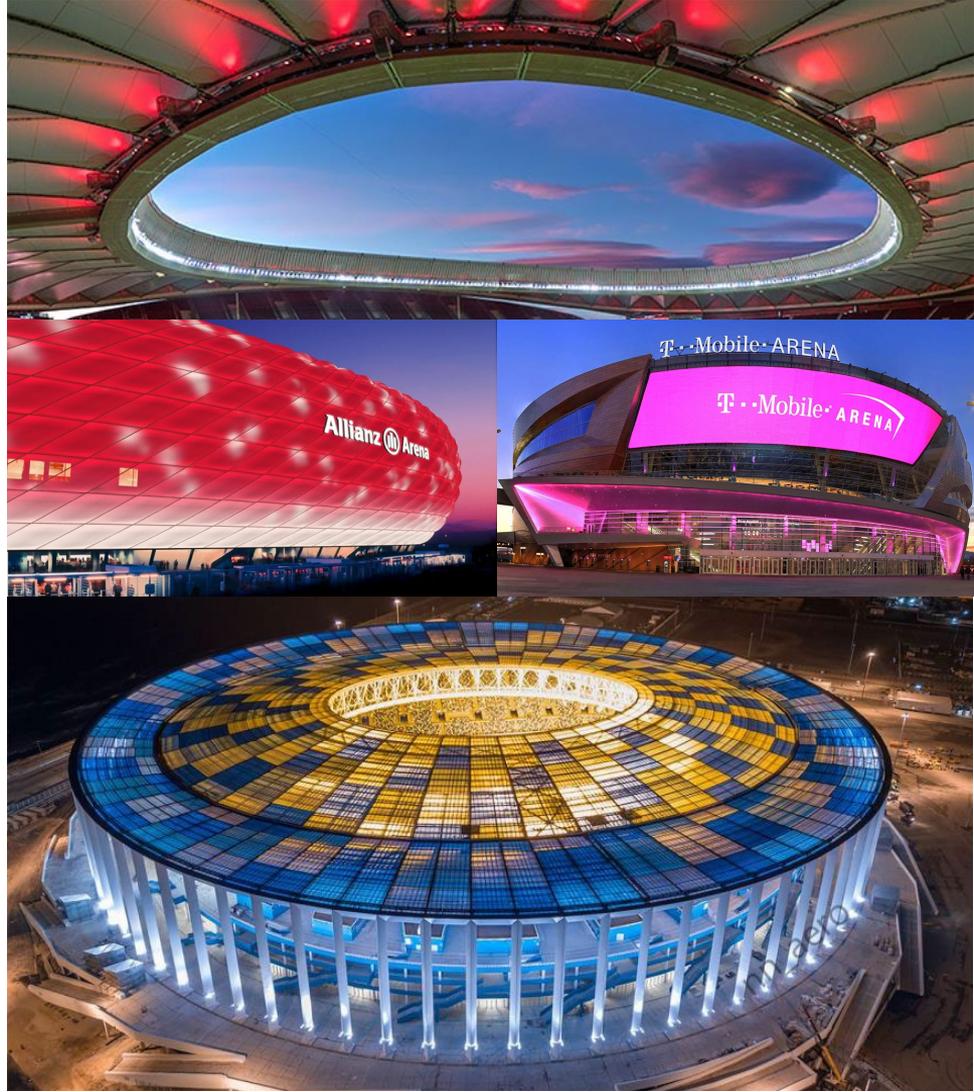
## Dynamic Façade + Roof Lighting

Le aree della facciata e del tetto possono essere equipaggiate con il portafoglio Color Kinetics per creare effetti luminosi di grande effetto, sia all'interno della struttura che all'esterno.

-Questo portfolio può essere integrato in Interact Sports perché il controller Pharos supporta il protocollo Color Kinetics (KiNet).

-Le scene possono essere dedicate solo a un'area e a un portafoglio CK, ad esempio la facciata).

-Tuttavia, le scene possono anche essere una combinazione di aree e portfolio, ad esempio una scena dinamica che controlla l'illuminazione del campo in combinazione con l'illuminazione del tetto.



# Dynamic Stands Lighting

DALI luminaires typically offered in stands

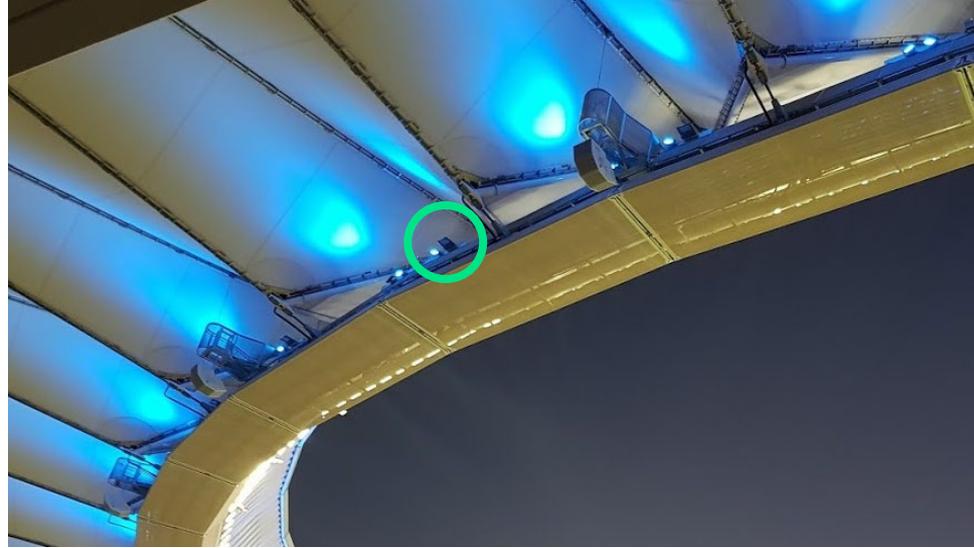
- ClearFlood gen. 2
- ClearFlood Large gen. 2

Or DMX RGBW illuminazione a soffitto con effetti dinamici

UNI Flood M G2 o CK Reach Elite

Anche se oggi spesso non viene controllata, l'aggiunta dell'illuminazione degli stand alla rete di controllo aumenta le opzioni da utilizzare nelle scene per immergere maggiormente le folle.

I costi operativi possono essere ulteriormente ottimizzati impostando i giusti livelli di luce per le attività non legate agli eventi, come la pulizia.



# Dynamic Concourse Lighting

DALI apparecchi indoor

- Gentlespace
- Pacific LED

Anche se oggi spesso non viene controllata, l'aggiunta dell'illuminazione degli atri alla rete di controllo consente di impostare specifiche atmosfere o di attenuare l'illuminazione quando non viene utilizzata.

I costi operativi possono essere ulteriormente ottimizzati impostando i giusti livelli di luce per le attività non legate agli eventi, come la pulizia.



# Entertainment Lighting

L'illuminazione per lo spettacolo utilizza prodotti con controlli DMX/RDM che in teoria potrebbero essere controllati anche dal controller Pharos.

Tuttavia, poiché questi prodotti hanno molti indirizzi DMX per controllare le luci, il panning, il tilting e lo zoom, spesso viene utilizzata una console professionale programmabile.

Tali console possono essere installate completamente separate dalle altre aree, ma.....L'architettura di sistema di Interact Sports Professional è predisposta per collegare la rete DMX alla console e consegnare il controllo (temporaneamente) dell'impianto per gli show pre e post partita





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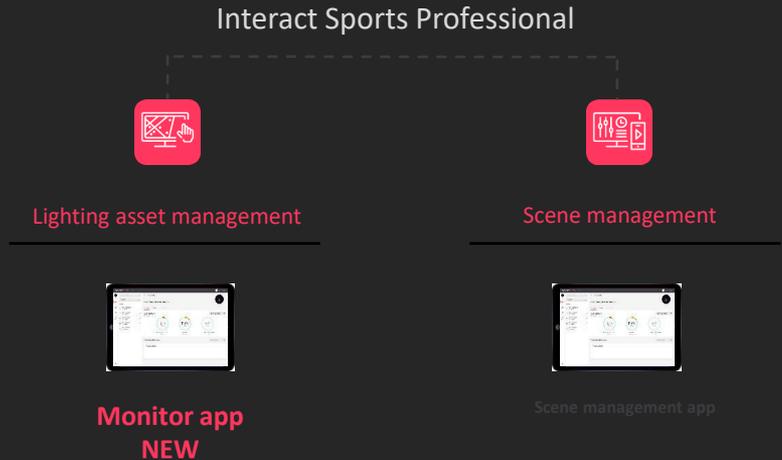
# Professional Sports Monitor App

Global System and Services Version 1 May 24

# Interact Sports Professional Monitor app

Monitor app - Connected lighting software for monitoring and maintaining LED lighting installations.

- Be alerted to system outages without the need for a physical on-site inspection
- Reduce downtime as well as maintenance service fees by only applying maintenance activities when truly needed
- Gain deeper insights – see system status, troubleshoot faults, track asset information and history
- Monitor and manage multiple sites on one dashboard
- Keep track of various types of lighting products for façade, stand and pitch lighting all from a single application



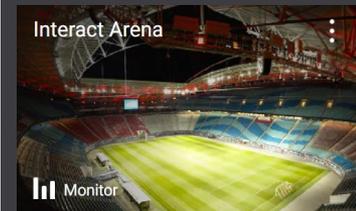
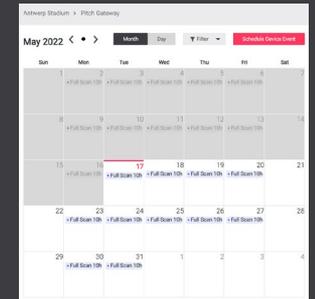
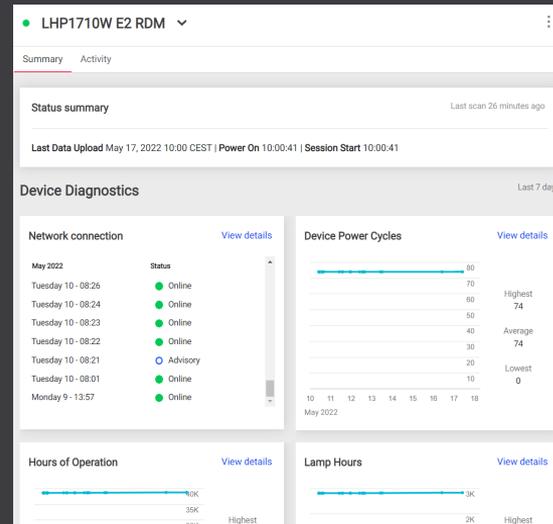
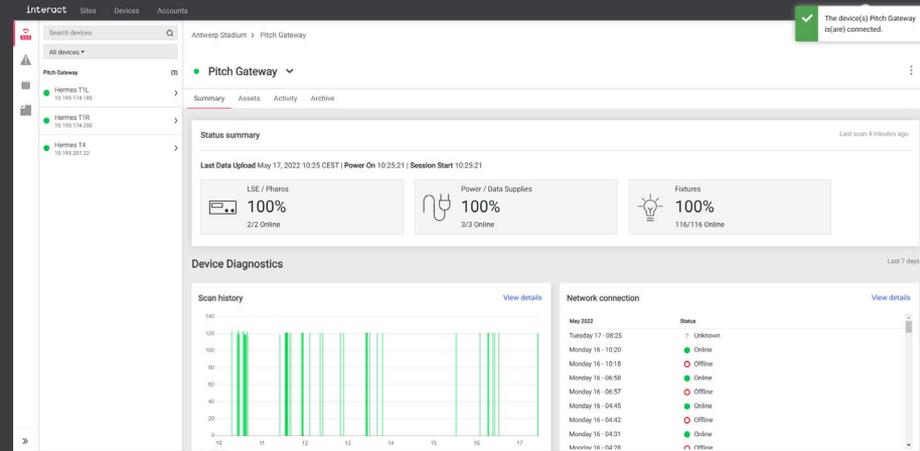
# Software application

- Easy to navigate & simple to setup
- Also works on the go on smartphone and tablet
- Fully self-serviceable
  - a) Self registration of sites, devices and users
- Discover, scan and configure your devices and analyze detailed performance information
- Can run on-premise if cloud is not an option!

## Ordering information

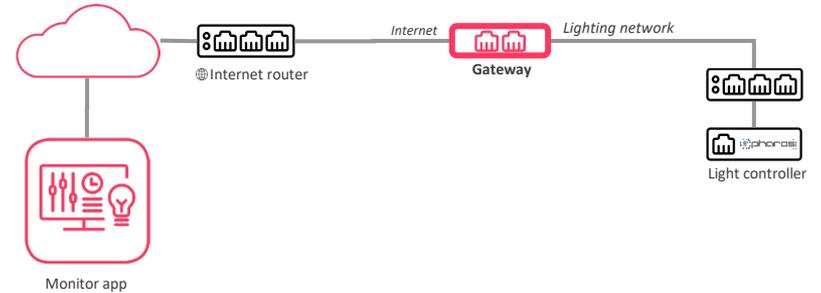
IA Sports Pro Monitor app-standard node  
*Yearly recurring fee per individually controllable light point*

IA Sports Pro Monitor app-high-res node  
*Yearly recurring fee per individually controllable light point for high resolution fixtures and LED strands including Accent, Accent Compact, Vaya Tube, Flex and FlexElite fixture families*



# Gateway

- Runs a local version of Monitor app and enables optional cloud connection
- One ethernet interface to optionally connect to internet, one to the lighting network



Ordering information	Item description
Gateway, 100 to 240 VAC Gateway, Power cable (3), Mounting brackets (2) and Mounting screws (4), Cable clip (1)	SSLCTR LANDMARK GATEWAY

<https://www.colorkinetics.com/global/products/controllers/landmarkgateway>



Specification sheet



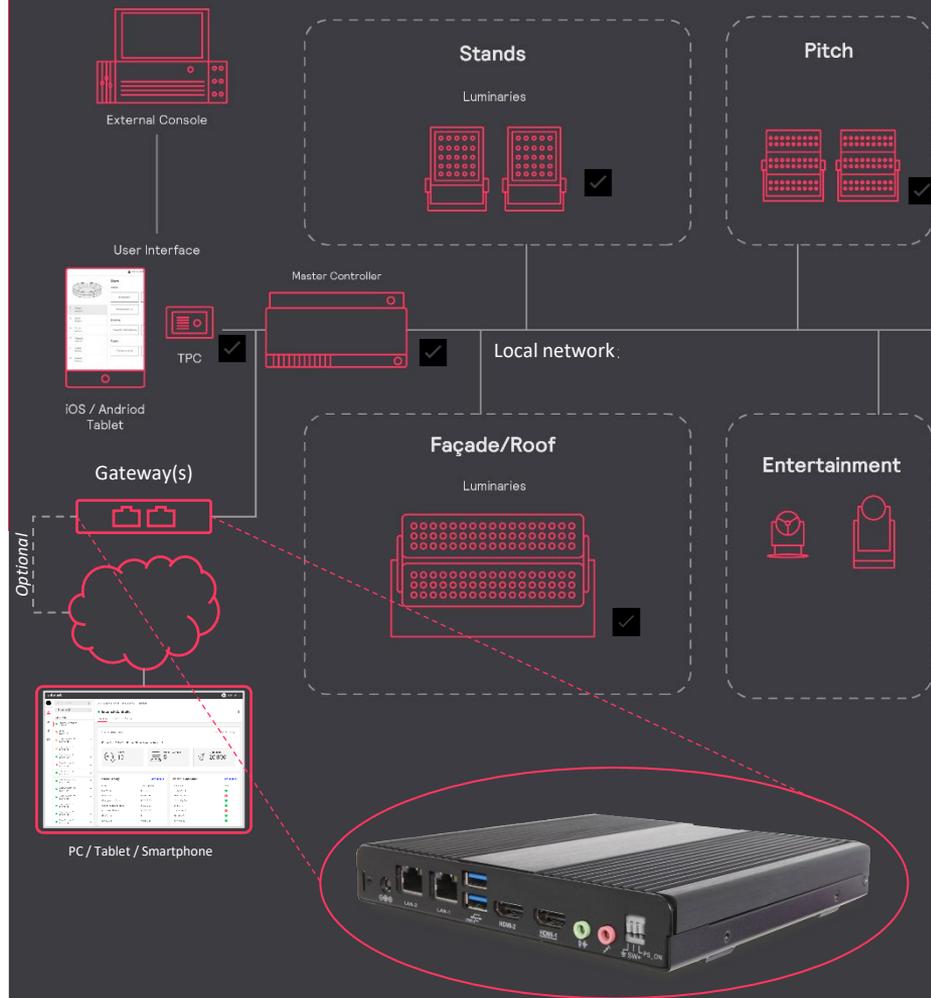
Installation instructions

Double-click to open

interact

# Supported devices

- Supported devices
  - a) Pharos lighting controllers
  - b) ArenaVision, Color Kinetics/UNI and DALI
  - c) LCN8040/LCN8041 (Luminex), DDBC320-DALI and all Color Kinetics/Vaya control equipment





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Sports

AirMesh  
For stadiums & arenas

An easy to install and operate local lighting control solution for small to medium size sports venues

- Easy to install
- Wireless mesh networking
- Automatic discovery
- Local web application



Light management



Scene management



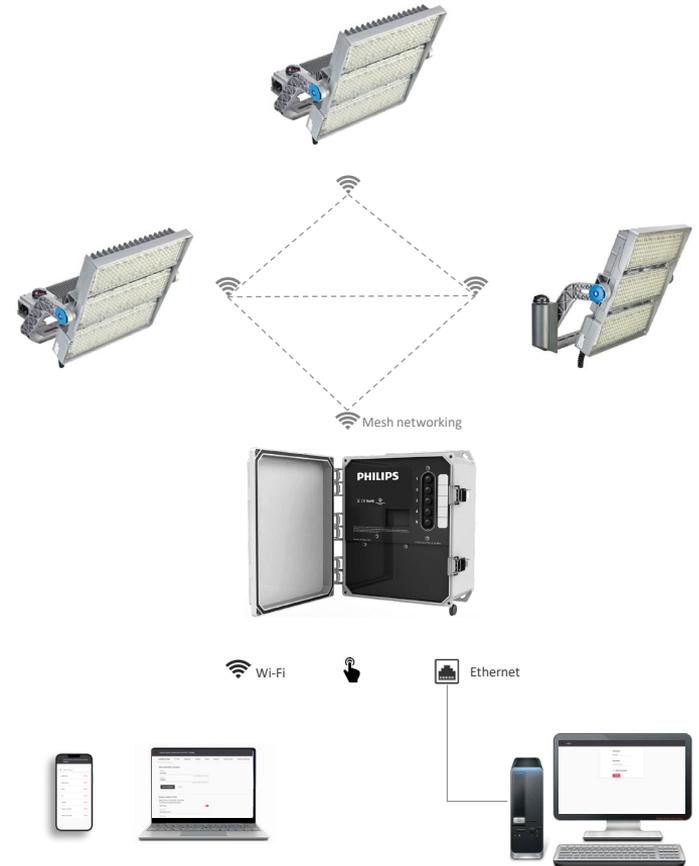
# Features

An easy to install and operate wireless local lighting control solution for small sites that allows for

- 2.4Ghz based mesh networking (encrypted and self-healing)
- Individual light control and dimming
- Programmable push buttons
- Scheduling
- Fully customizable zones and scenes
- Fully customizable user management
- Audit logging and alarms
- Simple dynamic light behaviors

To make installation easy

- Automatic luminaire discovery
- Access to a web application via WiFi or ethernet



interact

# Building blocks



1

ArenaVision or OptiVision luminaire with SHS node

The Philips ArenaVision and OptiVision luminaire can be ordered with the SHS node pre-mounted on its Zhaga socket. When the driver is not on top of the mast the luminaire comes with a special mounting accessory on the bracket for the SHS node.



2

SHS Site Controller Dynamic

The site controller orchestrates the mesh network, hosts push buttons for control and allows access to its feature-rich web application via Wi-Fi or ethernet. The dynamic site controller comes with special dynamic lighting behavior to spice up pre and post game time.



3

Control box / repeater

The control box can be used as a signal repeater or used to retrofit a DALI luminaire.

# Compatible luminaire ordering options

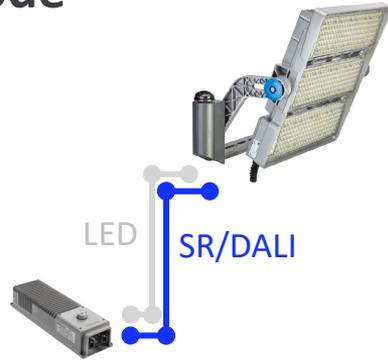
## ArenaVision and OptiVision Gen3.5

### SRT with SHS1 node



#### HGB

Driver on luminaire bracket,  
node on top of driver



#### BV

Driver remote from luminaire,  
node on bracket of luminaire using  
control box

### SR Remote with SHS1 node



#### HGB

Node on control box, designed  
to be remotely mounted close  
to luminaire with free line of  
sight



#### BV

Driver remote from luminaire.  
Node on control box, designed to  
be remotely mounted with free line  
of sight

## Design guidance

Some basic rules to follow:

1. Each SHS node shall have at least 2 other SHS nodes or a site controller within 150 meters free line of sight
2. Mount the site controller in a location that is within 150 meters free line of sight of at least two SHS nodes, while also being accessible for button presses.
3. Couple no more than 250 nodes to a site controller.

Following these design guidelines guarantees a healthy and robust mesh network.

**A repeater can be installed without luminaire to extend range where required.**

>2 devices in range

<250 nodes to a site controller

<150 meters line of sight



# Optimal solution for small to mid-sized sports venues

Thanks to its cost saving abilities, this is the perfect solution for small to mid-sized sports venues.

## 1. Save money on installation

No special wiring required for the controls system.

## 2. Save money on commissioning

Automatic discovery and no complex addressing and show programming software required.

## 3. Still deliver ambiance and suspense

Via the individual light control and dynamic behaviors ambiance and suspense can still be generated during pre, mid and post game times!





## Features and specifications



Standard control devices that anyone can control



Option to produce reports on lighting consumption and use



Easy retrofitting - cutting out disruptive and costly cable works



Option of multiple user groups and authorisation profiles for lighting control



Reliable and stable communication and data transfers via power-grid cables



Dedicated installation tool for easy re-configuration and system upgrades



Remote support and hassle-free software upgrades



Future-proof architecture thanks to cloud technology

## Intuitive control devices

3 different options for controlling light settings



Panel

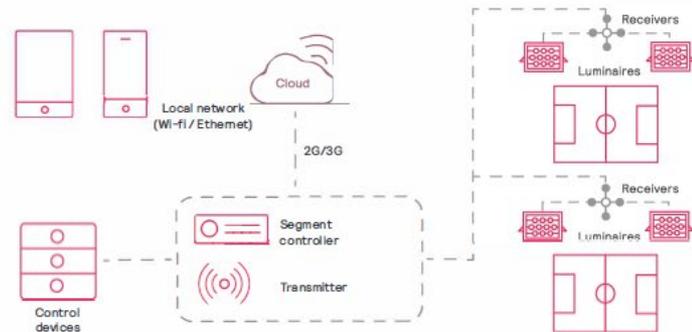


Tablet



Smartphone

## System architecture



## Choose the bundle that works for you

System Features	Specifications
Dimmable floodlights	Philips LED floodlights, DALI driven
Conventional floodlights	Supported, but only ON/OFF setting
System type	Cloud hosted application software with local controller
Network communication	Cellular 2G/3G
Local communication network	Coded mains - coded dimming signal over mains supply DALI communication between luminaire controller and drivers
Architecture	Cloud-based with service support from Signify
Control user device	Panel, via RS-485 cable or dry contact. Tablet or smartphone, Android, IOS and Windows supported (tablet or smartphone not delivered by Signify)

More detail product specification:

<https://www.lighting.philips.com/main/prof/outdoor-luminaires/sports-and-area-floodlighting>

## Philips floodlights are ready to be connected with Interact Sports



OptiVision LED gen3



ClearFlood Large



ClearFlood



GentleSpace gen3

## Segmentazione Sistemi di Controllo

## Sport

Applicazioni		CODED MAINS LOCALE (SELETTORE ROTATIVO)	INTERACT SPORTS RECREATIONAL (CODED MAINS)	INTERACT FIELD AND COURT (RF MESH)	AIRMESH	INTERACT SPORTS PROFESSIONAL / SISTEMI CABLATI DMX
CAMPI SINGOLI (Dilettanti / <200lux / locali / rionali / comunali)	4 TORRI FARO <=16PROIETTORI O < 2 LINEE ELETTRICHE	✓✓✓	✓✓	✓	✓	✗
	>4 TORRI FARO O >16 PROIETTORI O > 2 LINEE ELETTRICHE	✓✓	✓✓✓	✓✓	✓	✗
CAMPI SINGOLI E STADI MINORI (CALCIO Promozione/ >200lux/Serie D/ALTRI SPORT LIVELLO DILETTANTI)		✗	✓	✓✓✓	✓✓	✓
STADI FASCIA BASSA (CALCIO SERIE C / SERIE B / ALTRI SPORT LIVELLO PRO)		✗	✗	✓	✓✓✓	✓
STADI FASCIA ALTA (SERIE A / UEFA / RIPRESE TV)		✗	✗	✗	✓	✓✓✓
POLISPORTIVE CON PIU' CAMPI / CENTRI DI ALLENAMENTO		✓	✓	✓✓✓	✓✓	✓
INDOOR MULTISPORT LIVELLO ALTO		✓	✓	✓	✓✓	✓✓✓

## LEGENDA:

✗ NON APPLICABILE

✓ NON CONSIGLIABILE

✓✓ CONSIGLIATO

✓✓✓ IDEALE



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## LED Grow lighting

Progettare e aggiornare le infrastrutture per supportare la fotosintesi, consentendo e rafforzando la crescita dell'erba sulle superfici sportive.

- Lighting footprint: 200 square meters
- Light level: 300  $\mu\text{mol}$
- Amount of PHILIPS LED fixtures: 104
- Amount of Infrared fixtures: 26
- kW consumption: LED only 16kW.
- Including Infrared 64kW

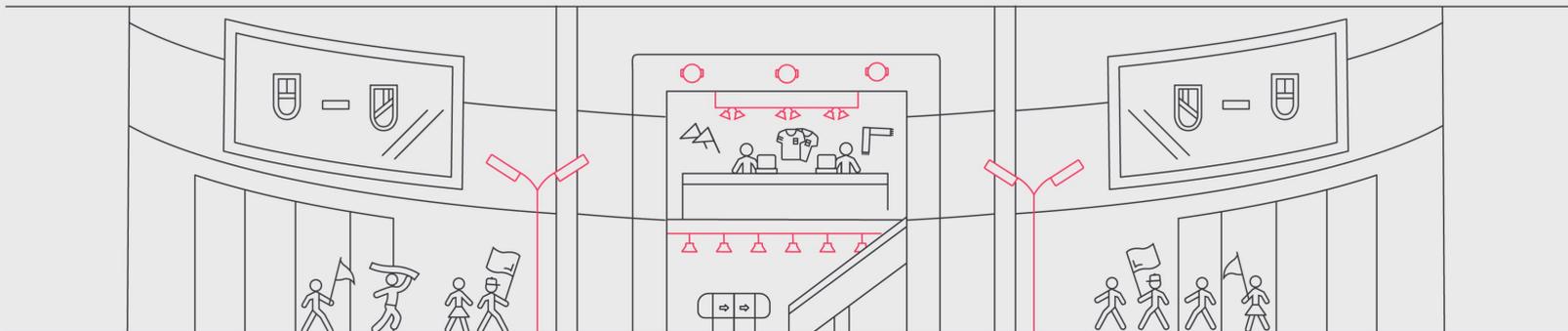


Presenti  
in oltre  
100 arene

Le installazioni di  
Interact Sports  
sono già presenti in  
23 paesi di 5  
continenti.

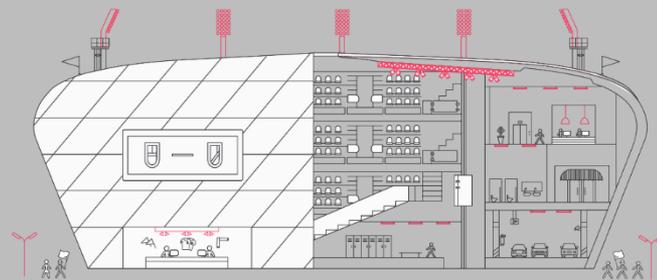
Migliorare lo stadio  
e l'esperienza per  
1,3 milioni di tifosi

Chiedeteci i  
dettagli e  
consultate i  
nostri casi di  
studio.



# Total ArenA Experience

Forniamo tutta l'illuminazione dello stadio: esterni, facciata, interni, box VIP, Bowl, parcheggio. L'illuminazione riflette l'identità del Club attraverso un'infinita combinazione di spettacoli luminosi.



ALLIANZ STADIUM – SOLUZIONI ENTERTAINMENT



Bari Stadium, Italy  
Pitch Lighting

signify

STADIO OLIMPICO DI ROMA

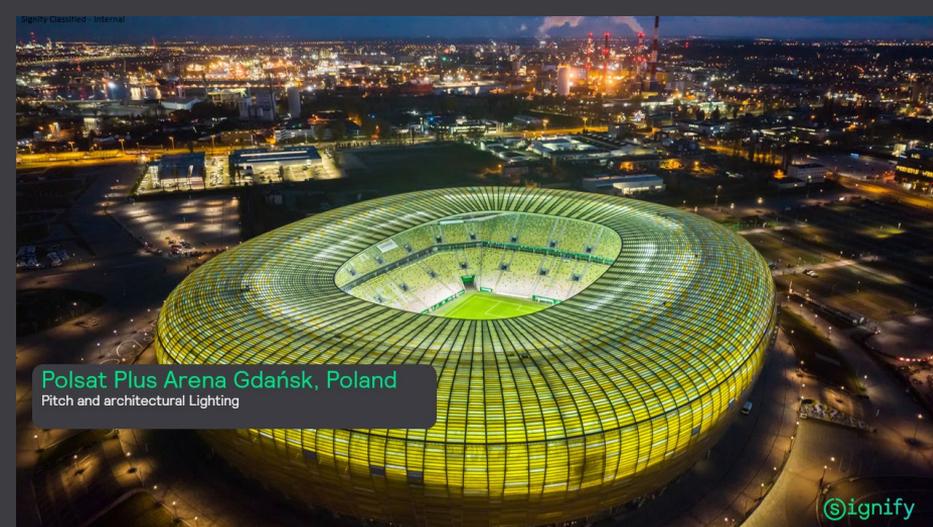


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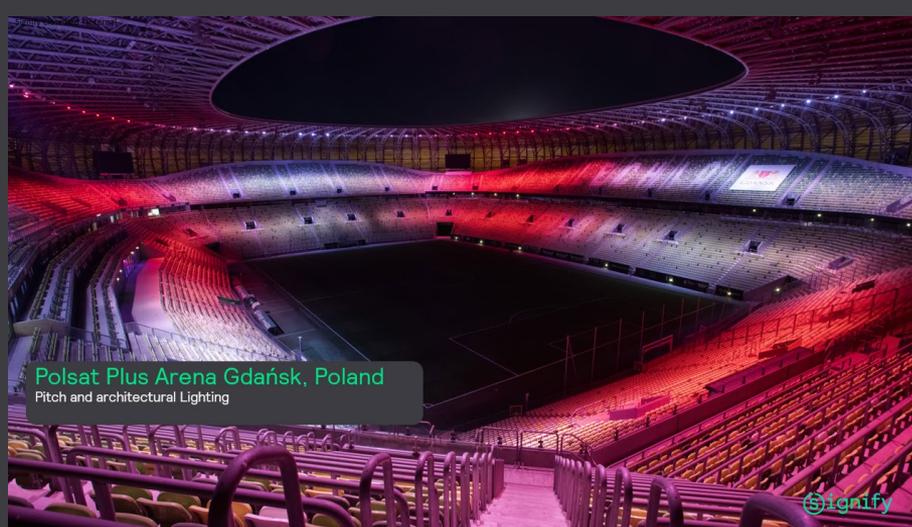
STADIO MARADONA NAPOLI:



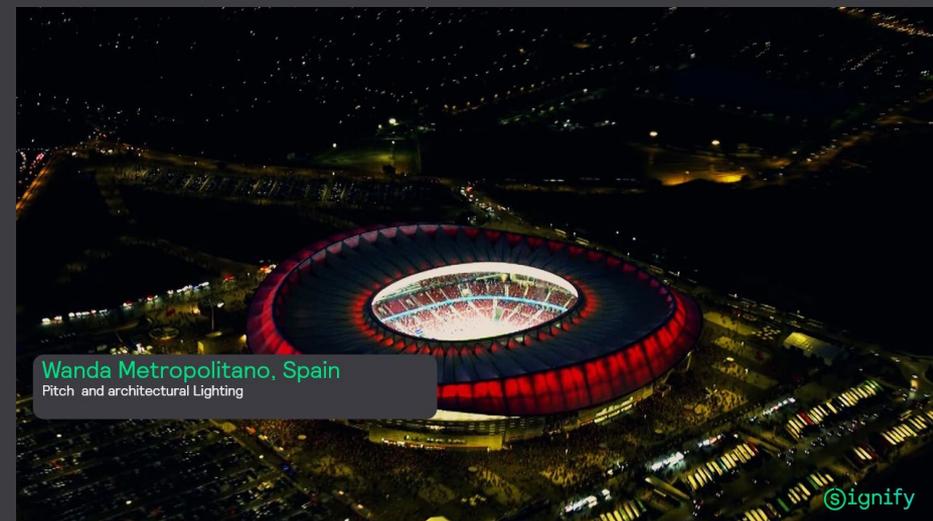
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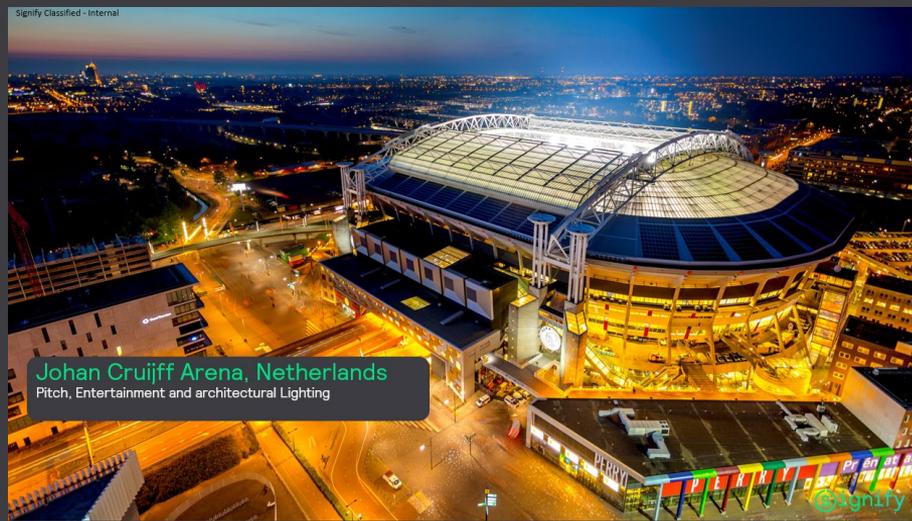
**Pilsat Plus Arena Gdansk, Poland**  
Pitch and architectural Lighting



**Pilsat Plus Arena Gdansk, Poland**  
Pitch and architectural Lighting



**Wanda Metropolitano, Spain**  
Pitch and architectural Lighting



**Johan Cruijff Arena, Netherlands**  
Pitch, Entertainment and architectural Lighting





## Viola Park

Tra le prime strutture complete in Italia con sistema wireless **AirMesh** di intrattenimento

Sostenibilità, Tecnologia  
Innovazione



Philips Optvision

**Site Controller** wireless

**Driver** su ogni punto luce

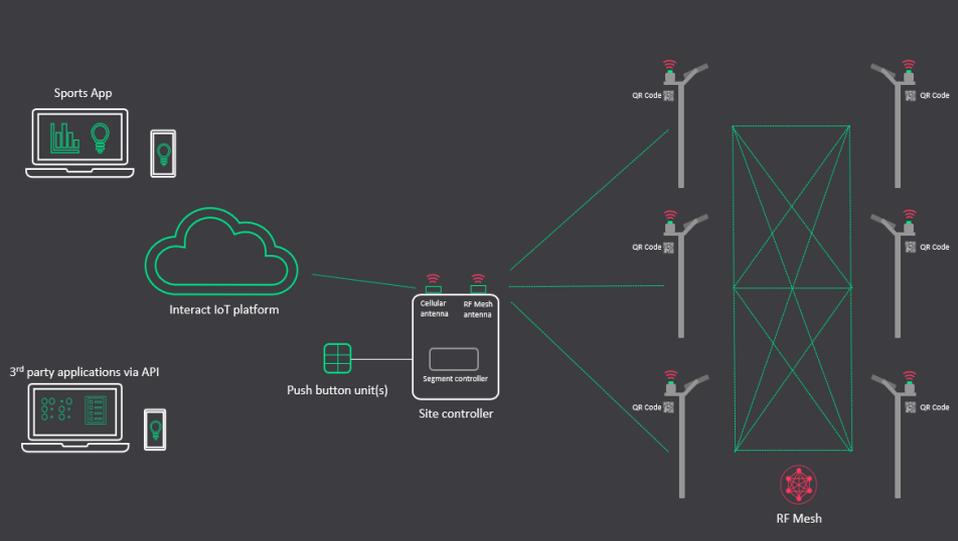
**Pilotaggio** wireless

**Report Energetici** in tempo reale

**Notifiche** malfunzionamenti

**AirMesh**

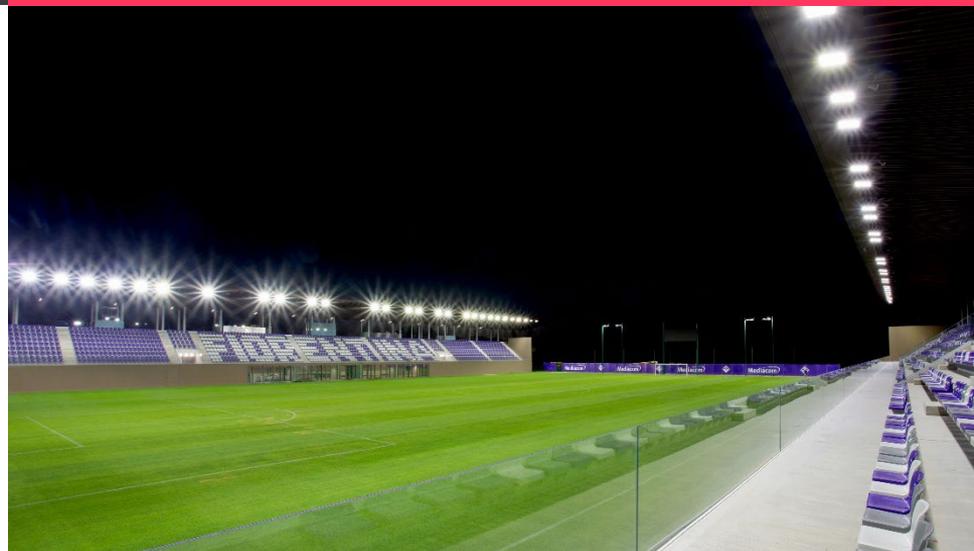
**interact**



*La nuova Casa Viola utilizza la piattaforma di gestione dell'illuminazione Interact Sports di Signify nella nuova versione AirMesh*



*certificazione UEFA CAT.2,  
soddisfacendo quindi gli standard  
di trasmissione televisiva della  
UEFA Champions League.*





# Il Palaghiaccio di Varese Acinque Ice Arena

Olimpiadi invernali 2026

**Interact Sports** garantisce un'illuminazione smart con la possibilità di creare coinvolgenti giochi di luce colorata prima, dopo e durante gli eventi sportivi



Philips  
ArenaVision Gen 3.5



Philips  
ClearFlood



Philips  
VayaFlood

## Interact Sports

- ❖ Offrire esperienze integrate end-to-end, dall'ingresso all'uscita
- ❖ Informazioni in tempo reale sul sistema
- ❖ Rendere lo stadio più attraente in ogni sua parte
- ❖ Programmi ed esperienze di marketing su misura
- ❖ Gestione Flessibile



## Benefici

Riduzione del consumo energetico > del 30%

Ricavi Aggiuntivi In funzione dell'impianto sportivo

Aumento delle presenze stadio/centro Fino al +10%

Riduzione delle emissioni di CO2 In funzione dell'impianto sportivo

Riduzione dei tempi di inattività degli apparecchi di illuminazione (health check) Fino al 75%



interact

We Are  
©ignify

interact Sports

**WEBINAR**

# Aspetti della gestione nell'impiantistica sportiva

**Grazie per l'attenzione**

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Ing. Federico Maria Barbaglio: [federico.barbaglio@signify.com](mailto:federico.barbaglio@signify.com)

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14/10/2024