

ABO DATA



Understanding and overcoming
the challenges of capturing and
leveraging the data generated by
M2M

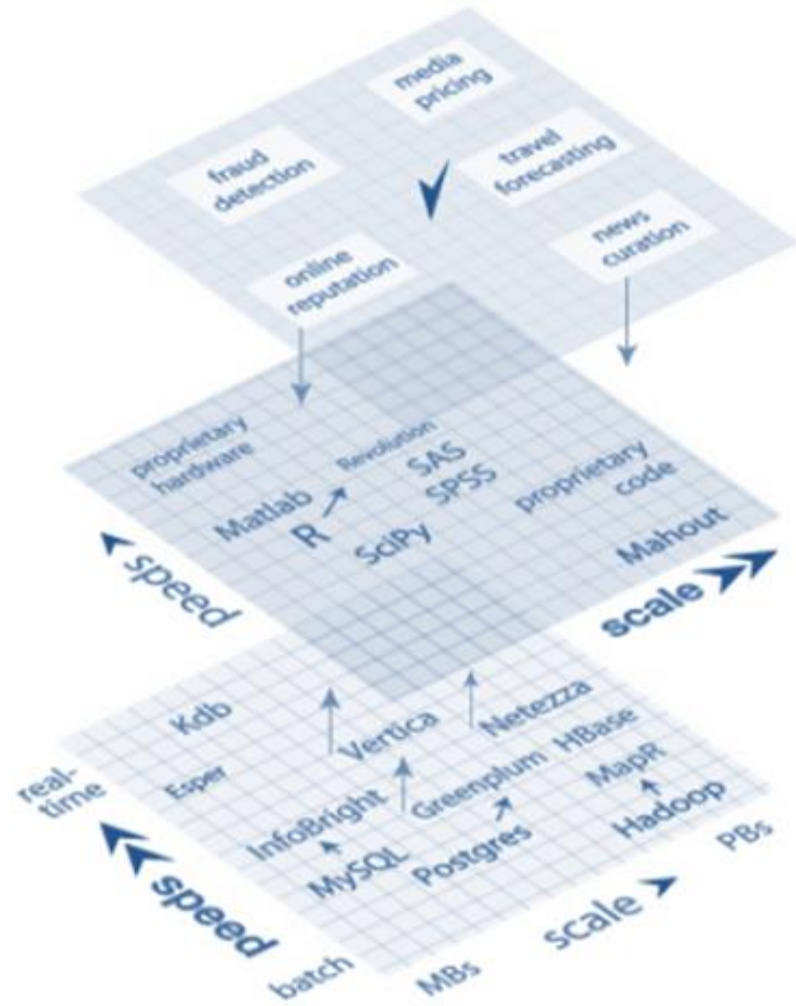
Cristiano Gherzi



Thursday, May 14th, 2013
Milan, Italy

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- ABO DATA is a Technology Research & Development Company

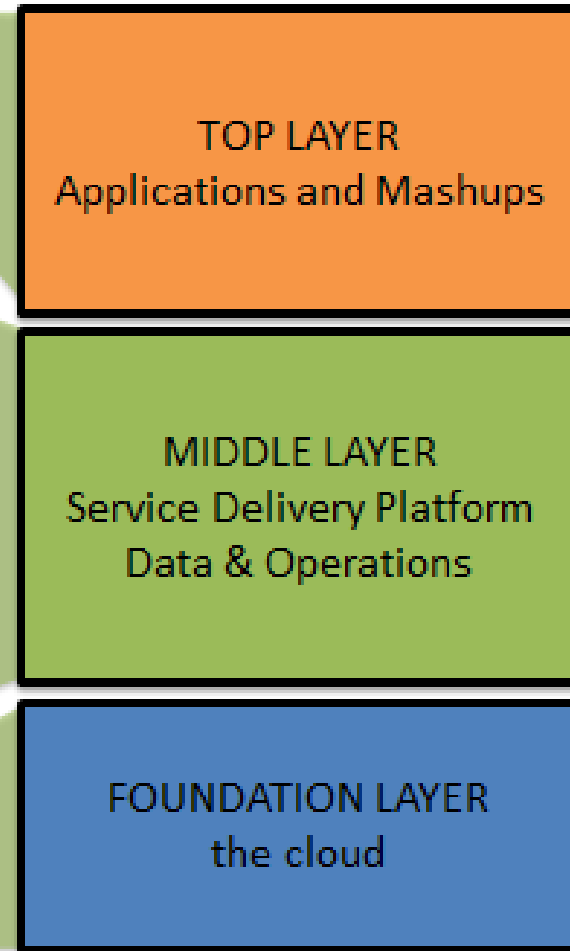
The Big Data Stack



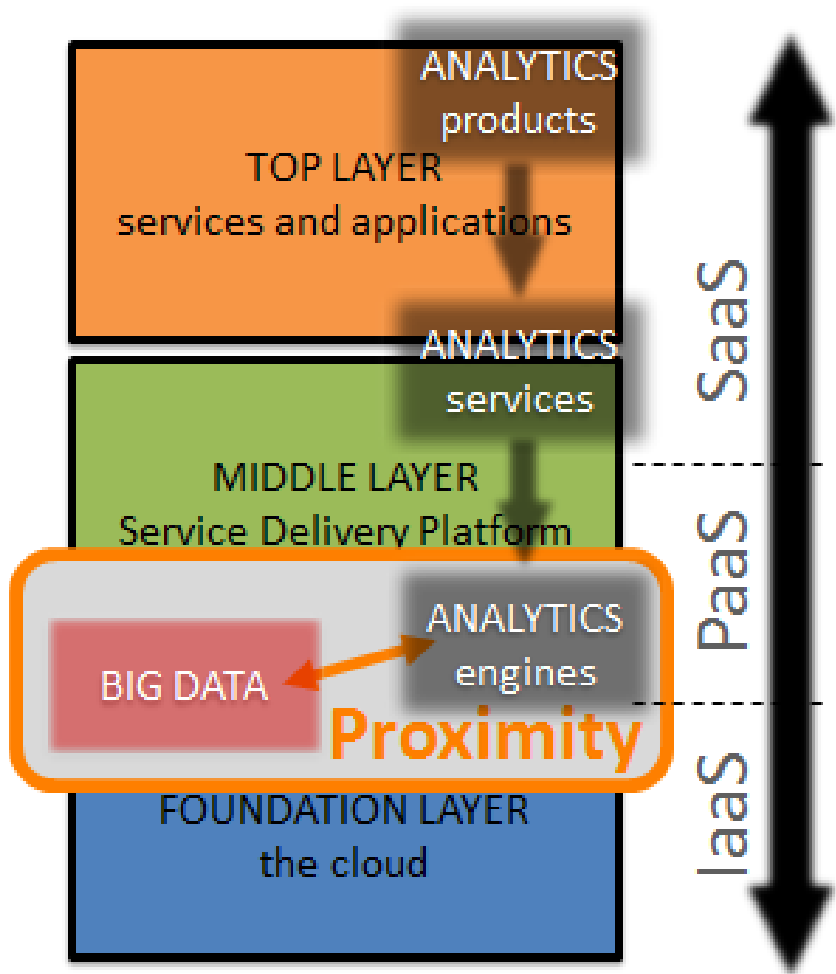
Where **application and focused services** are provisioned to applications

- Service orchestration, discovery, federation
- M2M Services
- Storage and Multi-platforms integration
- Business and Operations Support Systems
- Networks and Device Management

Where the cloud and virtualization infrastructure is provisioned **as-a-services** to upper layers



IaaS PaaS SaaS



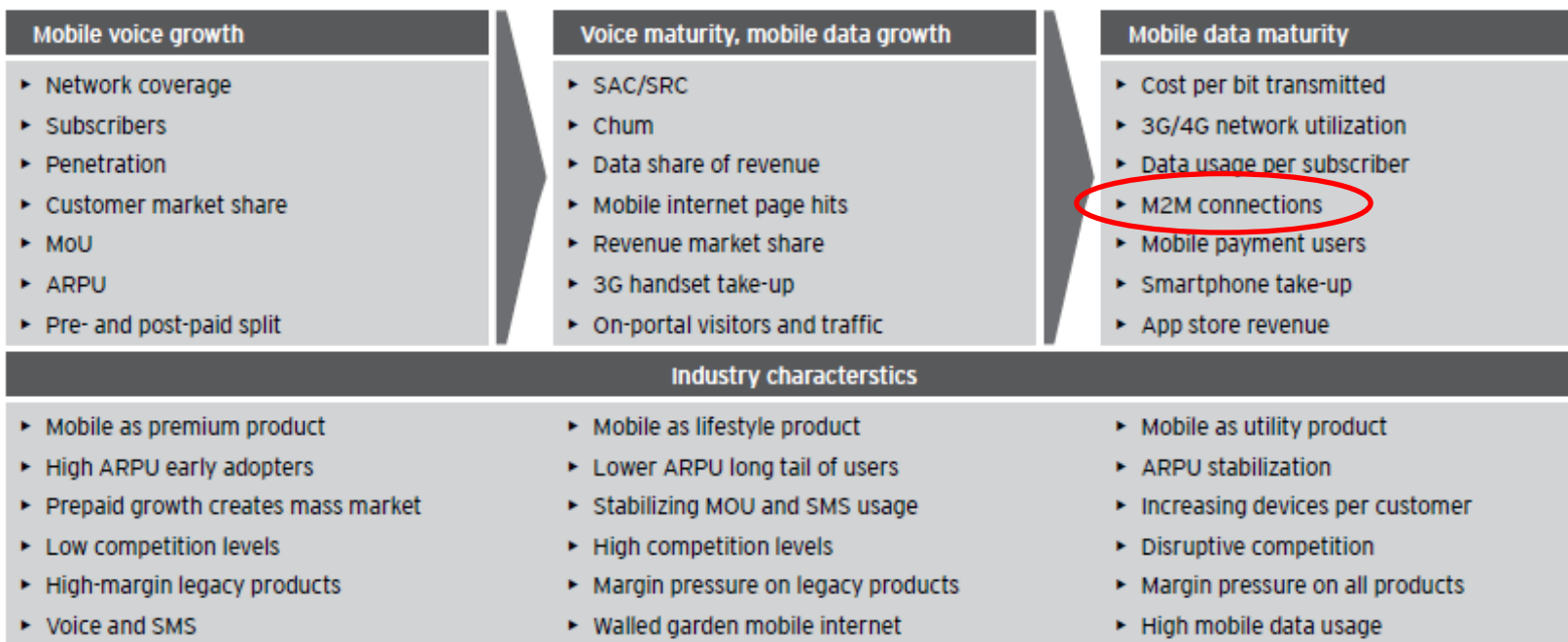
Fast Data, Big analytics and Focused Services

- Application requirements for **fast access** to a full data set are moving RDBMS and NOSQL data stores to memory and SSD appliances.
- With data in memory, statistical algorithms can operate interactively. The key factor is to **move analytics where data lives - Proximity** -and use a language compatible with the data layer.
- **Rich analytic service platforms** will be available to drive the development of new data products and services across all sectors.

M2M Analytics



- Connected device intelligence helps your organization to improve the activation rate and longevity of your connected device portfolio and to best incent sales and activations of your connected devices through direct and indirect channels.



- Operational:
 - Fault Management
 - Predictive Diagnostic
 - Anticipate Failure
 - Protect from malicious behavior or misbehavior of devices
- Business:
 - Strategy Development
 - Defining dynamics pricing schemes
 - Fraud Detection
- more ...



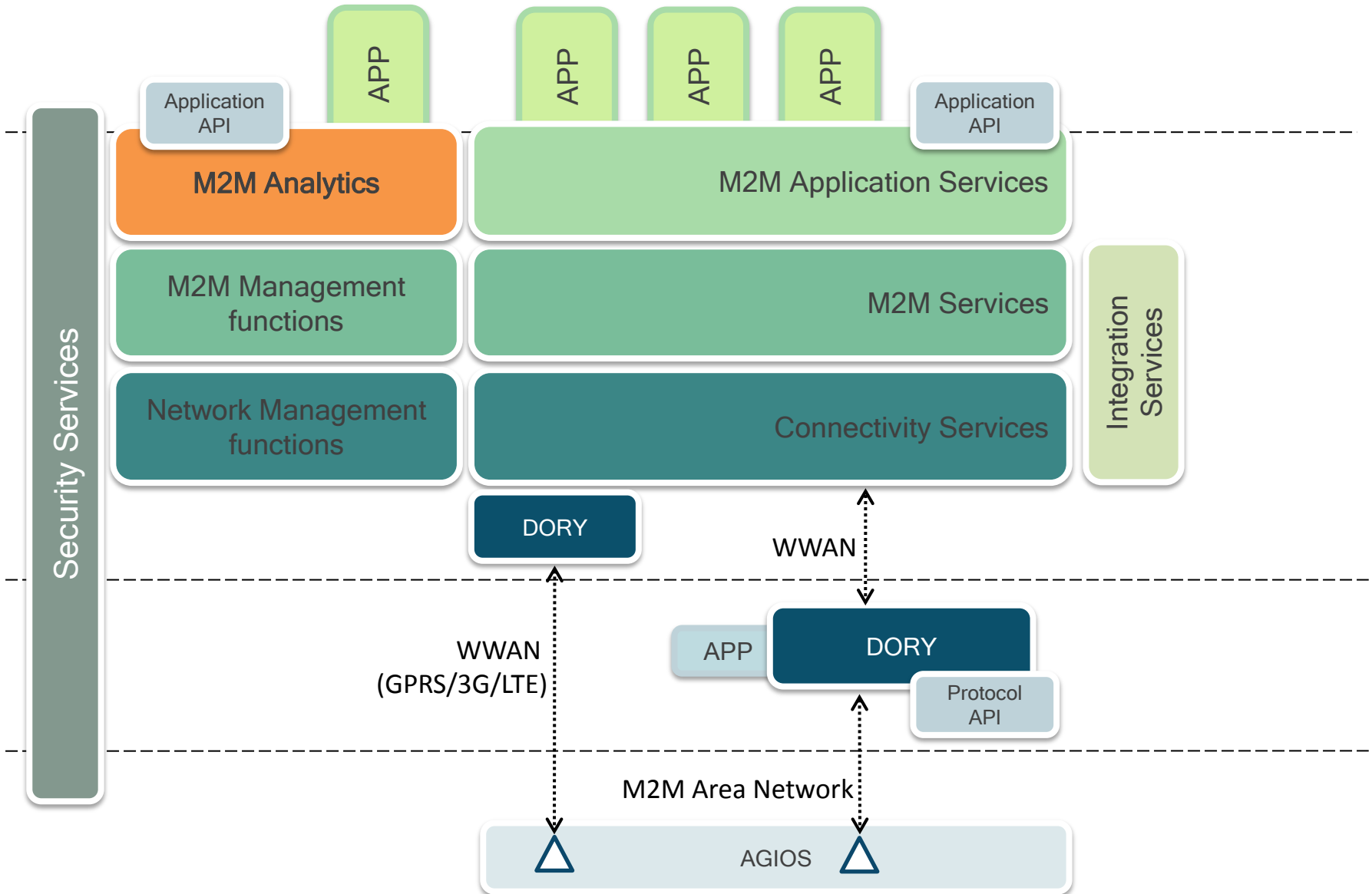
- How many active devices have not been in operation
 - ... in the last 3 weeks?
 - ... in Region A?
 - ... with Air Interface X?
 - ... belonging to the e-Health vertical?

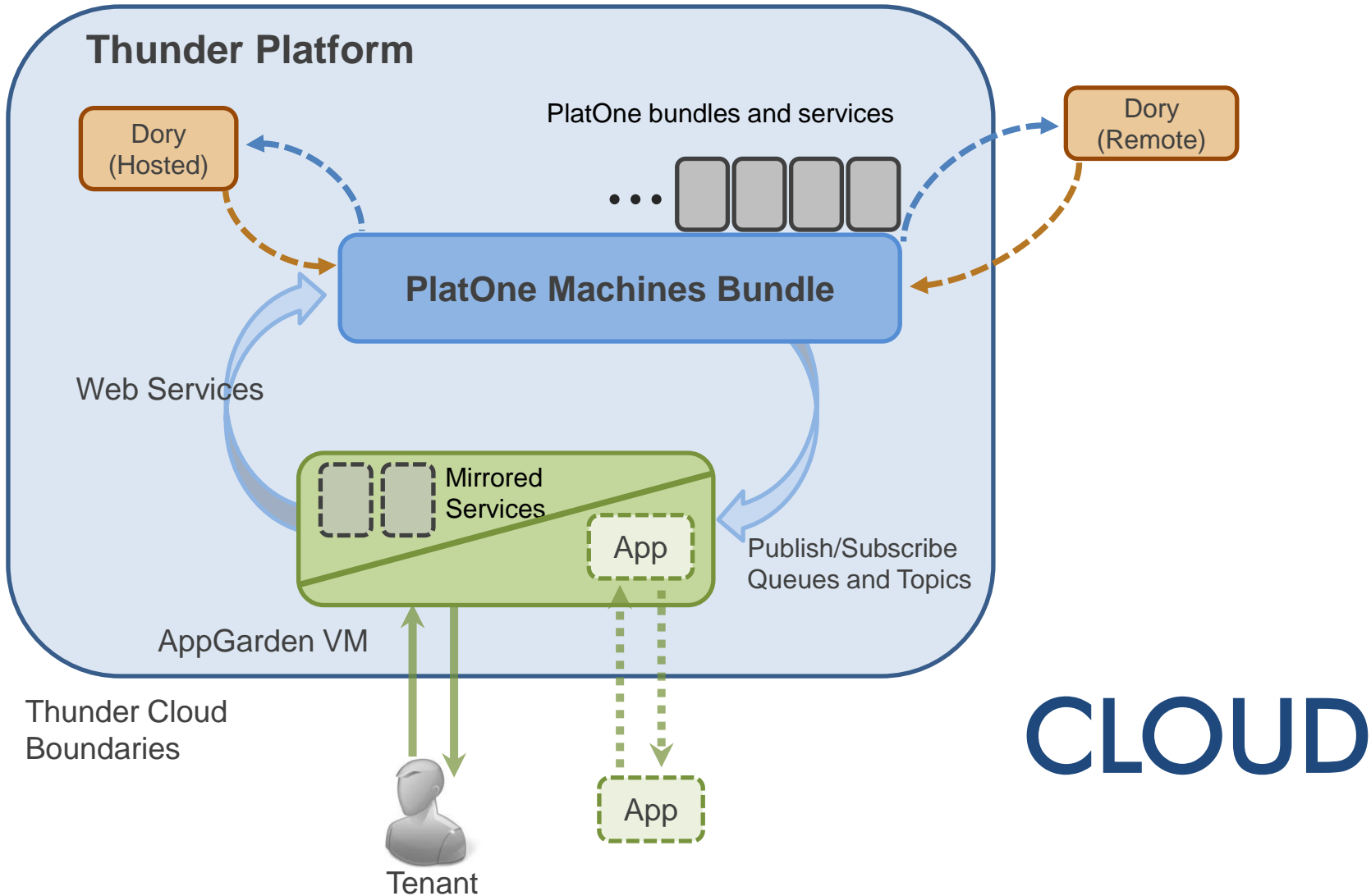


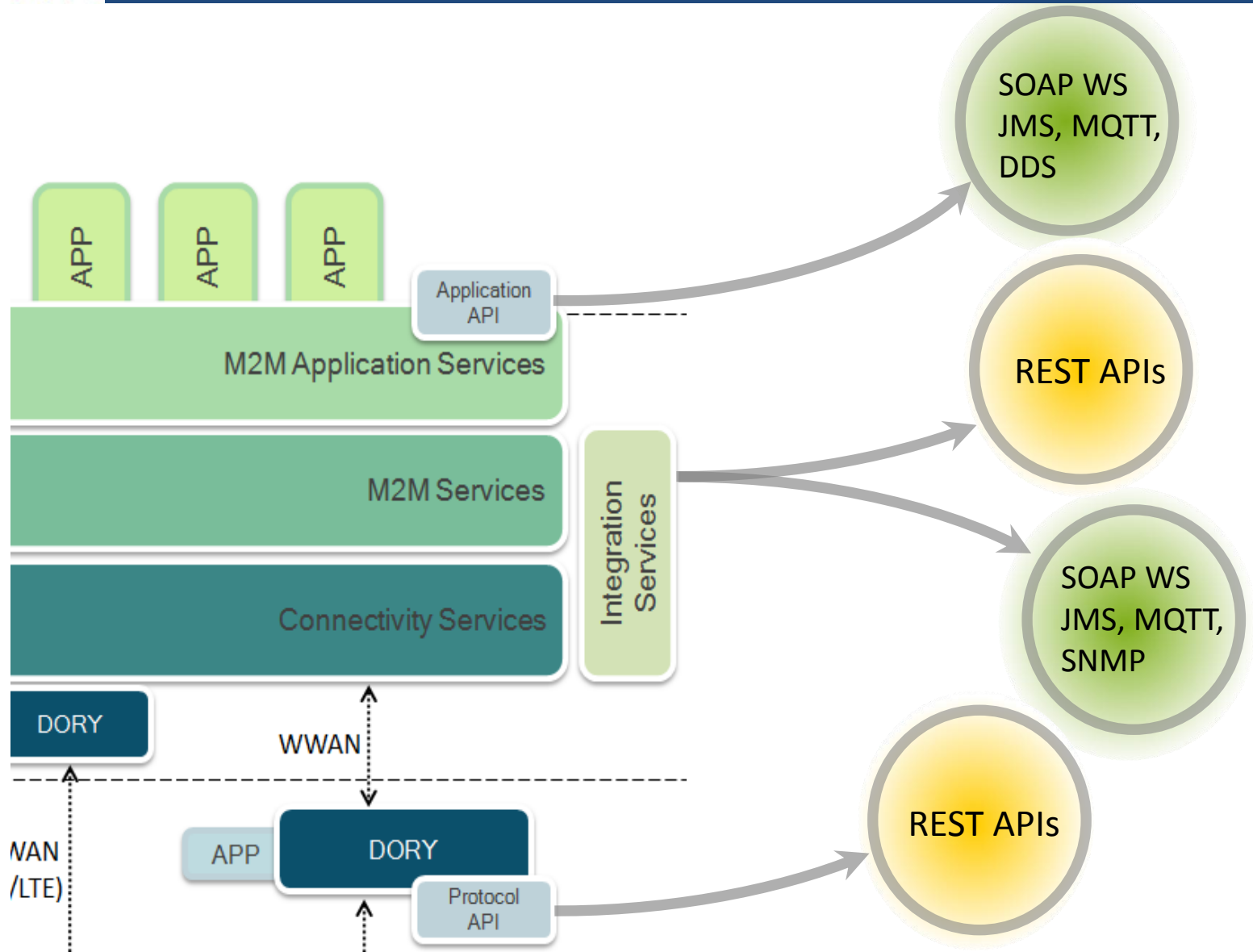
- Isolate devices that generated more than 2MB traffic each day
 - ... during last 3 weeks
 - ... in Region A
 - ... belonging to the e-Health vertical

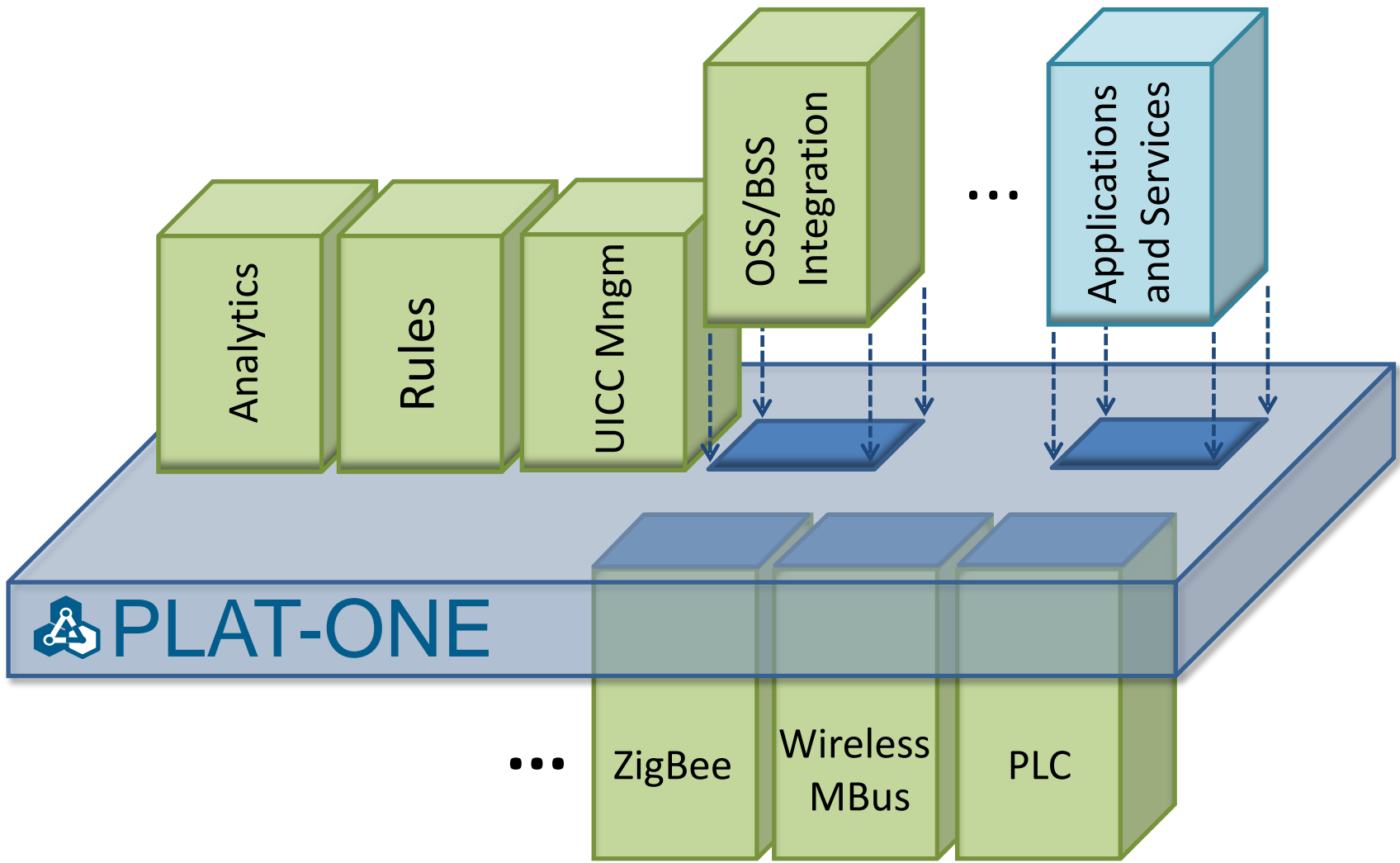


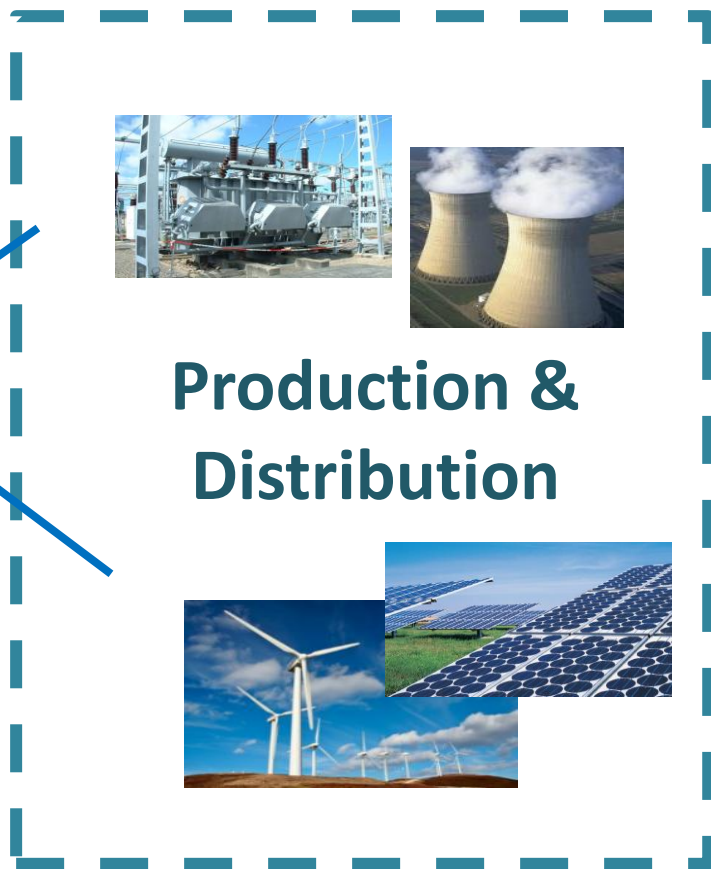
- Analysis of the traffic generated by devices (group by traffic-pattern)
- Group devices by their radio interface (2G, 3G, WiFi, Zigbee, broadband, ...)







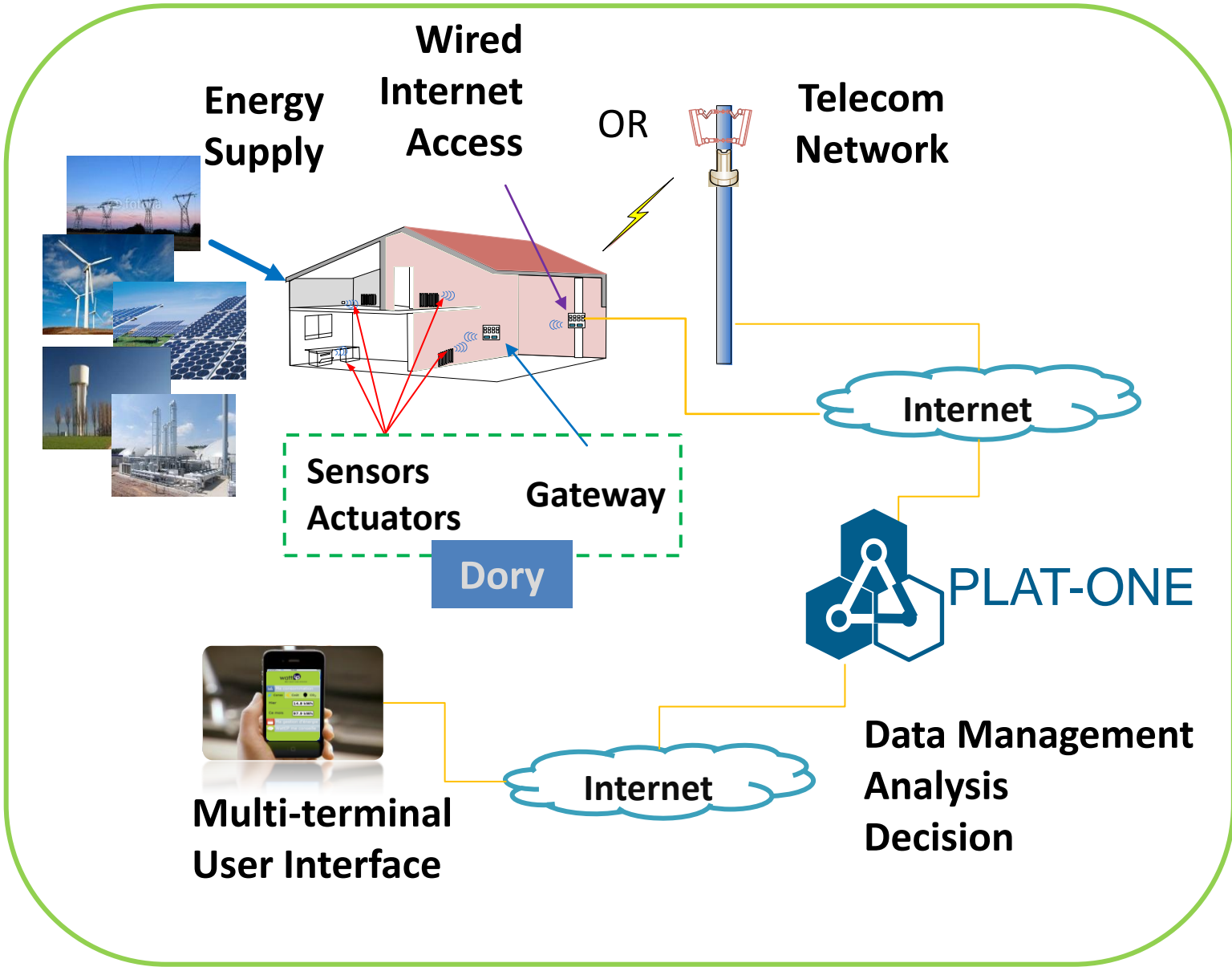




Meters

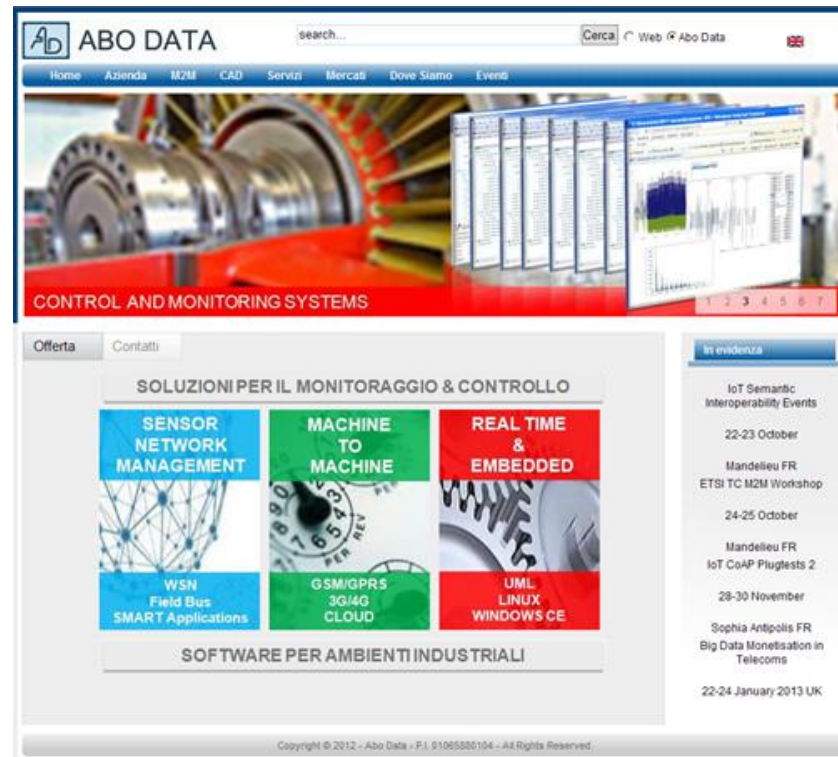
Production & Distribution

households, business,
administrations, public areas



- Data acquisition through ZigBee HA, Zigbee Custom & BacNET protocols
- Local Management for closed-loop automatic control
- Centralized Management for cloud-enabled dashboards and analyses of heterogeneous information
- HMI, Optimization Engines, Administration Consoles and other apps co-operating over the same environment, with customized permissions and access depending on role and level of the involved actors

- Massive deployments of new smart devices introduce unprecedented challenges in the M2M realm
- SDPs overcome these challenges:
 - horizontal scalability via cloud-oriented services
 - vertical scalability through early pre-processing of data streams in the M2M communication chain
- SDP semantic data contextualization and standardized contact points enable the seamless fruition of knowledge generated by M2M deployments



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