

# Future Internet PPP Usage Area : e-Energy Intel perspective

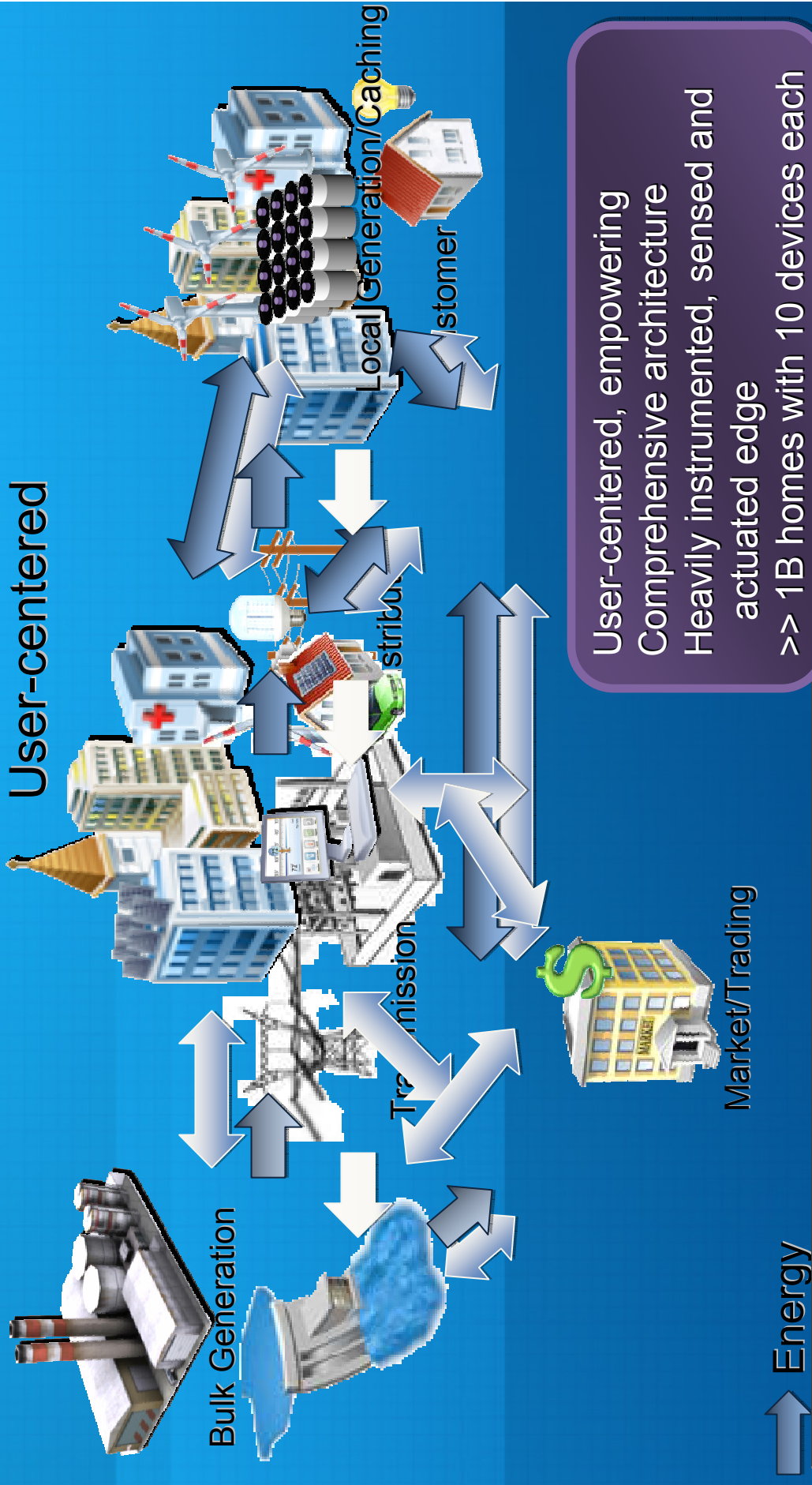
Future Internet Usage Areas Workshop  
Brussels, June 21-22 2010

Joe Butler – Intel Labs Europe



Intel Labs Europe

# A Vision for the Future



## User-Empowered World of the Smart Grid

# Potential Research Areas



- Microgrid architecture definition for developed and emerging markets
- Vehicle to Grid (V2G) opportunities at community level
- Vehicle to traffic infrastructure & communication interface to optimize traffic flow for energy use
- Energy usage profiling & prediction
- Policies, automation to manage usage at the edge
- Edge and Device Energy Caching
- Real-time, adaptive, trusted, extensible, low-power, low cost user level metering
- Power- and thermally-aware workload placement and migration
- Sensing/data architecture - open, secure, self-configuring, re-usable
- Embedded sensors, end-to-end energy usage monitoring and management, inferencing, machine learning; links to health, security, entertainment
- Smart charging control plane for PHEVs
- All-DC microgrids
- Power quality



end



Intel Labs Europe