



NEC GREEN VISION

Creating a sustainable society



Eugene le Roux
Deputy Managing Director
NEC Africa

NET SALES OVERSEAS 19%

PRESIDENT Dr Nobuhiro Endo

CAPITAL USD 31,1 billion

CONS. NET SALES USD 36,9 billion

HEADQUARTER Tokyo, Japan

ESTABLISHED July 17, 1899

TRADED AS TYO6701

EMPLOYEES 109,102

*Including
subsidiaries*

CONSOLIDATED
SUBSIDIARIES 283



NET SALES JAPAN MARKET 81%

IT SERVICES

System Integration
Support services
Outsourcing



IT PRODUCTS

Mainframe, Servers
HPC Storage
Workstations, PC SW



PERSONAL SOLUTIONS

Mobile, PC,
Monitor
LCD projectors

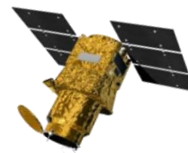


Network systems
Service providers
Enterprise Network



NETWORK SYSTEMS

Broadcasting and video
Aerospace & defense
Fire and disaster



SOCIAL INFRASTRUCTURE

TRADITIONAL BUSINESS DOMAINS

TARGET SALES OVERSEAS



TARGET SALES JAPAN MARKET

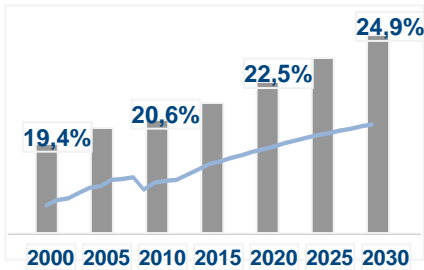
TO BE A LEADING
GLOBAL COMPANY
LEVERAGING
THE POWER OF INNOVATION
TO REALIZE
AN INFORMATION SOCIETY
FRIENDLY TO HUMANS AND EARTH

ELECTRICITY
GROWING
RELEVANCE

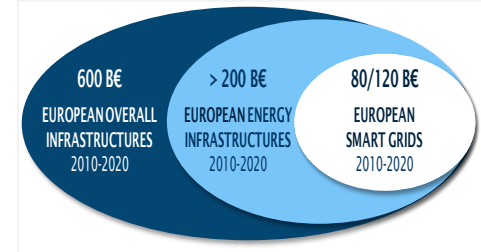
BETTER
PERFORMANCE

INNOVATION
AND RESOURCE
CONSTRAINTS

POLICES SUPPORTS
TRANSFORMATION



New imperative
“DO MORE WITH LESS”



**ENERGY IS ONE OF NEC KEY
DEVELOPMENT PILLARS**



口味蔵
宮古店

テレトラック
MIYAKO

止まれ



節電のため、
レーターの運
止しています。
ご理解・ご協
願いたしました
お

非常停止ボタン

非常停止ボタン

IT SERVICES

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Support services
Outsourcing



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HPC Storage
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PERSONAL SOLUTIONS

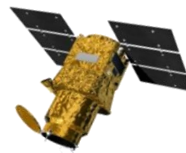
Mobile, PC,
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Network systems
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Energy Storage
AMI, xEMS
EV infrastructure



NETWORK SYSTEMS

SOCIAL INFRA- STRUCTURE

SMART ENERGY

ENERGY STORAGE

High performances LiB based Energy Storage System for Grid or Residential use



EV CHARGING

LiB for Electric vehicle, EV quick charging and management infrastructure



SMART & MOBILE

Last-generation Android based SmartPhones and Displays with related Energy Cloud Applications



NETWORKING

Multiple telecommunication technologies Including 3G/4G, Microwave, Fiber, PLC, 6LowPAN.



ENERGY CLOUD SERVICES

Data Storing, Applications, Administration
Security, Billing, Data Mining



HEMS

Management system to control Home Energy Network including PV inverter and Residential Storage System



AMI

2 way communication metering infrastructure based on a wide range of meter solutions from partners



NEC GREEN POWER PLATFORM

NEC MOBILE PHONES EVOLUTION SINCE 1978



NEC P10



NEC P4

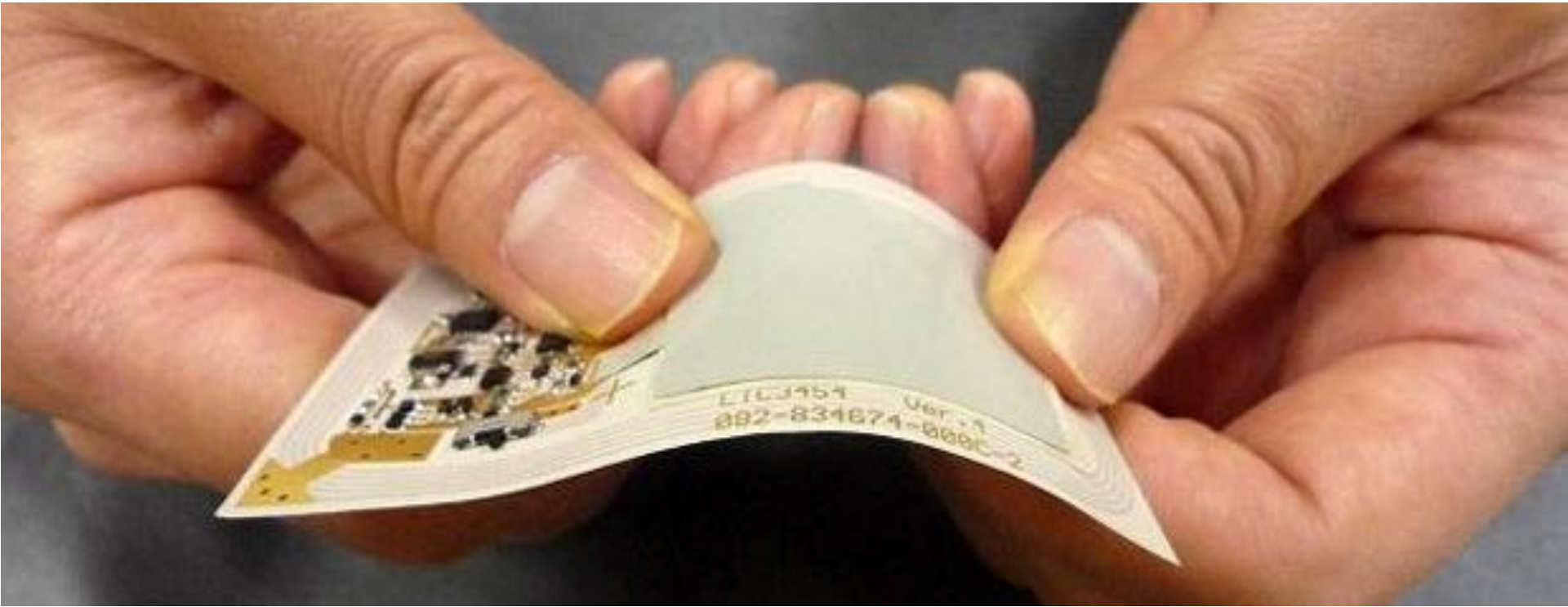


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MEDIAS

... AND NEC LITHIUM BATTERIES'



NISSAN AND NEC JOINT VENTURE TO MASS PRODUCE ADVANCED LITHIUM-ION BATTERIES



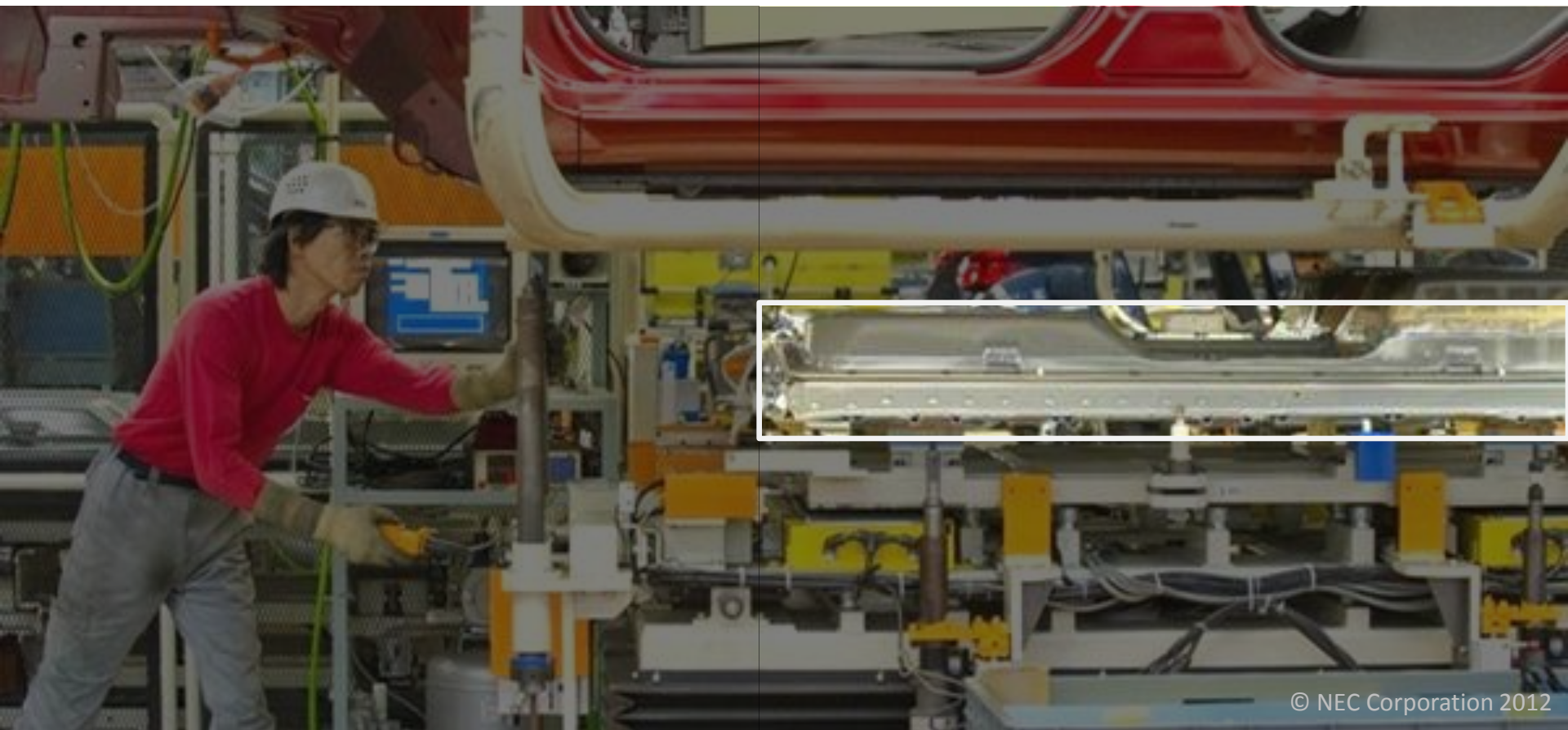
NISSAN LEAF SPECIFICATIONS

Number of modules	48
Nominal voltage	360 V
Electrical energy	24 kWh



NISSAN INADVERTENTLY GAINED SOME VALUABLE INSIGHT INTO THE DURABILITY OF ITS ELECTRIC CAR, THE LEAF, when about two dozen of them were destroyed in the tsunami that ravaged Japan in March.

None of the cars caught fire, and their





SINCE JULY 2011 NEC HAS COMMERCIALIZED A STORAGE SYSTEM USING A LITHIUM-ION BATTERY TO CONTROL HOUSEHOLD POWER USE AUTOMATICALLY

The ESS-H-002006A system comprises a lithium-ion battery with an input/output capacity of two kilowatts and a storage capacity of six-kilowatt hours, and a controller. It measures 76 centimeters in width, 45 centimeters in depth, and 88 centimeters in height, and weighs about 200 kilograms.



Household Energy Storage System

GRID STORAGE SYSTEM



Example of layout :2 MW / 2 MWh

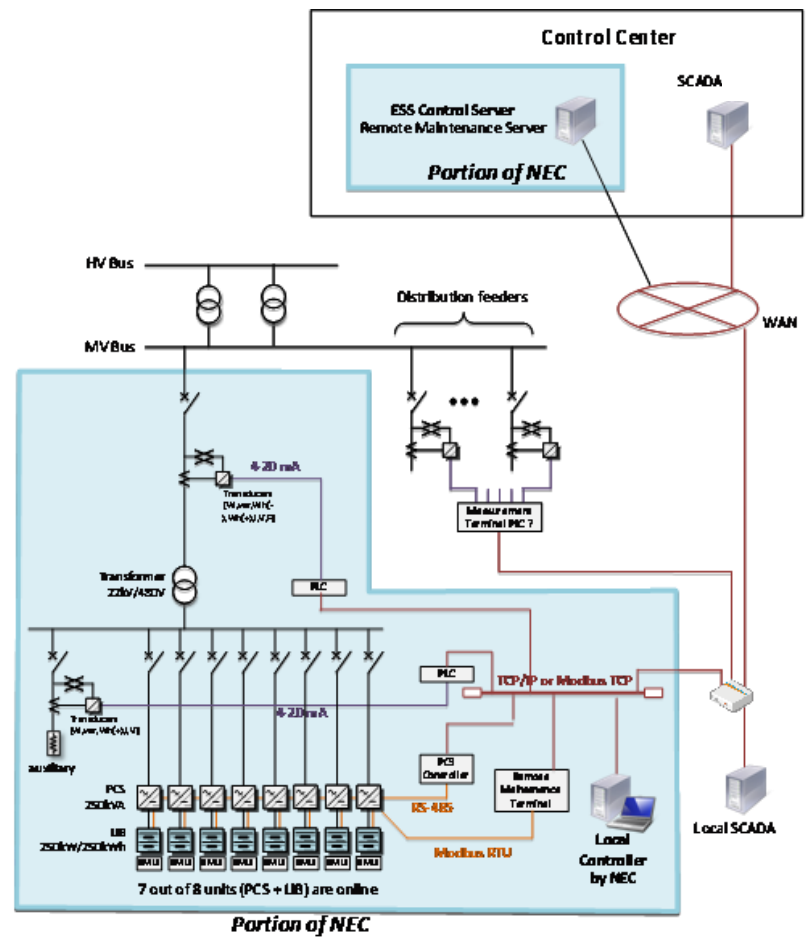


Image of EPRI solution:1 MW / 2 MWh





NEC DEVELOPED ORGANIC RADICAL BATTERY

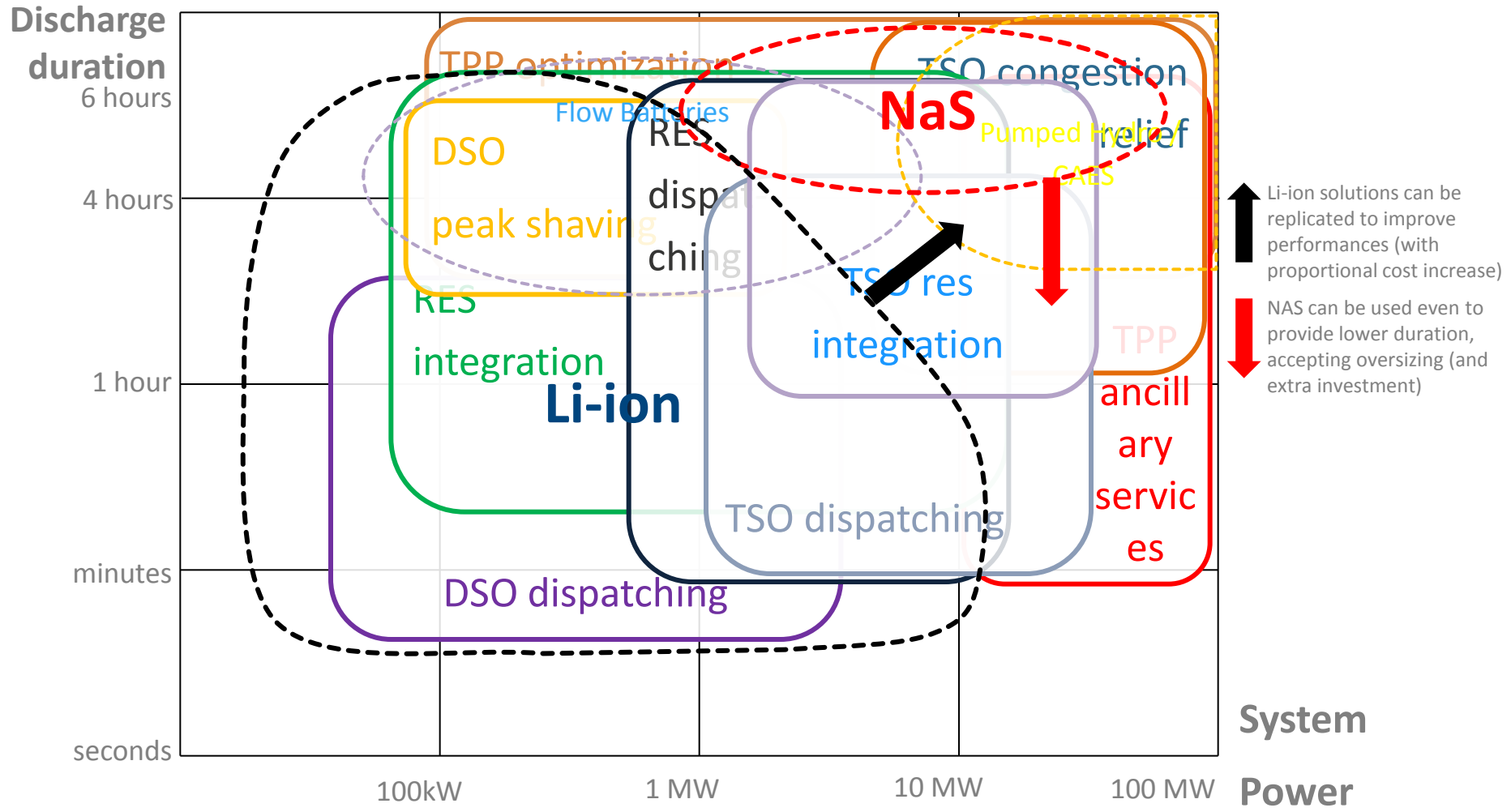
characterized by an extremely thin profile (0.3 mm), flexibility, and very fast charge time (about 30 seconds), in addition to a relatively high energy density (3mAh capacity).

The technology is also being welcomed by environmentalists because ORB batteries do not contain any of the heavy metals that pose the problem of proper disposal.



FEW SEGMENTS CAN BE SATISFIED WITH ONLY ONE TECHNOLOGY AT THE MOMENT

- Customers are likely requiring solution packages including different technologies

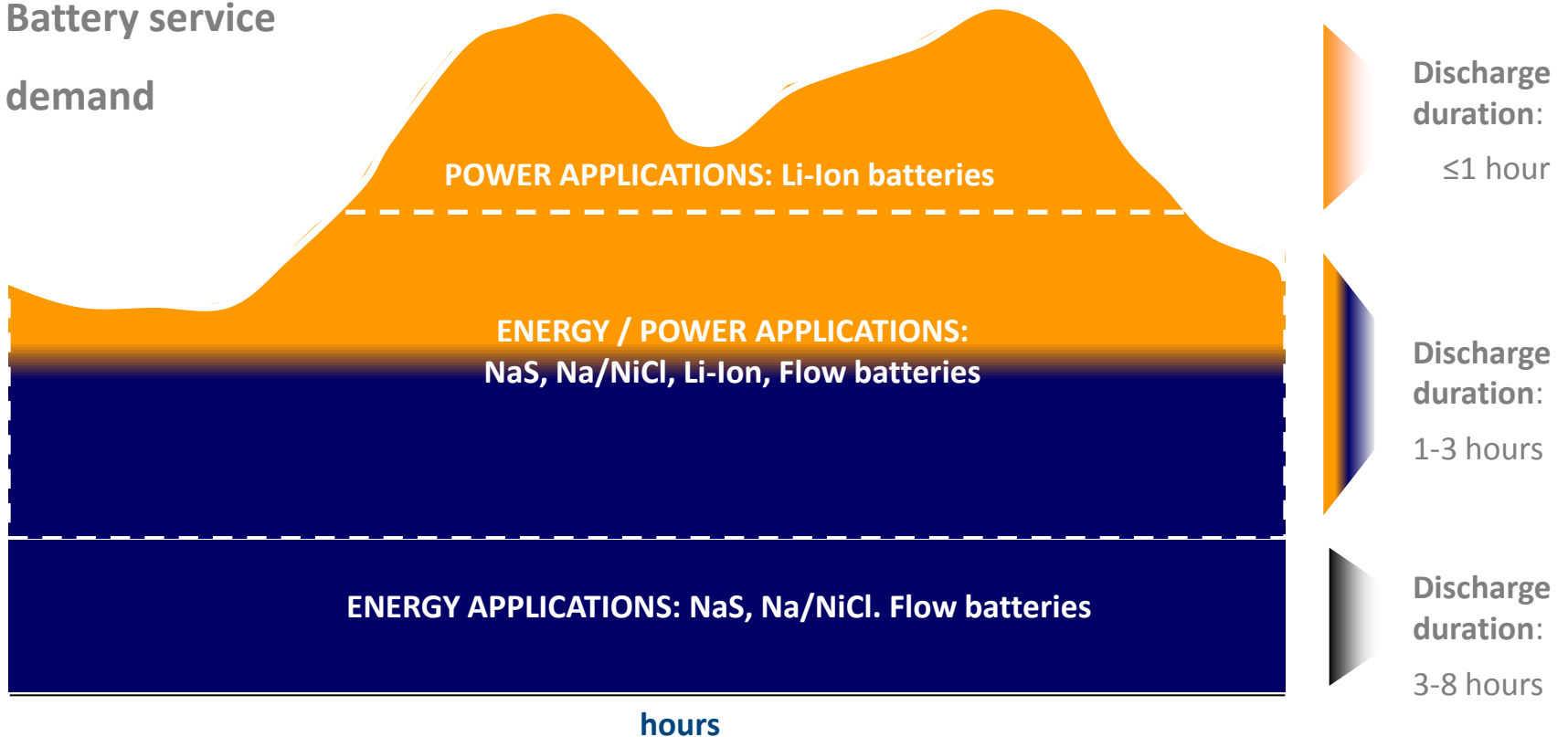


MULTI-TECHNOLOGICAL ESS DEMAND

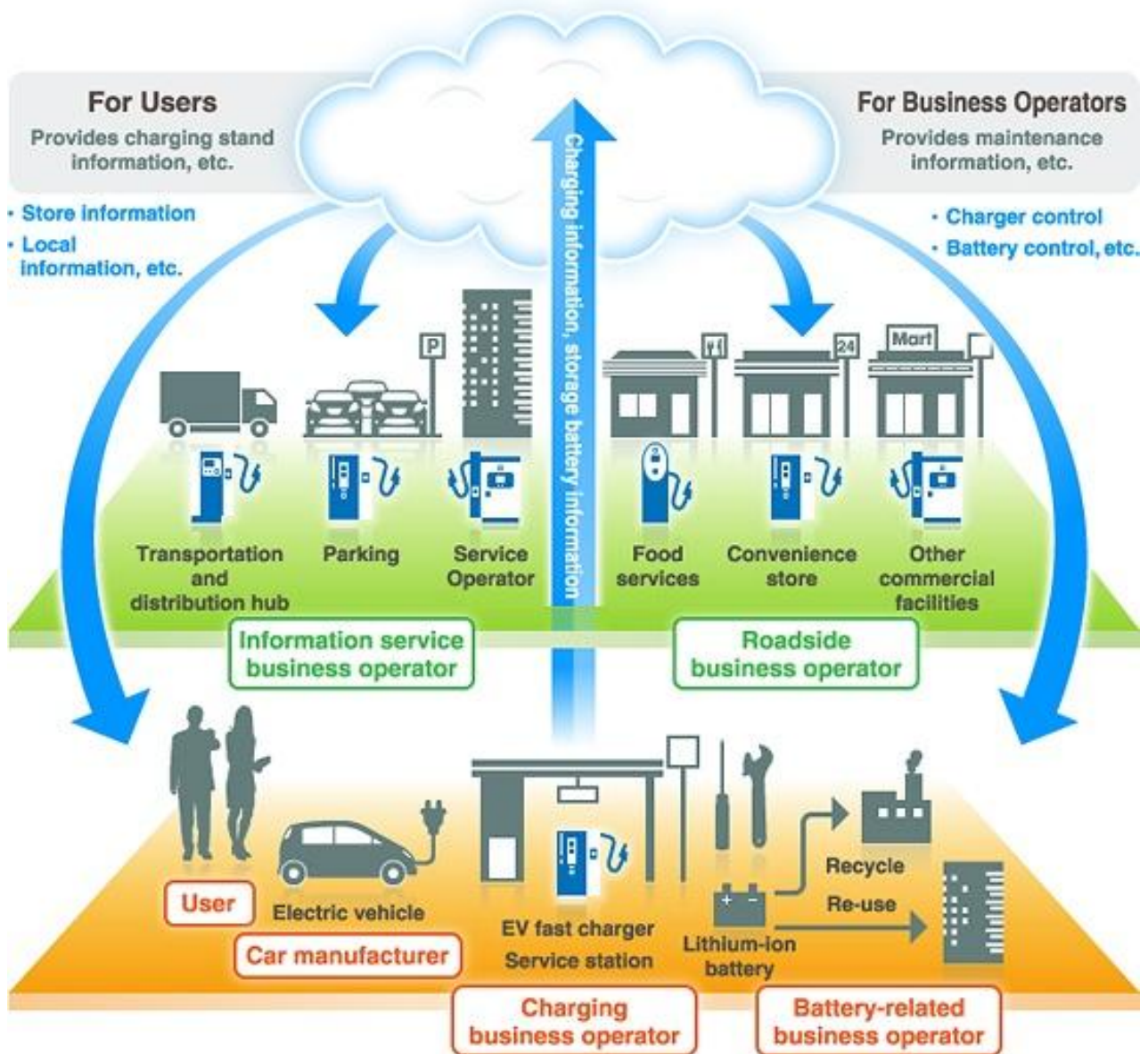


- According to customers, and the first experimentations, expected **multi-technologic ESS integration** depending on **technical requirements, functions and costs**
- For these reasons, the **value of a battery** should be measured in term of service provided to the system rather than in mere cost per kWh

Battery service demand

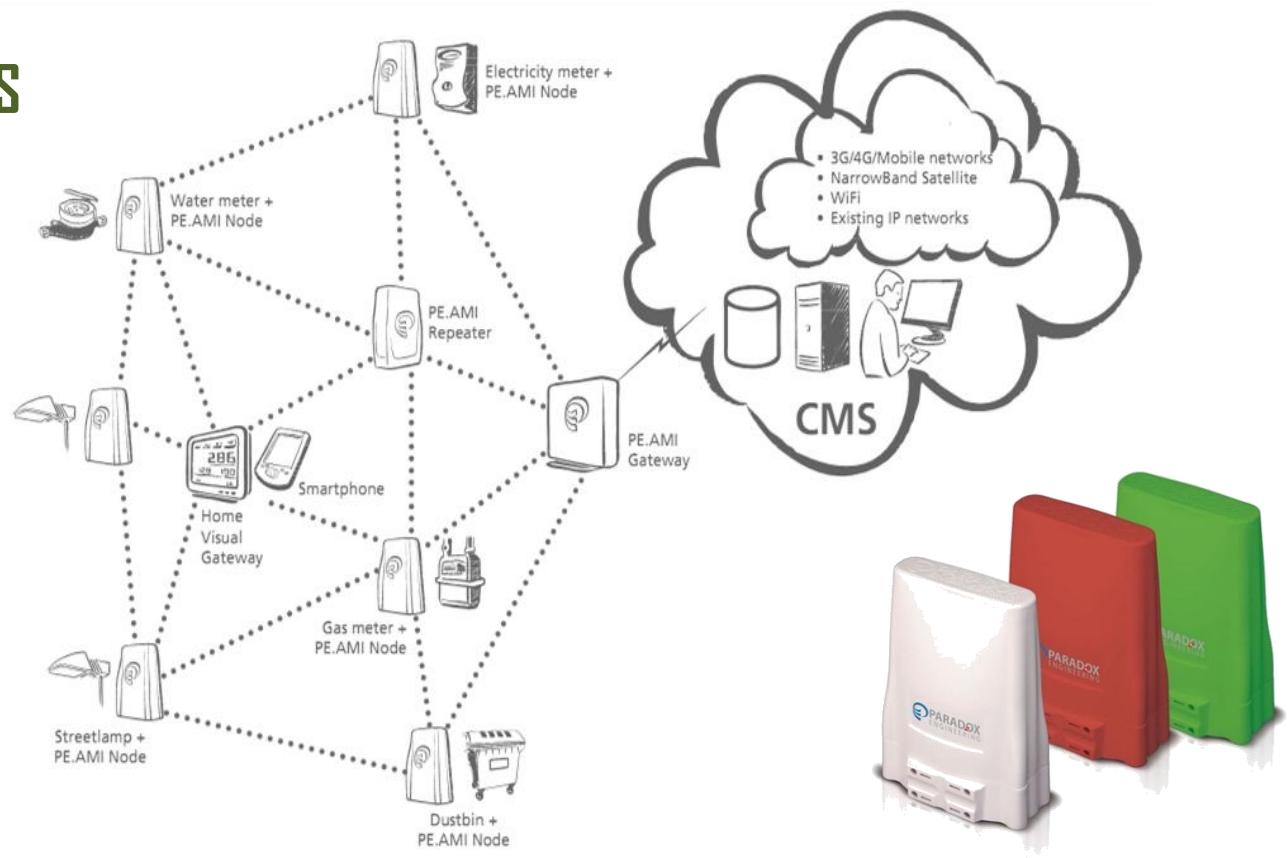


ELECTRIC VEHICLE CHARGING INFRASTRUCTURE





WIRELESS NETWORK SOLUTIONS



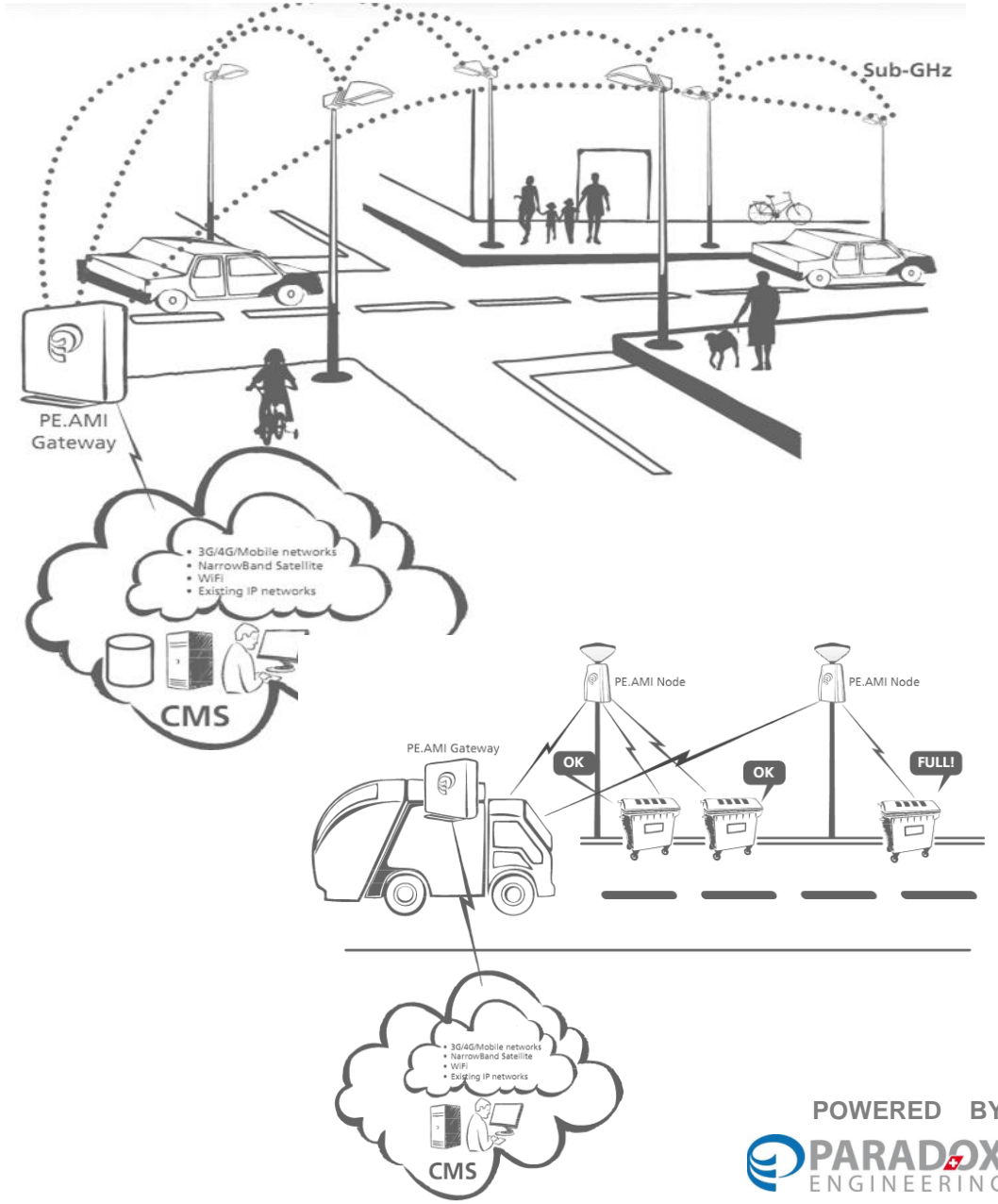
Out-of-the-box, end-to-end complete solution composed by hardware (Nodes, Repeaters, Gateway), software and management system building the first ultra-low power IPv6 full wireless-mesh network between any sort of new or existing meter and companies' business applications for easy remote data gathering and remote operations.

LIGHTING MANAGEMENT SOLUTION



Lamps can be grouped and programmed to switch or dim according to combinations of time, measured light levels or daily solar event times.

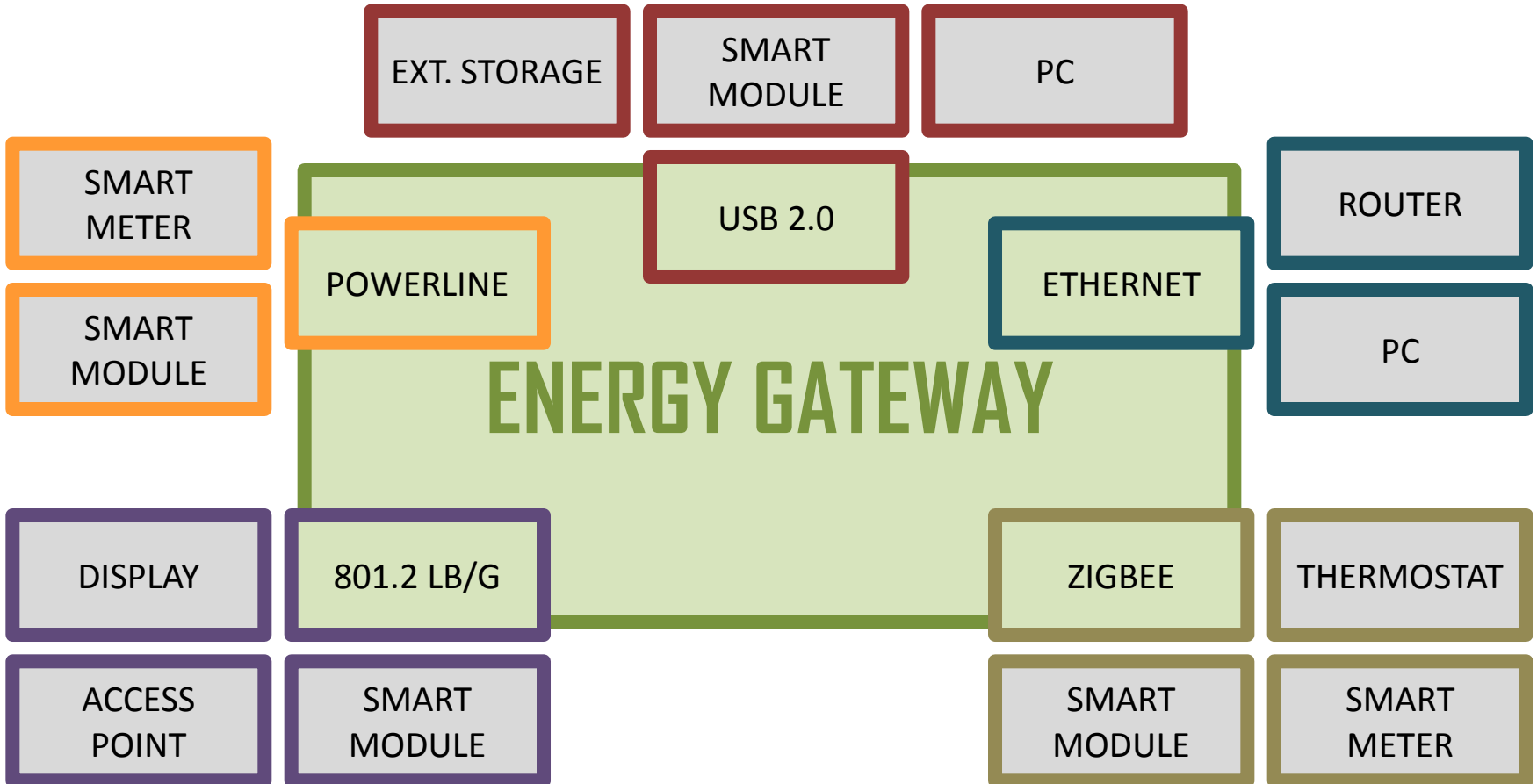
Changing local circumstances can be accommodated using different programs (e.g. term and holiday time programs for lights near schools) and day of week variations for given groups. Lamp failures, on and off times, mains supply and lamp electrical parameters (including power factor) can be reported regularly by setting monitoring schedules. Information can also be obtained on demand by polling units. If required, lamp failures can be reported as soon as they occur by setting up and using alarm profiles.





HOME ENERGY MANAGEMENT SOLUTIONS

NEC HEMS gateway solution can support multiple communication protocol to talk with “smart” appliances, lights, devices, plugs and to transfer the collected data to the utilities.



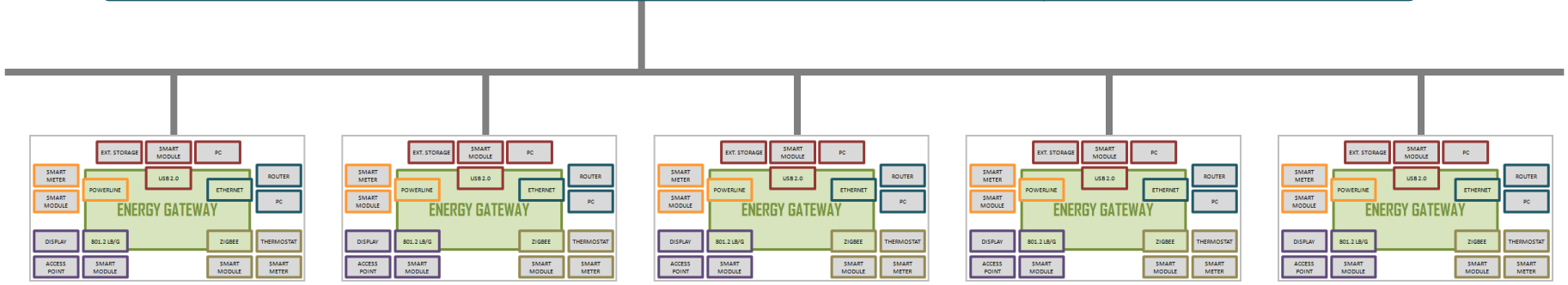
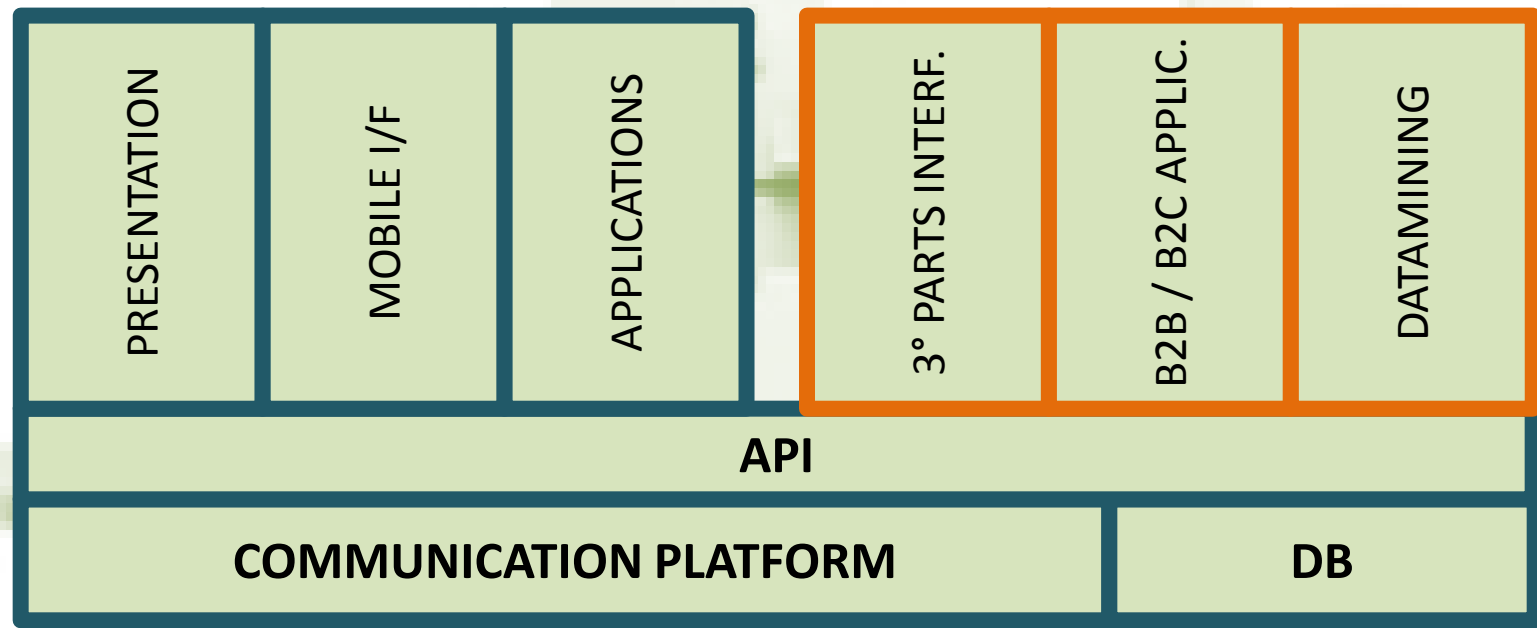


HOME ENERGY MANAGEMENT SOLUTIONS



The control and management suite for HEMS devices can be provided in cloud mode architecture to increase scalability, flexibility and data security.

ENERGY CLOUD

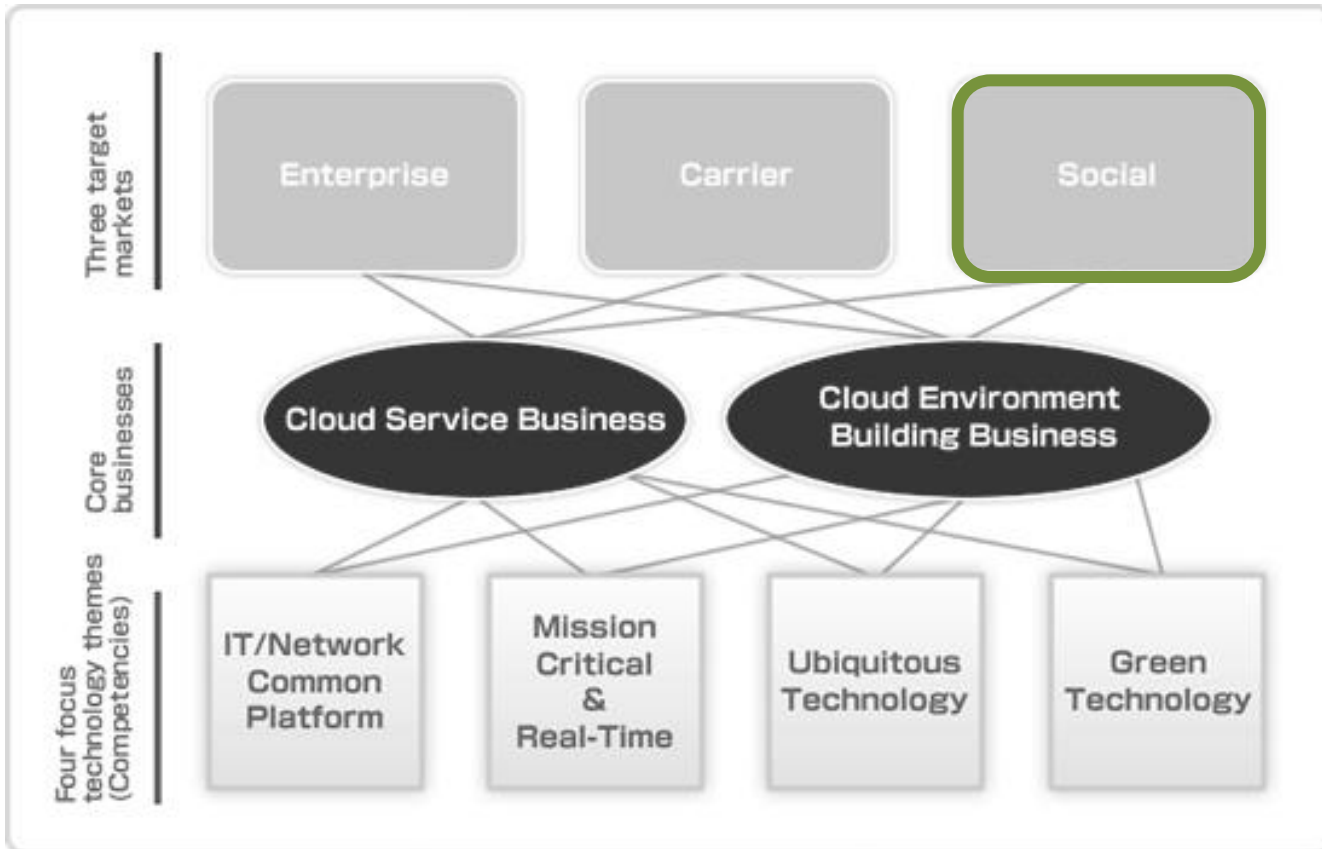




CLOUD COMPUTING TO IMPROVE GLOBAL ECOSYSTEMS

NEC offers green/eco-friendly services aimed at improving the coexistence of human beings and nature, and utilizes its strength in green technology, to promote the integration of environment and information systems, resulting in solutions to enable effective use of electricity and smart grid.

Including AMR, decentralized power system, interactive power distribution system and electrode (Lib) and storage system.





SMARTENERGYDEVICES

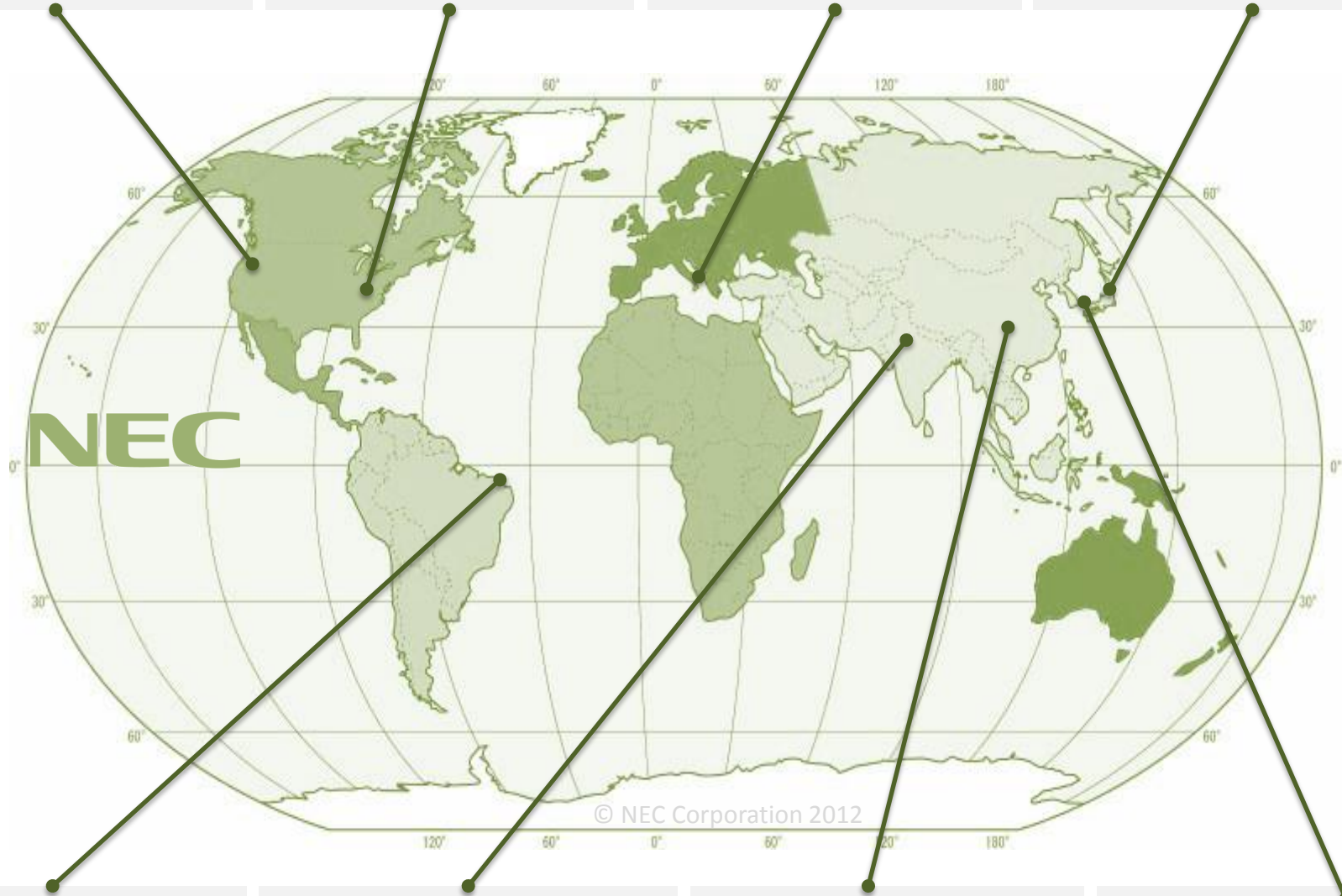


PORTLAND GEN. ELEC
EV Quick Charge
Portland [USA]

EPRI LAB
LiB Grid Storage
Knoxville [USA]

ENEL
Storage / hems / EV
Rome [Italy]

YOKOHAMA SMART CITY
EV / hems / cloud
Yokohama [Japan]



ARENA PERNAMBUCO
Smart city
Recife [Brazil]

DELHI MUMBAI IND. CORRIDOR
Smart City
New Delhi [India]

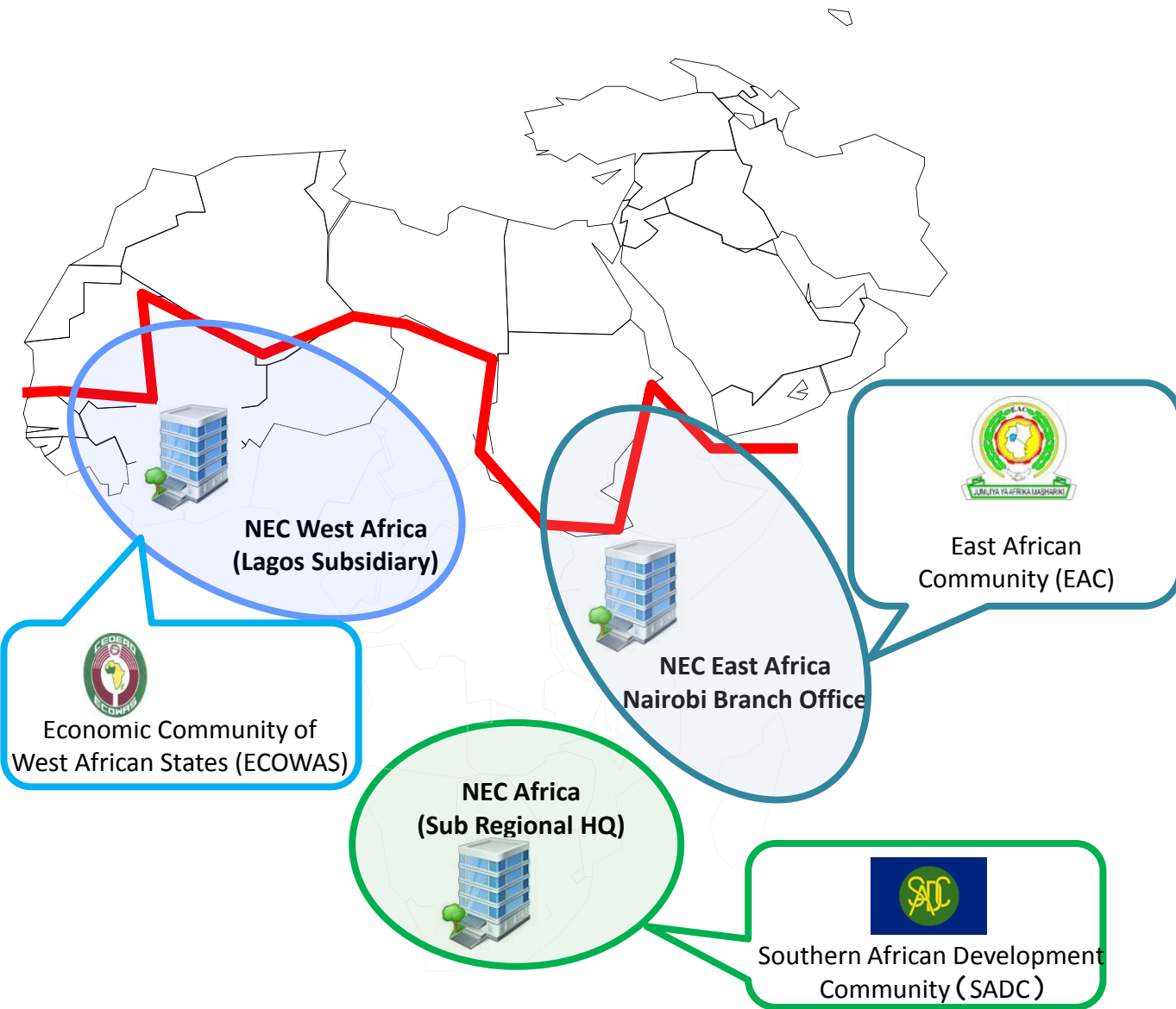
INTERNET OF THINGS
Smart City
Beijing [China]

DISTRIB. SMART CUTOUT
Smart Grid
Chugoku [Japan]

EMEA RHQ

EMEA
SMART ENERGY
COC

NEC Africa Regional Structure



Organization Summary

- NEC Africa (South Africa) founded 1st December 2011
- NEC East Africa branch reporting to South Africa from 1 April 2012
- NEC West Africa started operation 1st April 2012
- 35 Staff Members in the Region
- Areas of Focus around Carrier Network and Public Safety business units
- Wholly owned subsidiary of NEC Europe
- President: Mr Masahiro Yoshikawa
- Deputy Managing Director: Eugene le Roux



Carrier Network

- Wireless Access Networks
- Transport Networks
- Operations & Management



Public Safety

- Fingerprint identification
- Facial Recognition



Energy Solutions

- Energy Storage
- HEMS (Home Energy Management Solutions)
- Networking
- EV (Electric Vehicle) infrastructure

Cloud Service

Vertical Solutions (E-Education, E-Health, Smart City, Banking, Retail)

Managed Services

THANKS FOR YOUR ATTENTION

There are no limits when NEC takes care of the clouds



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