Modern visualizations of OPC process data
OPC UA and the Internet of Things.

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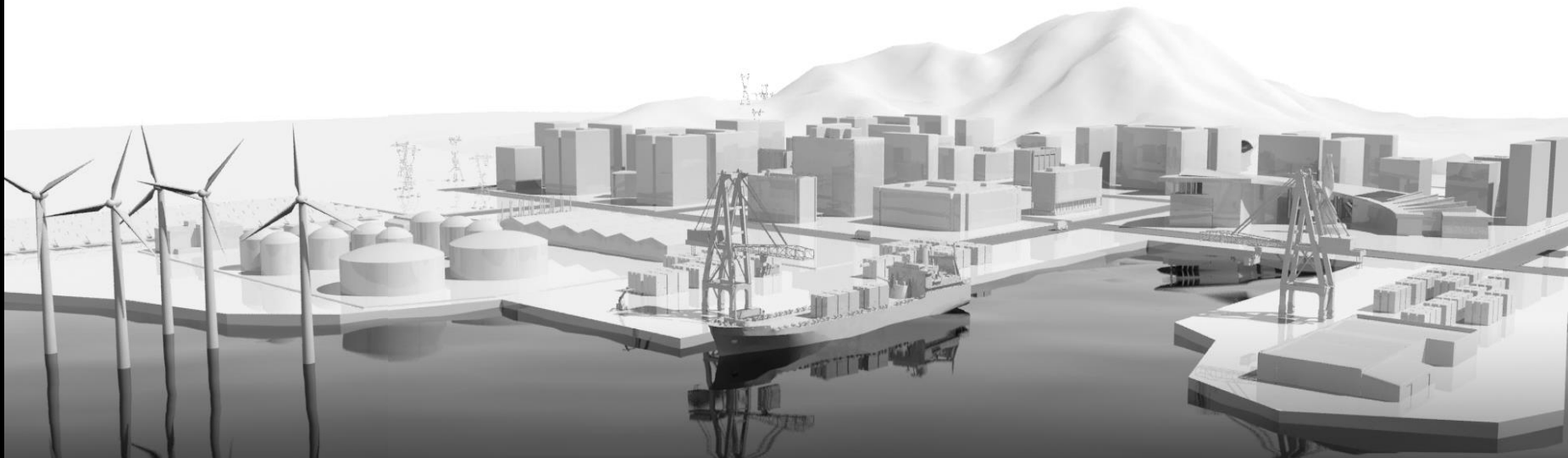
Our experience. Your advantage.

Wind power

Solar power

Energy management

Storage and measuring

Operations & logistics

Lifting solutions

Marine solutions

Mining and heavy machinery

Remote control & management

Business solutions

Tailored solutions
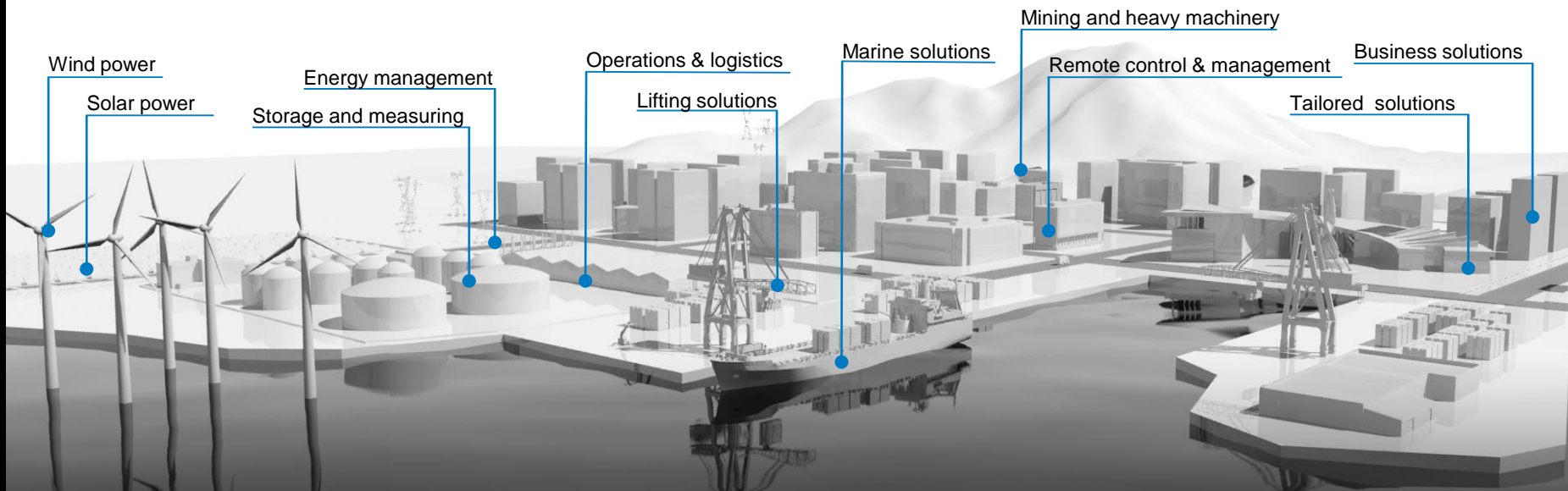
Wapice
Key facts

- Established in 1999
- Private ownership (majority owned by employees)
- Continous organic and profitable growth
- Focused on providing software expertise, electronic design, innovation and best practice consulting to industrial companies
- Employing over 270 experts in six locations around Finland

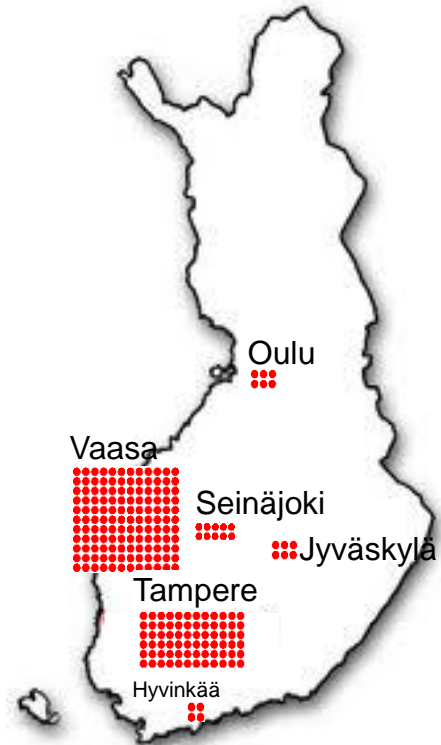- Customers: Energy, Industry, Machinery

TIVI
TIETOVIIKKO
"Perfect ten points"

AAA ®
Highest Creditworthiness
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We work in Finland near customers and education…

…with people from all over the word!

Oulu

Vaasa

Seinäjoki

Jyväskylä

Tampere

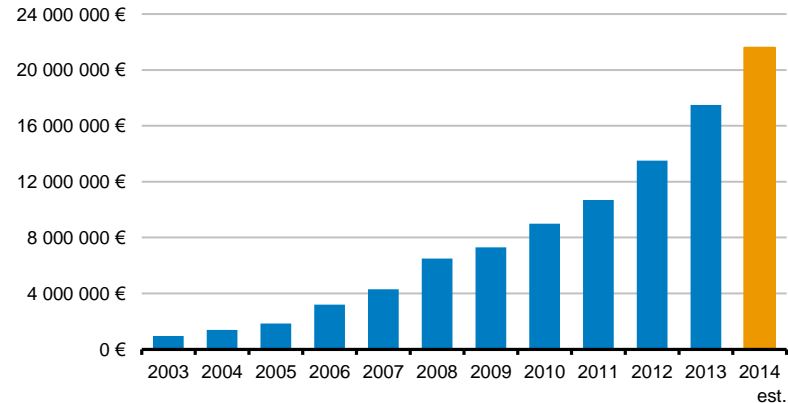Hyvinkää

Building a better future together
Customer oriented, reliable and lean

Employees
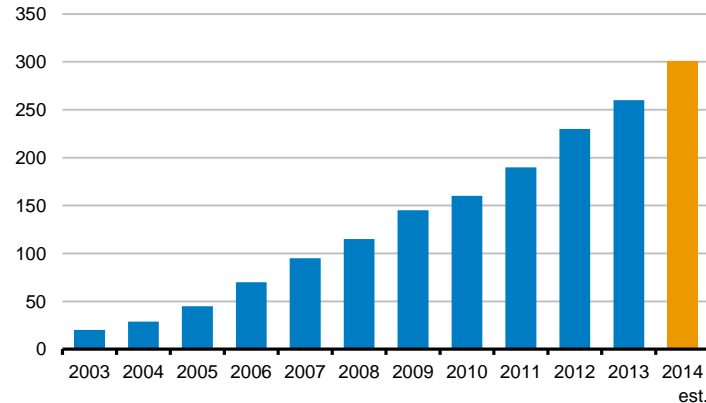
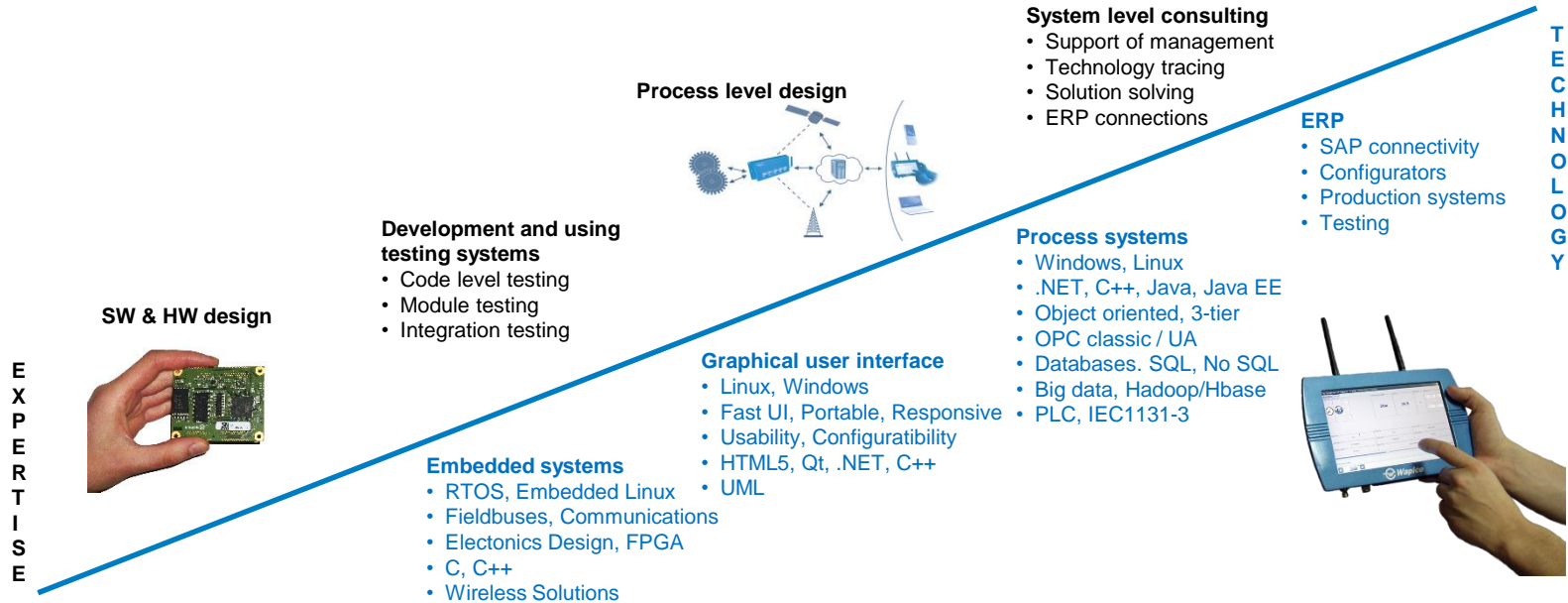Attracting experts that generate value and fuel innovation.

Turnover

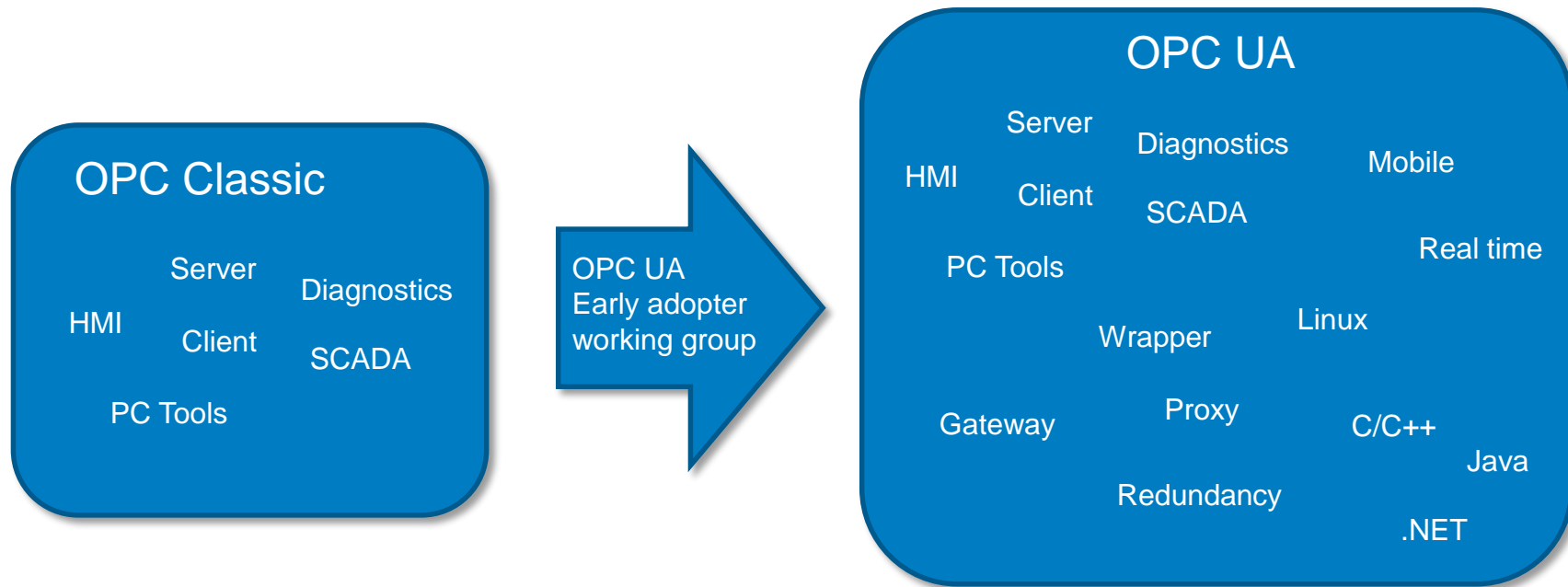Continuous organic growth supported by high customer satisfaction.

Building a better future together
Utilizing technologies

System level consulting
- Support of management
- Technology tracing
- Solution solving
- ERP connections

Process level design

ERP
- SAP connectivity
- Configurators
- Production systems
- Testing

Development and using testing systems
- Code level testing
- Module testing
- Integration testing

Process systems
- Windows, Linux
- .NET, C++, Java, Java EE
- Object oriented, 3-tier
- OPC classic / UA
- Databases. SQL, No SQL
- Big data, Hadoop/Hbase
- PLC, IEC1131-3

SW & HW design

Graphical user interface
- Linux, Windows
- Fast UI, Portable, Responsive
- Usability, Configuratibility
- HTML5, Qt, .NET, C++
- UML

Embedded systems
- RTOS, Embedded Linux
- Fieldbuses, Communications
- Electonics Design, FPGA
- C, C++
- Wireless Solutions

T E C H N O L O G Y

E X P E R T I S E

Wapice

Wapice utilizing OPC
Projects since 2000

OPC Classic

HMI
Server
Client
Diagnostics
SCADA
PC Tools

OPC UA
Early adopter
working group

OPC UA

HMI
Server
Client
Diagnostics
SCADA
Mobile
PC Tools
Real time
Wrapper
Linux
Gateway
Proxy
C/C++
Java
Redundancy
.NET

Modern visualizations of OPC process data

WRM
WAPICE REMOTE MANAGEMENT PLATFORM

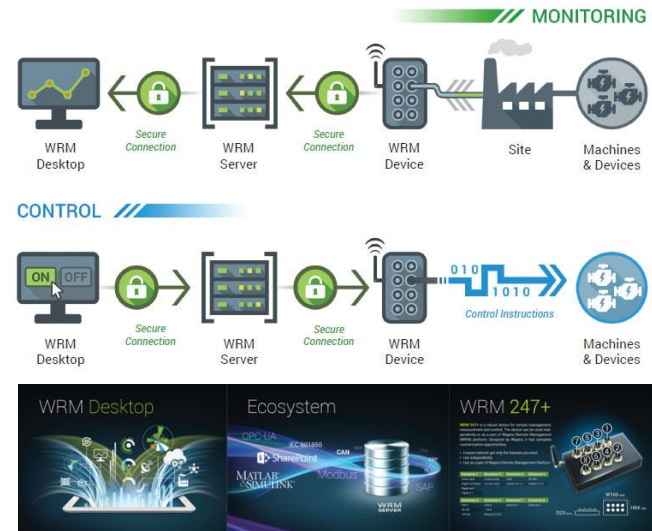# Modern visualizations of OPC process data
WRM platform

The WRM platform in brief

- Remote monitoring and control of assets
- Modern, easy to use, web-based UI
- Powerful report creation and analytics
- Big-data enabled and inbuilt security

Usage examples

- Regulatory reporting
- Supervisory monitoring and control
- Operational efficiency & KPI tracking
- Location tracking

WRM – How it works?

MONITORING

WRM Desktop — Secure Connection — WRM Server — Secure Connection — WRM Device — Site — Machines & Devices

CONTROL

WRM Desktop — Secure Connection — WRM Server — Secure Connection — WRM Device — Control Instructions — Machines & Devices

WRM Desktop | Ecosystem | WRM 247+

Electronics

The WRM247+ device provides versatile communication methods in a rugged IP65 enclosure. The electronics can be customized to meet your requirements.

Terminal Application

The WRM247+ Terminal Application handles the monitoring and control functionality and can be integrated to your products to enable remote management functionality.

Server

The WRM Server is Big Data enabled and handles the configuration and deployment of functionality throughout the system. Additionally it provides analytic capabilities.

Security Gateway

Access remote sites securely with WRM. By clicking a button in a web browser a user can establish a secure connection which also other applications could utilize.

Desktop Designer

Create content for your needs by utilizing the web-based WRM Desktop Designer. Add new UI elements and connect them to system data with ease.
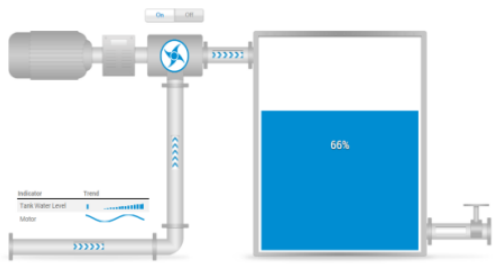
Desktop

The modern, web-based WRM Desktop is the interface for end-users. The Desktop can be fully customized to match your monitoring and control needs with the Desktop Designer.
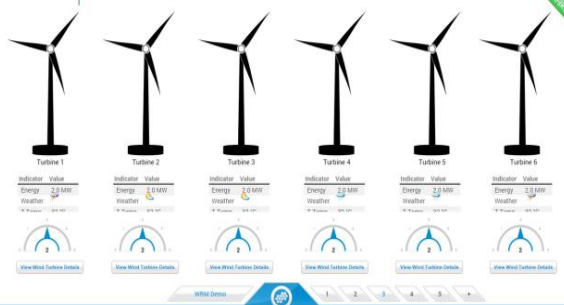
Modern visualizations of OPC process data
Build, deploy and manage your interfaces in a web browser

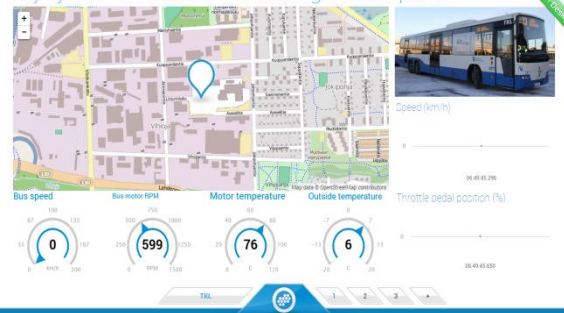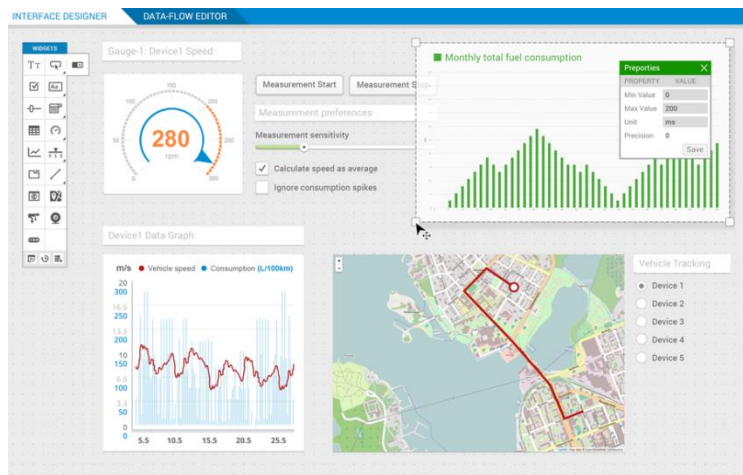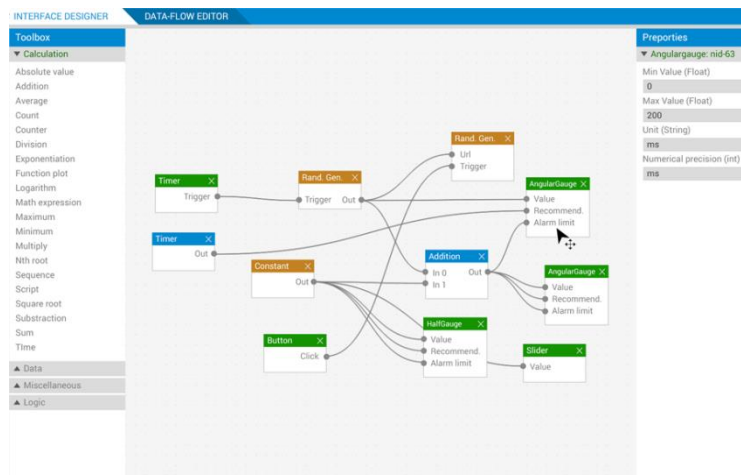# Modern visualizations of OPC process data
Web based user interface and report designer


Design user interfaces and reports

Visual programming for advanced tasks

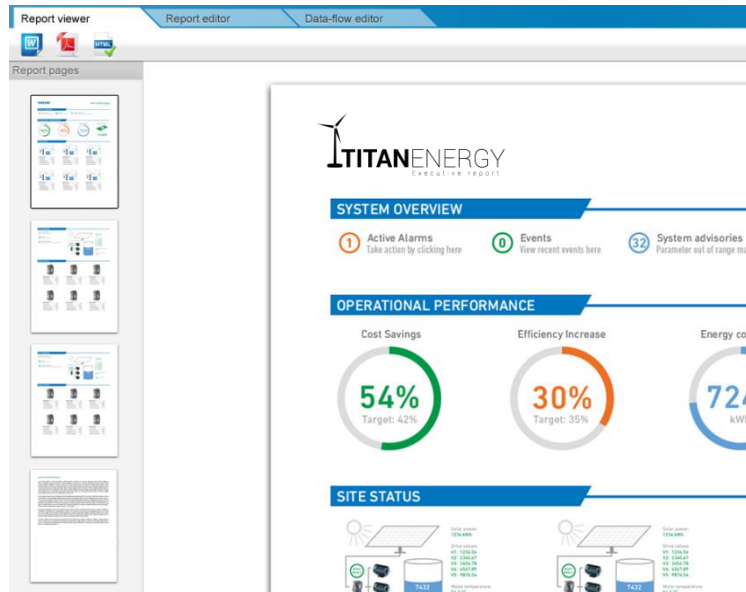# Modern visualizations of OPC process data
Combining OPC and Big Data

- Store all process and statistical values in a Big Data cluster

- Analyze historical data to identify operational improvement potential
  - Inbuilt web-based analytic client
  - Interface big data with R

- Model predictive, preventive or condition based maintenance scenarios
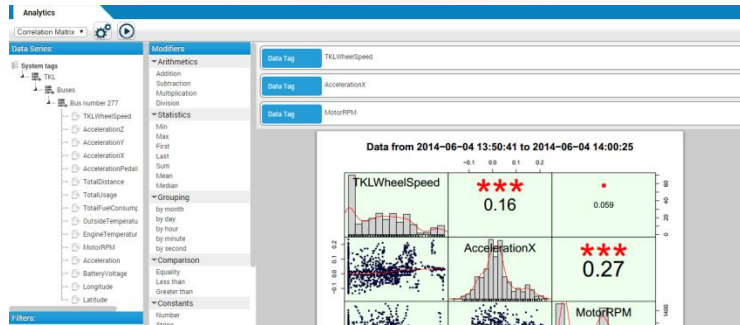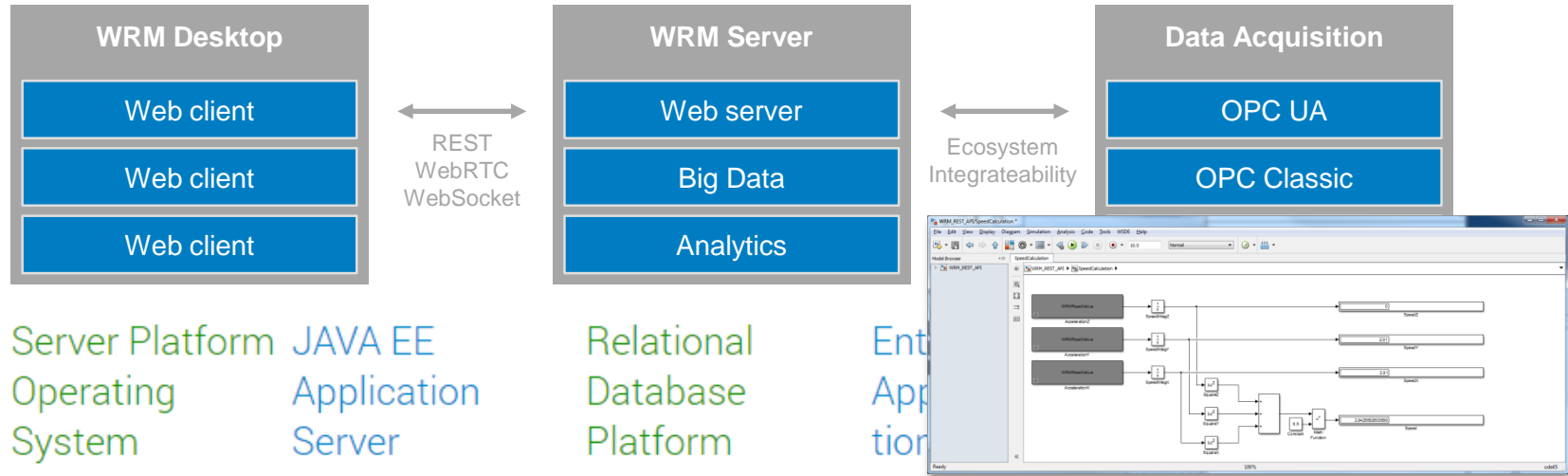
Modern visualizations of OPC process data
Report and advisory creation

- Enabling experts to create reports or advisories

- Utilize data to build a service business

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Modern visualizations of OPC process data
Enabling technology

WRM Desktop		WRM Server		Data Acquisition
Web client		Web server		OPC UA
Web client	REST WebRTC WebSocket	Big Data	Ecosystem Integrateability	OPC Classic
Web client		Analytics		

Server Platform Operating System

JAVA EE Application Server

Relational Database Platform

Ent... App... tion...

- Windows Server
- Linux
- UNIX (AIX, Solaris)

- Oracle Weblogic Server
- IBM Websphere
- JBoss

- Oracle
- MS SQLServer
- IBM DB2
- MySQL
- PostgreSQL

- WebServices
- JMS
- RDB
- REST

- Apache Hadoop
- Apache Spark
- R statistical computing

Demonstration Video

Modern visualizations of OPC process data
Conclusions

- Create and deploy modern user interfaces utilizing OPC in minutes
- Analyze historical data to strengthen service business
- Share information through dashboards or reports

- A platform to empower automation or industrial experts to create added value

Thank You! Any questions?

Please also visit our stand or wrm.fi for further information.

Software. Electronics. Innovation.