

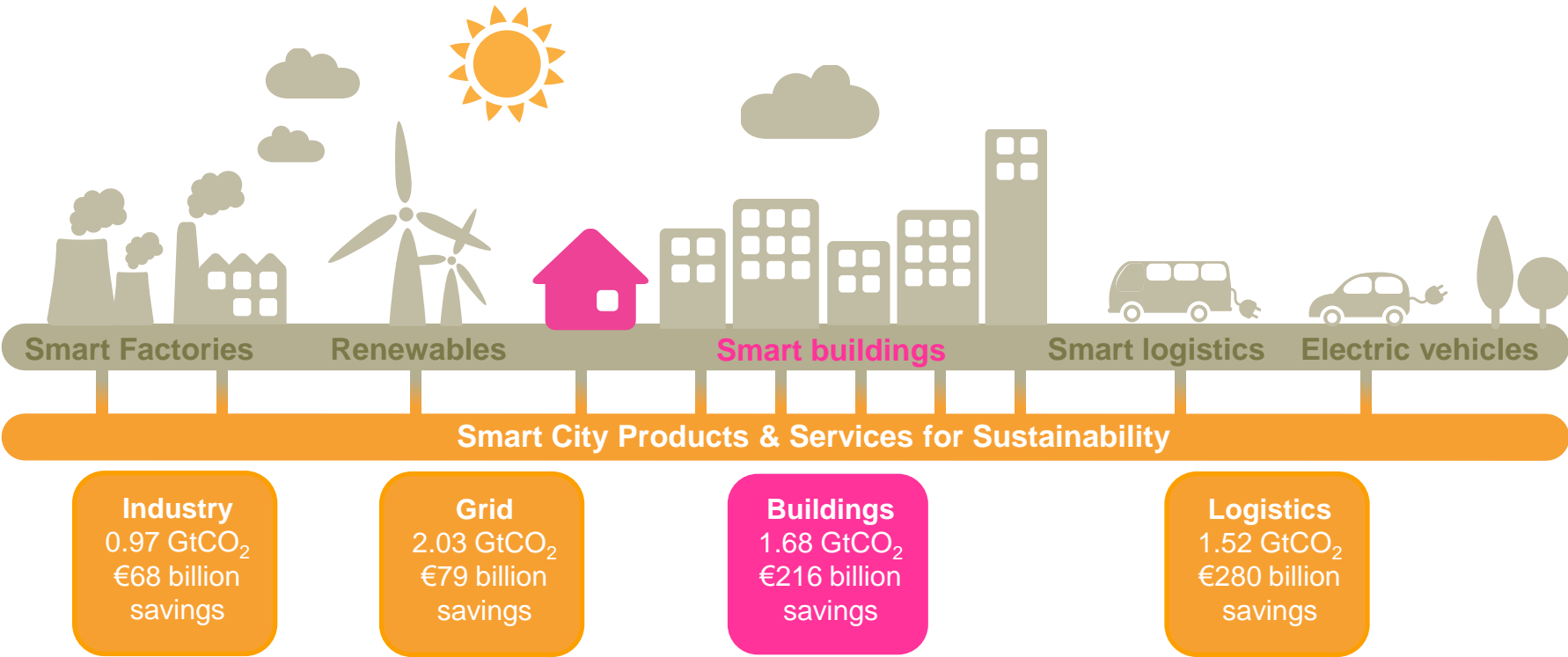
Energy@Home – BeyWatch Workshop

Telefónica I+D view on operator's role in sustainable homes

ict for sustainable homes, Nice, Nov.
2010

The enabling effect

ICTs could deliver approximately **7.8 GtCO₂e** of emissions savings in 2020 and approximately **€600 billion** of cost savings^(*)

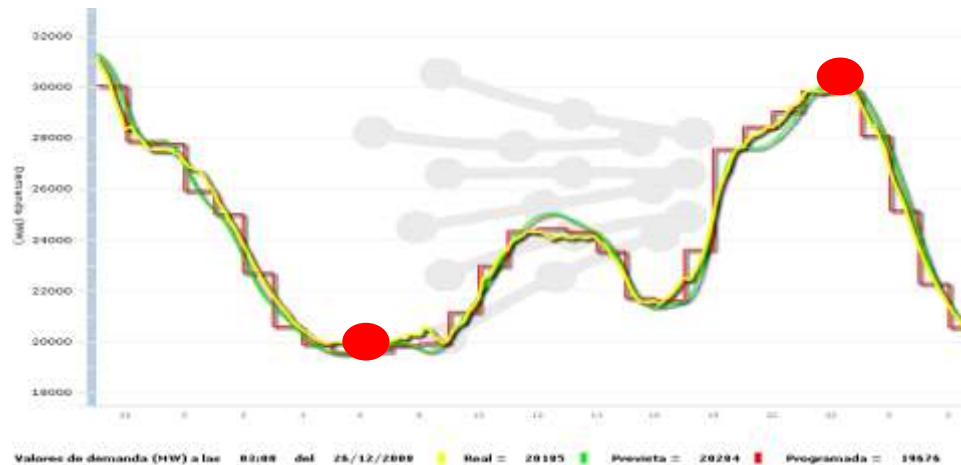


(*) Smart 2020 Report, The Climate Group, Global e-Sustainability Initiative

For most of the utilities, it is time to transition

From managing subscribers' **meters** to offer customer **services**

- That create **user awareness to promote efficiency**.
- Help utilities to meet their needs in terms of **load balancing** and **peak clipping**.
- Enable **demand response solutions** (according to price or demand signals), integrating home appliances control and in-home micro-generation management.
- Ease the **integration of renewables** in the grid.
- And accommodate **electric vehicles** as new loads/energy sources in the electric system.

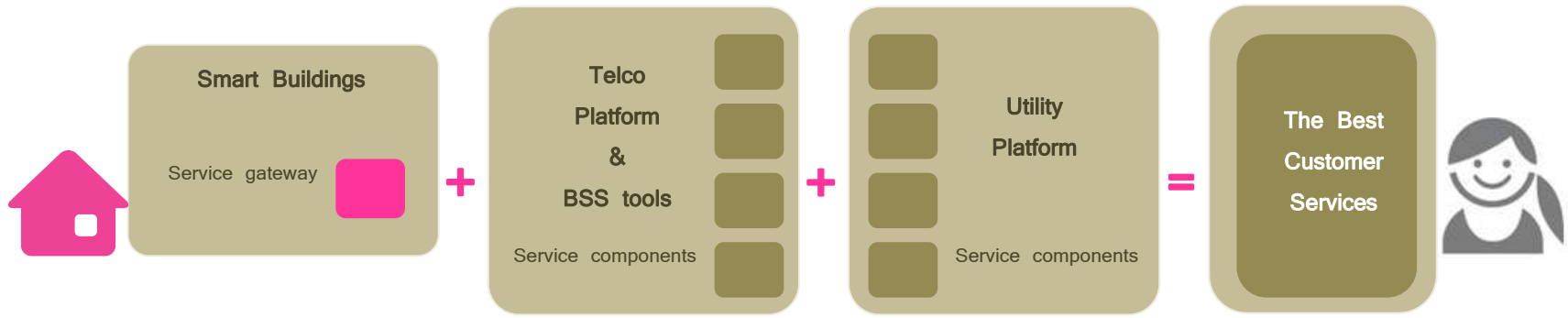


Telefónica I+D position to this respect?

Agree on a **collaboration model** that allows each one to concentrate in its field:

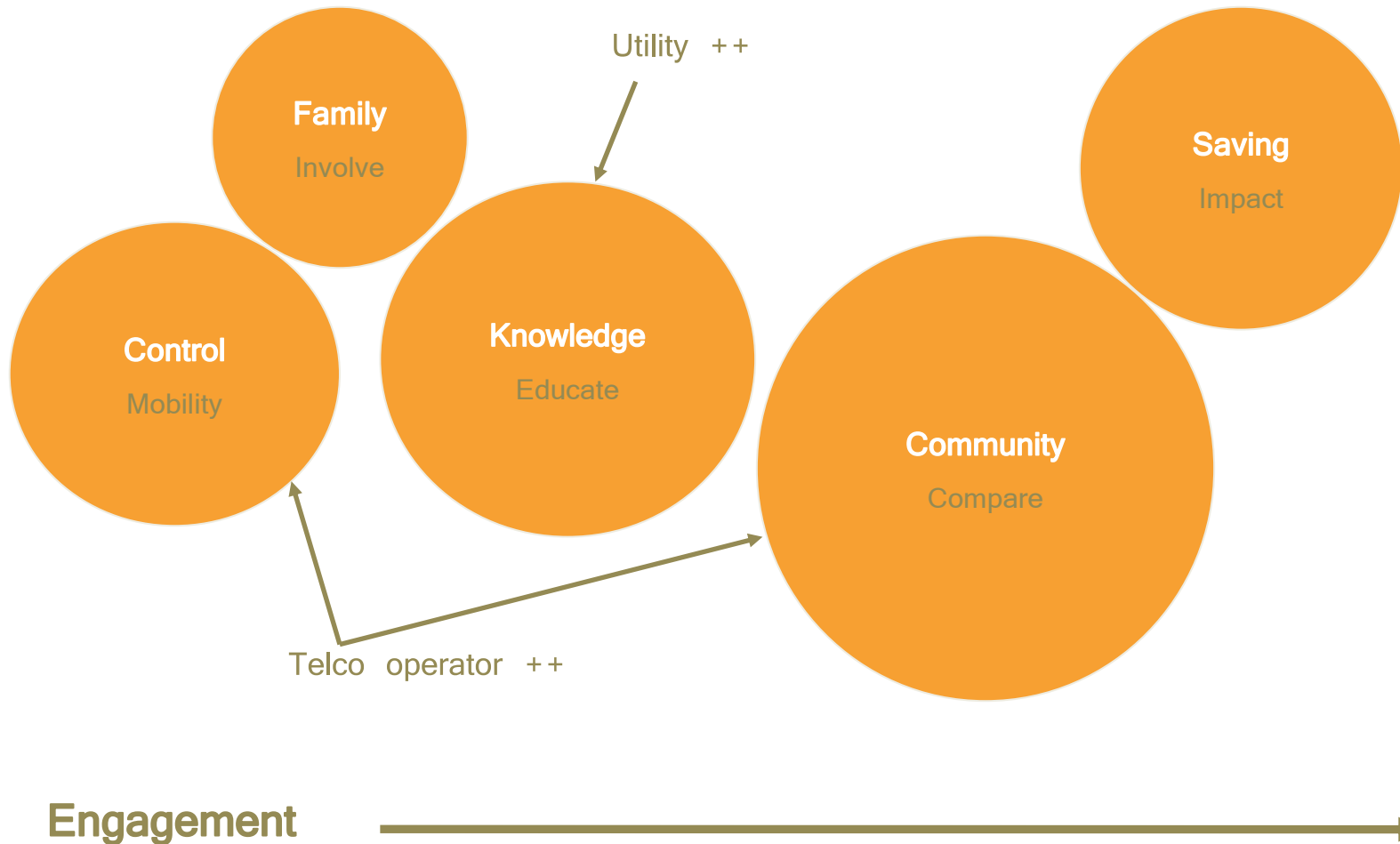
- Utilities are experts in energy. Operators in communications.
- Provide technological solutions to the utilities . Joint offering of services to their customers.

Enabling technological solutions



Energy Management	M2M Comms	Services Platform & BSS tools	Customer Experience
<p>Management of customer devices from a service gateway</p> <ul style="list-style-type: none"> - Monitoring - Control - Eventing <p>Integration of up-to-date wireless sensor networks (ZigBee, Z-wave, 6LowPan)</p> <p>Coexistence with commercial home automation solutions</p>	<p>Fixed - mobile (xDSL – GPRS, 3G)</p> <p>Secured guaranteed comms between service gateways and the platform</p>	<p>Provision and management of service gateways, connected home appliances and customer services</p> <p>Export telco network capabilities: location, messaging, user profiling – personalization servers</p> <p>Data publication/subscription mechanisms Data mining – virtual sensors</p> <p>Tariffs management Billing tools – enable B2B2C business model</p>	<p>Customer Driven Innovation</p> <p>Conceptualization of services and co-creation with customers</p> <p>Usable service interfaces</p> <p>Consistent user experience across services</p>

Customer experience over time



Co-creation with customers: 10 facts and 5 recommendations

Facts

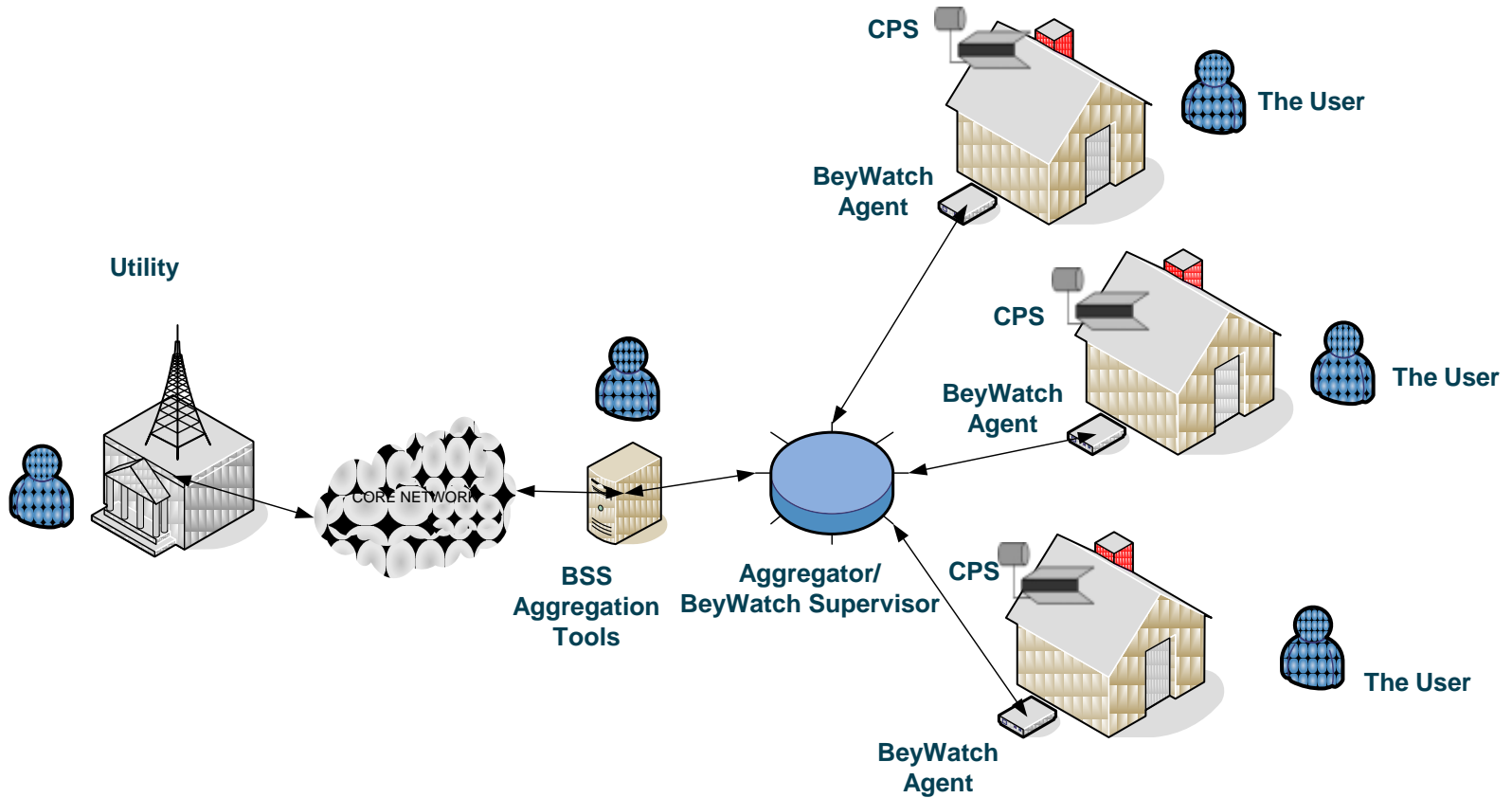
- › Energy costs are 'fair'
- › Different sensors were misunderstood
- › Sensors perceived as clutter: Devices have to be simple and nice-looking
- › Users are willing to move sensors around
- › One big payment, under 100€, or prorated
- › Free trials
- › Installed by professionals
- › Aimed at businesses
- › Control is seen as a basic feature
- › And saving means for them 5€ or more per month

Recommendations

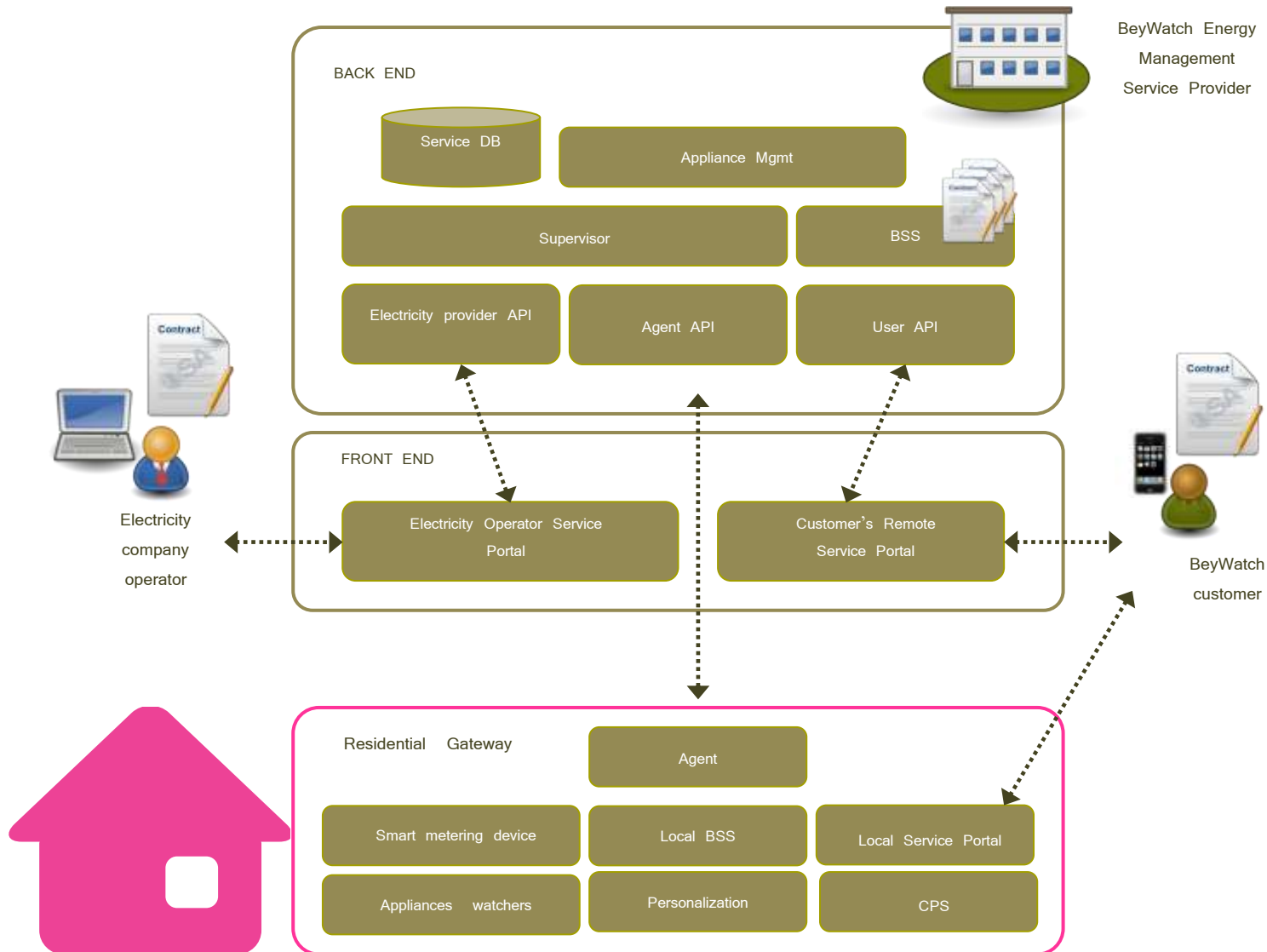
- › Make it about **control**
- › **Remote** Management
- › Let them **play**
- › Talk about the **service** not its components
- › **Education** is key



BeyWatch Logical Architecture



End to end service platform



Telefónica
