

The Landis+Gyr AM solution: *advantis Overview*



Agenda

advantis: System Overview

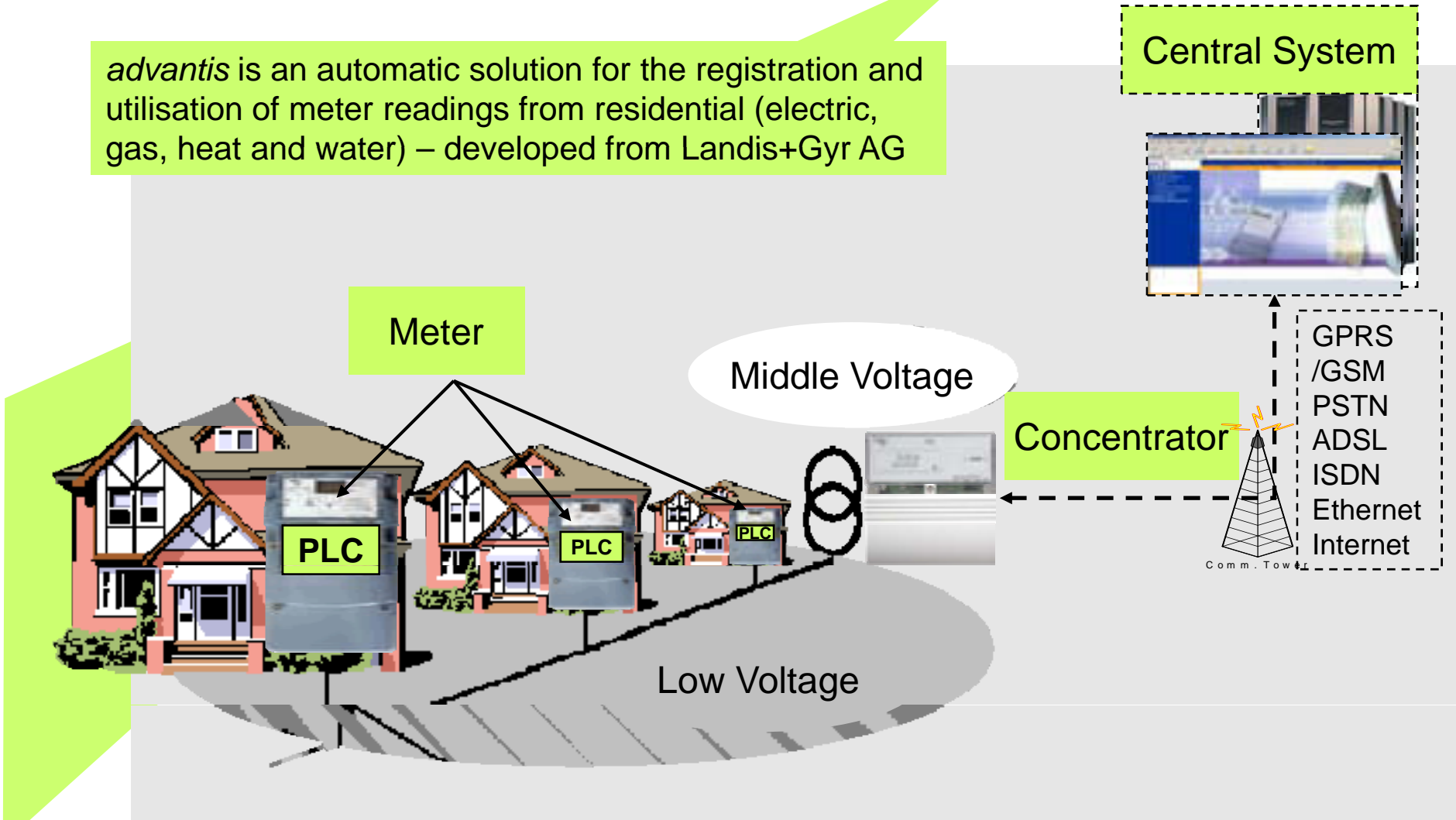
advantis: Processes

advantis: Roadmap

advantis: References

advantis – What is it?

advantis is an automatic solution for the registration and utilisation of meter readings from residential (electric, gas, heat and water) – developed from Landis+Gyr AG



advantis - Components

Meter



L+G ZMF architecture with pluggable/communication modules

Concentrator



L+G concentrator controls up to 3000 meters

Central System



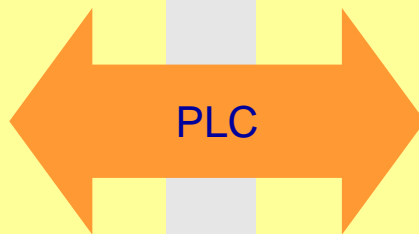
Architecture based on the proofed Converge

IT-System (z.B. ERP)



Adaptable interfaces based on open standards

1




2




Converge (advantis central system) Integration of I&C, Grid and residential meters

**One System
Converge / advantis**

Converge for automated I&C and Grid meter reading

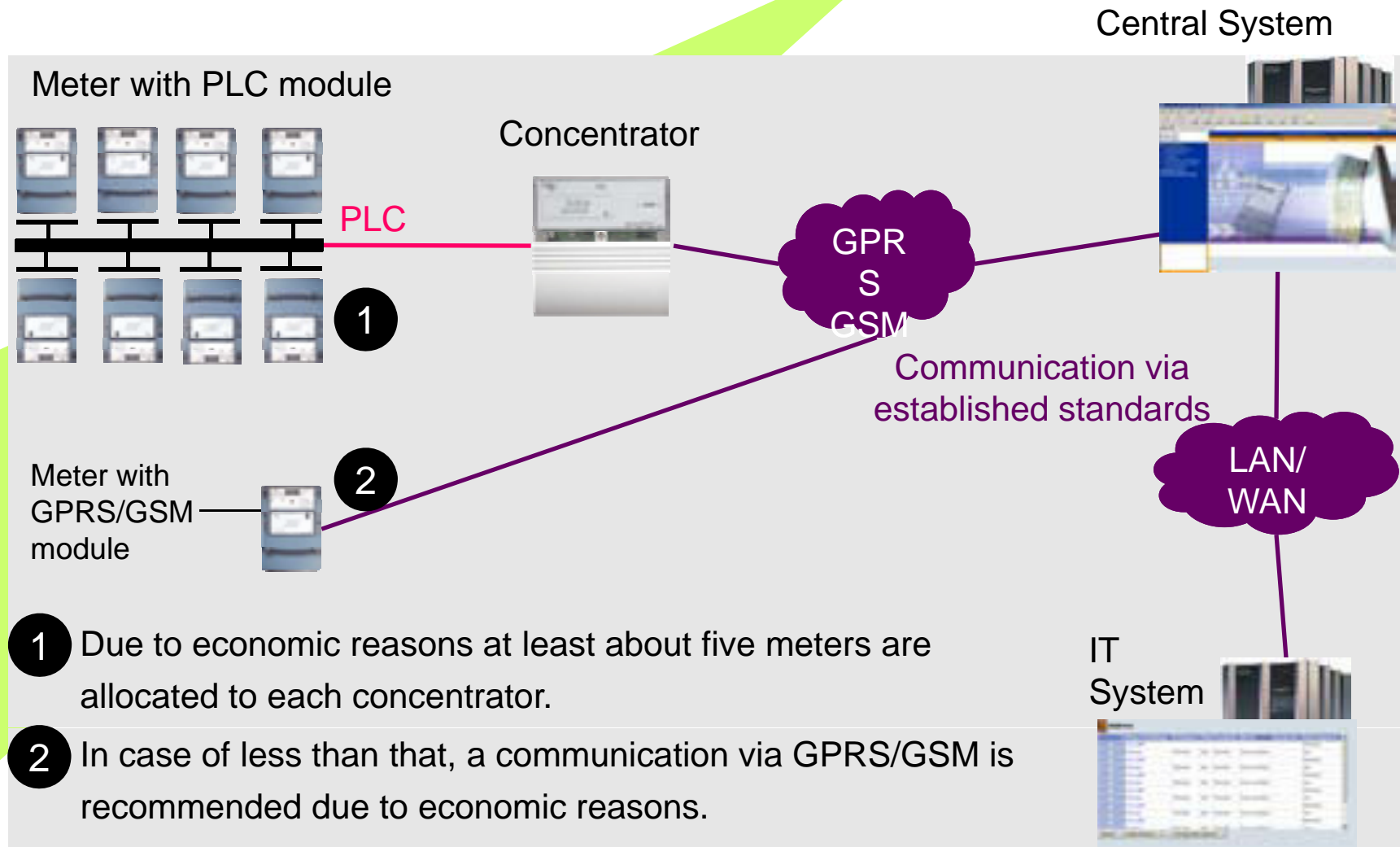


Automated residential meter reading

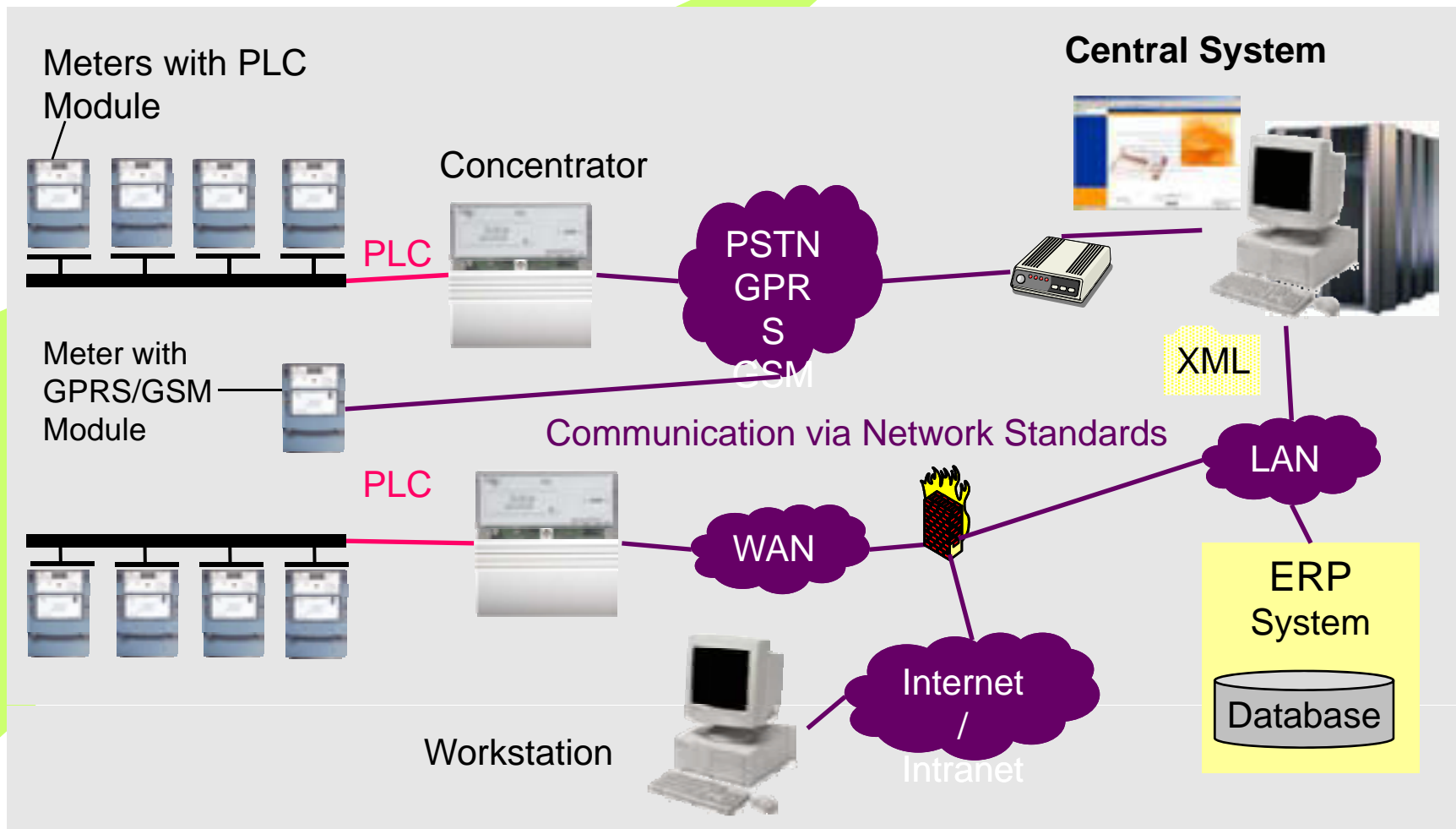


**For everything
I&C, Grid
and
Residential**

advantis – Communication



advantis – Overview

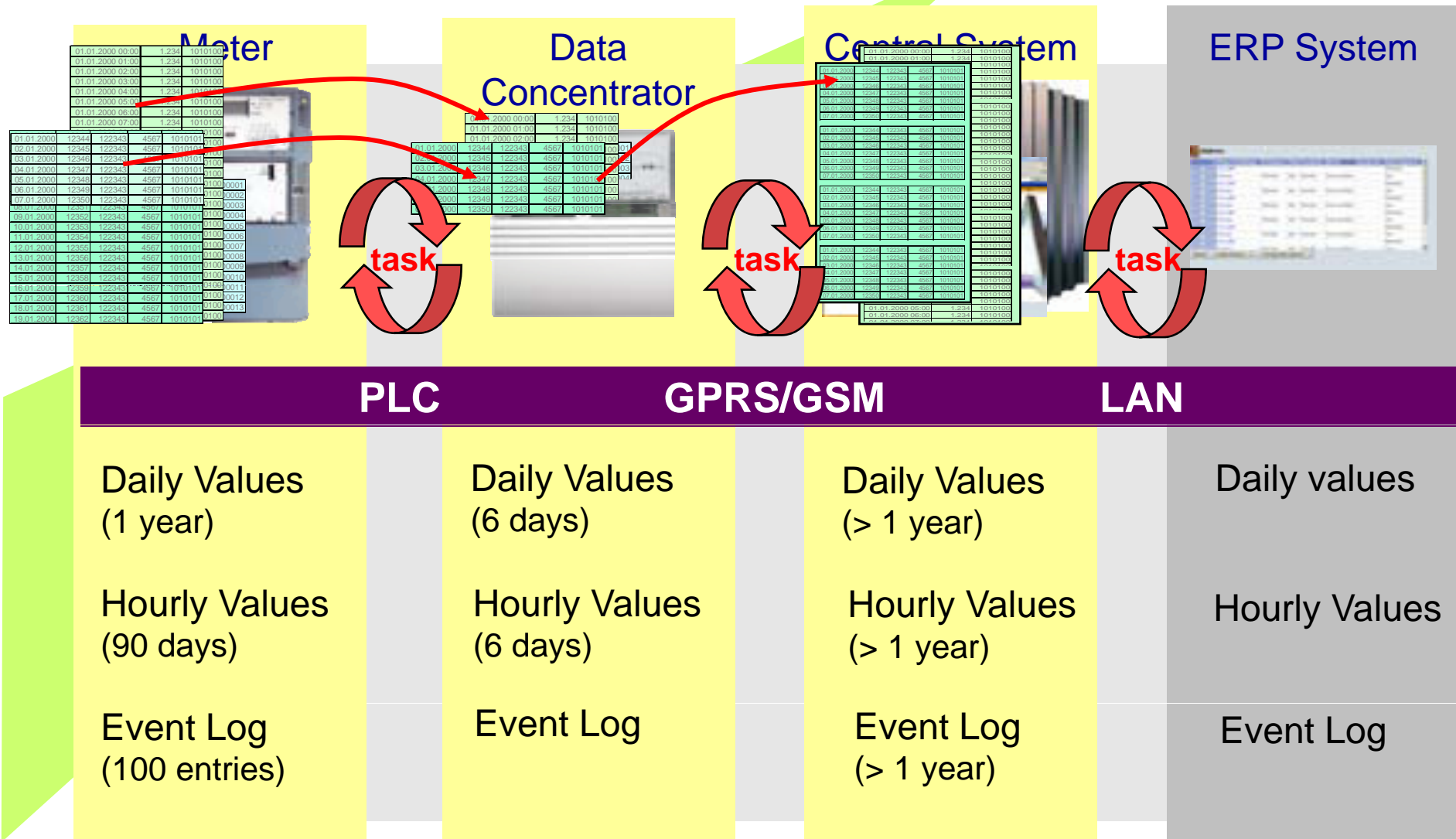


Maximum End to End Reliability: Redundant Data



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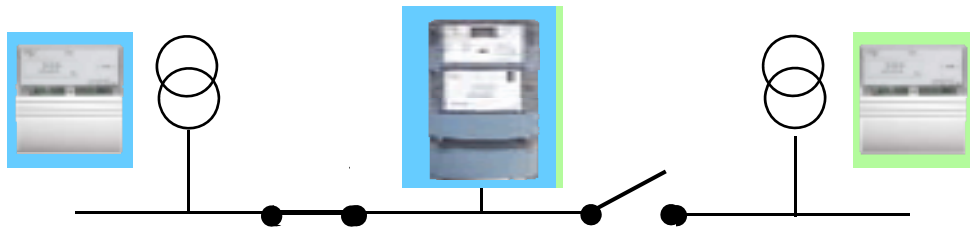


Minimised Installation and Maintenance Costs: Automatic Reconfiguration

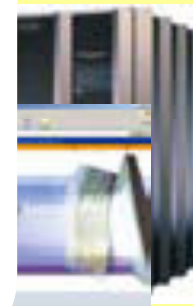


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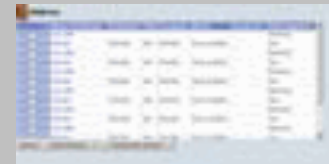
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System



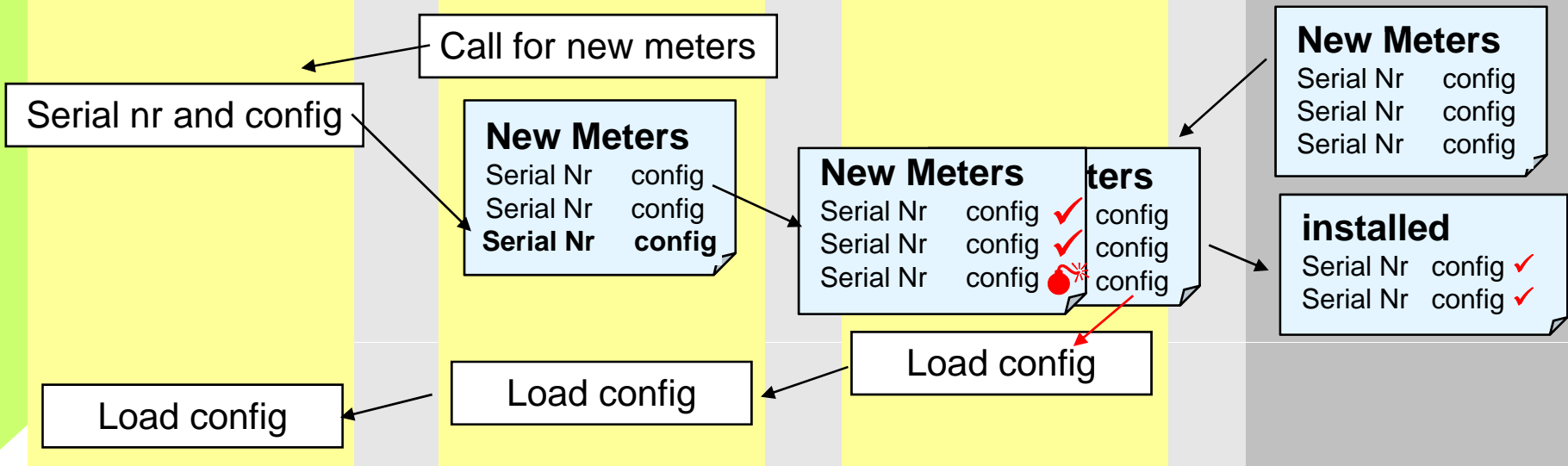
ERP System



PLC

GPRS/GSM

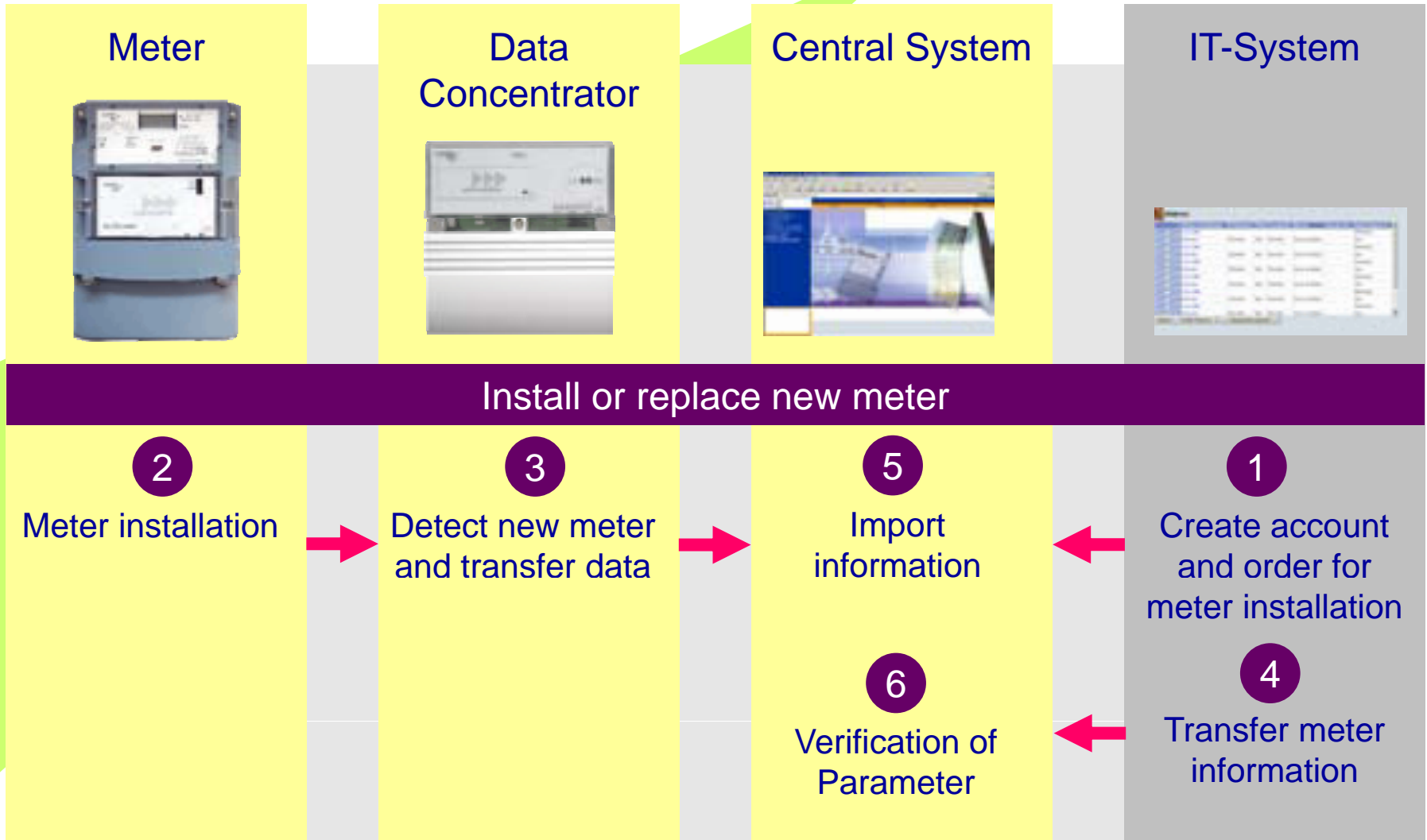
LAN



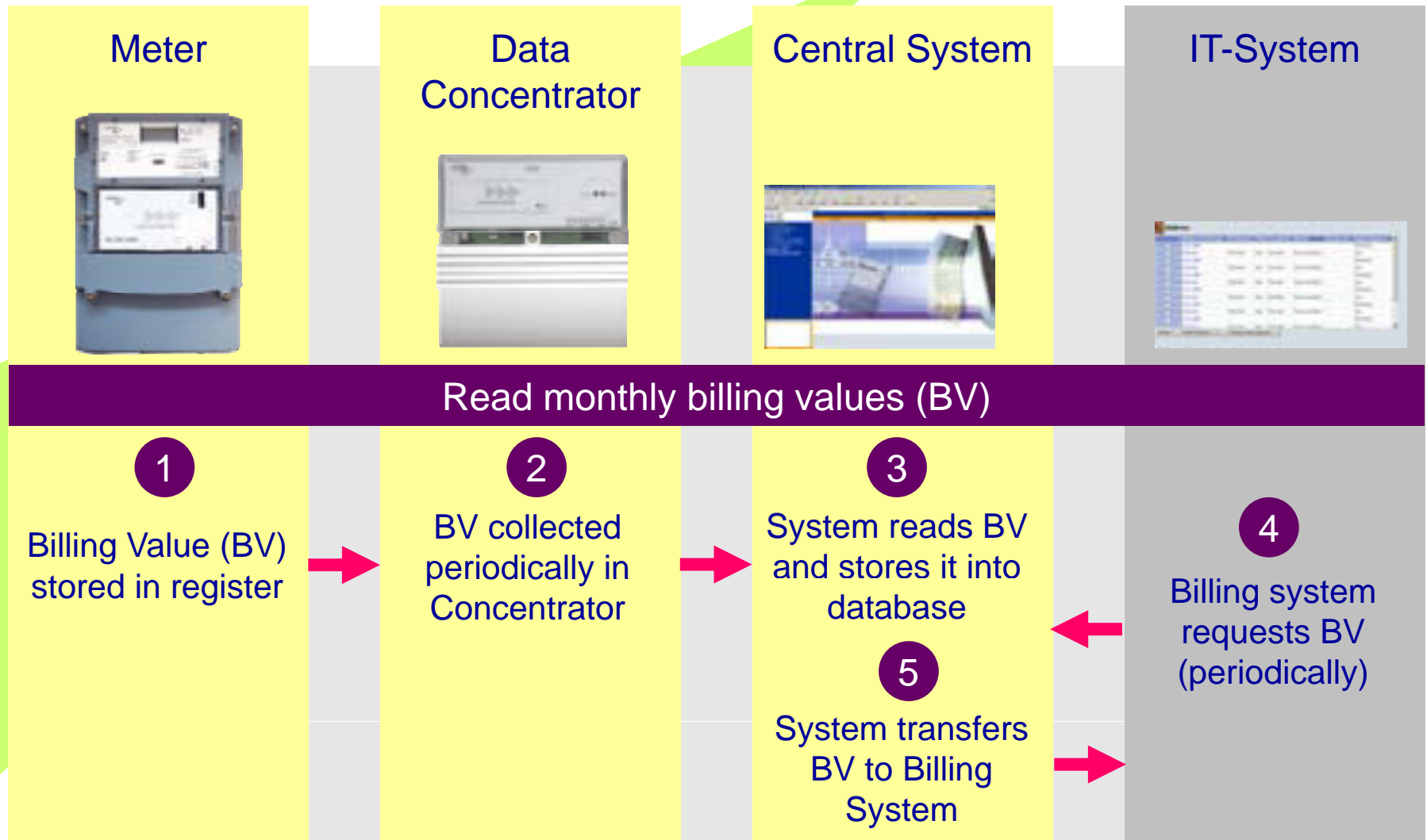
The Landis+Gyr AM solution: *advantis processes (plug + play, etc.)*



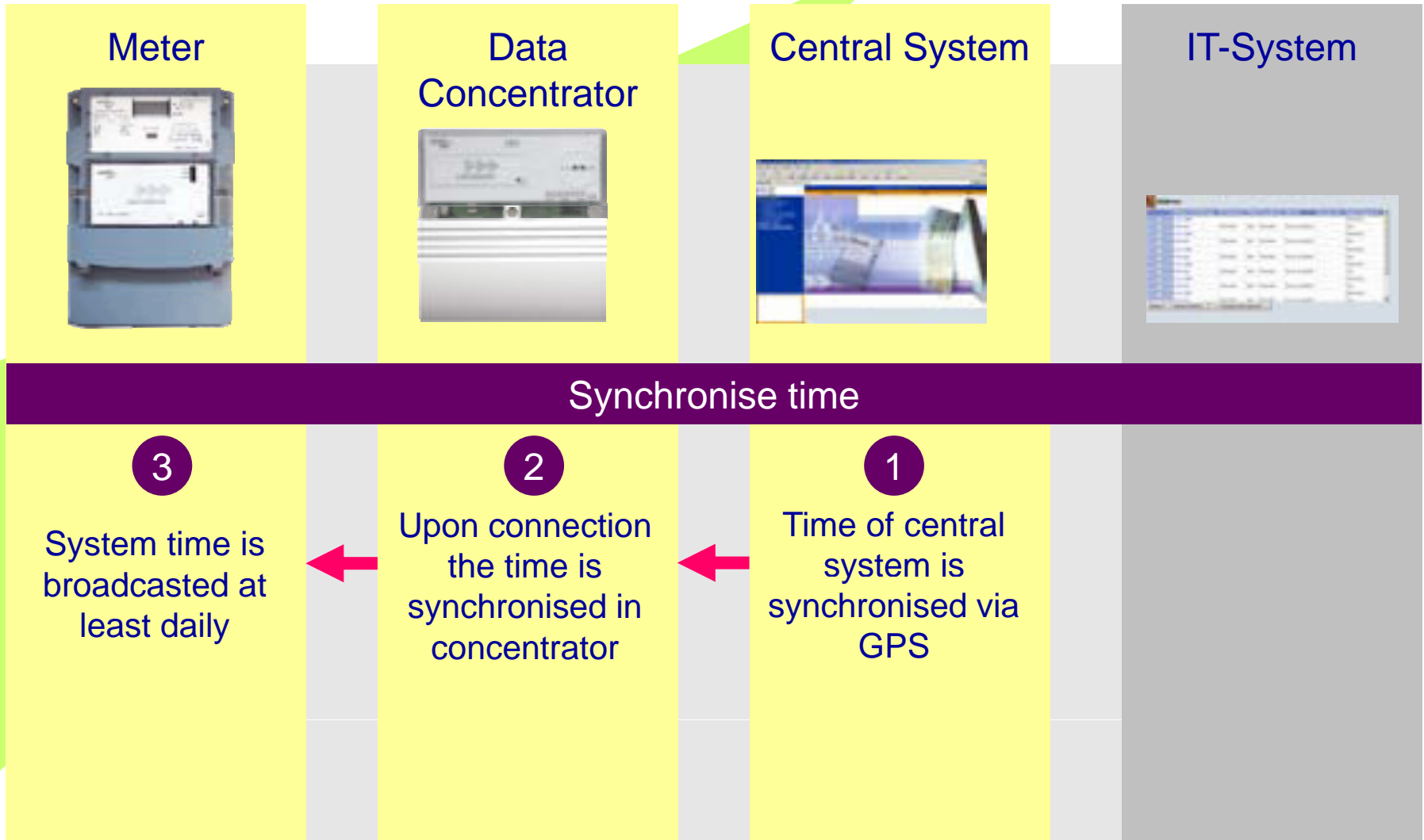
advantis – Install meter



advantis – Read billing values



advantis – Synchronise time

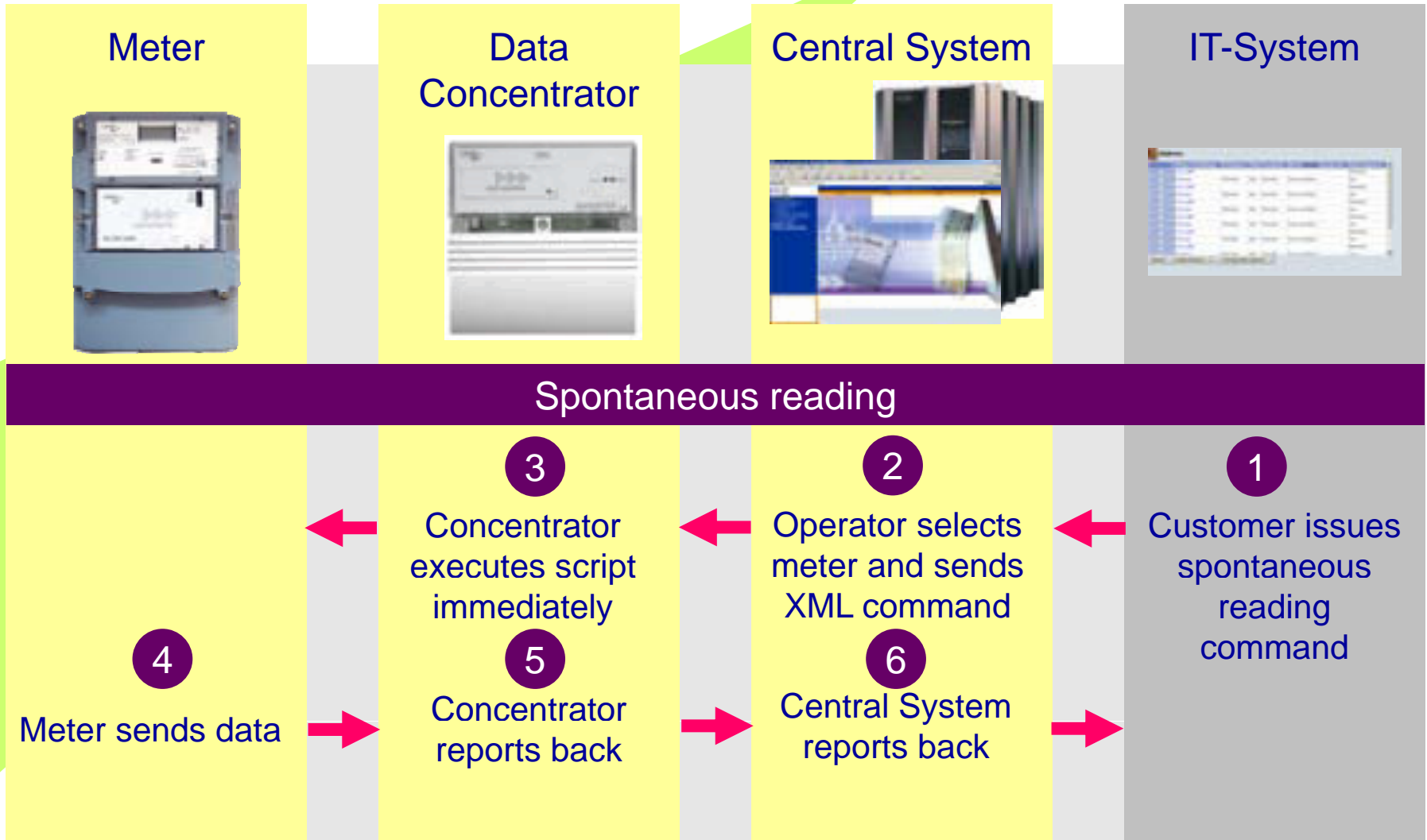


advantis – Spontaneous reading



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advantis: Roadmap

advantis – Key features V 1.0

End of August 2006

- Install new PLC meter and new Concentrator and Detection of a meter change
- Readout of Billing Values (daily, monthly, ordered, instantaneous)
- Readout of Hourly Values (< 160 MP)
- Network Quality Information
- Change of Contract/ Download Tariff Change/ Download of Load Switching Time
- Power Quality Registers
- Event Logs (standard)
- Data Concentrator Ethernet Reading via Fix IP
- Power Outage Handling in DC (500 ms)
- Data Processing/ Calculation/ Scheduling
- Data import/ export
- Synchronize time
- Feeder change
- FW Download to Concentrator via Ethernet & GSM

advantis – Key features V 1.1

February 2007

- Meter with GSM/ GPRS CU
- Data Concentrator Ethernet Reading via Dynamic IP (http-proxy)
- Data Concentrator GPRS Reading via Dynamic IP (http-proxy)
- Data Concentrator GPRS (Main), GSM (Backup) Reading

advantis – Key features V 1.5 planned by June 2007

- Periodic Readout Hourly Values, 30' Values and 15' values
- Daily Reading of 30min and 15 min Profile Values (for < 400 meters per DC – PLC)
- Disconnect / Connect with Breaker (polyphase meter)
- Supervise losses in the LV network
- Power Quality Parameters (Under-/Over Voltage, power outage per phase, voltage level, etc)
- Power Quality Event Log Reading
- Breaker Event Log Reading
- Power Outage Supervision
- Maximum demand / fuse supervision
- Protective box for the concentrator
- Data Validation
- DB Clustering
- FW Download to meter point

advantis – Road Map

V1.5: 1ph ZCF and breaker

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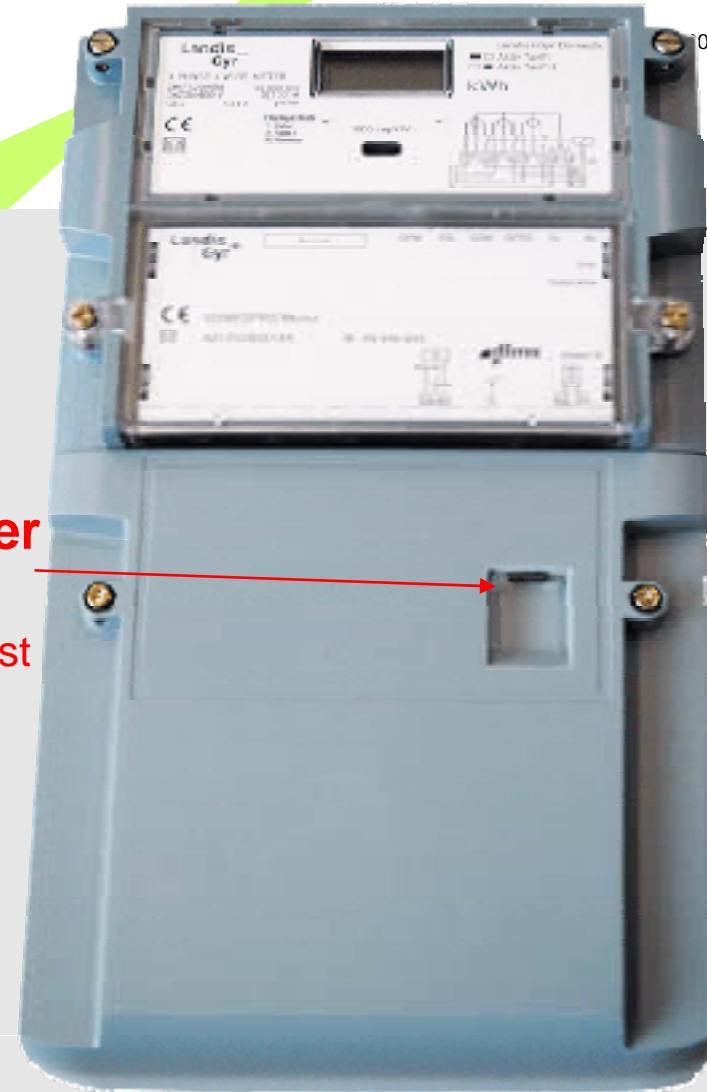
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1 phase ZCF

local breaker operation
Secured against unintentional operation



poly phase ZMF

Breaker applications

- **The breaker is NOT a protective device;**
-> A fuse is needed
- Moving customers: disconnect and/or reduce max. demand
- Max demand limited contract
- Max demand limiting in emergency situations
- Bad payers: disconnect and/or reduce max. demand
- Pre-payment: centrally controlled
- Local operation enable/disable
- Remote re-connection: via local re-connect enabled or direct

advantis - References

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advantis – Customer project in Italy

- Number of metering points:

Rome:

- 50'000 in operation
- 1'500'000 contracted

- Automatic reading: Once per month

- Value added services: Tariffs, Load Management, Prepayment, Multi energy readings (gas, water, heat), Customer terminal

- Time of amortisation: 4 years



advantis – Customer project in Denmark

■ SEAS/NVE

- Project started September 2006
- 1'000 meters installed (800 with PLC & 200 GSM)
- 10 concentrators
- Future potential for 300'000 meter points

■ Helsingör

- Project started October 2006
- About 250 meters installed
- 8 concentrators
- Proceeding delivery up to 3'000 meter points

■ Langeland

- Project started October 2006
- About 85 meters and 1 concentrator installed
- Future potential up to 4'000 meter points

advantis – Customer project in Switzerland

■ **Opfikon (Pilot-Project)**

- Project started September 2006
- About 240 meters installed
- 3 concentrators

■ **Massagno**

- Installation of 50 meters in November 2006
- Planned installation of another 100 meters in January 2007
- 1 concentrators
- Future potential up to 4'000 meter points

advantis – Customer project in Germany



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■ **SW. Munich (pilot)**

- Project started November 2006
- About 28 meters installed
- 4 concentrators
- Planned installation of 442 meters until end of January 2007
- Future potential up to 800'000 meter points

Advantages of advantis at a glance

- Plug & play installation and maintenance
 - > e.g. no configuration of the PLC network necessary
- Efficient and reliable data acquisition
 - > e.g. 95% of the data is pre-collected by autonomous processes
- All communication according to IEC standards (open protocols)
 - > published modulation scheme, published protocols, no hidden license fees, ...
- Modularity of the meter: combination of field proven L+G meter technology and latest communication technology
 - > reliable meter, module exempt from meter approval, module firmware upgrade
- L+G is a reliable Partner
 - > one partner from meter to data management