

# telenor

M2M - Smart Metering presentation

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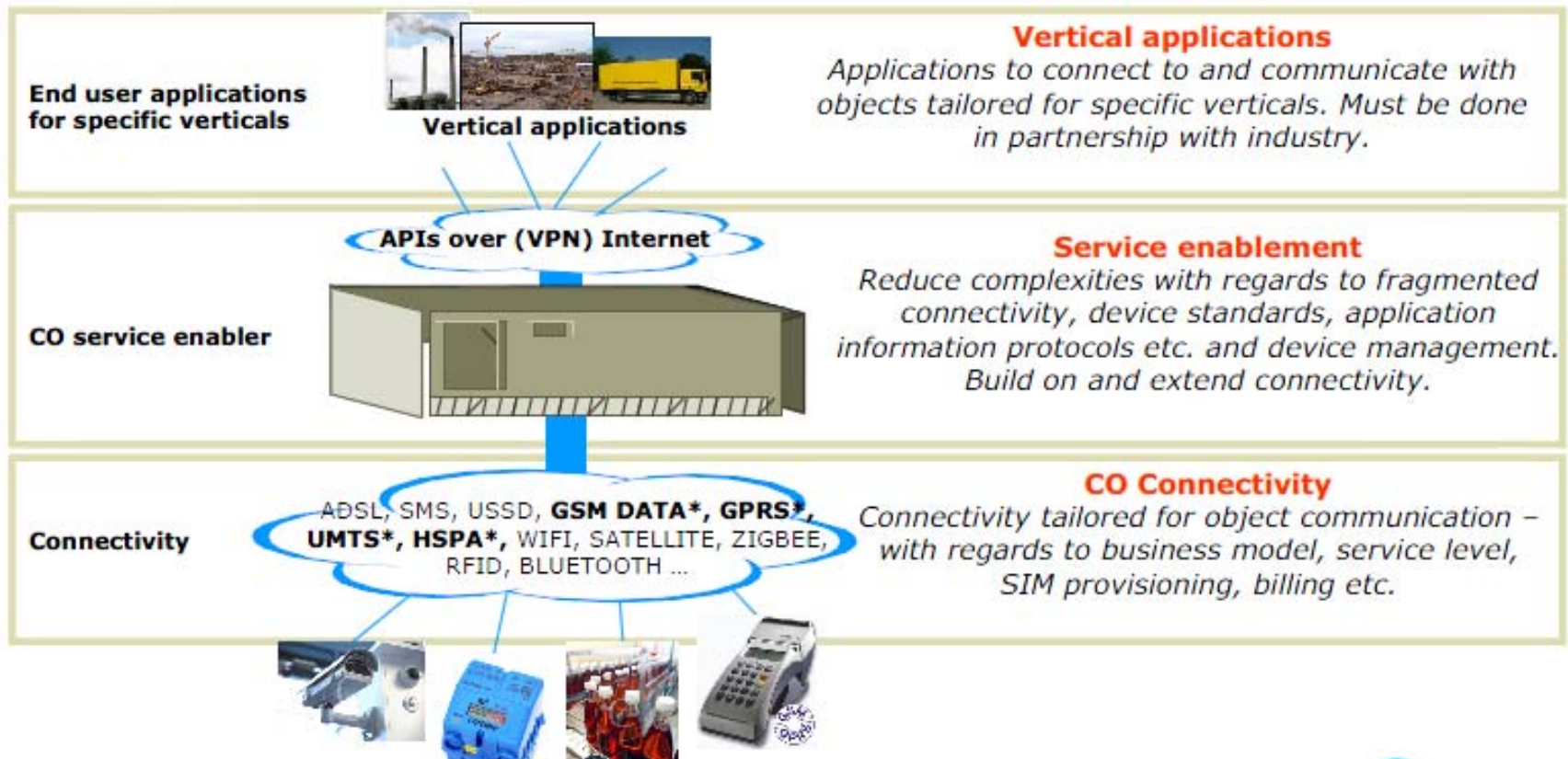


# Content

- Telenor new M2M business areas
- Telenor Connexion <http://www.telenorconnexion.com/>
- Telenor Objects <http://www.telenorobjects.com/>
- Telenor Cinclus <http://www.telenorcinclus.com/>
- Pannon



Our hypothesis is that there are 3 areas Telenor can take apart in: vertical applications, service enablement, and connectivity



# Telenor new business development in related areas



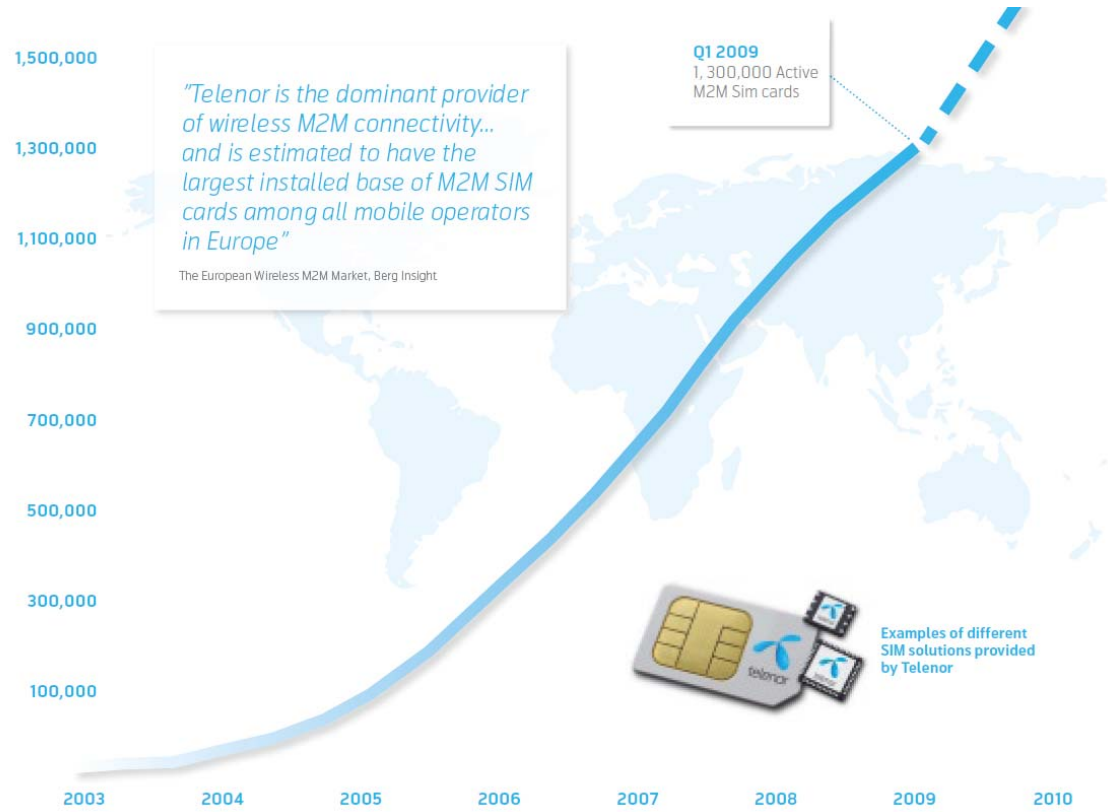
Percentage = Telenor ownership

# Partner strategy

- Technology partners
  - Meter manufacturers
  - Electricity, gas, water, heat/cool
  - M2M applications
- Solution partners
  - Smart Metering managed services
  - Smart Metering Solution providers
  - Smart Grid solutions
  - Home Automation services



# Telenor Connexion



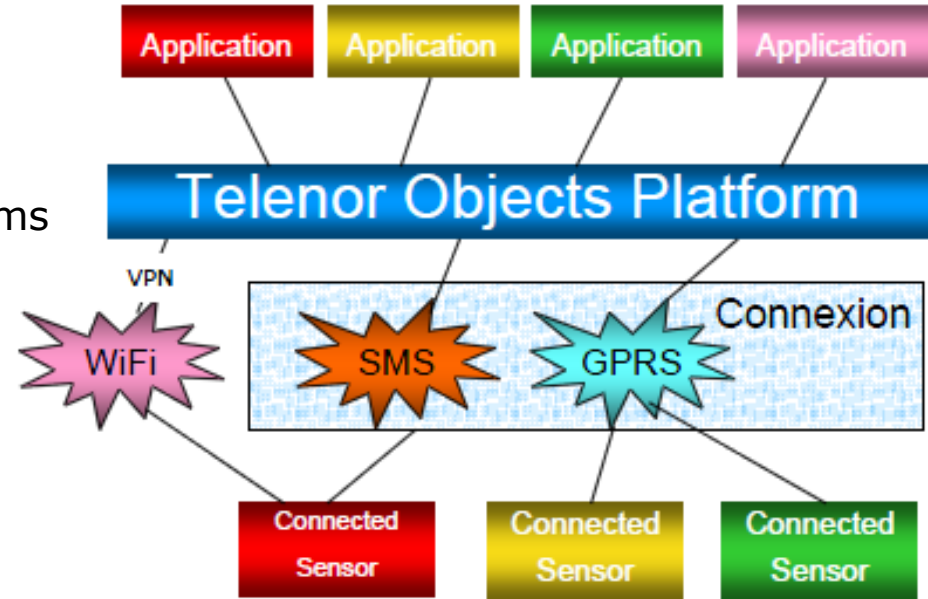
Telenor Connexion provides M2M connectivity solutions on an international level. By Q1 2009 it had deployed more than 1.3 million M2M SIM cards worldwide.





# Telenor Objects

- Network effects only through open systems
- Objects will have homes
- Information will be shared in a safe manner
  - Private
  - Trusted parties
  - Obscured data
    - Reduced accuracy
    - Delayed
    - Aggregated
  - Shared
- Challenges
  - No standards
  - No proper object naming structures
  - Finding data will be a challenge
  - Objects may consist of sub or super objects
  - Business models



# Telenor Cinclus

With extensive experience from Smart Metering



- Established 2004/1989
- 190 employees check
- HQ in Fornebu, Oslo
- Operations center in Lillehammer
- Communication technology,  
Telenor Cinclus OY, Vasa Finland
- Projects in Scandinavia and in the Netherlands – local comm./footprint
- In May 2009, Cinclus operates 1 M meter points



KPN



Pannon





# References



- 835.000 meter points in Sweden
  - Turn key solution
  - Installation at 20.000 meters a week
  - GPRS, Mesh RF, PLC and M-bus
  - Service delivery with specified SLA
  - Meter reading services and network operation services



- 141.000 meter points in Sweden
  - Turn key solution
  - GPRS and Mesh RF
  - Service delivery with specified SLA
  - Meter reading services and network operation services delivered



- 32.000+ meter points in Netherlands
  - Turn key solution
  - Managed services
  - GPRS
  - Meter reading services and network operation services



## Sourcing models in practice - Examples

### Buying components

**Insourced:**

- Purchasing
- Design
- Integrate
- Project
- Roll out
- Operate

**Outsourced:**

- none

### Turn Key Deployment

**Insourced:**

- Purchasing
- Operation

**Outsourced:**

- Design
- Integration
- Project
- Roll out

### Turn key deployment + service provisioning

**Insourced:**

- Purchasing

**Outsourced:**

- Design
- Integration
- Project
- Roll out
- Operation

# Cinclus Energy Gateway

**Utility meter with Cinclus Wireless / Wired M-bus Terminal**

Electricity meter



Gas meter



Water meter



Heat meter



**Wireless/Wired M-bus Communication**  
(Open and reliable standard for metering)



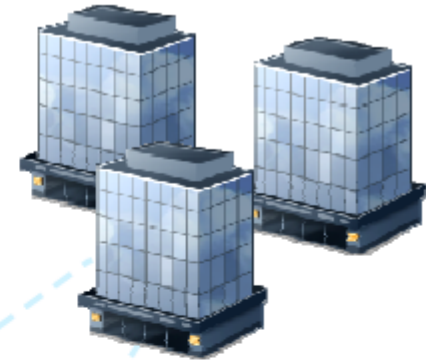
**Cinclus Energy Gateway**



**GSM network**  
Primary and backup carrier for data



**Utility Companies**



**Internet**  
Encrypted line as alternative data carrier

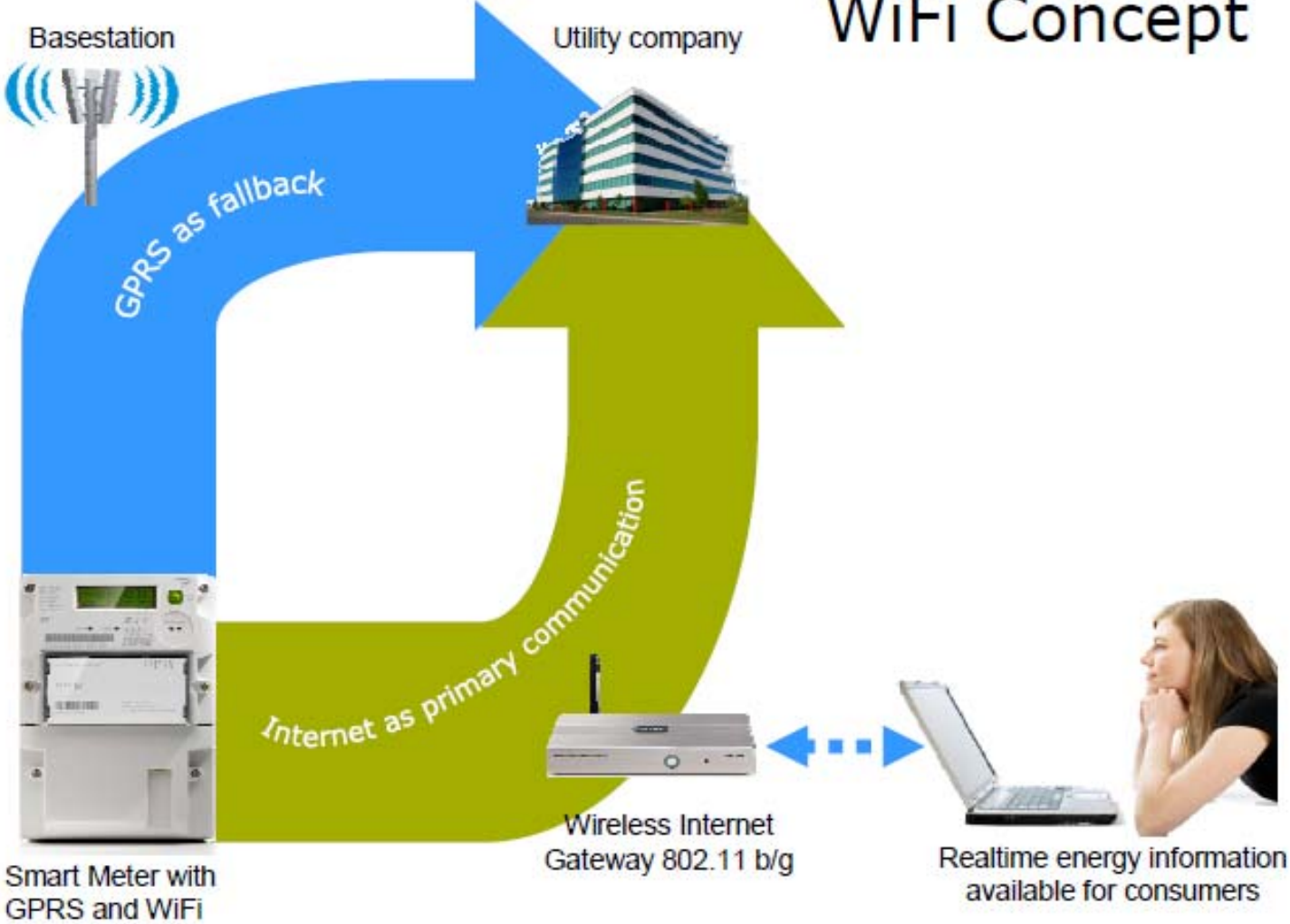


**Consumer Internet**



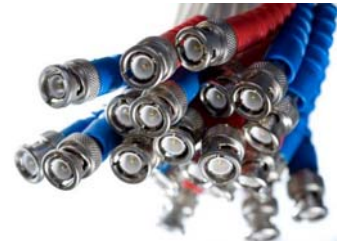
**Consumer Access to Energy Gateway**

# WiFi Concept

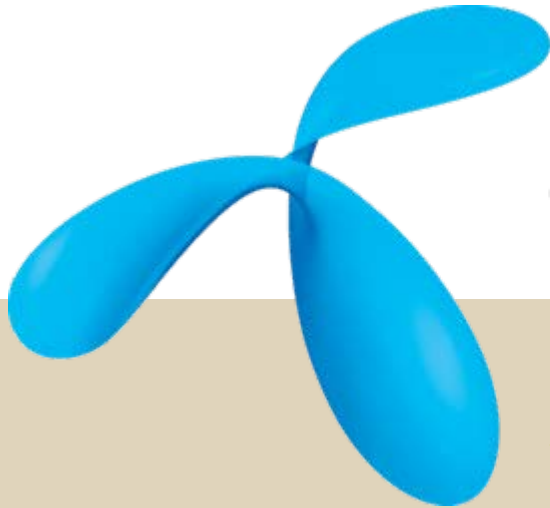


# Pannon

- Pannon is the dominant M2M provider in Hungary
- Partner strategy
  - AMR platform: SAP, Alcatel Lucent, ProcessVision, NSN)
  - Universities
- Strong R&D activities
- References RWE, FŐTAV



**Thank you for your attention !**



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