

# Lessons learned from Linky program France

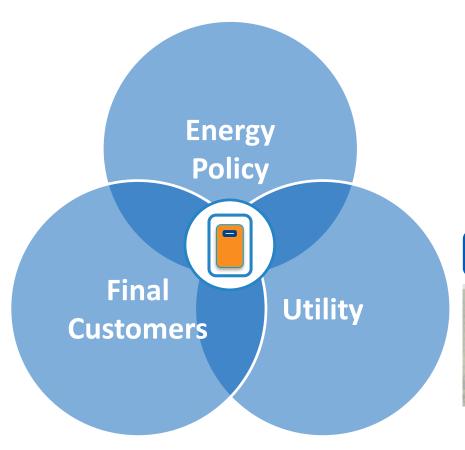
A massive roll-out 35 million smart meters



#### **Smart Meters in France: What we learned**



#### SMART METER: TURN A CONSTRAINT INTO AN OPPORTUNITY



#### **EDF Distribution KPI's**

SAIDI: 65 min

SAIDI Paris average: 12 min

SAIFI: 0,77

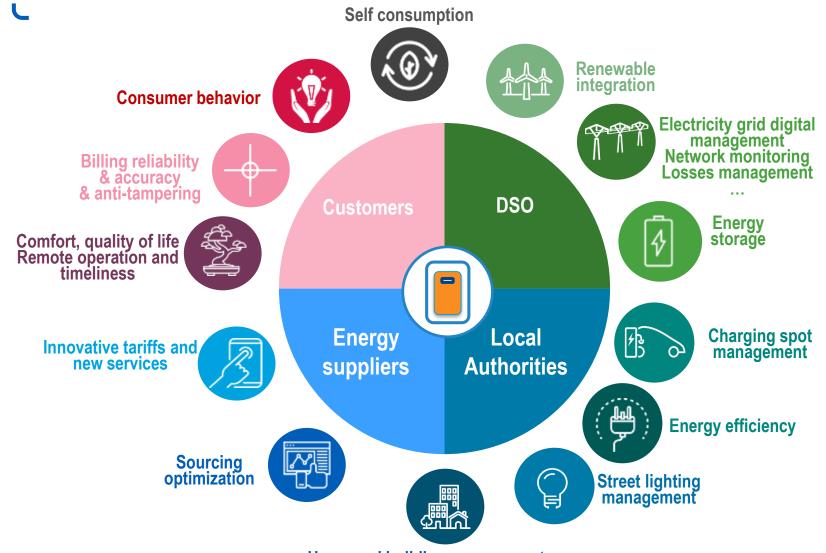
3% Technical Losses

3% Non technical Losses



## **Smart metering at the heart of the Energy Transition**







Home and building management systems for smart cities

## **Smart metering at the heart of the Energy Transition**



**Self consumption** 

## VITAL EVOLUTION OF THE ELECTRICAL INFRASTRUCTURE TO MEET THE NATIONAL ENERGY CHALLENGES

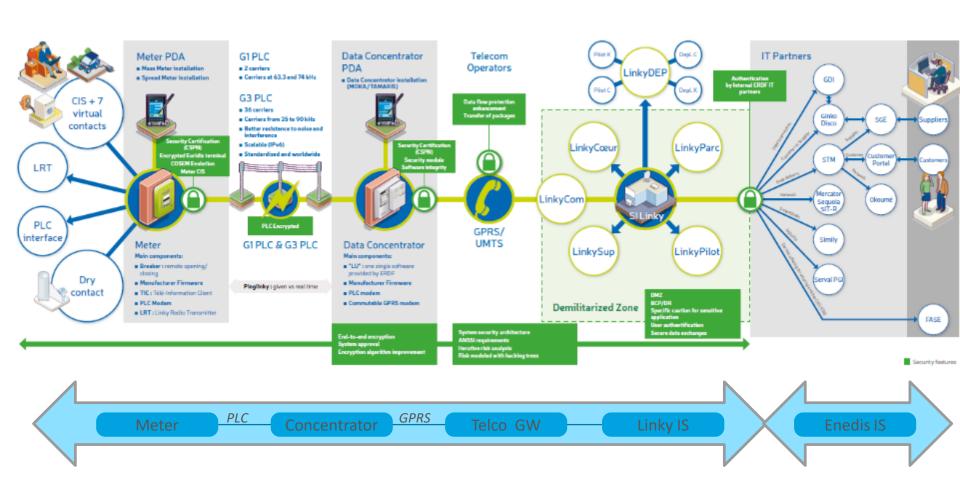




Home and building management systems for smart cities

## **Architecture of the Linky System**







#### **Smart Meters for Residential Customers**



- 1 Metrological Led
- 2 Display
- 3 Push button
- 4 Serial Number and legal information
- 5 Sealing
- 6 LED
- 7 Time of Use (TOU) switch
- 8 Pulse output
- 9 Fuse





#### **New offers development**

- 10 energy tariff
  registers for the
  supplier and 4
  energy tariff
  registers for the
  DSO
- Producer and consumer load profiles (time resolution: 10 / 15/30 and 60 min)



#### **Remote operations**

- Opening and closing of the breaker
- Opening and closing of the TOU switch
- Change of maximum allowed power

**Bidirectional** 

**Evolutive** 

Interoperable

Secure



## **Smart Metering: EDF's Proven Solution**



#### Schedule on track

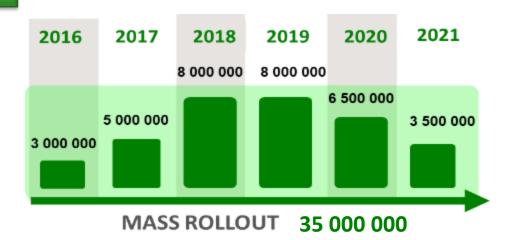




750 000 METERS PRODUCED / MONTH



**4 000** OPERATORS IN THE FIELD **/DAY** 



Quality







>1.5 billion
DATASETS

COLLECTED / TRANSFERRED / STORED
PER DAY

Budget



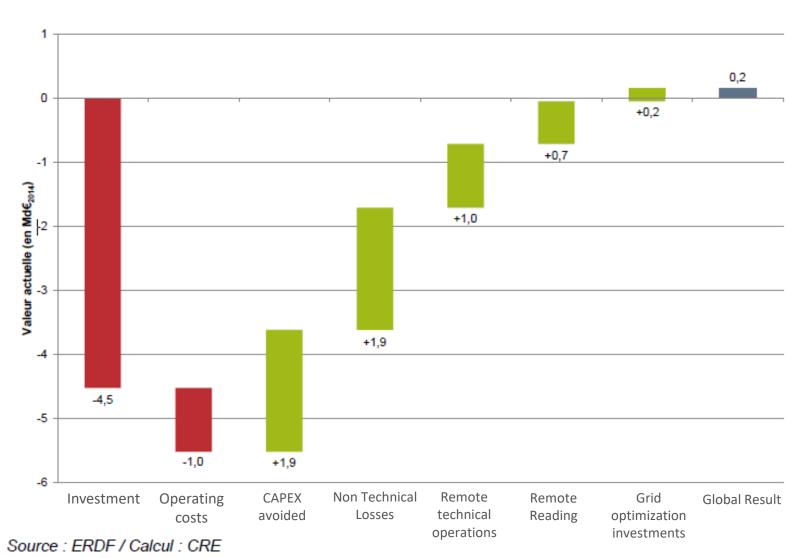
**4,2** billion € (update forecasts, initial cost was 5bd€)

CAPEX BY 2021



## A Self-Financing solution/Regulator







## The main lessons from Linky Program



Security, performance, reliability and scalability of the entire system Innovation and Interoperability

#### **Governance and management:**

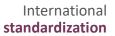
a climate of trust, an efficient decision-making process. a dedicated team to manage the program





Stakeholder membership
Public acceptance
Adapted communication

Contract management









Rollout, supply management and anticipation

**Human factors**: anticipation of

trades transformation

Financial factors: budgetary rigor





**Legal support** 

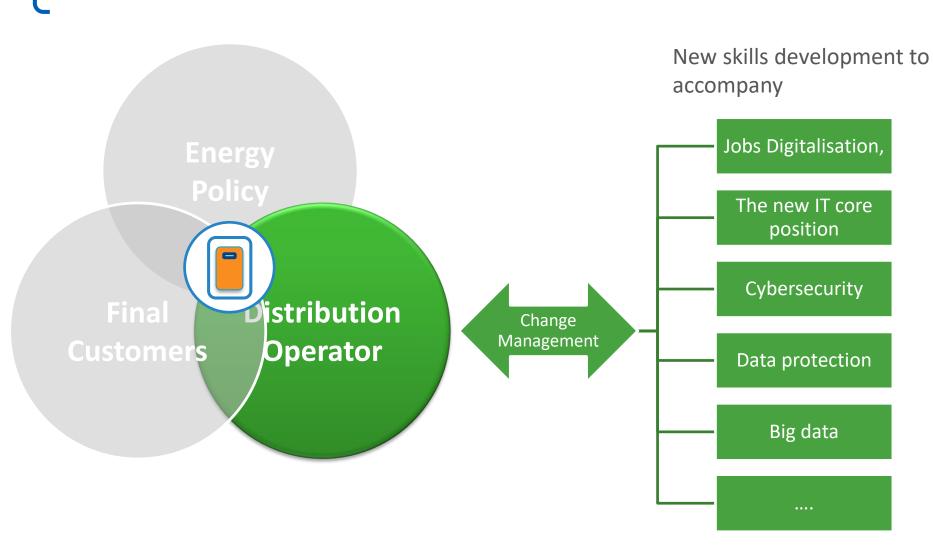


**Partnership** relations with the different **manufacturers** (IS, equipment, installation)



## **Smart Meter: EDF's Change Management**







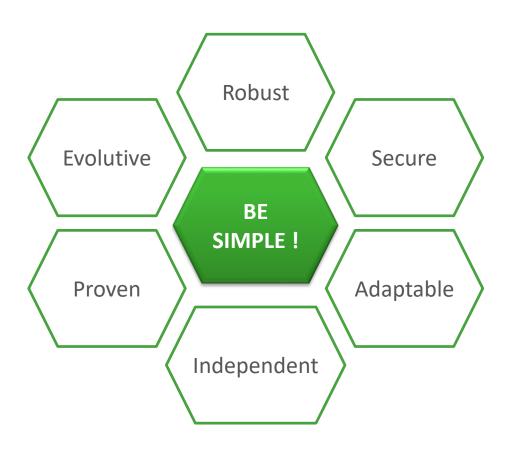
#### **Recommendations 1**



#### **BEFORE LAUNCHING THE TENDER**

#### IN ORDER TO BE SUCCESSFUL







#### **Recommandations 2**



## **End to end solution**From Meter to Cash

Smart Meters

HES

MDMS

Qualification Center

1 SMOC : Smart Meter Operation Center

2

**SOC: Security Operation Center** 

3

**IT Infrastructures Operation Center** 

Legacy System of SEC (Billing, CRM, GIS, OMS, ...)



#### **Recommendations 3**



#### An end to end solution from meter to cash

STEP 1
Prepare the project

STEP 2 Implement

STEP 3
Operate & Maintain







### **Know-How Transfer from Utility to Utility**





# Thank you for your attention

