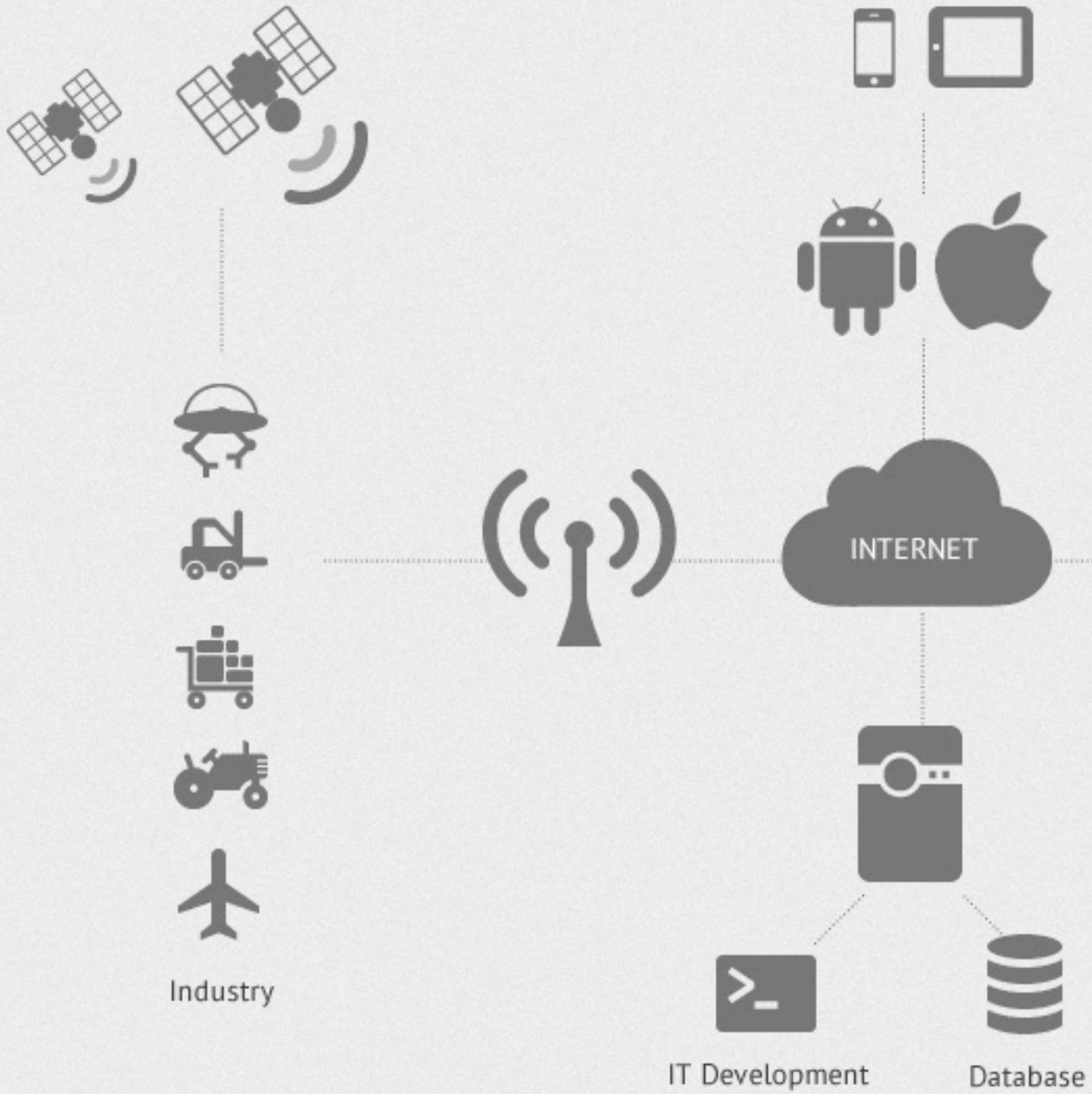
SOLUTIONS

Smart Grid
Energiemanagement im Rechenzentrum

Günter Lemmer

Agenda

- Company Introduction
- Machine to Machine Communications
- Smart Grids
- Questions?



me SOLUTIONS

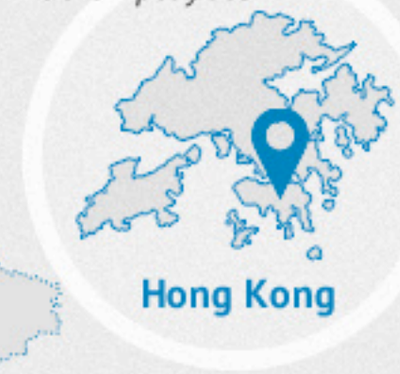
Your Trusted Partner in Industrial M2M Applications

Company introduction

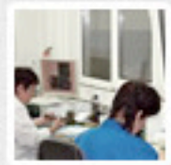
Norman Weiss
CEO



Privately held company
CEO: Norman Weiss
Locations: Munich, Malta, Czech Republic, Hong Kong
25 years in business by now
More than 200 employees





Our mission statement

To continue to be the pioneering force within M2M technology and applications worldwide, providing perfect, reasonably priced solutions for all kinds of business customers. We are keeping our promises every time and actively seek to exceed our client's expectations.

ME INDUSTRIES

Holding

ME SOLUTIONS

"Driven by technologies"

- M2M
- MONITORING
- VENDING
- SMART GRIDS

ME SYSTEMS

"Driven by efficiency"

- MECHANICS
- ELECTRONICS

ME SERVICES

"Driven by competence"

- SOFTWARE
- HARDWARE
- DISTRIBUTION
- LOGISTICS

About us

me SOLUTIONS *as an independent, trendsetting Company stands for unrivaled and up-to-date M2M-Solutions*

Telematics Transmission in connection to service-based online-gates is still more or less standard. But Telematics and M2M Communication certainly can provide much more than only: ***„Where are my trucks, my employees, my containers ...?“****.*

Therefore ***me SOLUTIONS*** *puts upmost prominence and value on the individual consulting and business solution. For our costumers we are able to schedule, implement and create a tailored, customized, and sustainable solution with an high impact on economic sense.*

References

our clients list include prominent companies like

- BMW / Rolls Royce
- Siemens
- Linde
- Roche Diagnostics
- PI / Carl Zeiss
- Rheinmetall
- SWM, Bavaria, Germany

ISO 9001

QMS-TGA-ZM-07-92

Definition M2M

The term Machine to Machine communication (M2M) refers to the automated exchange of information. It allows wireless and wired systems to communicate autonomously with other devices of the same ability.

The inherited value of M2M technology is to rationalize business processes by enabling machines and vehicles to communicate with each other via a mobile communication network.

Characteristics M2M

Machine

- Acting automatically or on remote requests
- Mobile and fixed terminals
- Monitoring devices
- Actuator devices

Independent communication

To

- Enabling connectivity
- Access & core network
- Supporting the data traffic
- Signaling of terminals
- Absolute secure & affordable

Network infrastructure for M2M communication

Machine

- Aggregation, processing and presentation of sensor data
- Interpretation of the data
- Real-time communication
- Automatic decisions

Automation of the services

Machine to Machine Communications

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me Hardware

Mobile Network Provider

Vodafone
at&t
Telekom
Telefonica

me Server

Customer Hardware

me Web Apps
mobile

Business

Customer

Processes

COST BENEFIT

M2M Ingredients

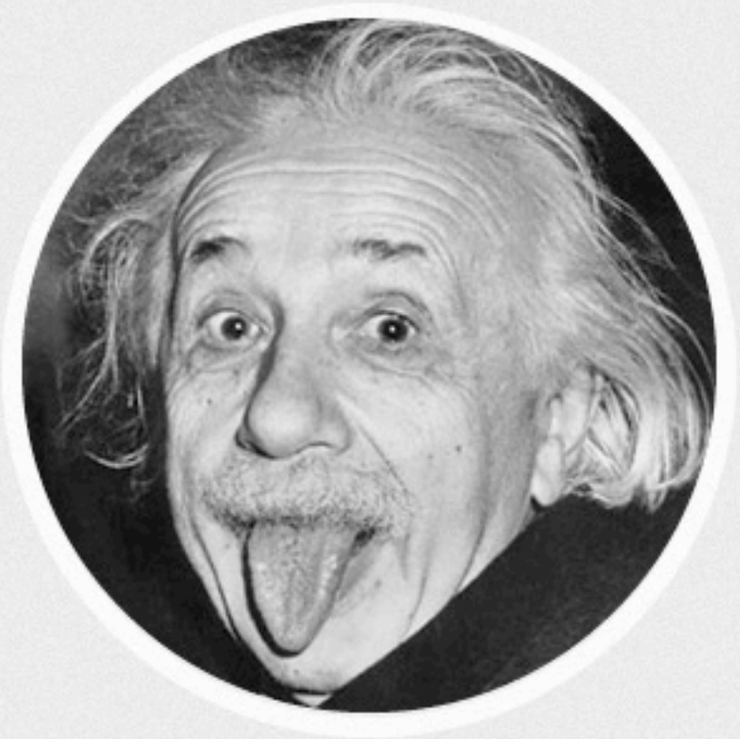
Smart means:

A smart grid improves the efficiency, reliability, economics, and sustainability of the production and distribution of electricity.

It acts on information in an automated fashion, such as information about the behaviors of consumers and suppliers.

- Reliability
- Load optimization
- Renewables
- Smart meter
- Process automation

What's the smart part doing?



Support wide-spread distributed energy resources by managing:

- Bi-directional flows of power and real-time information
- Supply / demand balancing within the distributed networks
- Intermittent renewable generation

Facilitate the participation of customers by:

- Enabling new technologies so consumers can monitor and automatically control their private energy use
- Providing opportunities for consumers to participate in the market to meet demand / response signals

Current implementations (samples)

Malta

- First smart grid country worldwide
- Installing 250.000 smart meters
- Expected online by 2012

South Korea

- Jeju-do island acting as a test bed
- US $65 million investment
- Fully functioning by 2011
- 6.000 households

interactive in both directions

optimized self healing

secure predictable

integrated distributive

The EU2020 agenda says:

One of the most critical challenges Europe is facing today is how to ensure the efficient and sustainable use of natural resources.

Without serious upgrading of existing grids and metering, renewable energy generation will be put on hold, security of the networks will be compromised, opportunities for energy saving and energy efficiency will be missed, and the internal energy market will develop at a much slower pace.

Smart Grids can manage direct interaction and communication among consumers, households or companies, other grid users and energy suppliers.

Smart Grids can make an important contribution to the new strategy for smart, sustainable energy and growth.

Smart Grids will be the backbone of the future decarbonised power system!

Enabler

Smart Grids will be the key enabler for a future low-carbon electricity system, facilitating demand-side efficiency, increasing the shares of renewables and distributed generation, and enabling electrification of transport.

Security

Developing and maintaining a secure network is essential for continuity of resources and the safety of consumers. It is important to ensure the security and resilience of the infrastructures supporting Smart Grids deployment.

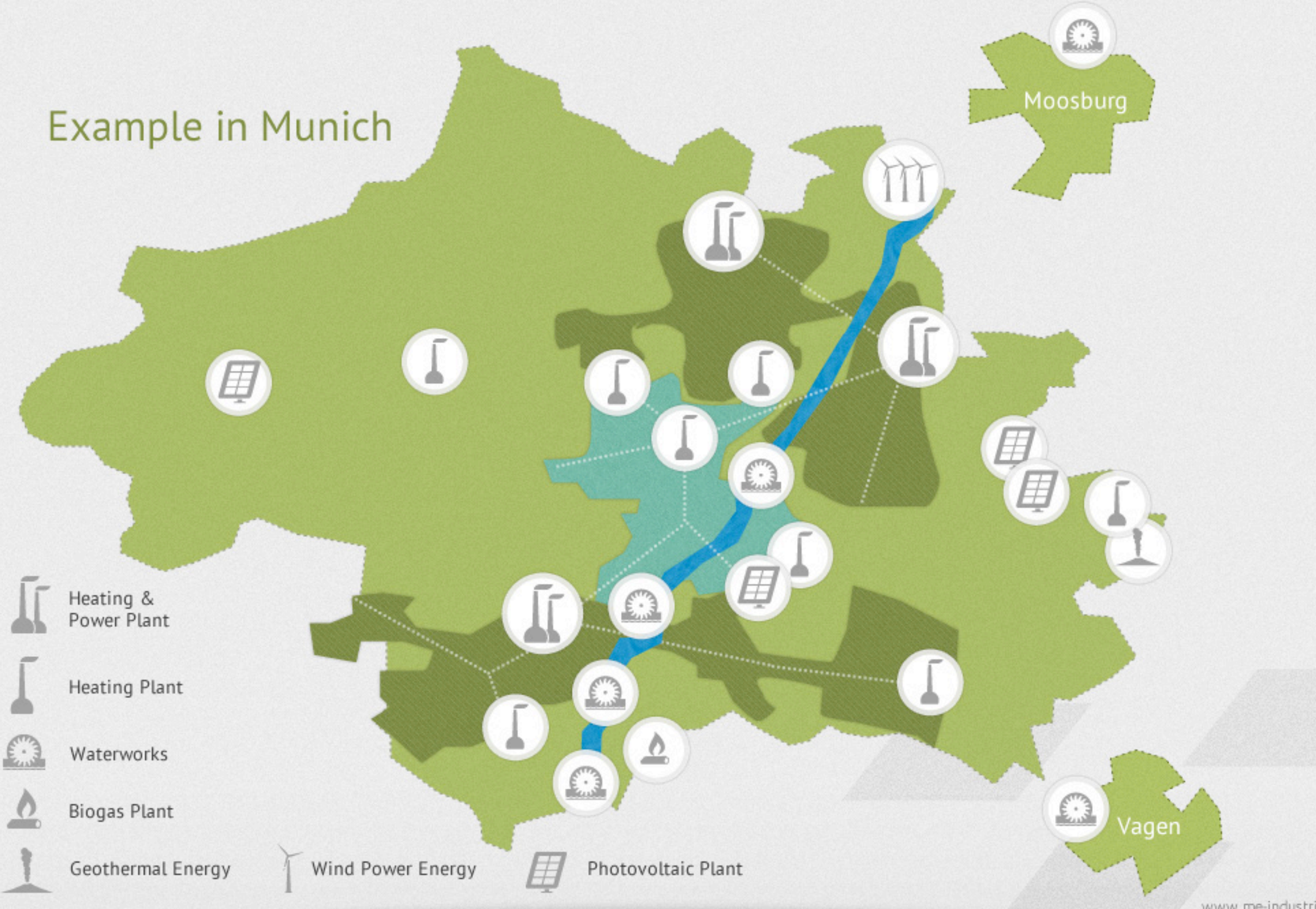
Demand Responce

Natural drivers for investment are the possibilities to enhance network efficiency and improve overall system operation through better demand response mechanisms and cost savings (remote operation of meters, lower reading costs, avoiding investment in peak generation, etc.).

Behavior Change

Developing Smart Grids in a competitive retail market should encourage consumers to change behavior, become more active and adapt to new ‘smart’ energy consumption patterns.

Example in Munich

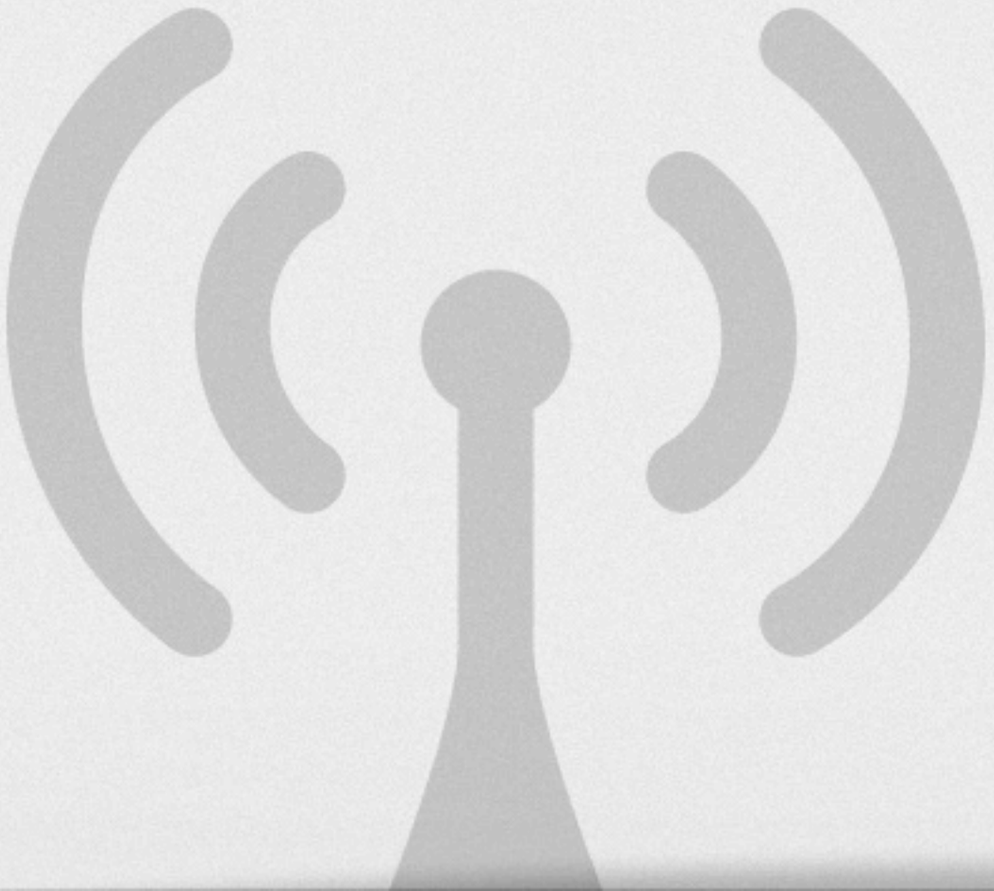


Mobile data

In our opinion mobile data are the new oil of the digital economy:

Better information for better management decisions

Better decisions for prosperous business



- Fast, precise and reliable information
- Reduction of maintenance costs
- Efficient use of resources
- Optimization of processes
- New business Concepts

What are the benefits of choosing *me* SOLUTIONS?

Benefits for government

- ***me* SOLUTIONS** is independent
- Transparency of cost & success
- getting figures from all different sources on one flatscreen
- Forecast for taxes
- Forecasting of energy shortages
- Energy efficiency, reduced losses
- overview decentralised energy sources (Photovoltaik in the countryside)
- Kyoto protocol: saving CO_2 emissions
- BEE compliance

Benefits for business

- Secure energy supply
- Sustainable growth
- Predictable energy costs
- International competitiveness
- Positive impact on employment
- Theft protection (ex.: Photovoltaic)

"It always seems impossible until its done."

Nelson Mandela

We kindly invite you to get in contact with us:

I ♥ BAYERN

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