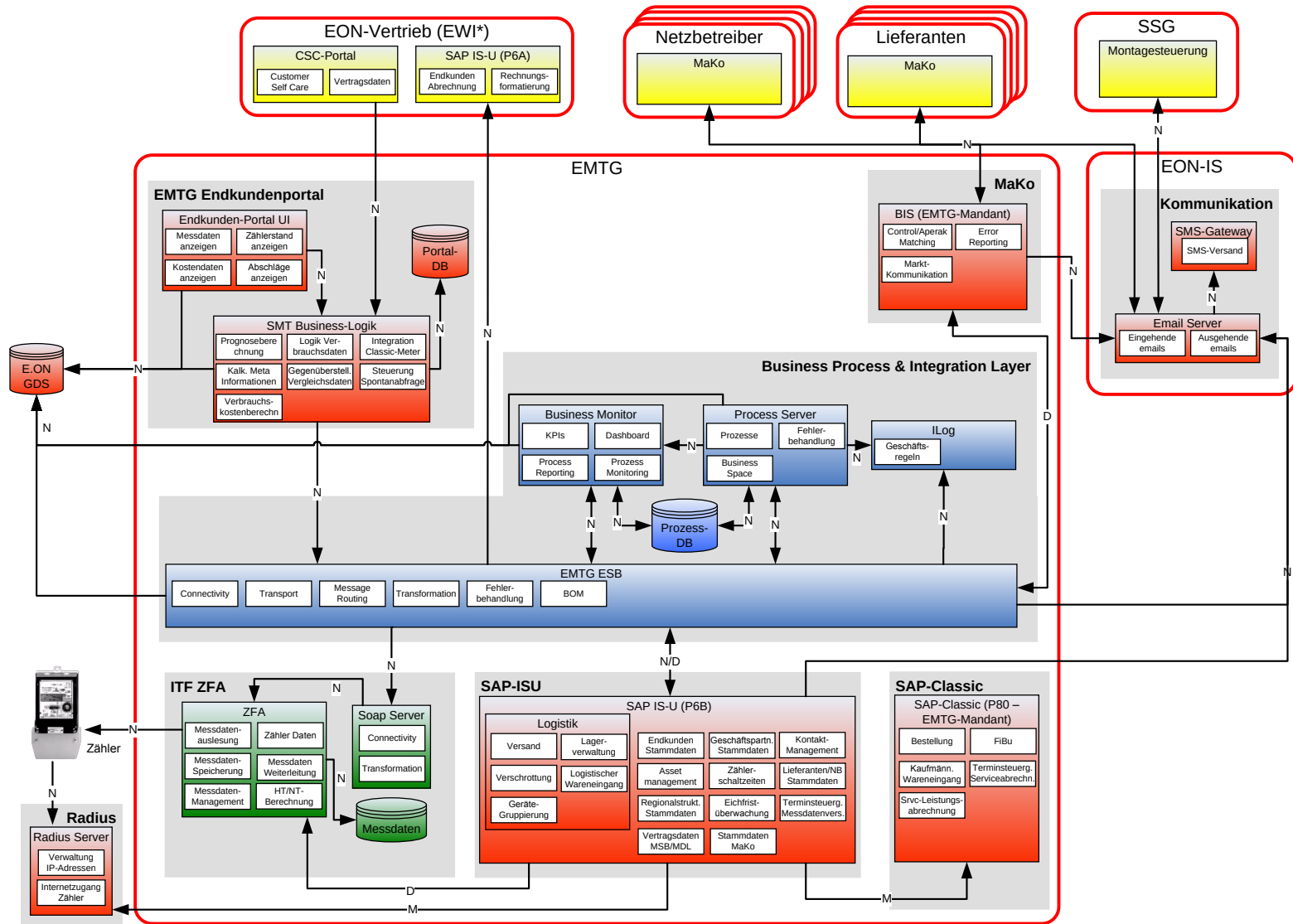


Od pilotného projektu k plne funkčnému riešeniu

Ján Hromádka, IBM Slovensko



Smart metering - overall architecture



Trying to adopt it all at once would be like...



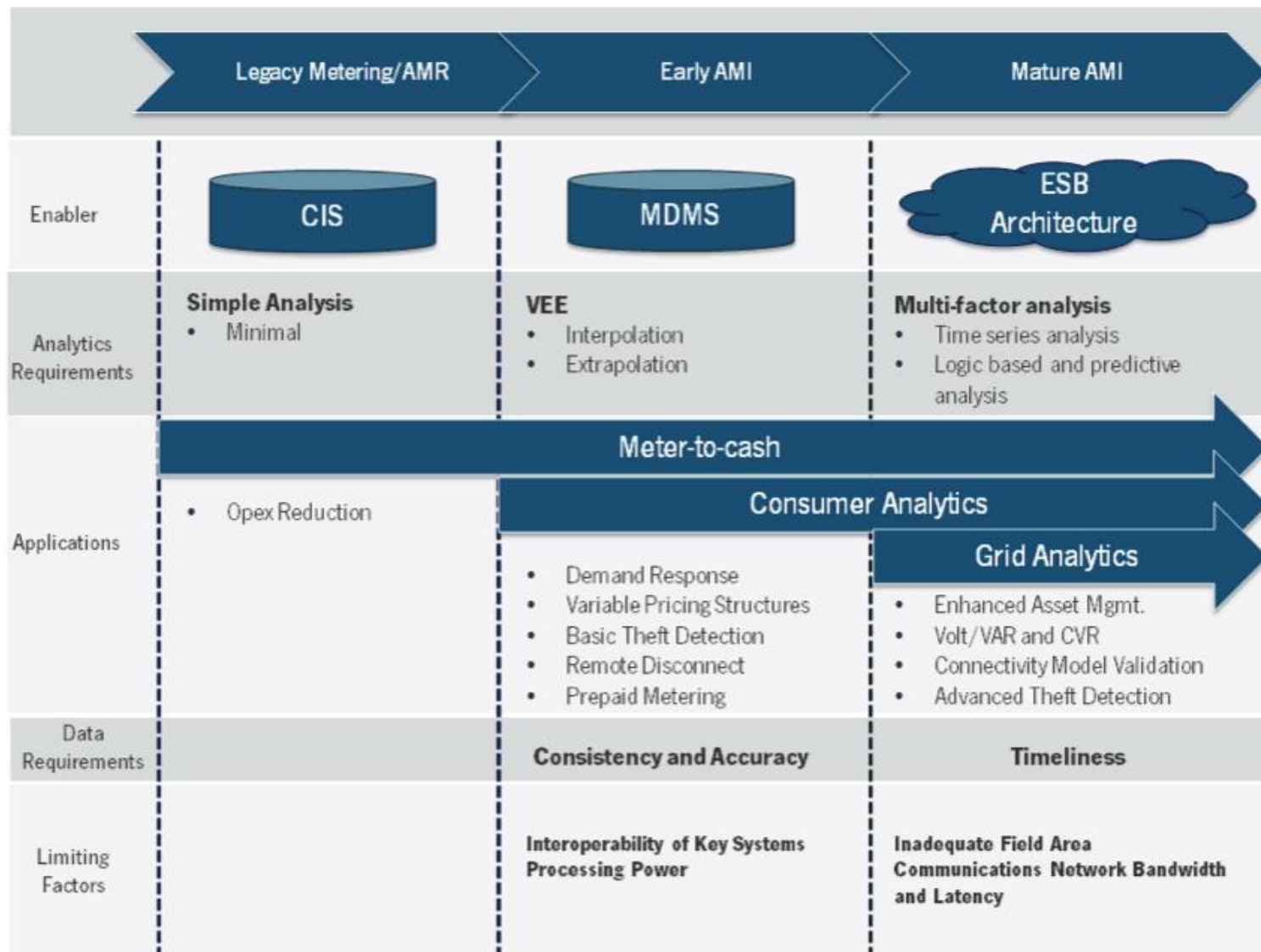
“...trying to eat an elephant.”

and if you approach it the wrong way and the effort goes badly...



“...the elephant might eat you.”

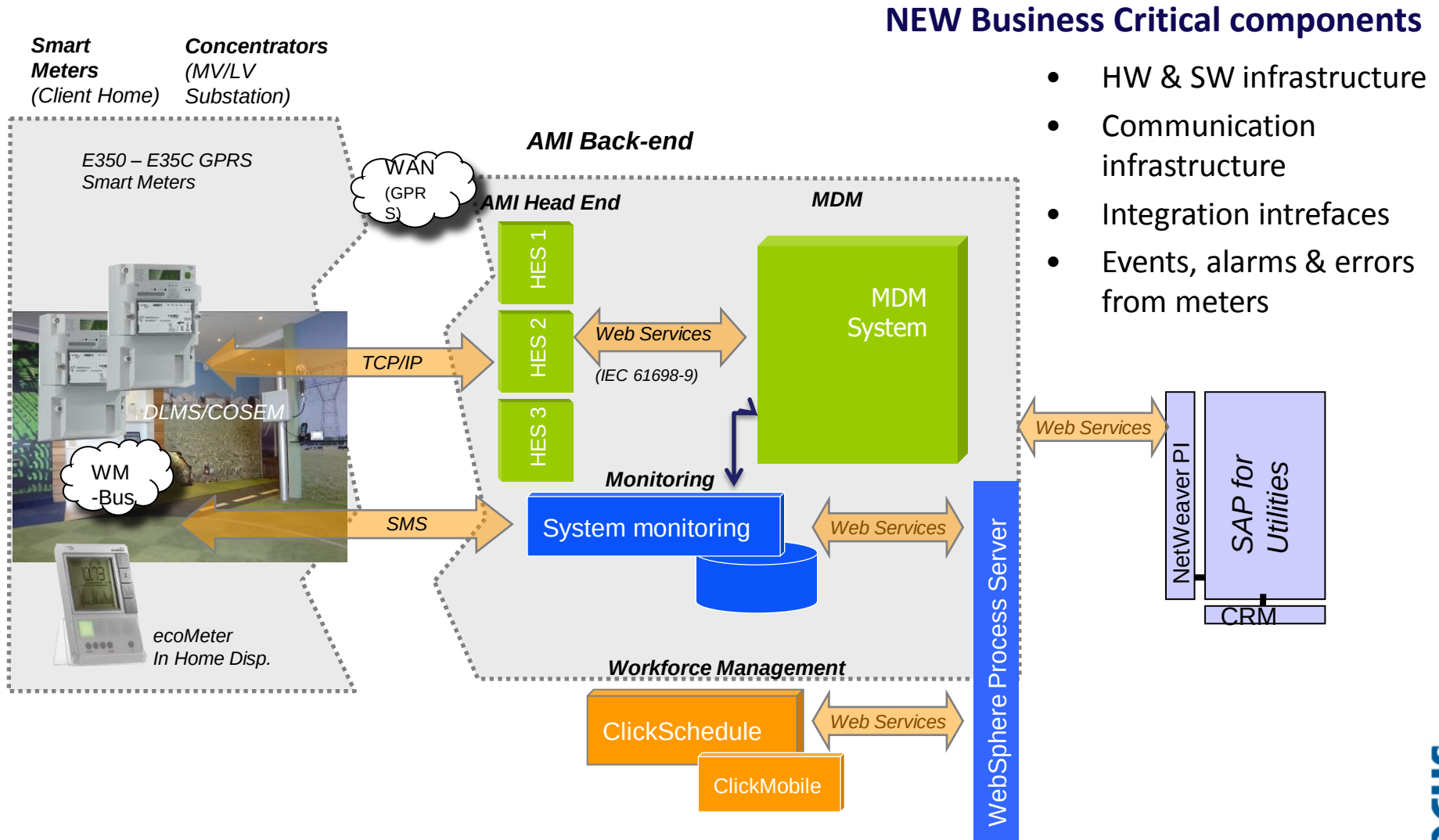
Smart metering (AMI) Architecture Evolution



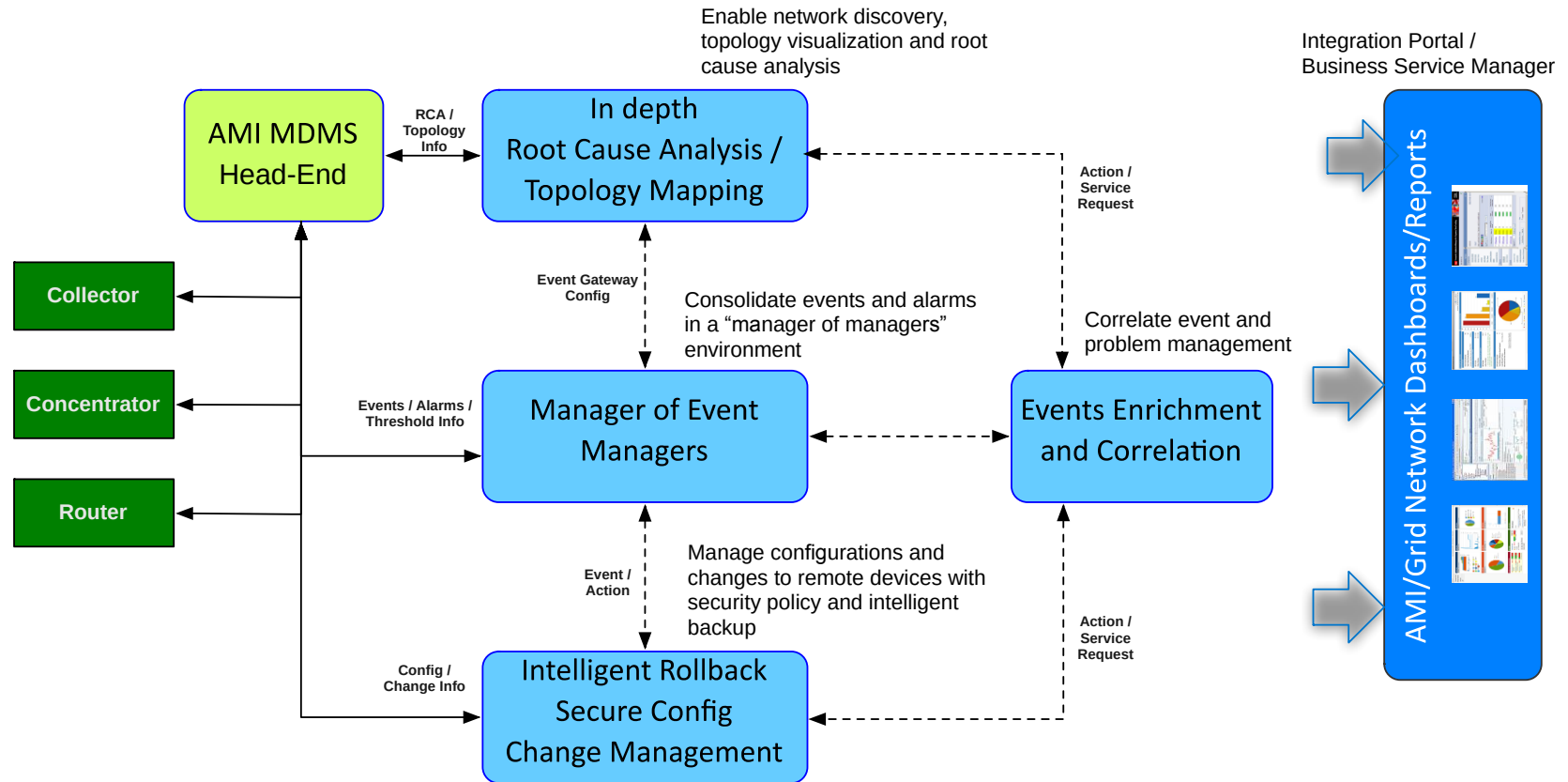
Smart metering (AMI) Architecture Evolution

- **System monitoring**
- **Data analytics**
- **Customer engagement**

AMI Architecture – System monitoring



Intelligent Metering Network Management



Paradigm Shift:

"Inspect and Detect"



"Detect and Inspect"

Intelligent Metering Network Management

The management system must provide visibility, control and automation over smart metering and the rest of the utility network operations with a set of robust capabilities to:

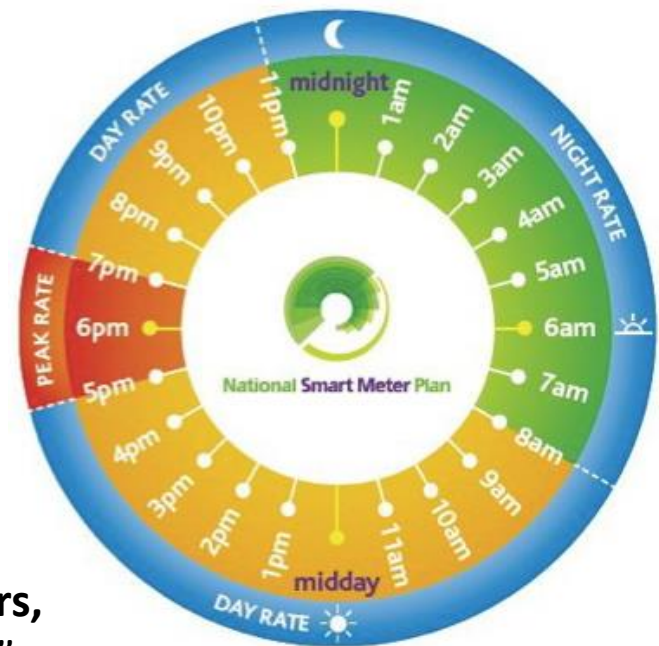
- **Monitor events in real-time** from multiple sources including meter vendor solutions, MDMS and other SA/DA EMS/NMS in a manager of managers environment
- **Proactively detect and respond** quickly to problems that impact the AMI and other SCADA/DA/SA network, devices and systems with an in-depth root cause analysis and topology view from a single point
- **Analysis and access to actionable intelligence** for operational problems/incidence/trouble-ticket management via rules and policies based correlation and enrichment of events and data from various AMI, MDMS and other SCADA/DA/SA systems and applications

You can't manage what you don't measure and analyze

EC adopted the Communication "**Energy Efficiency Plan 2011**" for saving more energy through **concrete measures**. The set of measures proposed aims at creating substantial benefits for households, businesses and public authorities: **it should transform our daily lives** and generate financial savings of up to €1000 per household every year.

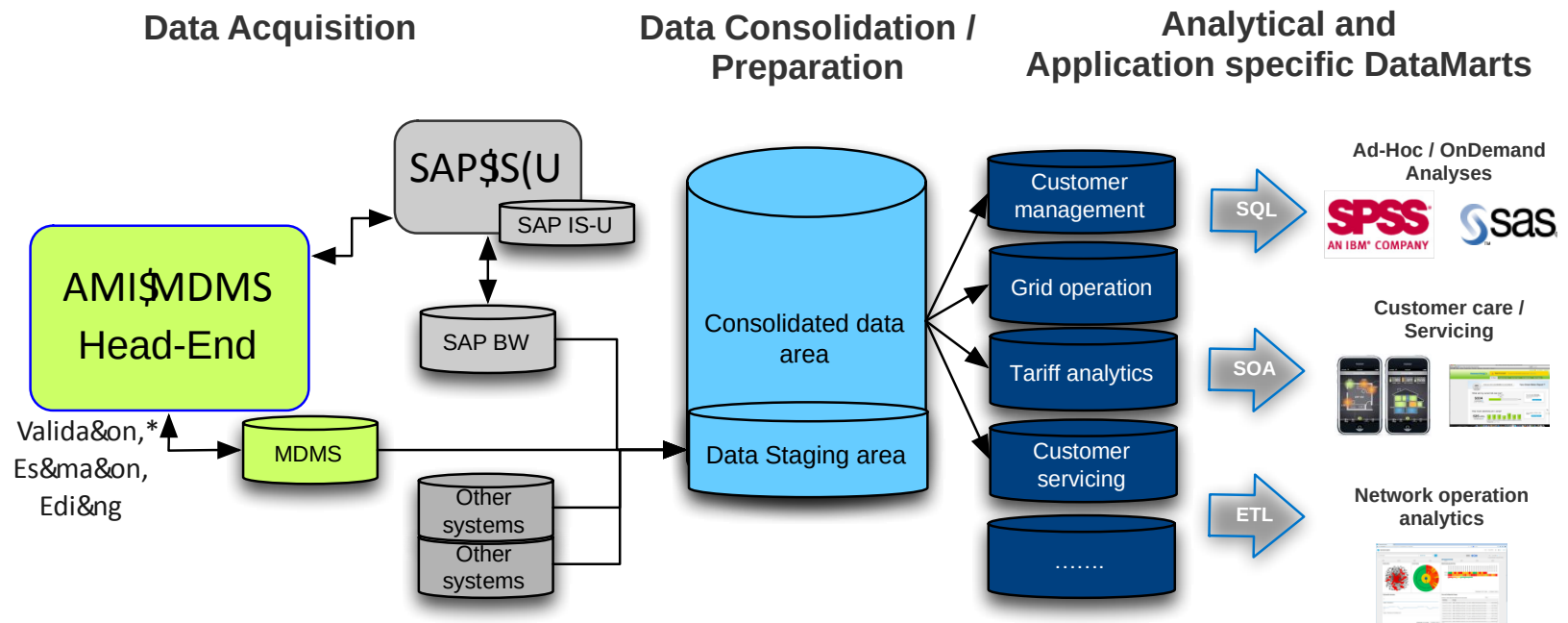
Commission for Energy Regulation, Ireland

- The National Smart Metering Plan
- **Mandating time-of-use tariffs as the norm**
- Pilot results:
 - 2-3% reduction in Total
 - 8-9% shift from Top-Peak to Off-Peaks
- Success factors:
 - **"Obtain and analyze data** for understanding potential distributional impact"
 - **"Focus on how to make it relevant to customers, and to retailers in terms of household savings"**



Data & analytics strategy and platform

- 100.00 meters represent **9.6 mio new records daily**
- In 3 years history it will **represents 6 TB of Historical Data**



- Billing (Time & Day differentiated rates)
- Customer Service (Energy Cost Alerts)
- Energy Theft Detection
- Electric Service Restoration Support
- Energy Efficiency Program customer segmentation / targeting

Customer engagement as the key to success

Experiences from successful projects shows that roll-outs must start with the customer



Customer survey



Quality standards



Education



Activating consumers will depend on a positive customer experience. In this regard, clear information is key.

Best practices are already available



*Vision: Transforming our **relationship with customers** and their relationship with energy*



*Assess the **value of information** which may be provided by **SMs** by analyzing the reaction of consumers to different levels of information*



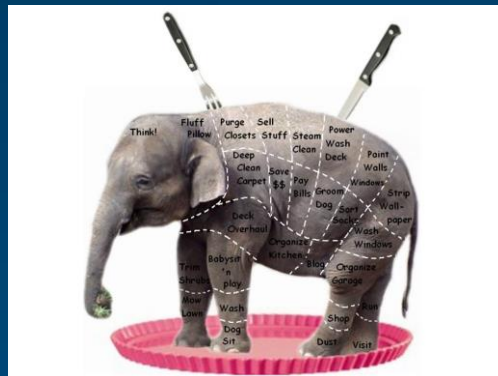
*“Within the **next five years** Ireland could have the **highest penetration** of smart meter customers with **time-of-use tariffs** in the world”*



Summary - Take aways

- **EVERY business process** within the utility **will be significantly** changed due to the Smart Meter technology
- Take in consideration the **increasingly complex business critical communication networks and IP-enabled devices** deployed to support smart grid and smart metering projects
- **Detail architecture design** and **System integration** at an early stage is crucial
- Plan the **data staging and analytics platform** early; the more robust the platform, the sooner the internal processes can adopt and adjust
- **Customers awareness** needs to be created from the beginning

Ďakujeme za pozornosť



Dobru chuť!

