Helvar

WIRELESS LICHTMANAGEMENT MET DALI

Sigurd De Knijf

A Connected World

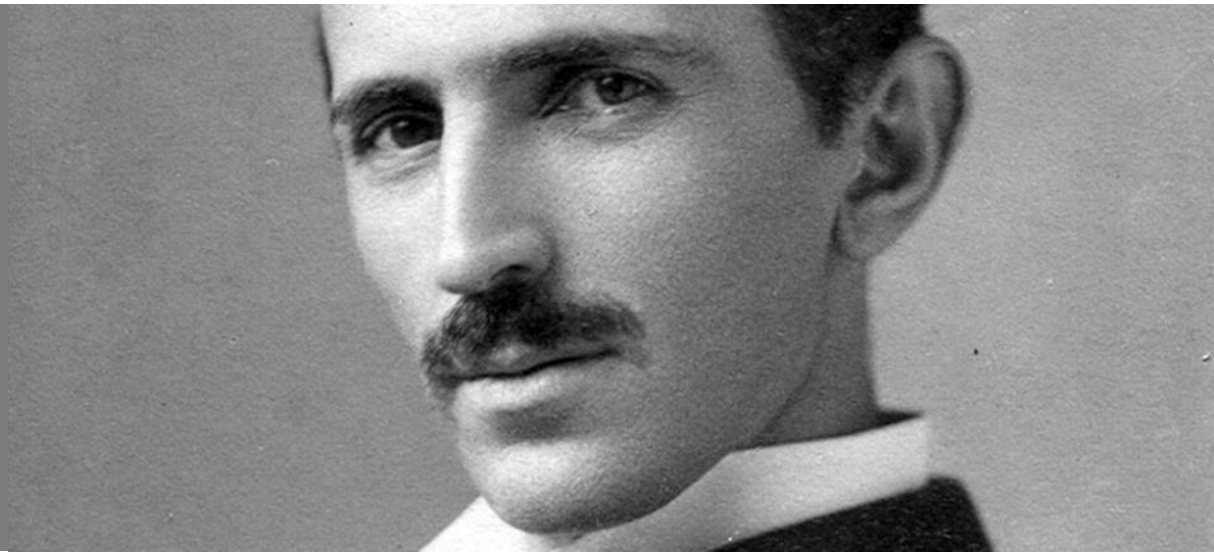
When wireless is perfectly applied, the whole earth will be converted into a huge brain, which in fact it is, all things being particles of a real and rhythmic whole.

We shall be able to communicate with one another instantly, irrespective of distance. Not only this, but through television and telephony we shall **see** and **hear** one another as though we were face to face
The instruments through which we shall be able to do his will be amazingly simple compared with our present telephone.

A man will be able to carry one in his vest pocket

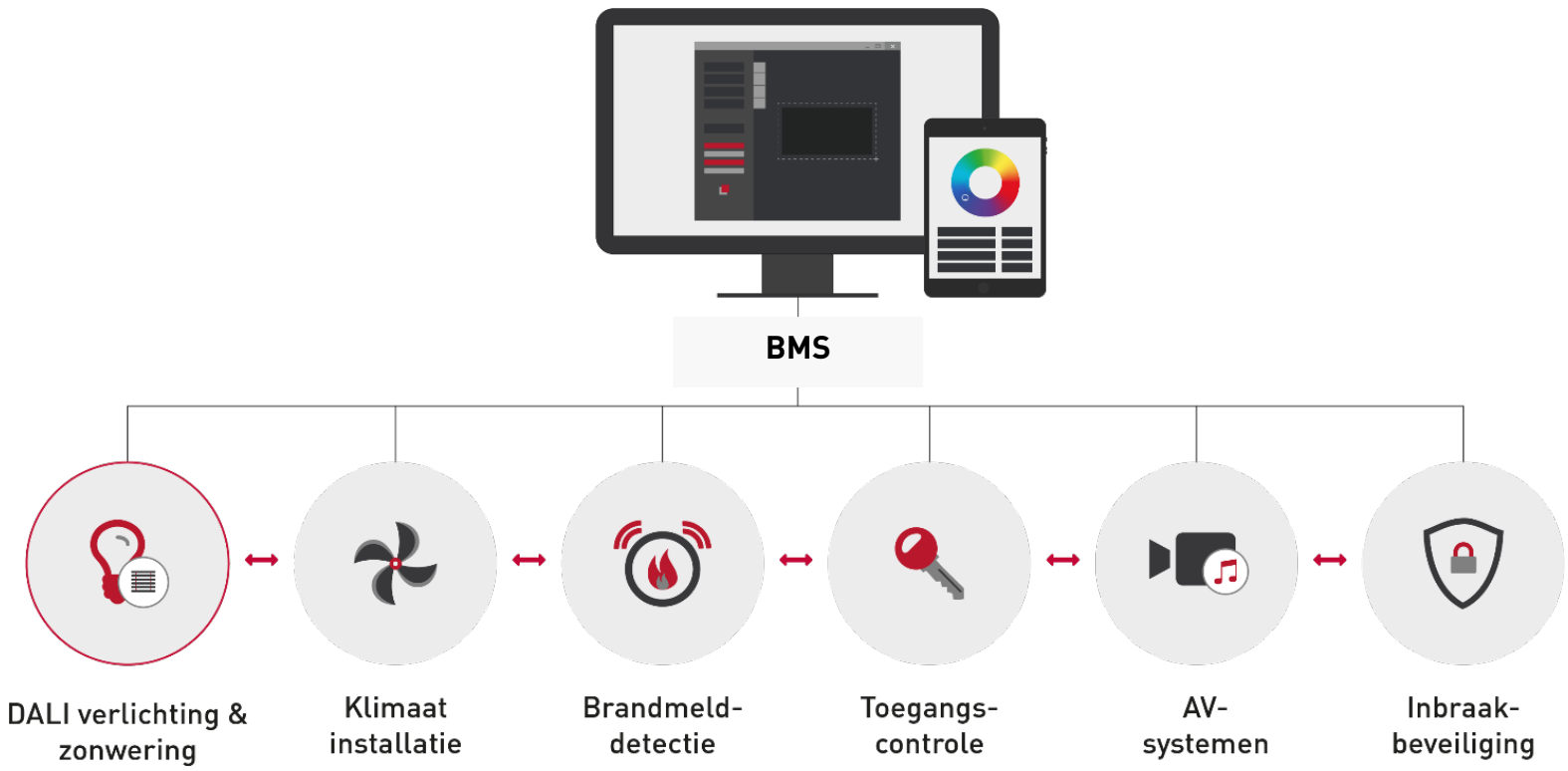
1926

Nikola Tesla

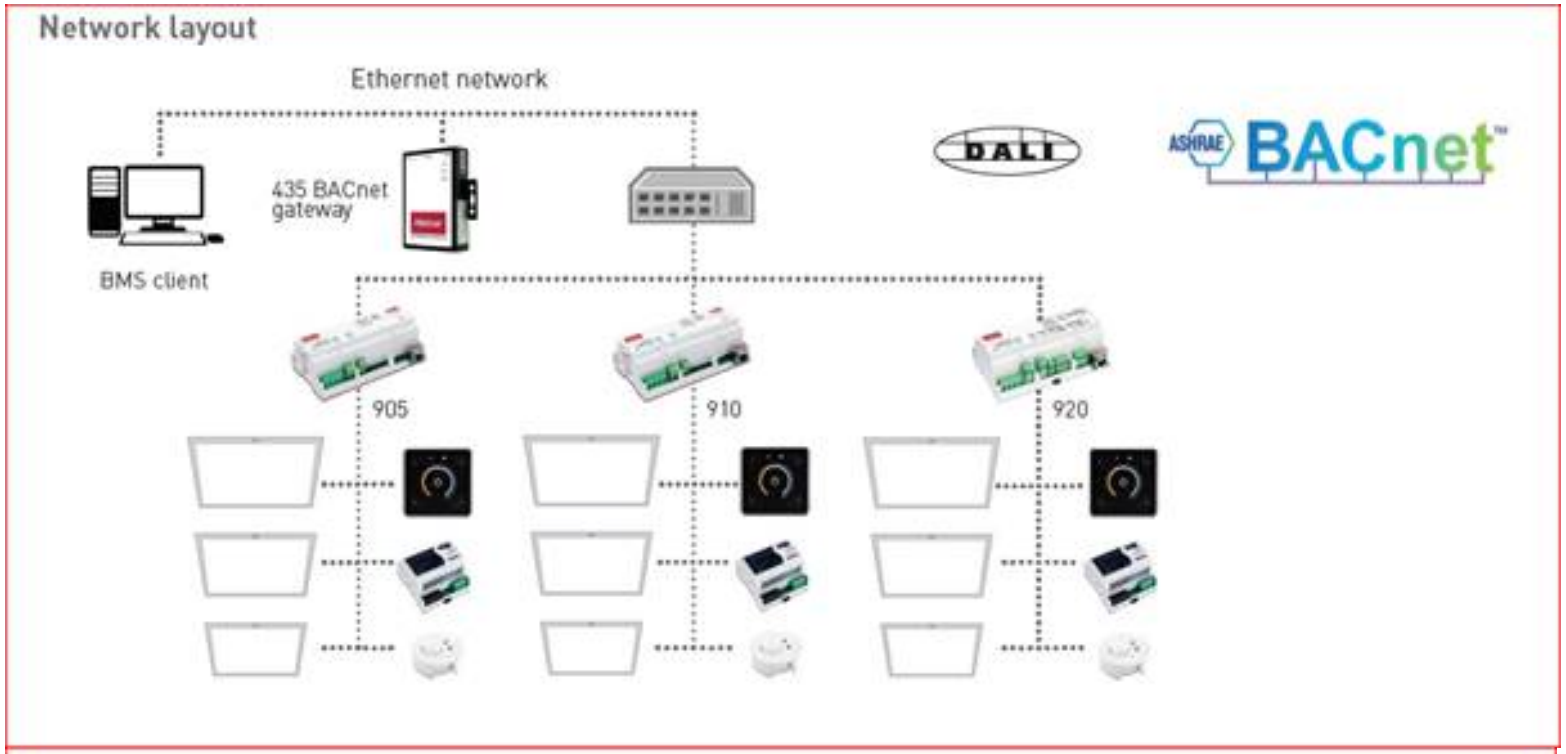


SMART BUILDINGS / BMS

SYSTEM ARCHITECTURE

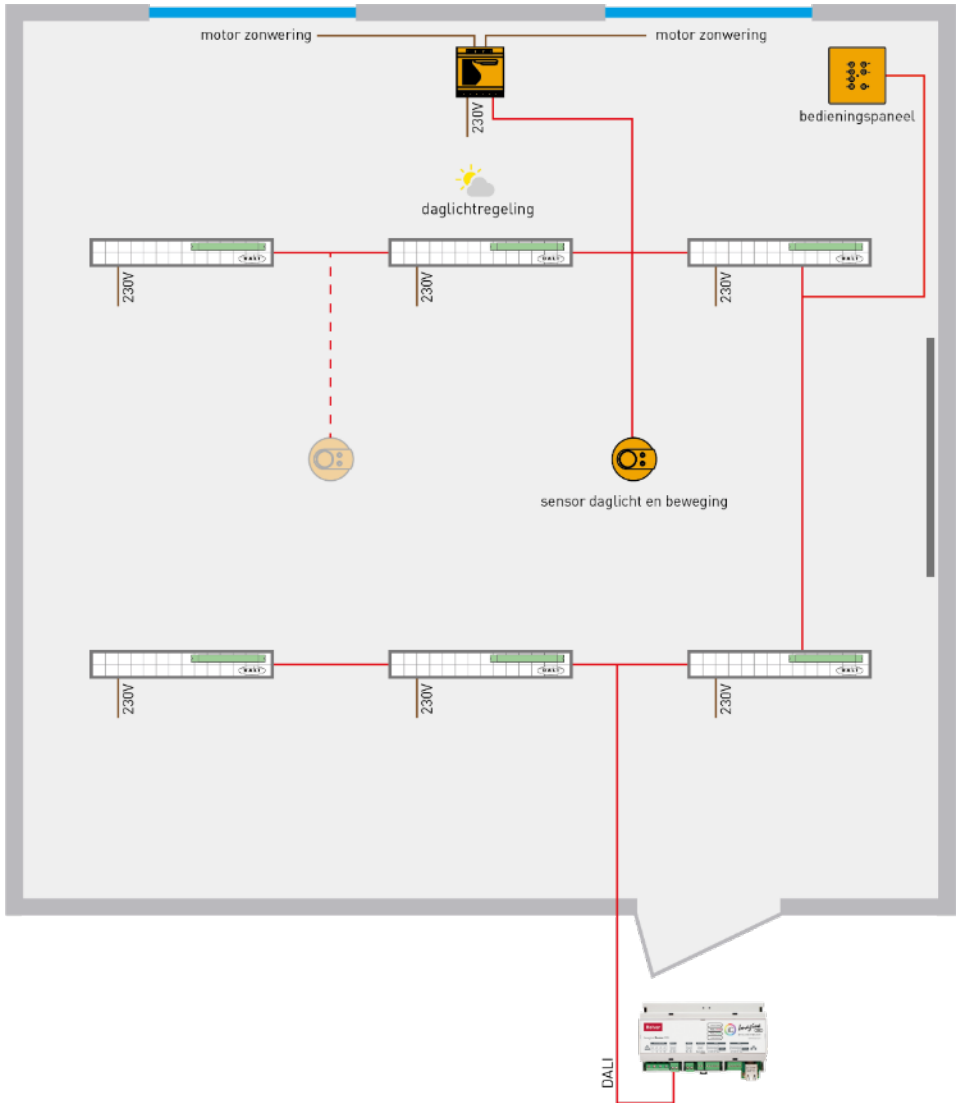


STUCTURE / **LIGHTMANAGEMENT**



Helvar Router Group or DALI device	BACnet Point Instance	Application
Group scene	AV - Analogue Value (Read and Write)	Scene trigger, absence, presence detection
Group consumption	AI - Analogue Input (Read only)	Estimated group power consumption
Group direct level	AO - Analogue Output (Write only)	Send lighting direct levels
Router fail	BI - Binary Inputs (Read only)	Controller status
Device missing	BI - Binary Inputs (Read only)	Load, sensor and keypad status
Lamp fail	BI - Binary Inputs (Read only)	Lamp fail status

STUCTURE / **DALI SYSTEM**



Basis DALI system:

- Digital
- 64 users – 250mA
- Bidirectional
- Wired

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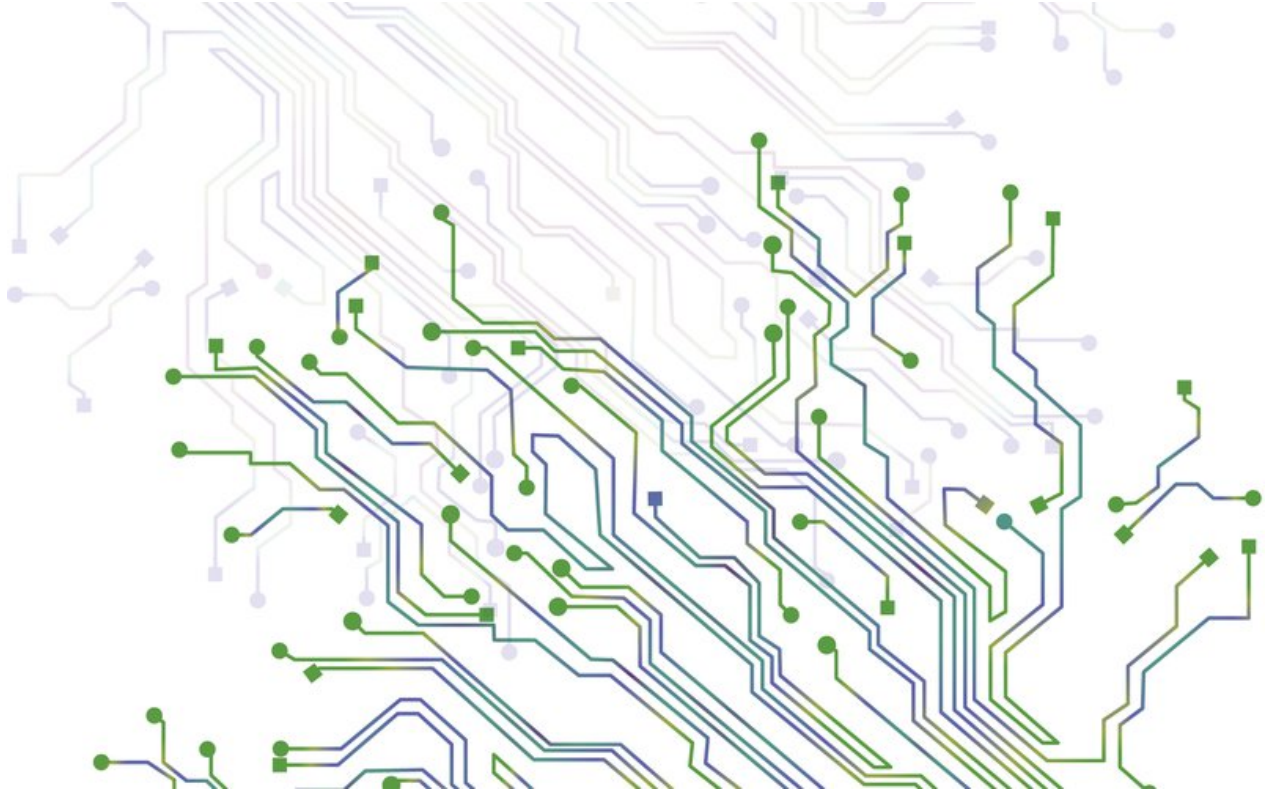
NEEDS

MARKET:

- Efficiëncy
- Energy saving
- Userfriendly
- Affordability
- Healthy Buildings
- Maintenance

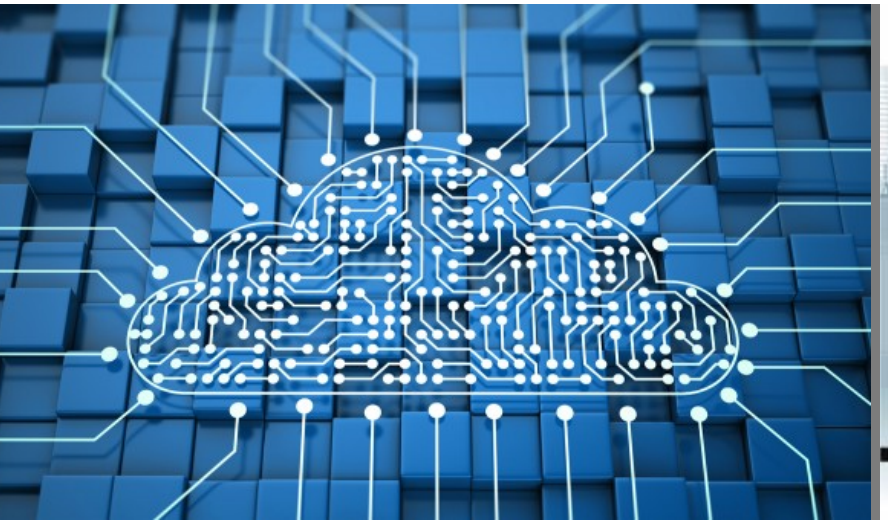
INSTALLER:

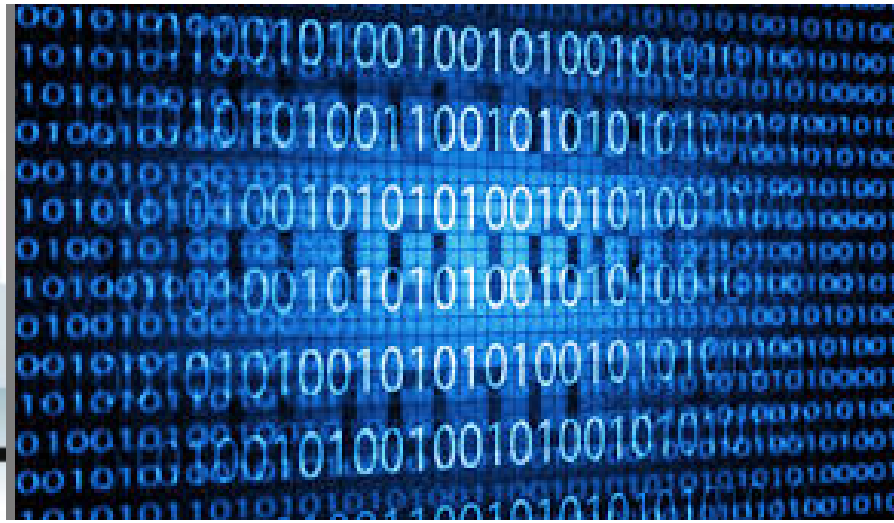
- Installer friendly
- Cost saving



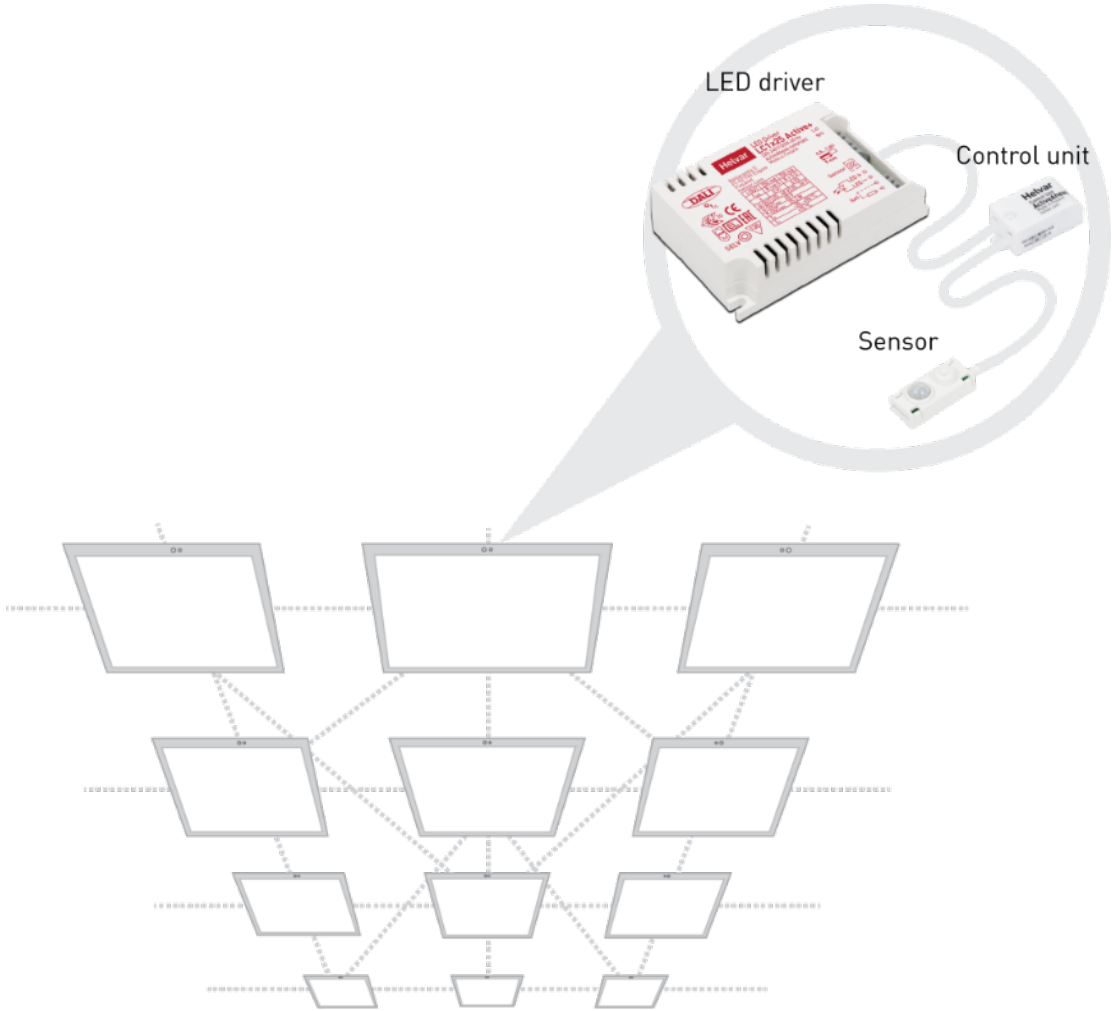
NEW DEVELOPMENTS

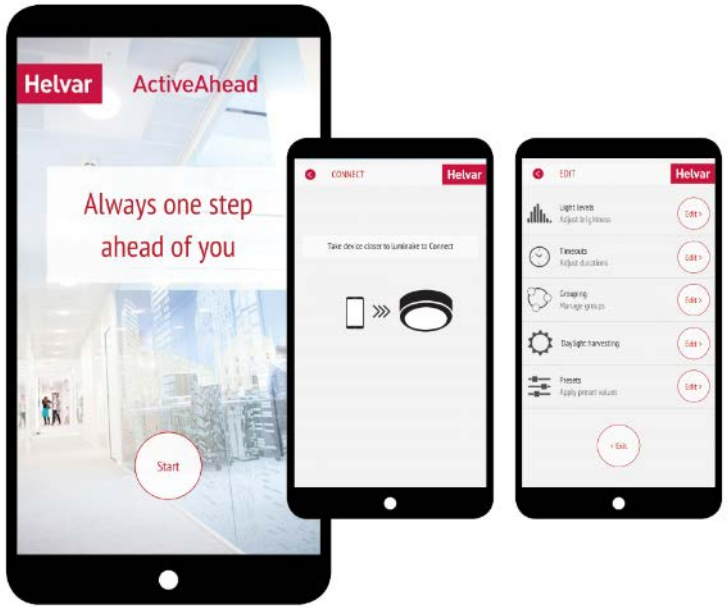
- Wireless / hybride solutions
- New services
- **More** Data
- **More** intelligents controls





BLUETOOTH / WIRELESS-DEVICE





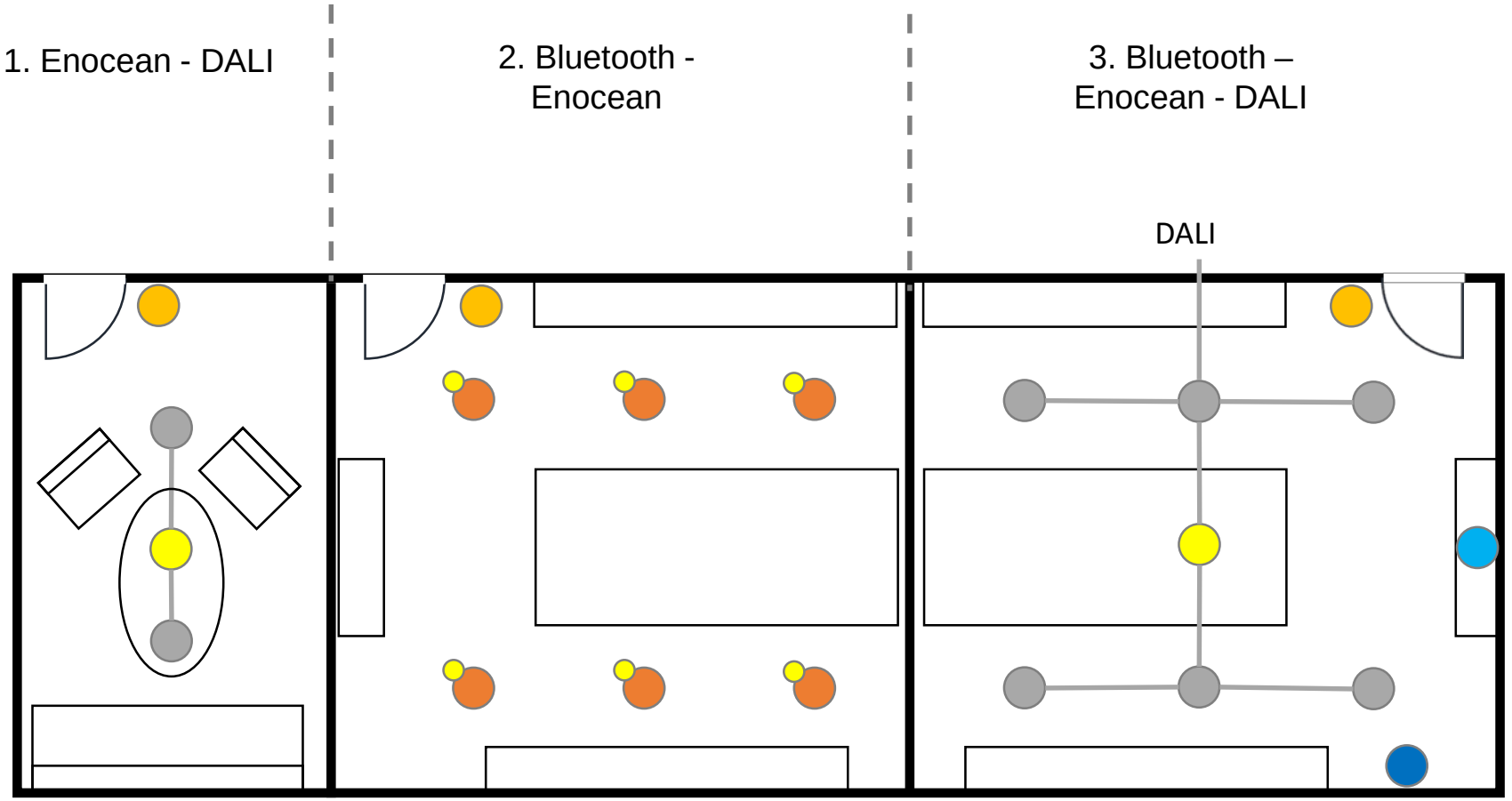
BLUETOOTH MESH

https://vimeo.com/225874947

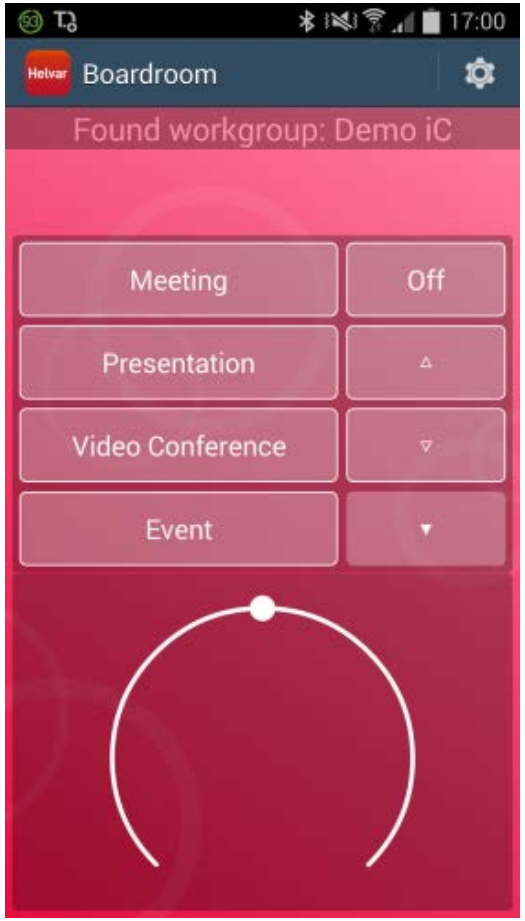
WIRELESS SYSTEMS LAN

				
Standard no	14543-3-10	802.15.4	802.15.1	802.11
Frequency (MHz)	868	868/2450	2450	2450
Range (m)	30	100	10	100
Network topology	Star	Mesh	P2p, star (mesh)	Star
Energy consumption	Very low	Low	Low	High

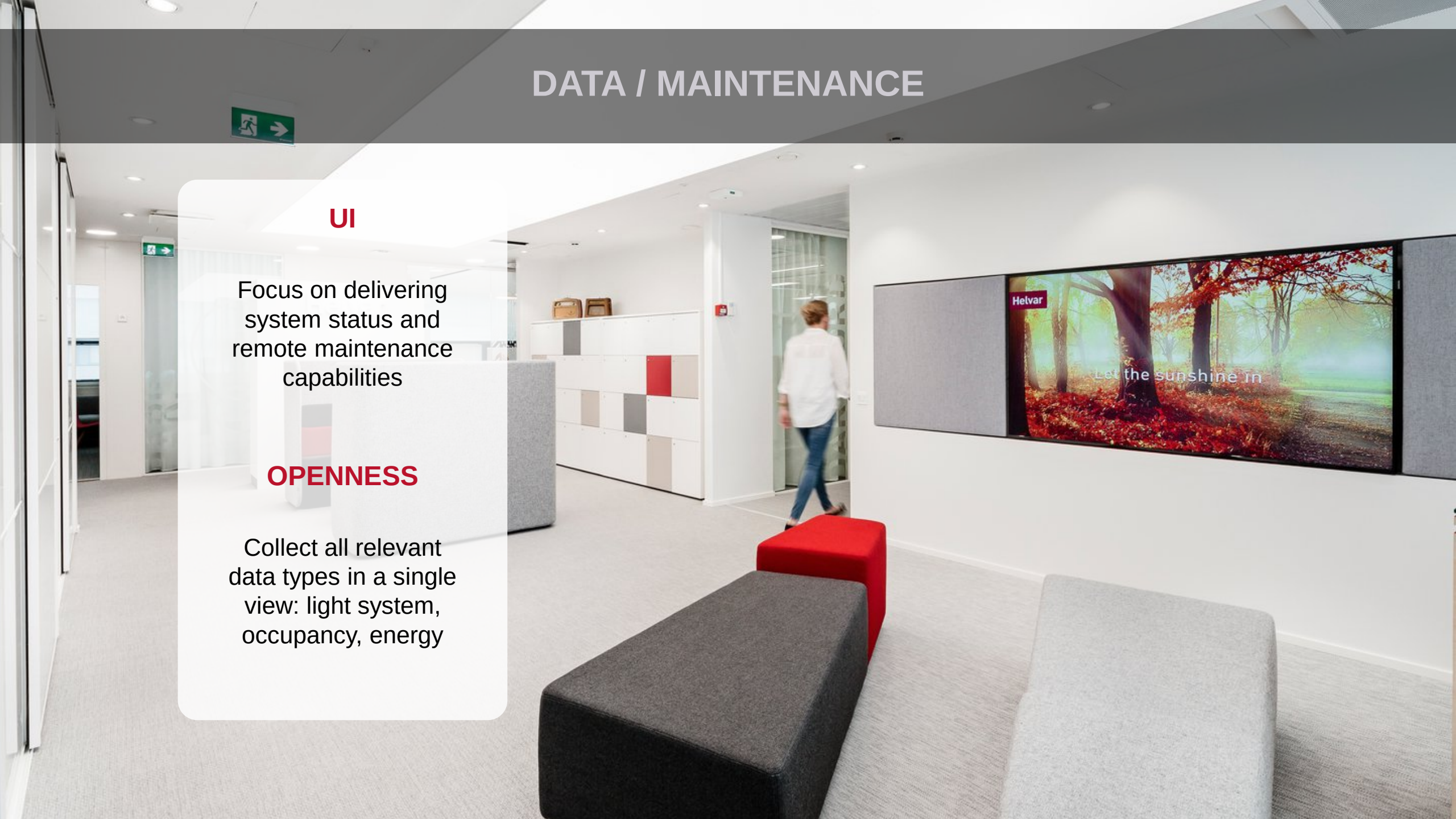
EXAMPLE SEVERAL WIRELESS NETWORKS



WIFI / WIRELESS CONTROLS



DATA / MAINTENANCE



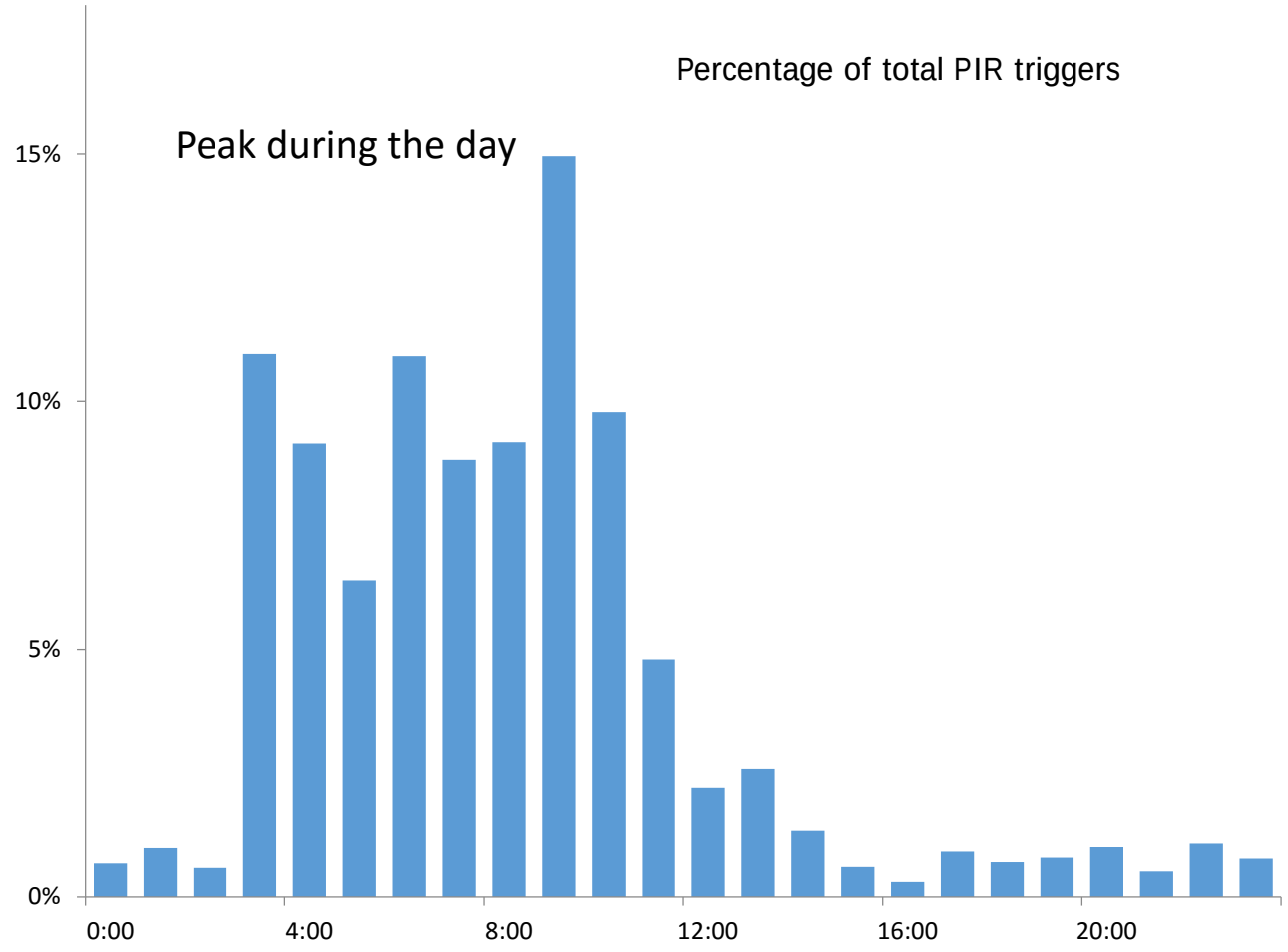
UI

Focus on delivering system status and remote maintenance capabilities

OPENNESS

Collect all relevant data types in a single view: light system, occupancy, energy

DATA / VALUABLE INSIGHTS THROUGH DATA



FUTURE OF CONTROLS?

People are pretty lazy …

- Manual control = < 1%
- Sensors = 16%
- Time controlled = 83%
- Others …

FUTURE FOR CONTROLS ?

MOOTHMETRIC

Provide the right environement to a individual person.


Helvar
HELVAR
Leads Light intelligence
to improve your well-being