


# Smart Metering & Energy Solutions

Roman Tost

The background is a high-angle photograph of a city skyline at sunset. The sky is a deep orange and yellow, with the sun low on the horizon. The city below is silhouetted against the bright sky, with some lights visible. A network of white hexagons and connecting lines is overlaid on the image. One hexagon in the center contains a faint image of a city skyline. Another hexagon in the bottom right contains a faint image of a highway with traffic. The text "Energy is an essential part of live" is written in white on the left side of the image.

**Energy is an  
essential part of live**



ICT

Information and  
Communication Technology

IoT

Internet of Things

Smart Cities

Automatic Metering  
Reading

Smart Metering

IoE

Internet of Everything

Sensors

Automatic Data  
Management

Automatic Billing

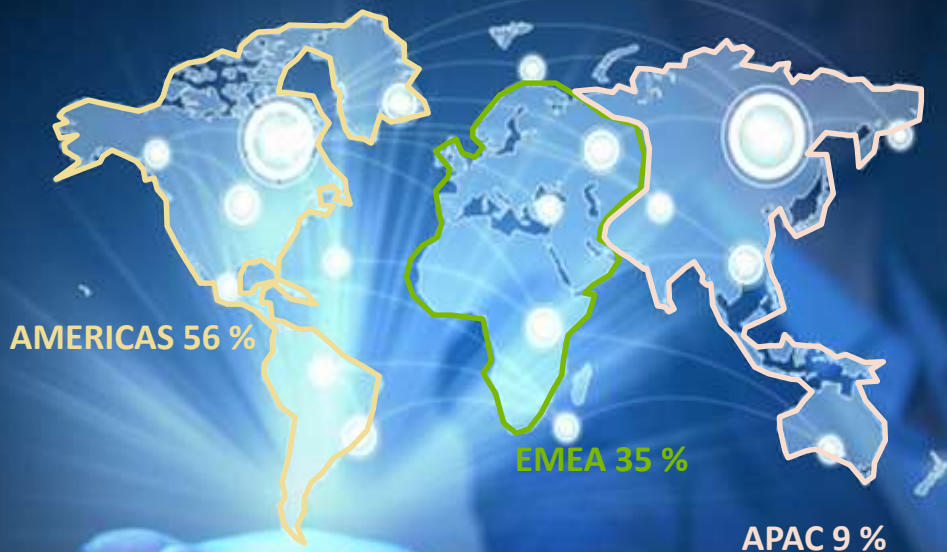
System Control

THE FUTURE IS NOW

# Landis+Gyr ... our Contribution



...the global smart metering leader and a smart grid pioneer



BY 2017/18

Sales worldwide	1,659 bn USD
R&D in % of Sales	9,8 %
Employees	approx. 5,900

## Landis+Gyr Global

- Active in over 96 countries
- Over 5,900 Employees
- Different competence centres for energy products, solution, infrastructure
- Comprehensive solutions for electricity, heat / cooling and gas
- Advance Metering Infrastructure
- Industries largest R&D resources
  - 1,389+ engineers in 24 R&D centres



# Metering, Data Management & Optimization

# Situation Today: Lots of Interactions

**District Cooling provider are facing (end) customers directly**

Billing based on size (square feet) negatively influences the capacity of the DCP

Billing disputes and legal actions between DCP and end customers



Cooling Plant

**Developer or DC Provider**

Manually operated billing / collection is not in line with e-Government initiative

*Customer Interaction*



Residential & Commercial Customers

# Situation Tomorrow: One Face – Less Worries

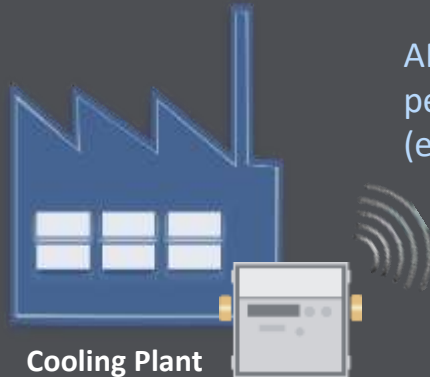
Together with technology partner is the face to the (end) customers

Consumption based billing will reduce energy usage by (end) customers and lead to a reduction of needed DCP capacities



Technology  
Partner

AMR with control room for  
permanent network monitoring  
(e.g. meter alarms)



Cooling Plant

Integrated billing system with  
online features (customer portal,  
payment, information)

AMR  
Consumption based billing

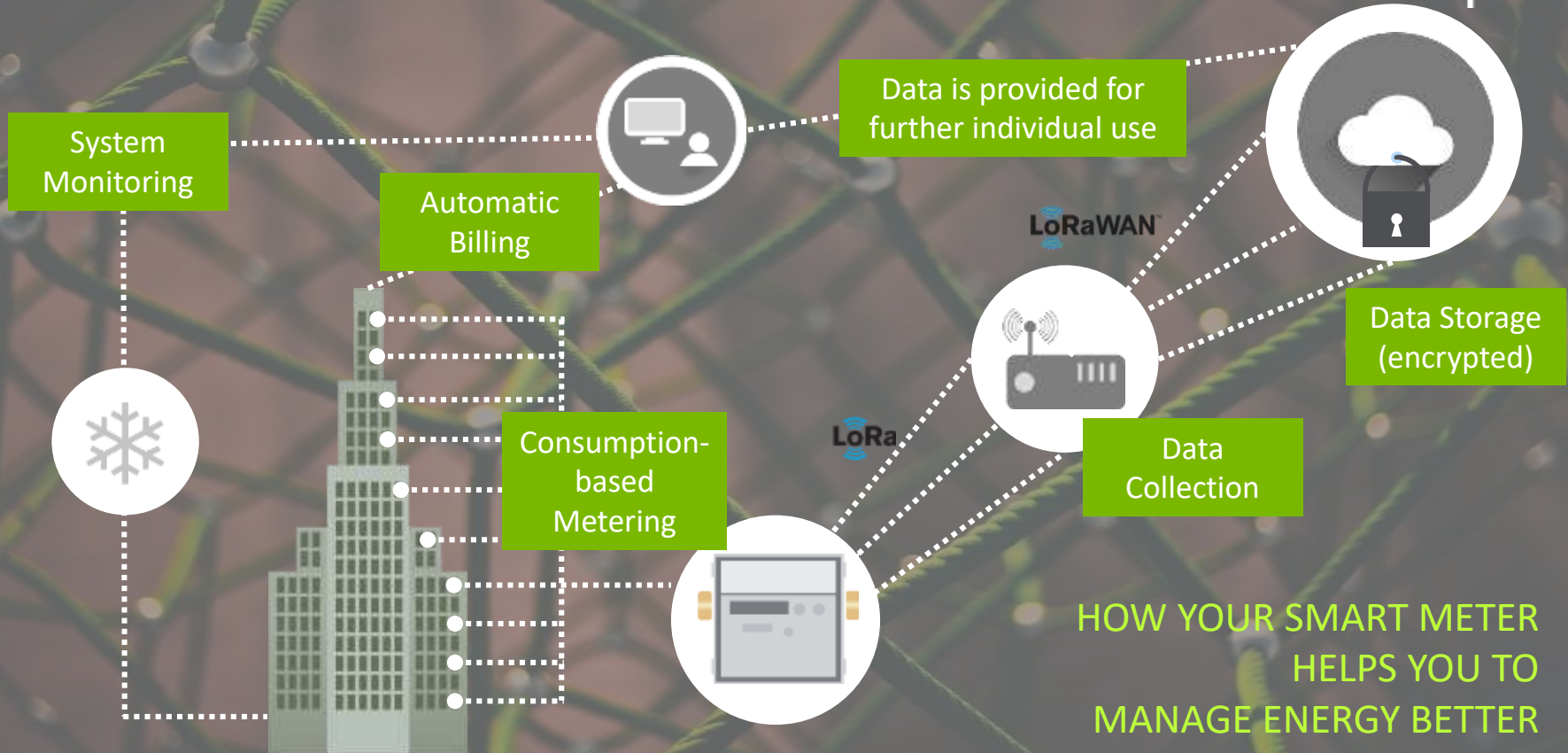


Residential &  
Commercial  
Customers




# Smart Metering Solutions

Landis  
+Gyr





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- **Customer Interaction Handled by Provider:** As one face to the customer
  - **DCP Capacity Reduction:** consumption based billing leads to a reduction of needed capacities
  - **Quicker Customer Response:** permanent network monitoring with AMR
  - **Faster and State-of-the-Art Billing:** online based billing features (customer portal, online payment, information)

**EARN MONEY – SAVE COSTS**

**SUSTAINABILITY – SAVE RESOURCES**

# Meter Data Management – Automated Data Transfer

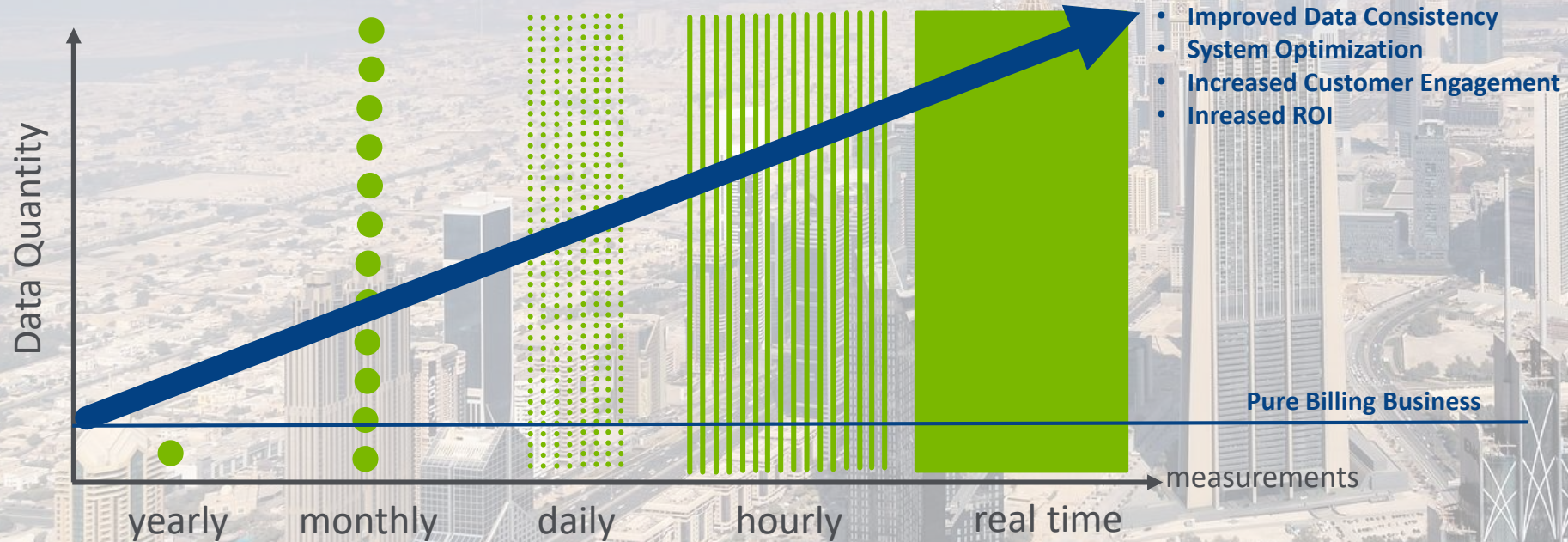
- Automatic Acquisition of Data
- Quick Data Preview
- Management of Templates and Measuring Devices
- Data Visualization (graph, table, chart, etc.)

## GOAL:

- Enhance Quality, Performance, Interactivity
- Reduce Costs, Resource Consumption
- Real Time Data and Response

Automated Data Transfer

# From Meter-2-Cash to Increased System Efficiency



You can never optimize something what is not measured correctly



# Sub-Metering – Benefits from the AMI

## Utilities



- System Control
- Secure Investment
- ROI → Earn Money
- Influence Customer Behavior
- Satisfied customers

## Customer



- Consumption Based Billing → Fair Invoices
- Improved Customer Service
- Increased Awareness of Energy Consumption

## Environment



- Reduced Energy Consumption
- Reduced CO2 Emissions
- Energy Savings → Preserve Resources



# Special Case: Retrofit Business

- Using the Existing Infrastructure
- Sustainability

## WHY?

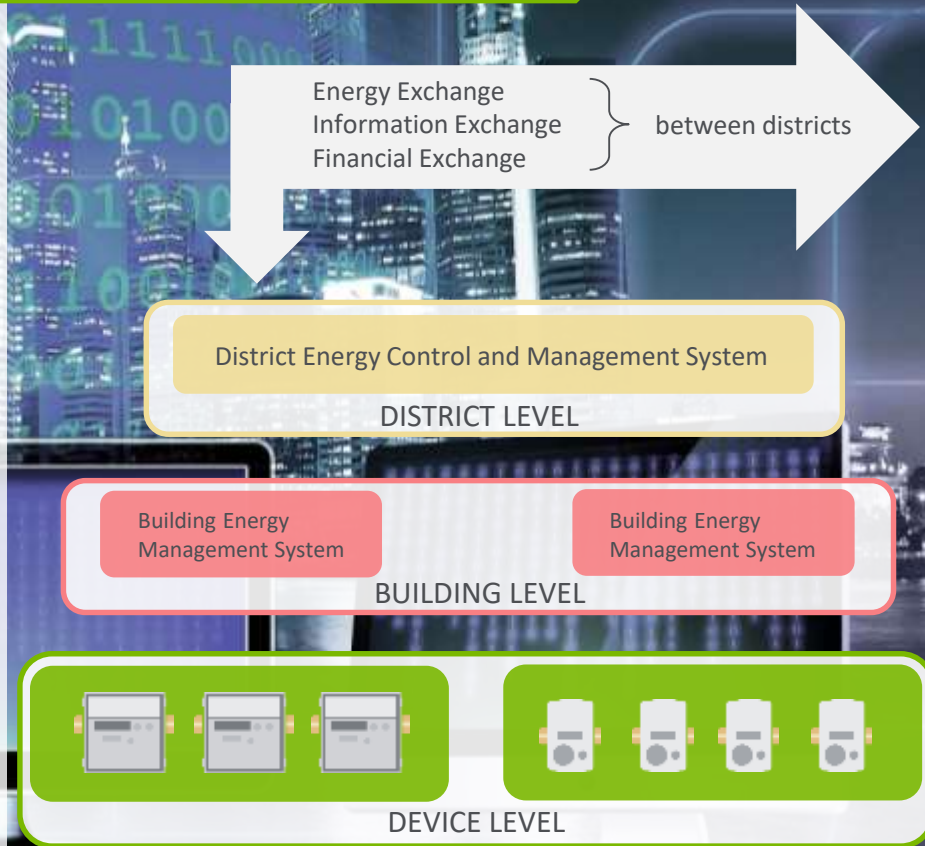
- UAE, the Dubai Supreme Council of Energy set goal **reducing energy demand**
- Whopping **30%** before the end of 2030
- DEWA process of **retrofitting 30,000 buildings** investment value of **\$8 billion**
- **Secure savings** of over **\$22.33 billion**
- Just one Example



# System Control

High Quality and Quantity of data enables:

- **Remote Monitoring, Control and Optimization** of district cooling system efficiency and performance
- **Cost and Time Reduction**
- Positive Impact of **Carbon Footprint**
- Modern Web-based Solutions  
→ **Because: YOU CAN ACCESS THE SYSTEM FROM EVERYWHERE!**





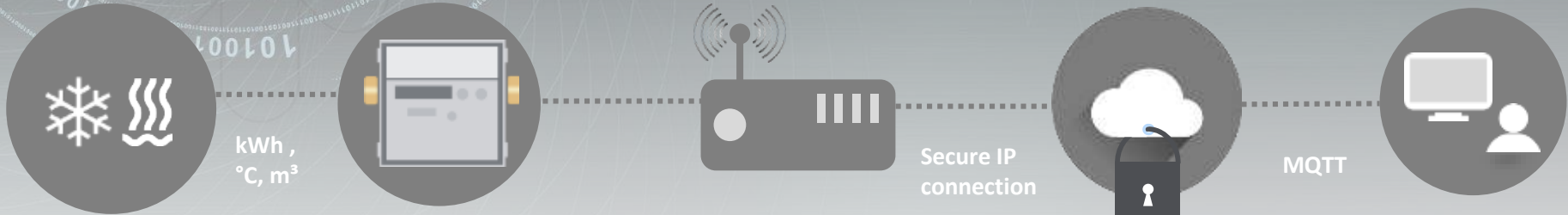
# Digital Transformation and Smart Added Value

- Temperature Deviations
- Detecting Leakages
- Detecting Pipes in Service
- Actual Load in Distribution Networks

This leads to better processes that increase overall efficiency and reduce costs.

# Conclusion

- Automated Data Transfer
- Higher Data Quality and Quantity
- Simplified Workflows
- Time and Cost Savings
- Optimization of Data Management and System Control
- Increasing System Efficiency







Landis  
| Gyr +

Your trusted partner  
to realize your Vision



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**THANK YOU FOR LISTENING**