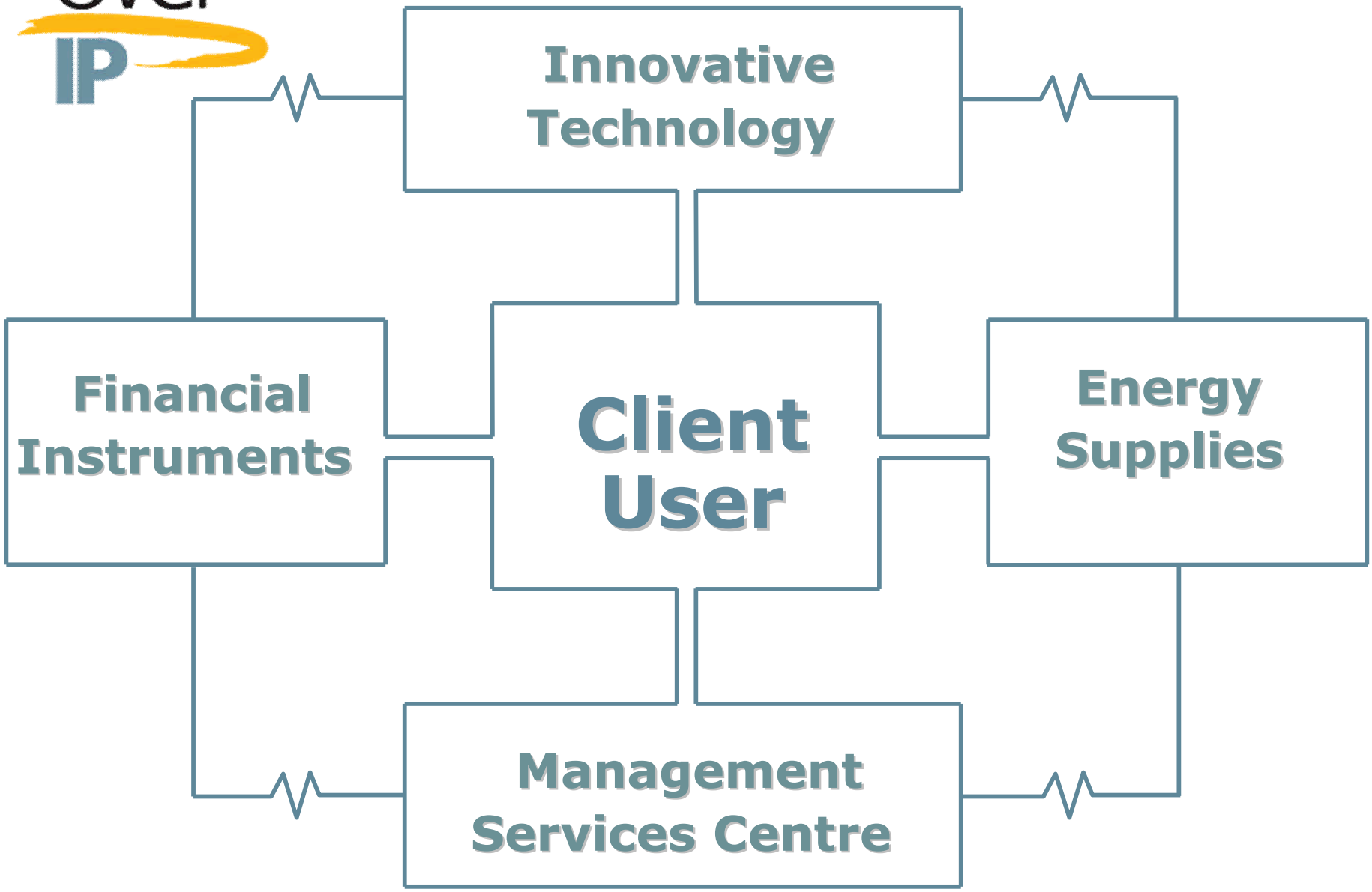
Over IP
Innovation in the ICT world

By: *Over IP Ital East Engineering Group*

OVER IP srl • Via C. Battisti, 1 • 40123 Bologna • Italy

Over IP - MISSION

- **Over IP**, works in two important and strategic markets for the innovation of **Energy and Information Communication Technology** by developing and providing services and systems for the benefit of citizens and therefore their **prime objective is social utility** .
- **Energy:** with systems that offer both an improved service for ends users and a energetic economic saving for energy supply companies, they also provide direct advantages and consequential savings for the citizen.
- **ICT:** with projects and systems designed to improved assistance and efficiency of services developed for sectors that are socially important and useful to citizens such as health, "homeland security" etc.


Innovative Technology
Financial Instruments
Client User
Energy Supplies
Management Services Centre

TELELighting System

- **TELELighting System is a system with innovative and patented technology for the telemanagement of external lighting systems.**
- **The use of the Internet Protocol mode means that telediagnosis and telecontrol of the system's single components can be carried out permitting a personalised management of the public illumination service .**
- **TELELighting System with its interactive telematic centralised management provides notable savings of both energy and maintenance costs with a reduction in on-site interventions by technical staff .**
- **TELELighting System guarantees a high standard, highly reliable and continuous service together with ease of installation and use.**

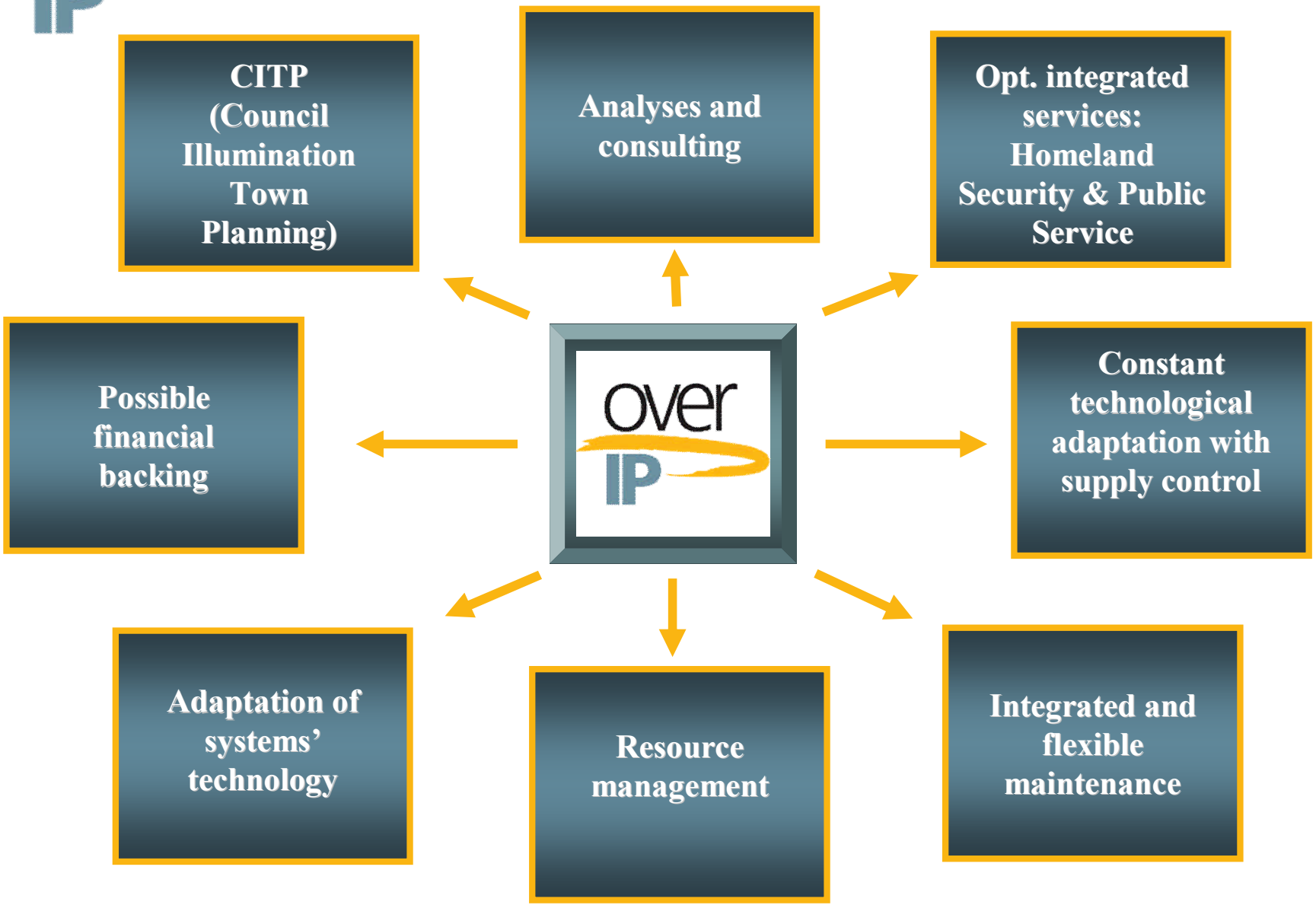
Characteristics and advantages of TELELighting system

- **TELELighting system can detect abnormalities in the functioning of lighting and derivation apparatus in real time .**
- **Single out the reason and cause and centralise all information necessary for action targeted at both resolving the issue and saving money .**
- **In parallel the Internet Protocol modes permit a centralised vision and management of each single light, from one or more computers making notable economic savings on an energetic level possible .**

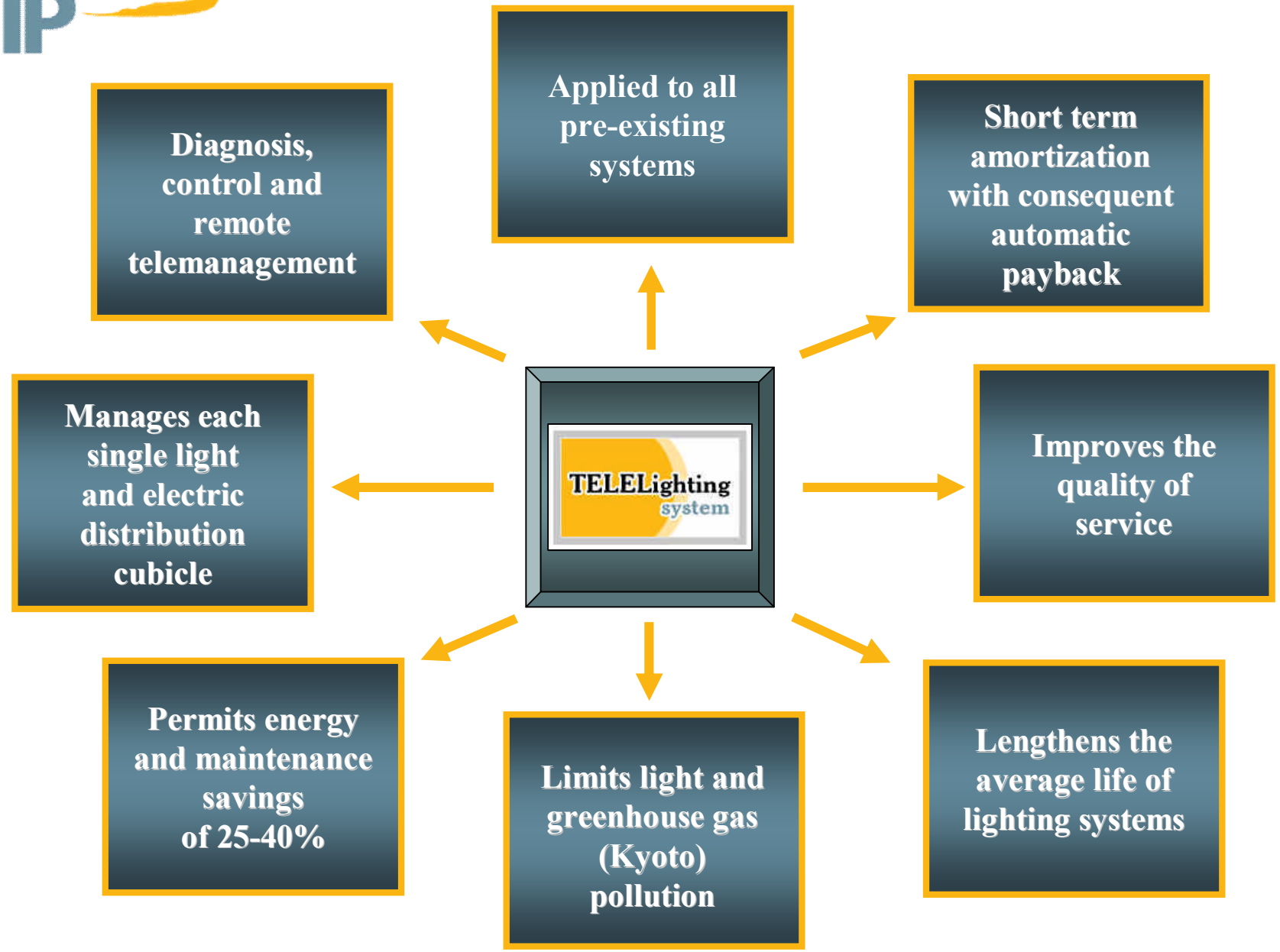
TELELighting System is therefore the ideal solution for :

- **Reducing costs in electricity current supplies** since all systems with traditional management have energetic consumptions superior to that actually necessary
- **Reducing maintenance costs** with centralised management of illuminated areas and focused on-site action with relative monitoring and control of third parties .
- **Optimum service of illumination supply** with PC and telematic management of working parameters

Services supplied to the Council by OverIP

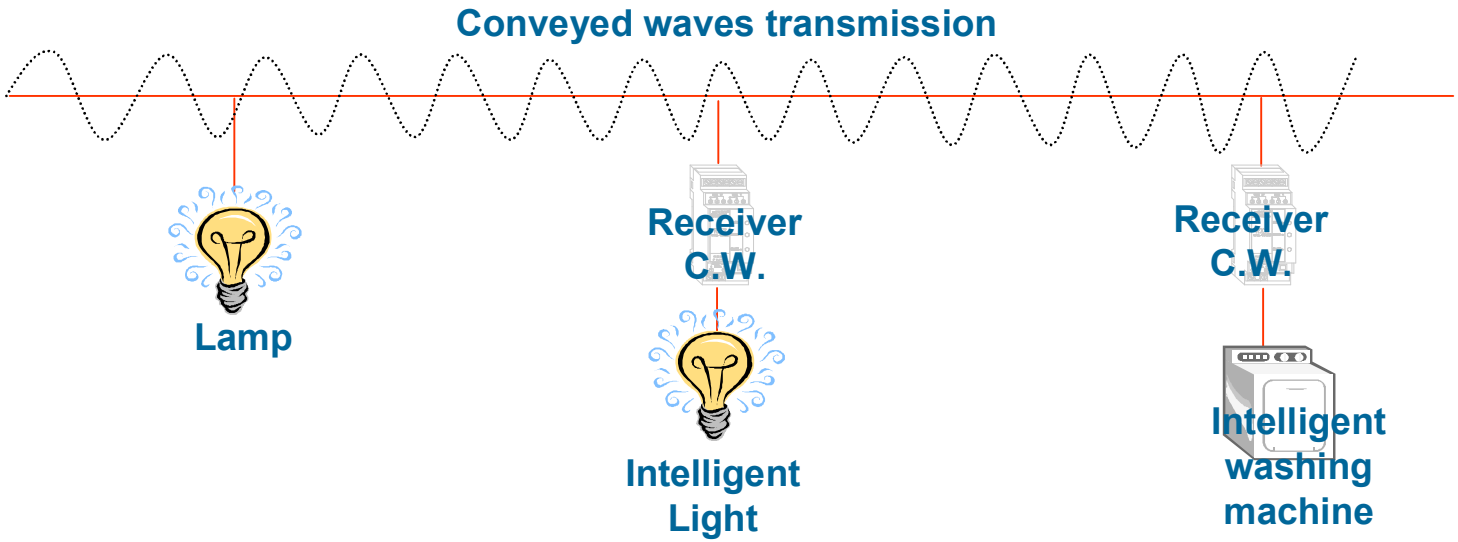


TELELighting technology
Services for the Council

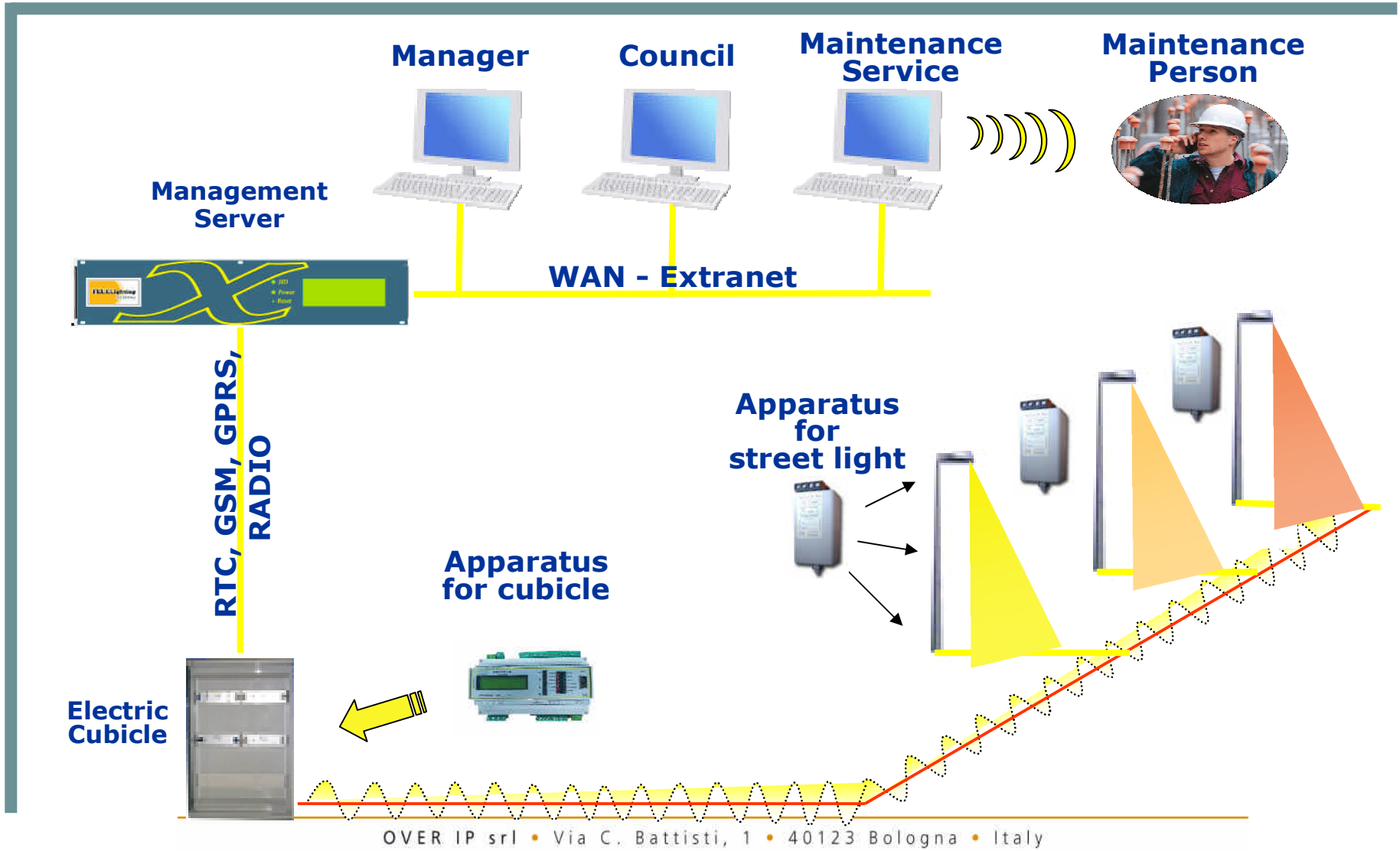


What are conveyed waves

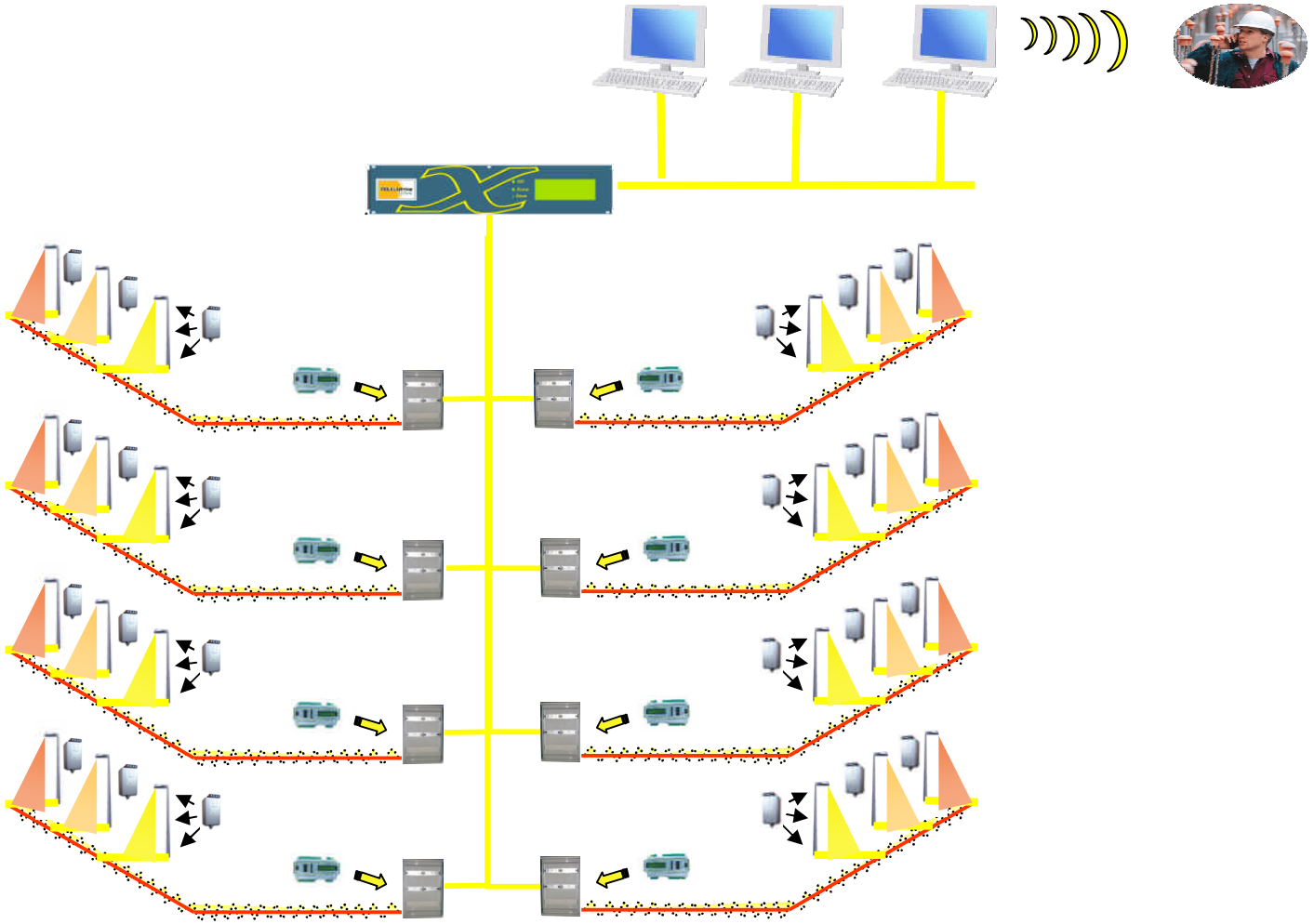
- It is a technology that uses normal pre-existing electric cables (both inside and outside of buildings) to transmit coded digital signals
- The power line is used both as a current source for the devices as well as a means of signal transmission .



TELELighting architectural solution



TELELighting architectural solution



Italian Situation: White Certificates

- TEP (Ton Equivalent Petrol)= value measurement unit for white certificates
- 1.000,00 KWh = 0,22 TEP
- TEP = 4.545,00 kwH
- TEP value=min € 100,00 to max. € 300,00
- Since January 2006 the company *ACQUIRENTE UNICO* manages the energy market

See website:

www.acquirenteunico.it/ita/home/procedure/home.asp

Example of saving no. 1 with partial turning off of the street light

		Maintenance Service €		Energy KWh		Energy Savings TEP & KWh	
Street light	Electric Cubicle	Before	After	Before	After	TEP	KWh
500	10	18.000	9.000	304.087	210.945	20,49	93.142
1000	20	36.000	18.000	608.173	421.890	40,98	186.283
5000	100	180.000	90.000	3.040.865	2.109.448	204,93	931.417
50000	1.000	1.800.000	900.000	30.408.650	21.094.481	2.049,32	9.314.169
100000	2.000	3.600.000	1.800.000	60.817.300	42.188.961	4.098,64	18.628.339

Calculation based on P.I. systems with 61% of 125 W V.M. lights + 15% 250W V.M. + 24% 70W SAP.

Telemanagement with only turning off of 50% of the lights for 50% of the duration of nocturnal operation of P.I. (Public Illumination) systems.

Example of saving no. 2 with reduction of lights' intensity

		Maintenance Service €		Energy KWh		Energy Savings TEP & KWh	
Street light	Electric Cubicle	Before	After	Before	After	TEP	KWh
500	10	18.000	9.000	304.087	214.807	19,64	89.280
1000	20	36.000	18.000	608.173	429.613	39,28	178.560
5000	100	180.000	90.000	3.040.865	2.148.067	196,43	892.798
50000	1.000	1.800.000	900.000	30.408.650	21.480.670	1964,35	8.927.980
100000	2.000	3.600.000	1.800.000	60.817.300	42.961.341	3.928,70	17.855.959

Calculation based on P.I. systems with 61% of 125 W V.M. lights + 15% 250W V.M. + 24% 70W SAP.

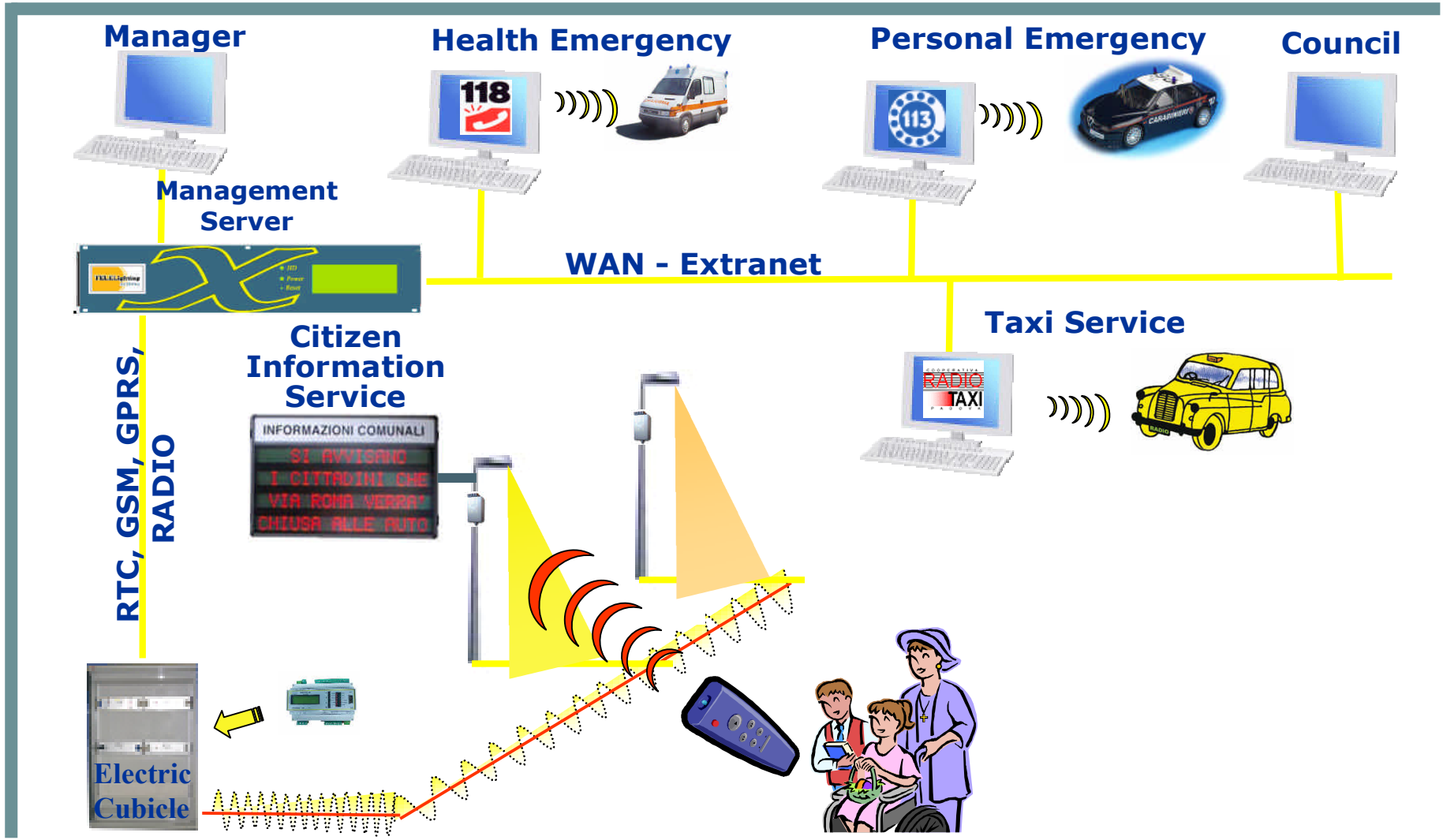
Telemanagement with only 30% of point flux/light point for 75% of the duration of nocturnal operation of P.I. (Public Illumination) systems.

Example of saving no. 3 with substitution of lights

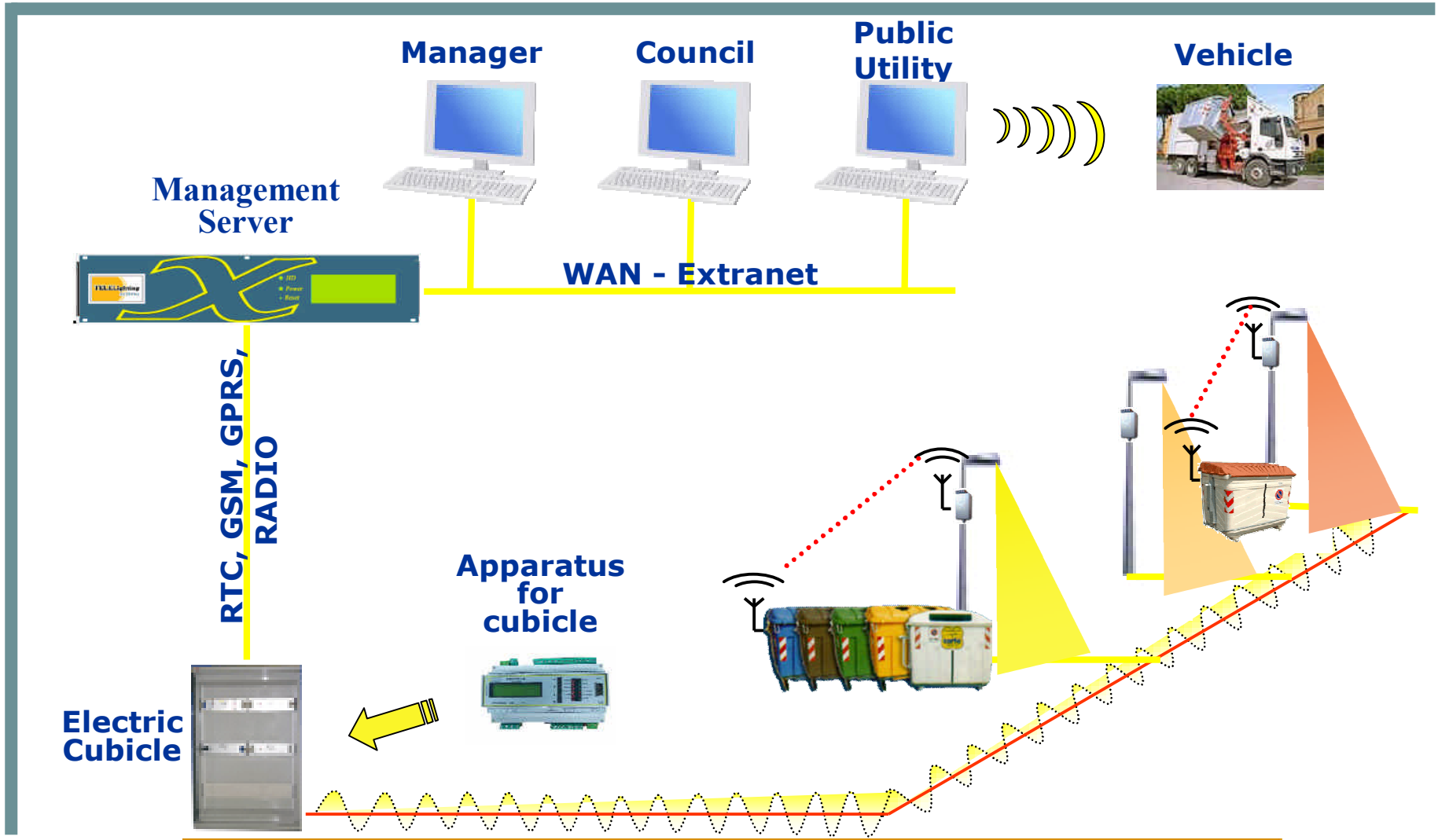
		Maintenance Service €		Energy KWh		Energy Savings TEP & KWh	
Street light	Electric Cubicle	Before	After	Before	After	TEP	KWh
500	10	18.000	9.000	304.087	115.178	41,56	188.909
1000	20	36.000	18.000	608.173	230.355	83,12	377.818
5000	100	180.000	90.000	3.040.865	1.151.775	415,64	1.889.090
50000	1.000	1.800.000	900.000	30.408.650	11.517.750	4.156,41	18.890.900
100000	2.000	3.600.000	1.800.000	60.817.300	23.035.500	8.312,82	37.781.800

Calculation based on P.I. systems with 61% of 125 W V.M. lights + 15% 250W V.M. + 24% 70W SAP with CHANGE IN LIGHTS TO 100% 70 W SAP.
Telemanagement with only 30% of point flux/light point for 75% of the duration of nocturnal operation of P.I. (Public Illumination) systems .

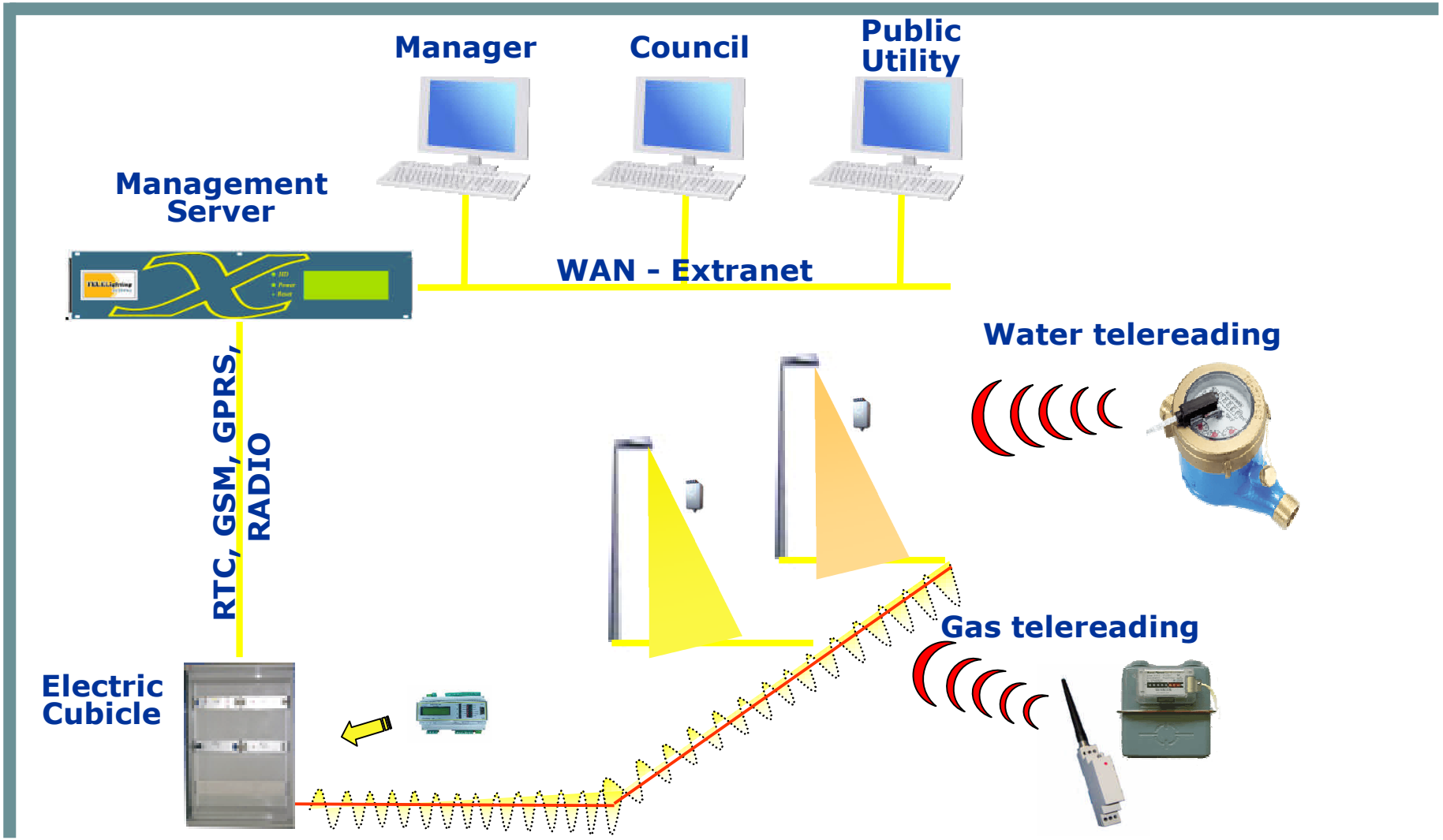
"Homeland Security" Services



Services for Public Utility



Automatic "telereading" services for Public Utility



Funding for system purchase

- For Public authorities and especially councils the problem of having financial resources available in order to buy the TELELighting System, in this moment when funding available is in decline, even when faced by a system which provides global savings (energy, maintenance and infrastructure) and, in time, generates a pay-back of costs undergone has been evaluated and defined by Over IP in the banking world .

- More specifically, Over IP has studied and organised, together with the OPI Bank in the San-Paolo-IMI group, several economic funding proposals that are compatible and applicable with conditions, rules and designs stipulated in the field of public financing .

Leasing undertaken by local authority

- Is a method of financial leasing applicable to the purchase of the TELELighting System
- It is also considered a fully accepted form of funding available for public authorities. It divides the cost of goods into a pluriennal period that lasts as long as the use of the goods in question.

  As with other forms of funding
- The Councils can also ask for contributions from Regional Operational Programs as a energy saving measure

Loan undertaken by Local Authority

- In order to implement investments, local authorities can use passive loans and undertake a loan with the Bank for Loans and Deposits
- Alternatively they can use other credit institutes that have more convenient effective tax rates and instalments to pay

Establishment of an ad hoc company [ESCO]

- Through the establishment or participation in an ESCO (Energy Service Company) by a public authority or council
- Based on a promissory note to the ESCO itself for a certain number of years for the sum of money equal to the annual cost of public illumination (consumption and maintenance
- Calculating a plan of self-financing rationalisation, management and maintenance that will generate the payback to recover the investment made

Benefits of TELELighting system

integrate — Provides services beyond the lighting network

scalable — Expandable on the basis of the client's needs

profitable — Creates concrete savings for the end user

flexibile — Uses various technologies on the basis of the user's needs

simple — Can be easily applied to any Public Illumination system

efficient — Transforms a lighting network into an intelligent territory network

Benefits
for the lighting system's provider

OVER IP srl.

Via C. Battisti 1

40123 Bologna

Italy

Tel. +39.051.232009

Fax +39.051.271361

info@over-ip.org

http://www.over-ip.org