

You can afford the Best

RealiteQ™

New Generation of SCADA & Remote control solutions



IoW

Internet of Water

Cloud-based single source SCADA & remote-control operation & management solution for water & wastewater utilities

The new (4th) Generation of SCADA system

By Ran Kedem - CEO



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Water & Wastewater Utilities Challenge

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The Challenge – Mission (almost) impossible

Water utilities are facing growing challenges; the demands are increasing, the regulation become heavier while the resources are limited more then ever.

The challenges are even bigger as for limited budget and limited in-house Hi-Tech capabilities

And... the modern technology doesn't help, it's: expensive, technically complicated, distributed (each provider with its own communication protocols) and needs high maintenance.

The need

Centralized - One comprehensive integrated system for one water network

Simple - to install, to use and to maintain

Smart - Real time control & data management to allow efficient & safe operation and continuous network improvement

Agnostic - Seamless interfacing with existing & new equipment and software.

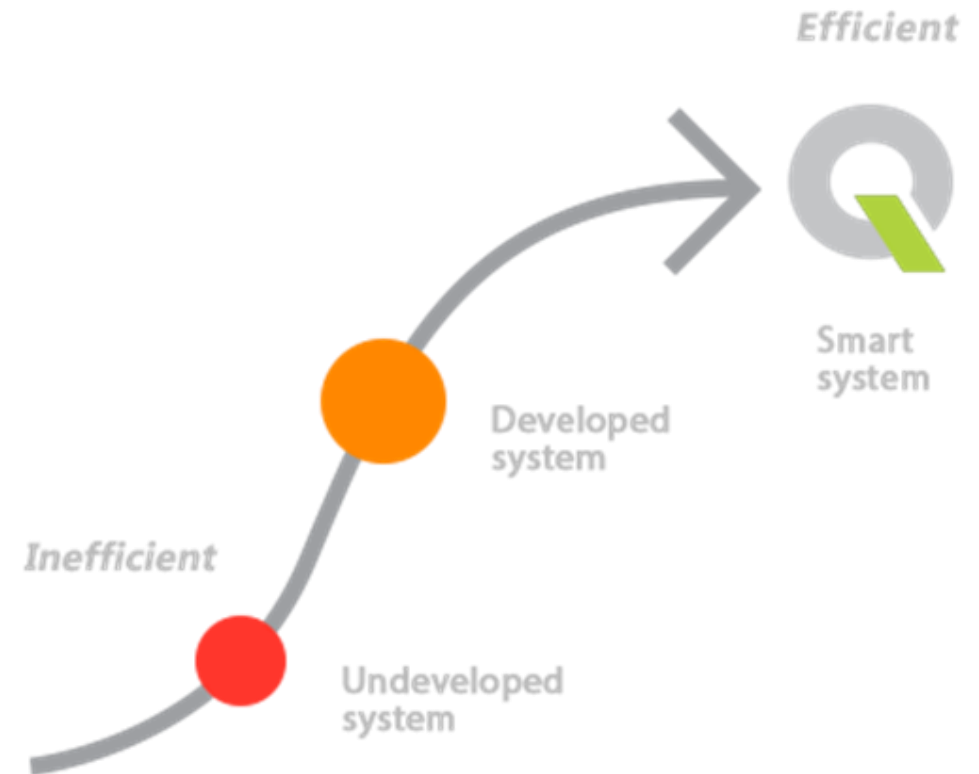
Real time - remote monitoring & control to allow operational optimization of routine and critical events

Safe & Secured – reliable and cyber protected

Affordable – to any utility (financially and technically)

RealiteQ – the solution (or, making it possible!)

RealiteQ - Affordable, agnostic single source tool that enables real-time remote-control operation & management of remote devices, facilities or entire network efficiently and securely.



RealiteQ – Turn any network to an efficient network

Agnostics, Smart & Simple data management, Affordable

Agnostics

- Seamless interfacing with existing equipment & software
- Device - Meter, sensor, analyzer, controller, valve, pumps...
- Facility – machine, pumping station, Water treatment plan...
- Entire Network – Hundreds and more sites & facilities...

Management

- Real time operation - Monitoring & Control (bi directional)
- Critical/crisis events - smart alert, real time remote intervention
- Historian Data – Big data analytics for efficiency improvements

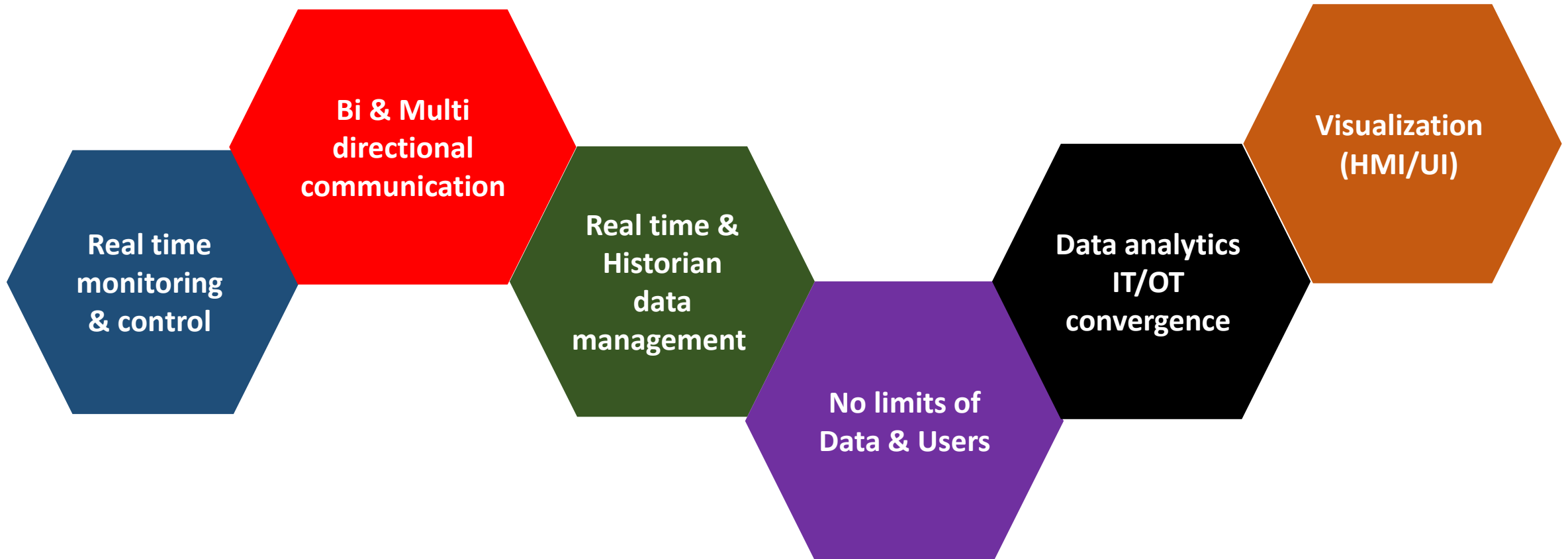
Smart & Simple

- Single source – Data acquisition, telemetry, remote control, Analytics & visualization
- Simple to install, use & Maintain
- Fast & non-destructive installation

Affordable

- Modular– from one to hundreds and more devices/facilities
- No need for IT special capabilities or infrastructure
- Can be integrate with existing operation/management systems
- Affordable– Low CAPEX & OPEX

RealiteQ single source in a nutshell



All you need for system optimization

The challenge & The solution

**The number one management risk is
running an organization blind!"**

**With RealiteQ you can see anything,
anytime, from anywhere!**

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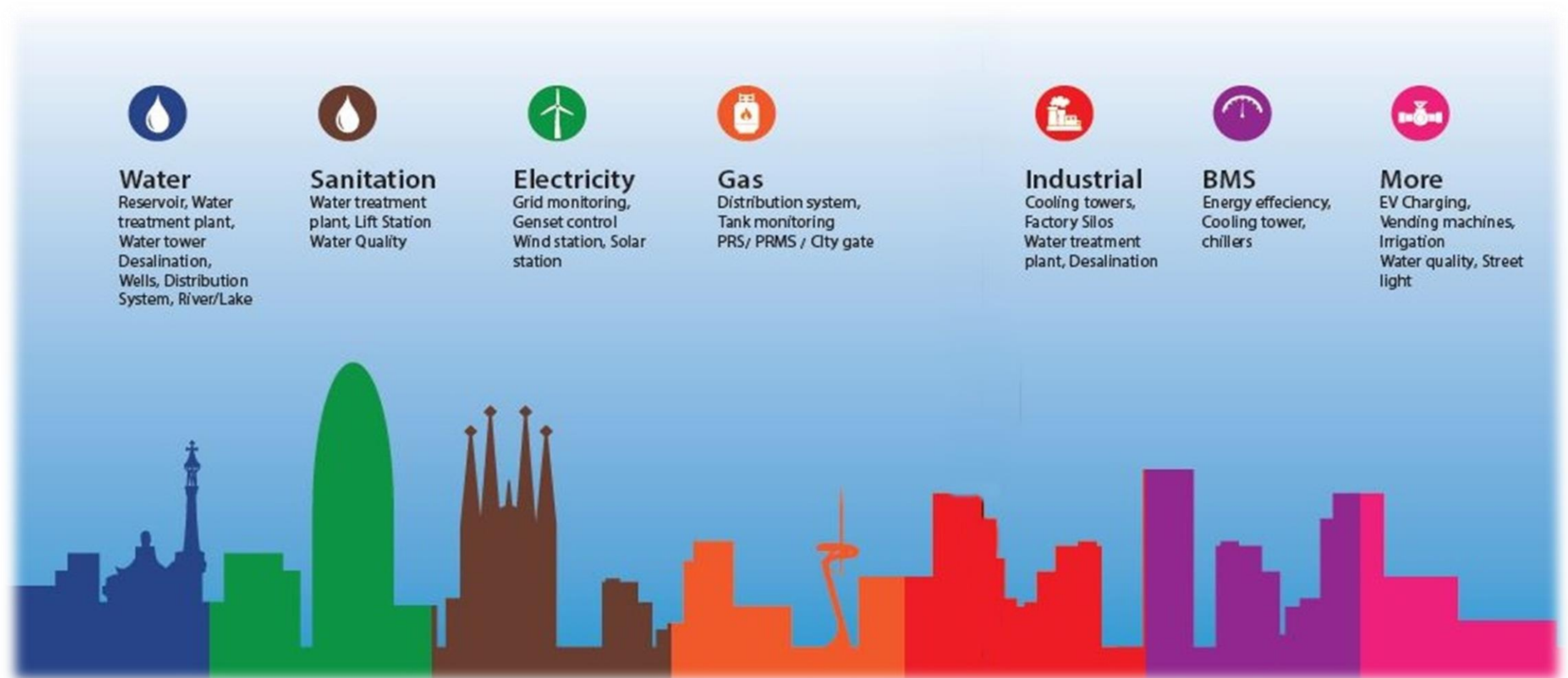
About Reali Technologies

The new (4th) Generation of SCADA system

By Ran Kedem - CEO

About Reali Technologies – the developer of RealiteQ

Reali Technologies was established in 2008 as a breakthrough startup, the developer of advanced cloud-based SCADA for a wide range of applications named – RealiteQ.



RealiteQ - Proven Technology worldwide

Today RealiteQ is a commercially proven state of the art solution, Installed in thousand of sites in more then 40 countries in 5 continents.

Among RealiteQ Key Users are Israeli, American & Global leading enterprises such as: Johnson Control, Tesla, Volkswagen, L'Oreal, Solenis, Unilever, Coca Cola...and many water and wastewater utilities.



Volkswagen



citibank



L'ORÉAL
PARIS



Unilever



Schneider
Electric

fluence

ICL
Where needs take us



Most innovative firm

TheMarker

A July 2017 Article in TheMarker Magazine:
RealiteQ is amongst Israel's most innovative water-tech companies
"Hundreds of companies around the world chose RealiteQ's system for remote management of water infrastructure"



"RealiteQ brought the IoT and the Cloud to the water supply market"



Realite Technologies was selected
to attend the Israeli innovation
authority road show in China



In the past month, the Israel Innovation Authority conducted a screening process of Israeli technology companies in several technological sectors including the ICT sector, for a road show to be held in December in China among local investment groups and potential partners.

The companies were examined on the basis of two main criteria: attractiveness for investments and suitability to the Chinese market.

Of the 150 companies that started the process, Realite Technologies one of 8 ICT companies that successfully passed the whole screening process (carried out by Chinese parties in Israel and China), presenting its RealiteQ system - the new generation of SCADA and cloud-based remote control systems.

You can afford the Best
RealiteQ
New Generation of SCADA & Telemetry Solution



Ran Kedem
CEO

“When we talk about IIoT, we can't overestimate the changes that already happened and those which will occur in the next few years. IIoT is probably the biggest revolution in the industrial and utility markets since the adoption of the modern controller and automation technologies.”

www.realiteq.com/

START-UP NATION CENTRAL

Discover innovative Israeli companies changing the world

Start-Up Nation Central now helps impact investors, corporations, governments and NGOs to identify innovative Israeli companies with the highest relevance to the UN Sustainable Development Goals (SDGs) directly on our Start-Up Nation Finder Innovation Discovery Platform.

Discover Israeli SDG-relevant companies



New generation of SCADA – Market research

- “Fourth Generation – Cloud / Internet Based SCADA System....”
- ...” Cloud-based SCADA dramatically lower the costs associated with a traditional SCADA system... getting started with a cloud-based SCADA, users can achieve about 90% reduction in costs...”
- ...” Cloud-based SCADA improve the system's reliability. Cloud computing platform enables water and wastewater utilities to deploy redundancy and disaster recovery capabilities far beyond that found in the typical water and wastewater IT departments...”



Source: 2017 Zion
Market Research

IloT for water & wastewater – market research

- “The water and wastewater industry is in transition to a digital revolution that has the potential to transform the industry from innovations such as the internet of things and machine learning.”
- “The key to control is connection. By connecting all water related objects to the internet of things, utilities can be optimized minute by minute and in the long term”



Potential security problems are the most common argument against putting manufacturing systems into the cloud. ...

Fortunately, this problem has been worked on for years now, and a properly designed and installed **cloud-based system is no less secure than a system protected by the IT firewall**. Physical data center security, encryption, centrally managed user authentication, and other plant-level network security tools keep these systems safe today.

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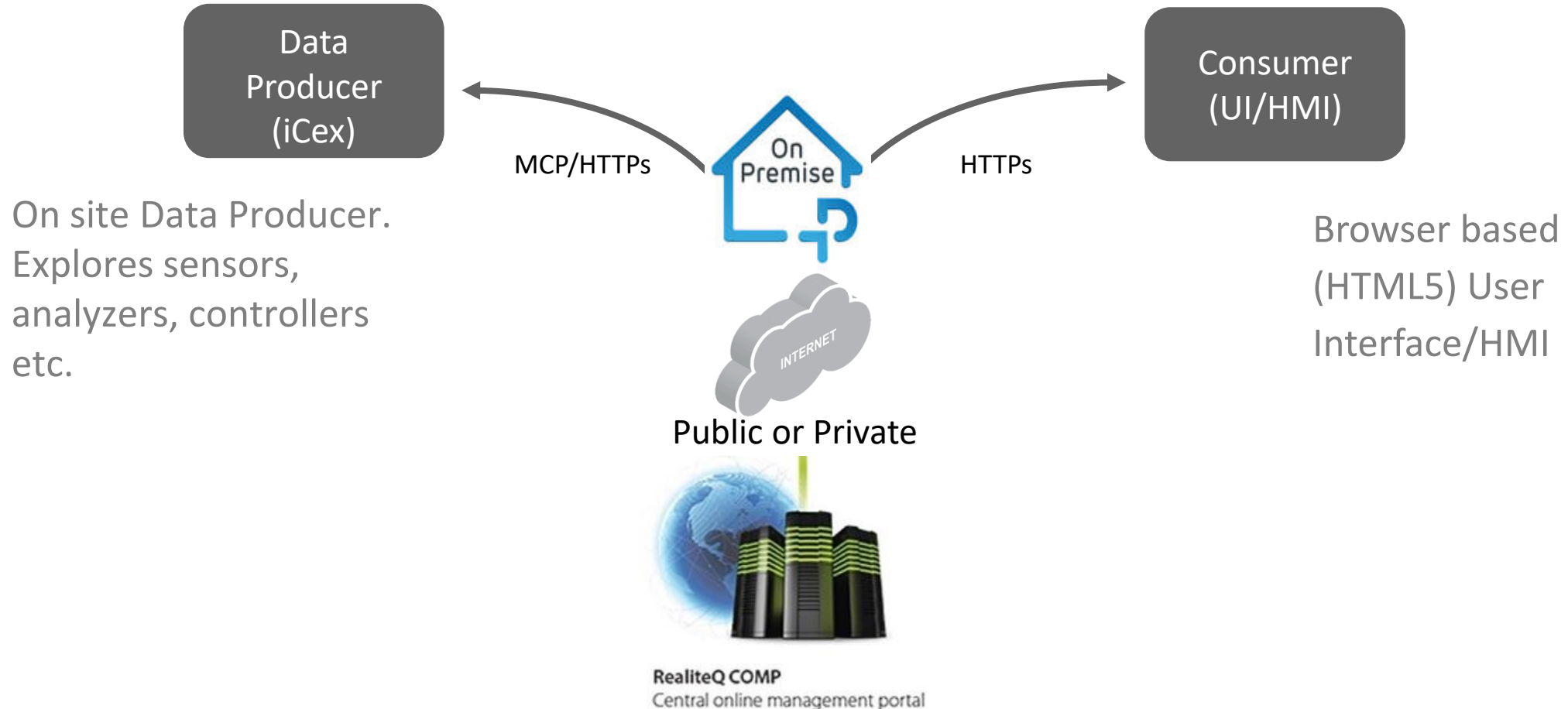
Internet of Water

About RealiteQ SCADA

The new (4th) Generation of SCADA system

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RealiteQ System Concept

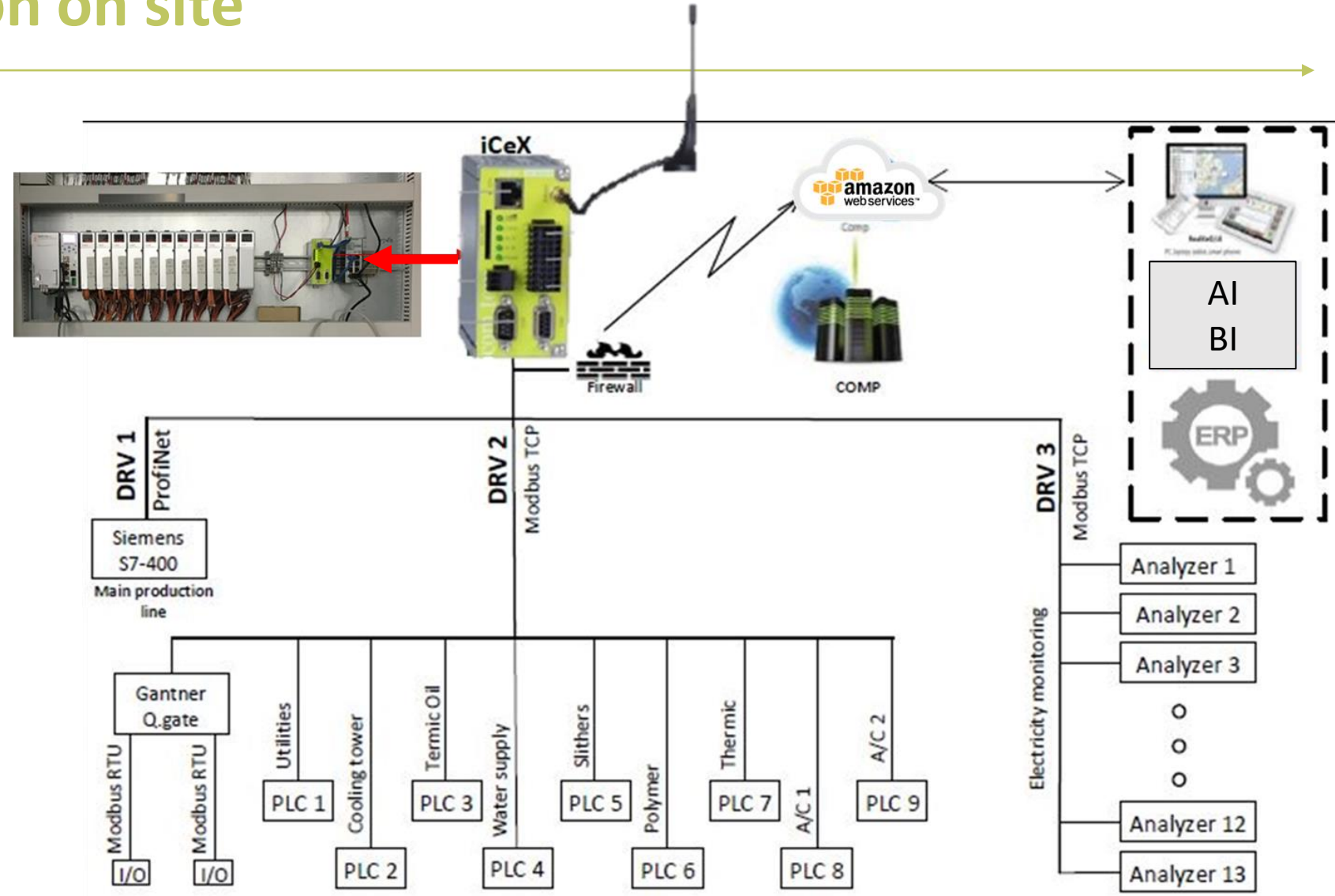


Central Online Management Portal

Mediates all communication, defines security and user permissions, manages the Historian, streams live data and sends Alarms notifications.

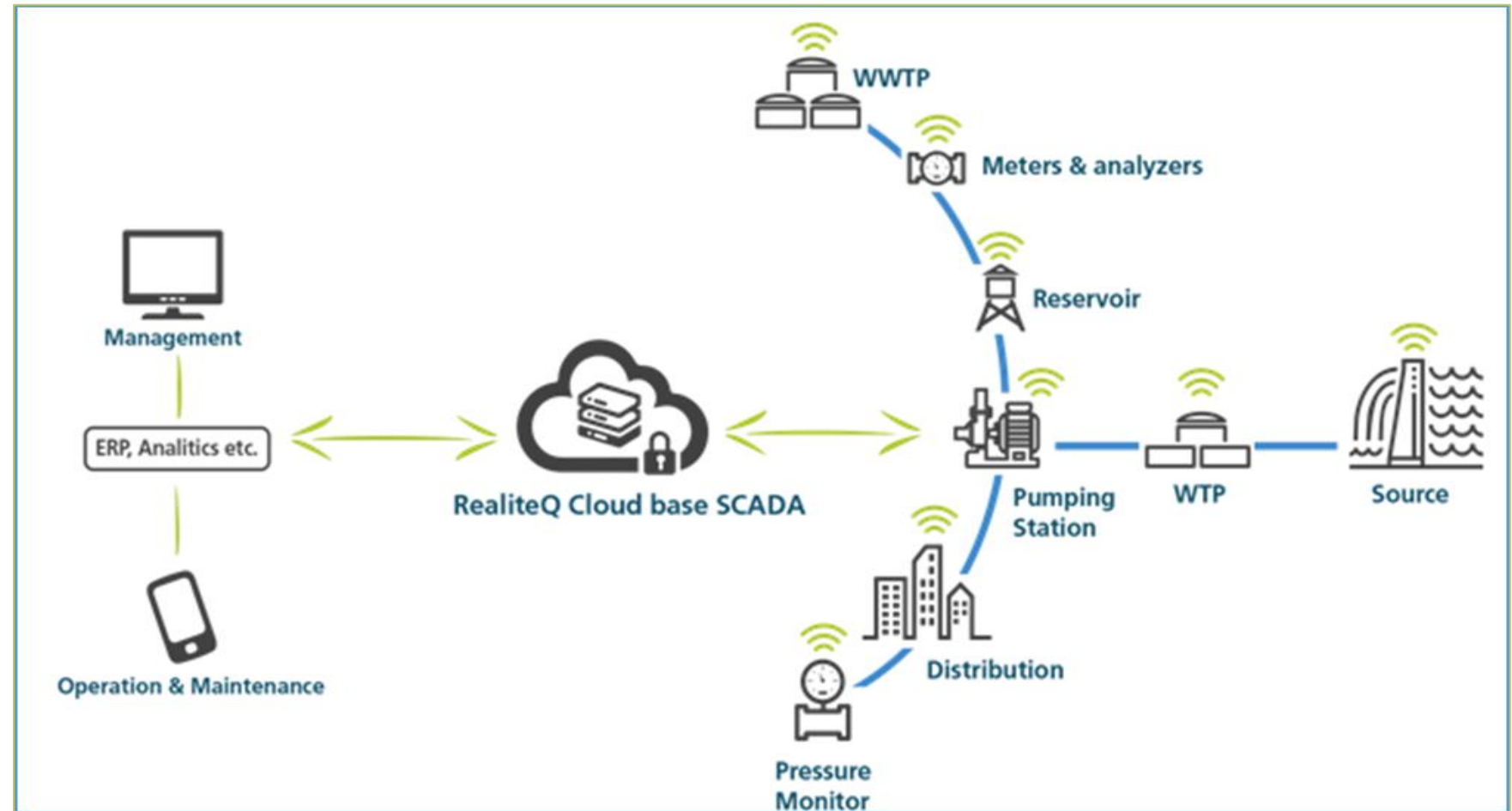
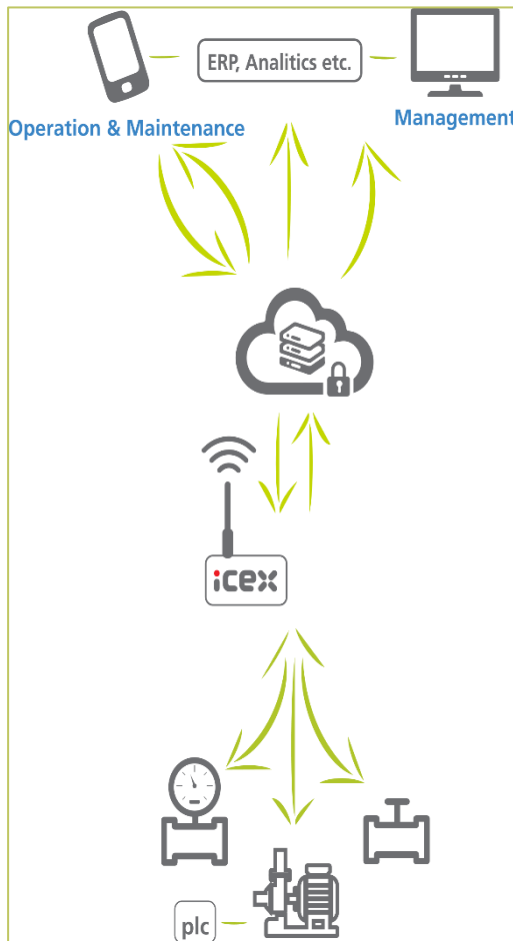
RealiteQ – installation on site

RealiteQ via its iCeX can be connected to many different devices, Machines, lines, analyzers, sensors... using up to 3 different protocols in parallel.



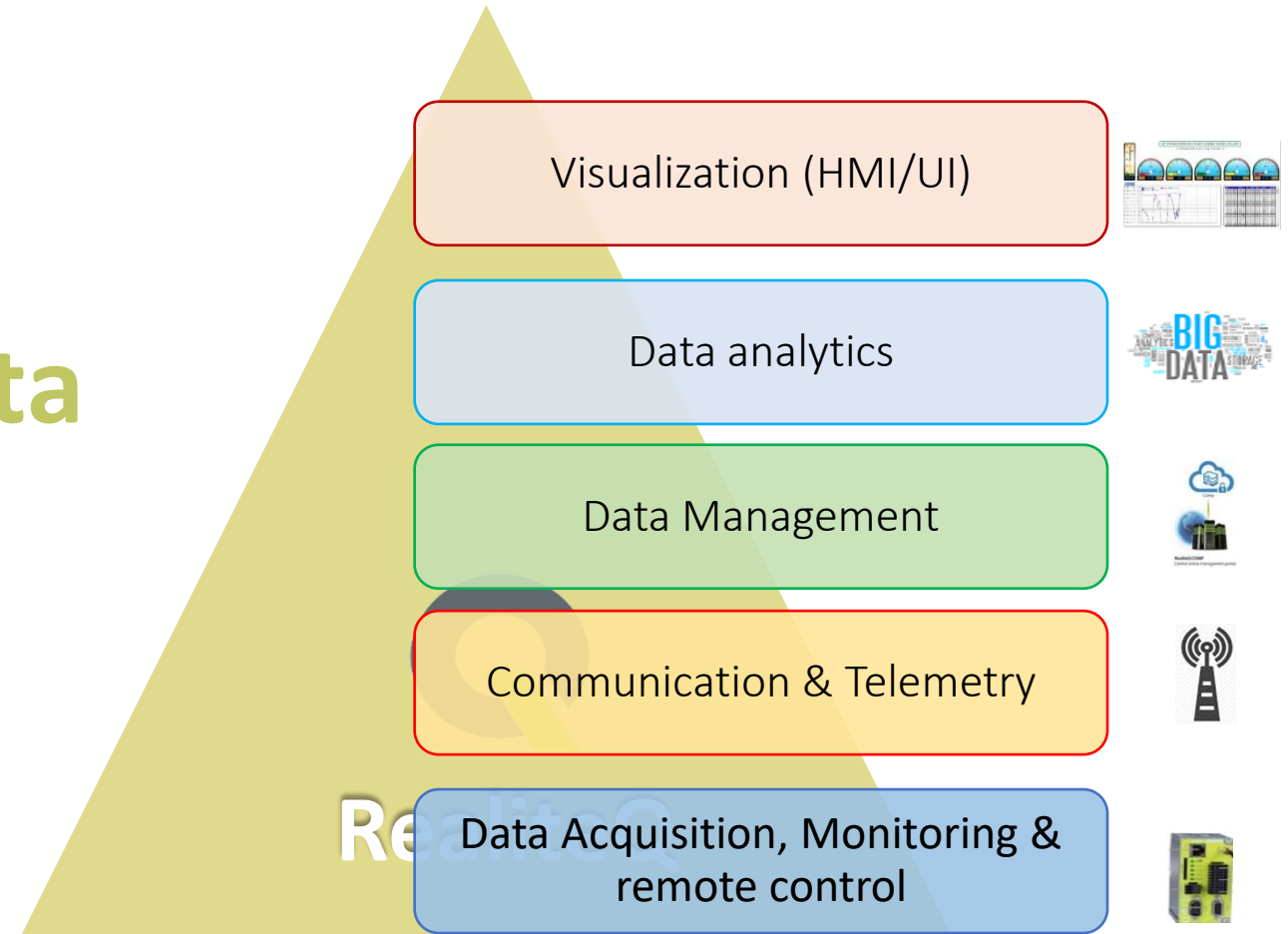
One network - One centralized SCADA solution

From single Device/site to the entire network (100% Modular)



RealiteQ Single source comprehensive solution

RealiteQ – handling data
from A to Z

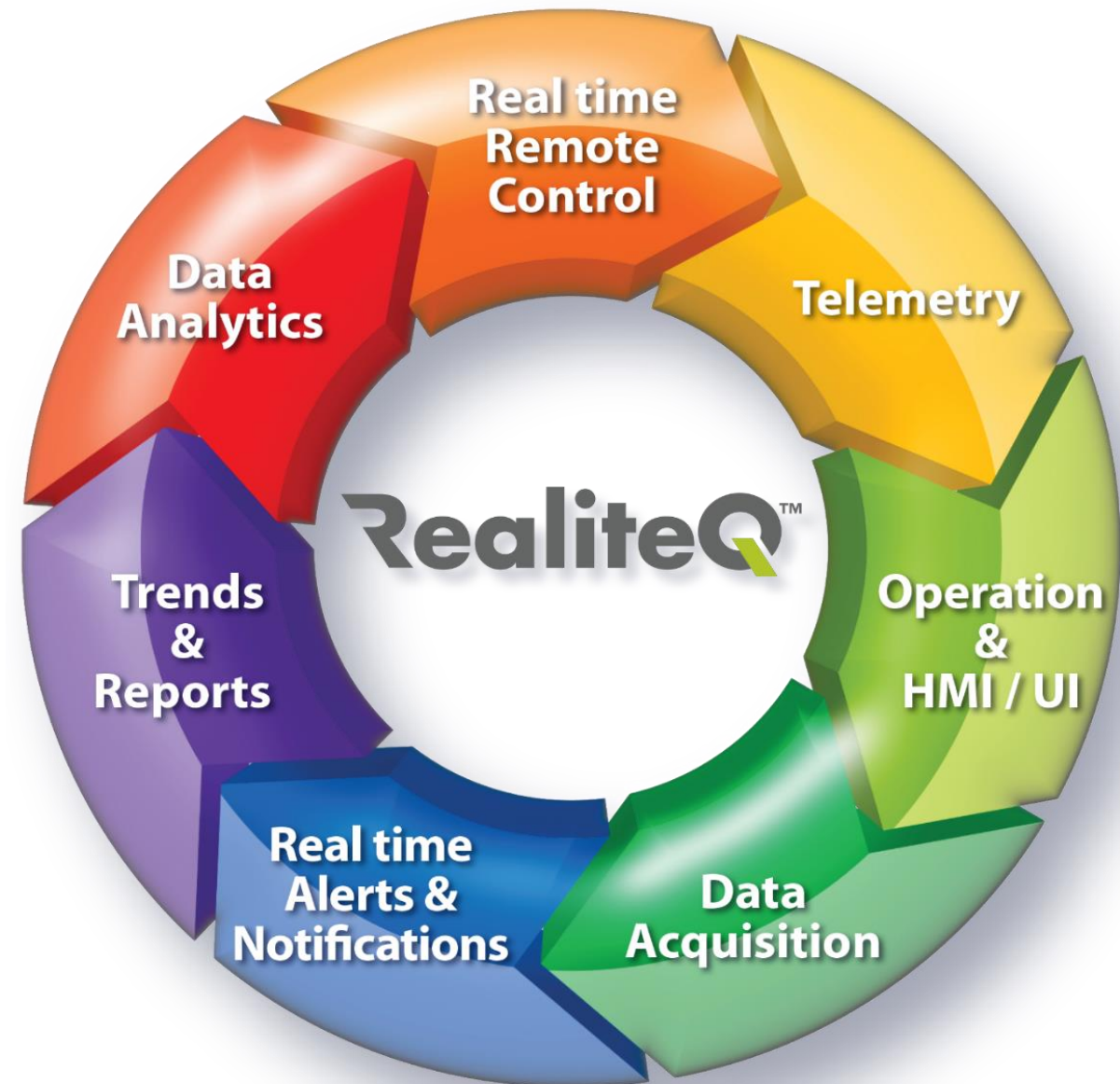


RealiteQ – much more than just a SCADA

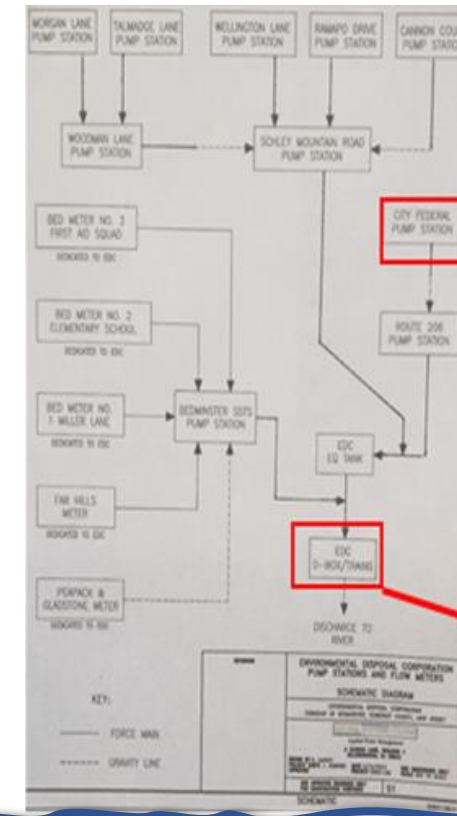
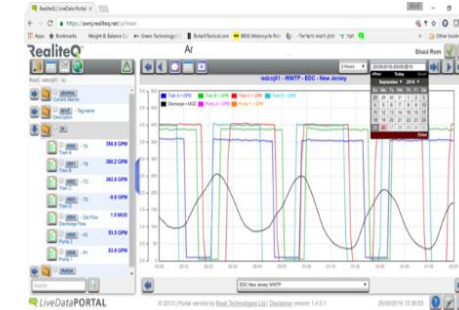
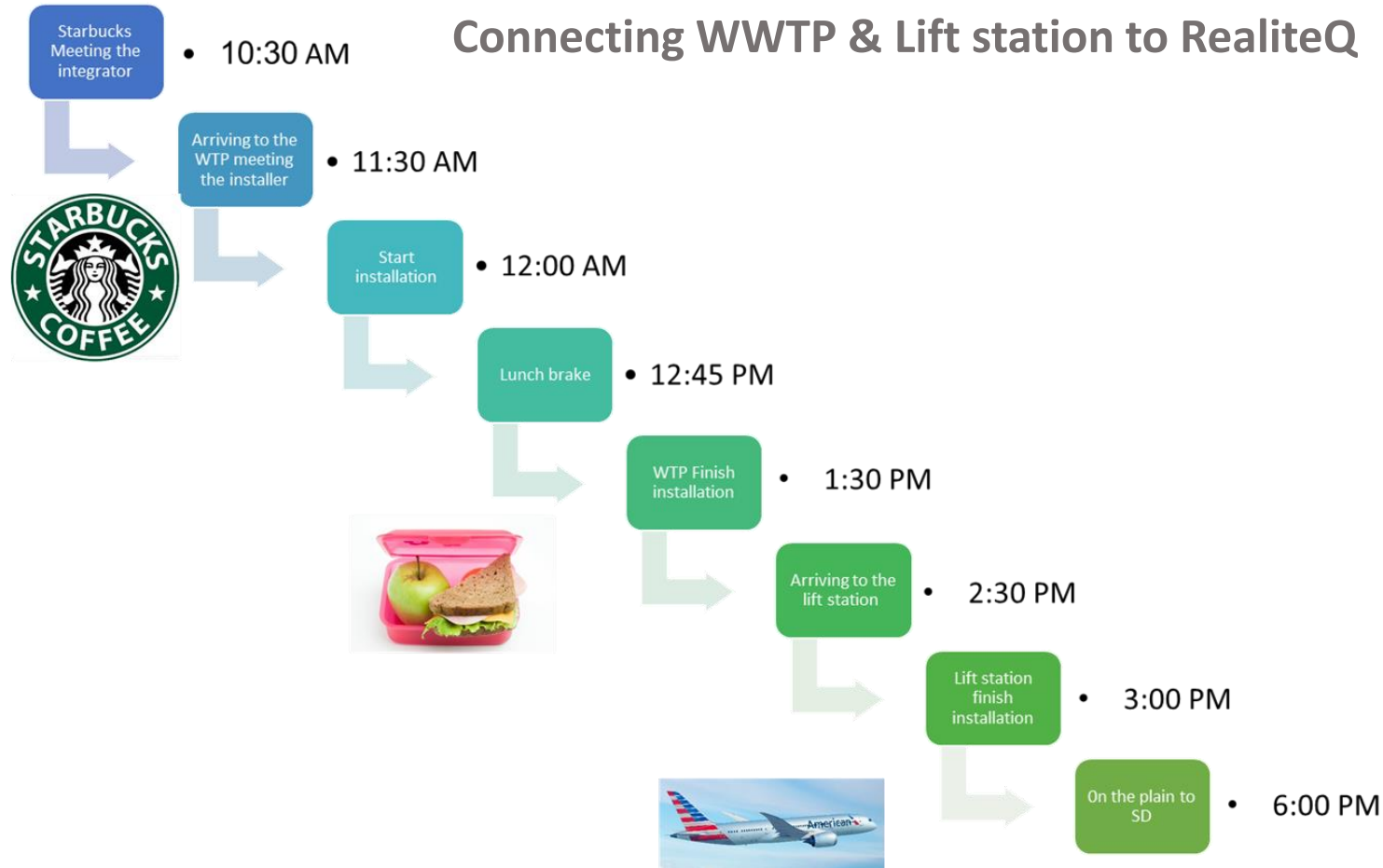
IT/OT convergence -

RealiteQ integrates information technology (IT) with operational technology (OT) and offers **significant benefits** along the four strategy operative dimensions:

- Cost,
- Quality
- Speed
- Reliability



Fast, simple & seamless installation



The customer received two sites connected to RealiteQ within hours with no interruption to the ongoing operation of the facilities.

Real time “Asset health” status

Facility health status



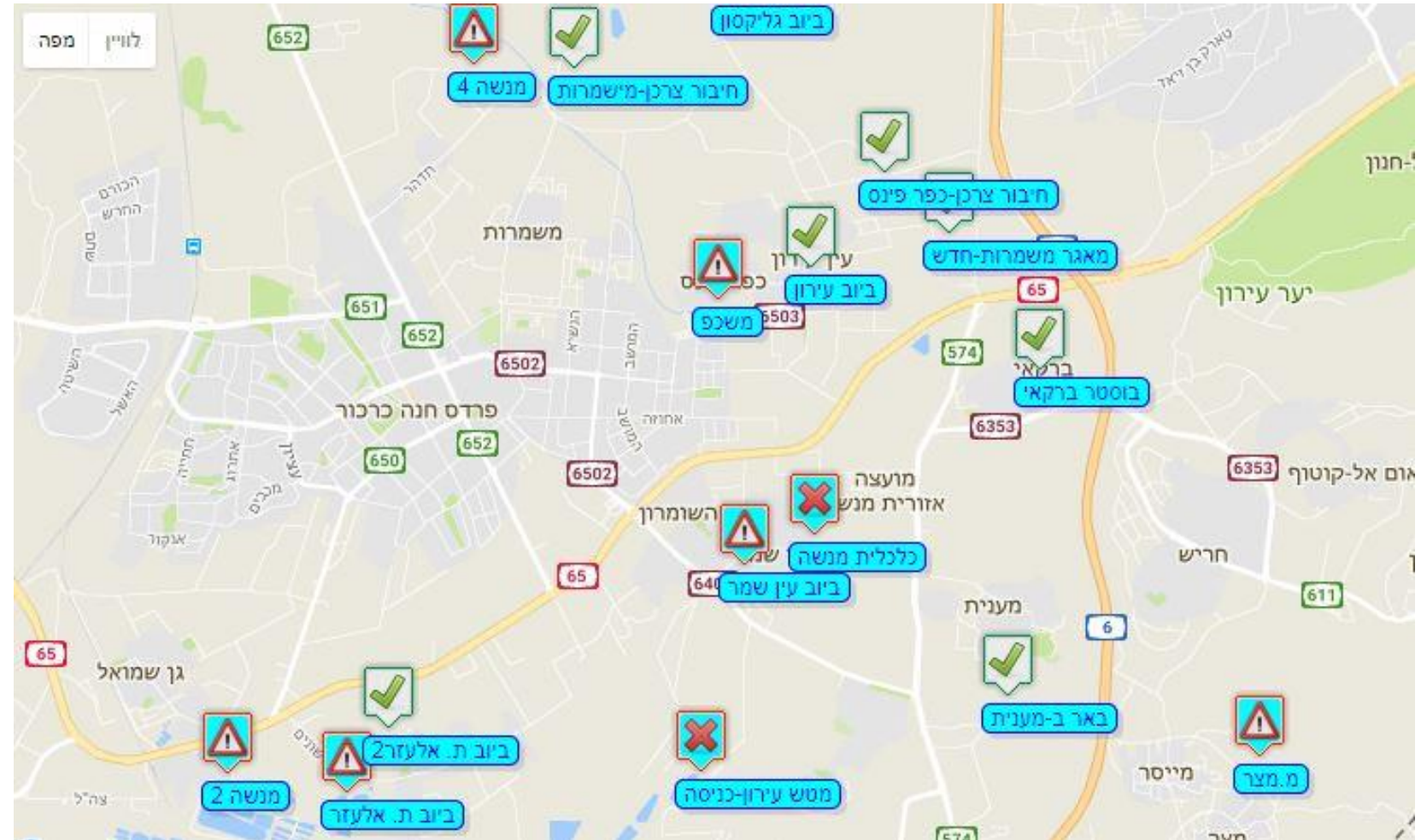
OK

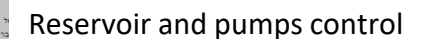
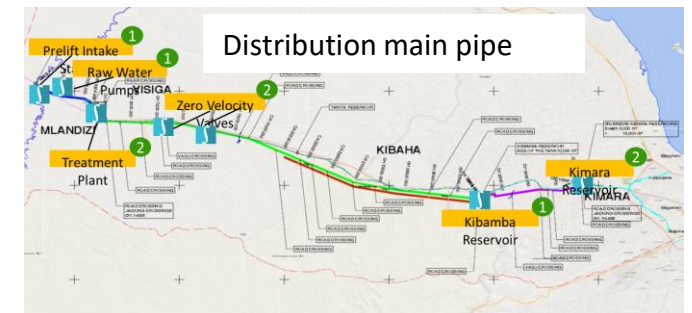
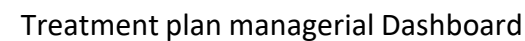
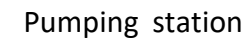
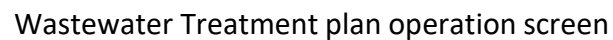
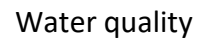


Alert



No communication





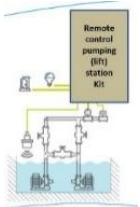
One network – One SCADA system



iCex – For real time control in any facility with 24/7 electricity



iCex solar kit – For real time control in any outdoor facility without 24/7 electricity



plug & play kits – real time control for specific applications (pumping station, water tower...)



Data logger – Battery operated RealiteQ Data Loggers (RDL)



One Centralized system for the all corporate levels

Corporate level	Real time, Monitoring, Managerial Dashboards, historian information, BI & analyses for <u>all corporate facilities</u> improvements.
State/Country level	Real time monitoring of <u>all state facilities</u> status, single centralized professional & experts support.
Utility level	Monitoring Data sharing (optional) among sites, visibility of <u>all the utility facilities</u> .
Site/Facility level	Real time monitoring and control from any device in <u>the local facility</u> , any place by any authorized personal.

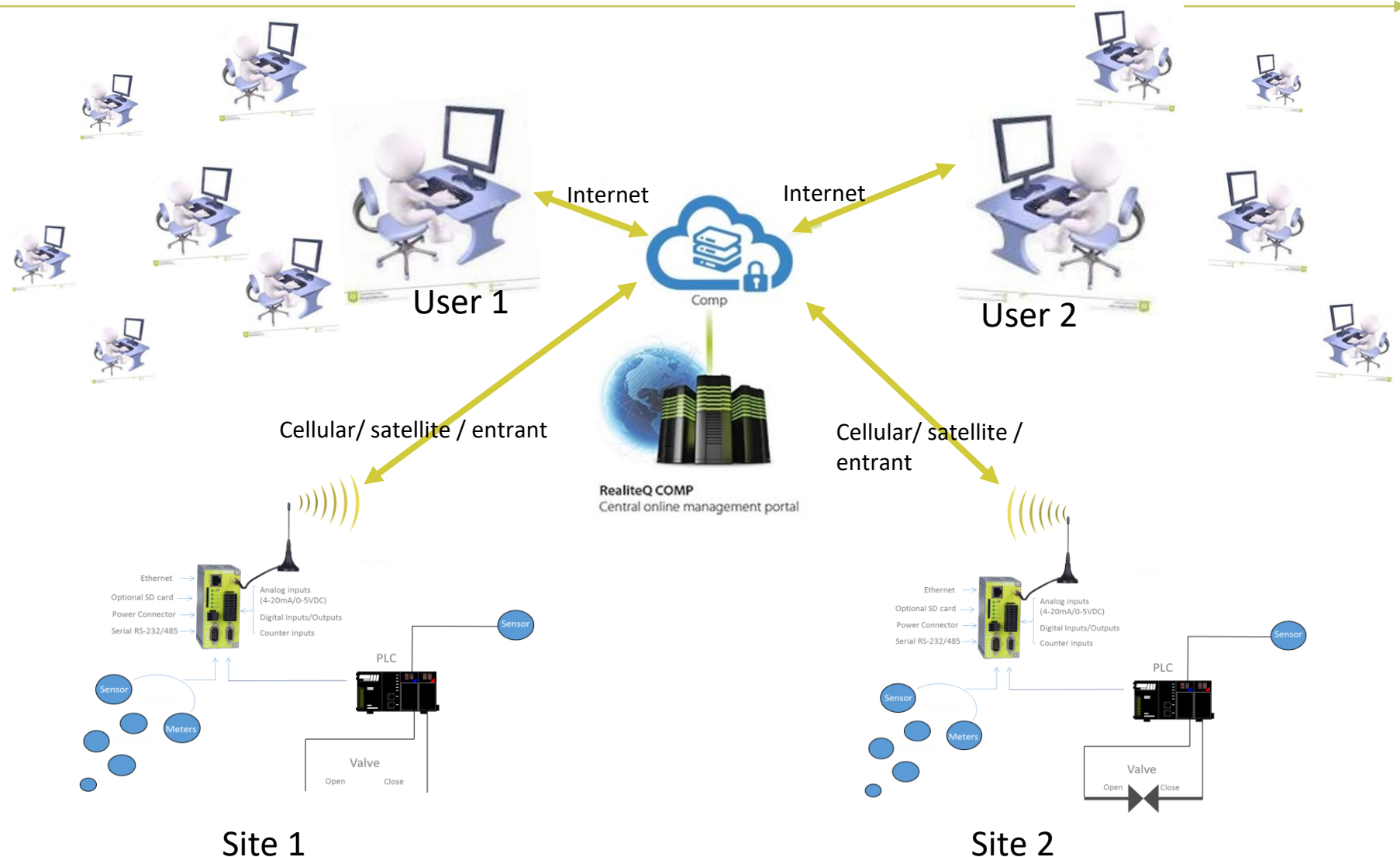
Corporate Level real time control Dashboards



RealiteQ brings uniformity and transparency to the corporate

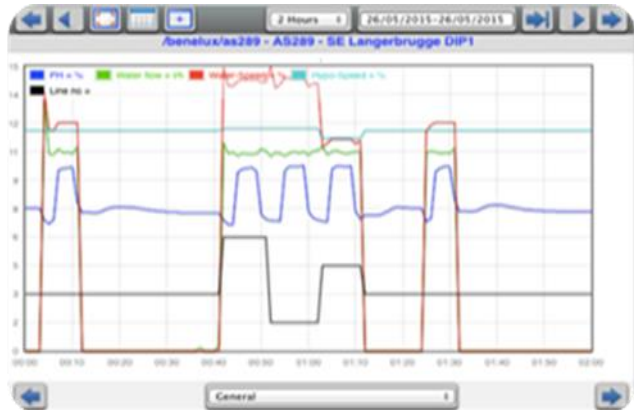
System for all - for operation optimization

From the CEO to the field technician – any one can use the system according to his authorizations and needs in order to optimize the operation efficacy and the quality of service.

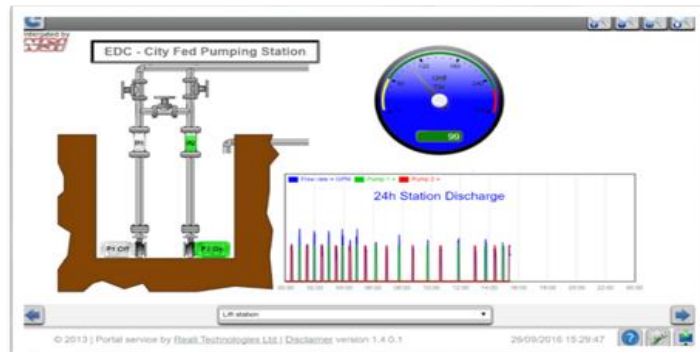


Unlimited sites and Data available for any authorized employee

Cross organization efficiency



Professional department



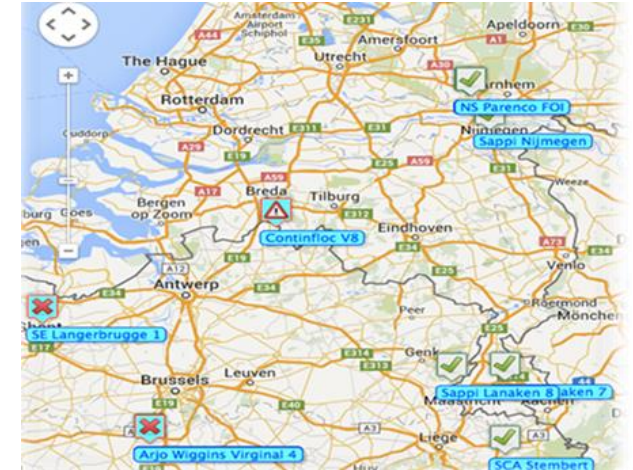
Field Technician

Professional
department
– Trends and
reports

CEO – system
Real time
status
overview

Field
technician -
real time remote
operation

Operational
manager – real
time operational
indicators

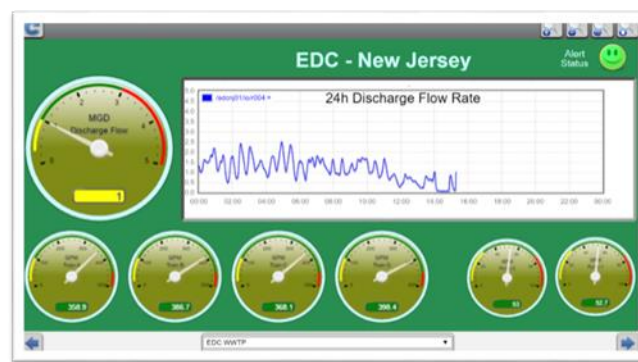
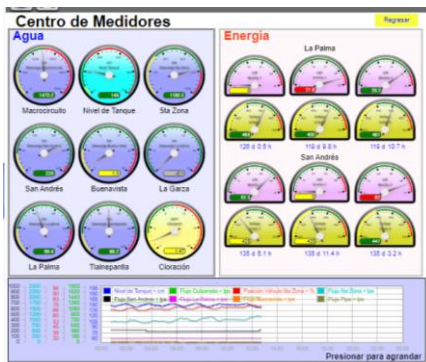


CEO & senior management



Operational Manager

BI – Analytics, Tables, Reports & Graphs



Time	CIA104 WELL - first (uS/cm)	CIA300 PRODUCT - first (uS/cm)	NITRAT 300 - first (ppm)	PH300 WTR to TOWN - first	CL301A CHLOR - first (ppm)	PH400 Waste Conc - first	EDA On - first
2019-04-30 22:15:00	1223	959	53.5	7.57	0.28	6.82	1
2019-04-30 22:30:00	1222	960	53.5	7.58	0.28	6.84	1
2019-04-30 22:45:00	1221	959	53.5	7.57	0.28	6.84	1
2019-04-30 23:00:00	1222	959	53.5	7.58	0.29	6.85	1
2019-04-30 23:15:00	1222	957	53.5	7.59	0.29	6.85	1
2019-04-30 23:30:00	1220	961	53.5	7.57	0.29	6.84	1
2019-04-30 23:45:00	1222	962	53.5	7.60	0.29	6.85	1
2019-05-01 00:00:00	1223	961	53.5	7.61	0.29	6.84	1
Minimum	0	474	0.0	7.49	0.00	6.72	
Maximum	2016	1096	100.7	8.02	0.61	7.06	
Average	1215	965	55.3	7.62	0.28	6.89	

7. func.prev_period_value(ref, period:, mode:)

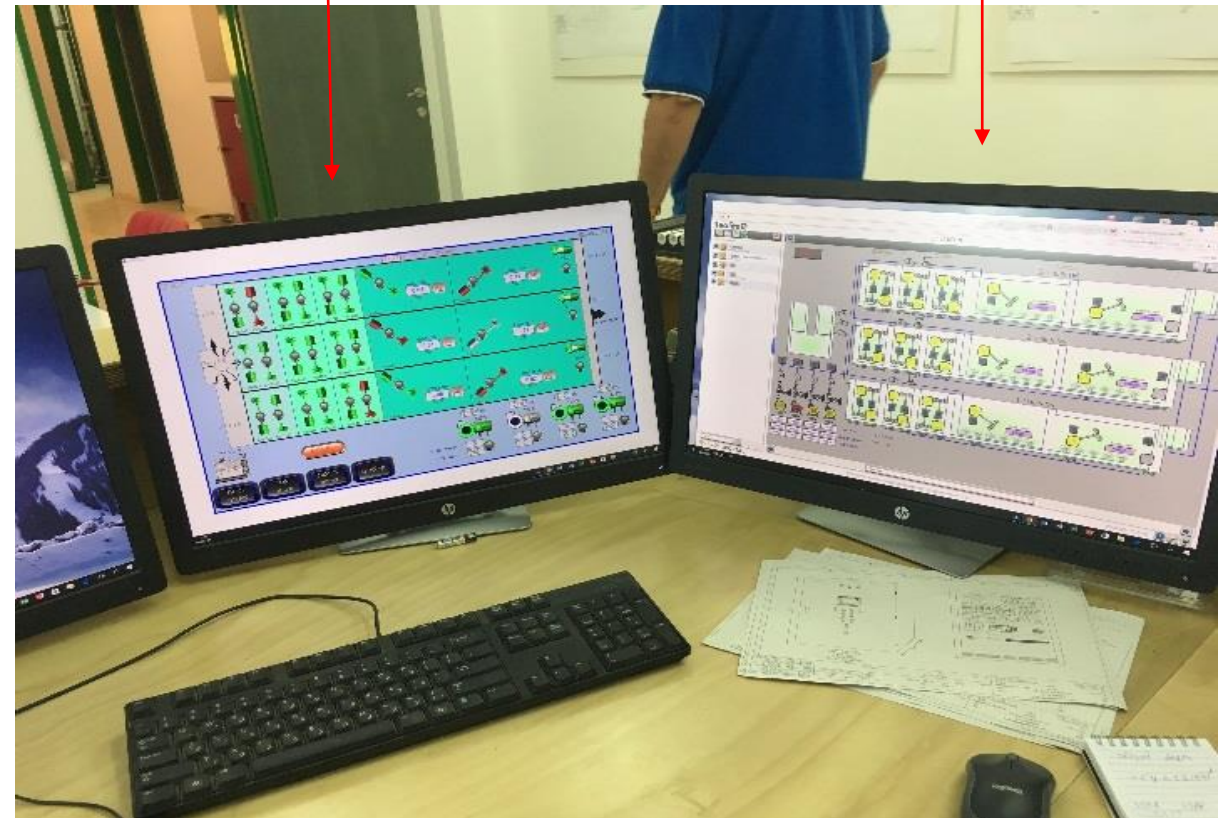
Calculates historical value for the previous time period given node reference according to given period and mode.

Hybrid System - Upgrade

Cost effective & Non-destructive Scada upgrade

data transfer from
RealiteQ COMP to
old HMI USERS

New RealiteQ
HMI for new
users



Cyber security – (built for cyber)

- No static IP, no private VPN required (VPN is used only for remote maintenance).

- Username and Password with score.

- Full user managements.

- Detailed credentials.

- Salted & encrypted passwords.

- All communication is done over SSL.

- Users sessions expire automatically.

- Password renew reminder.

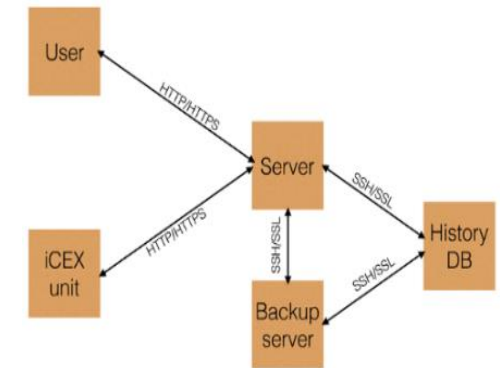
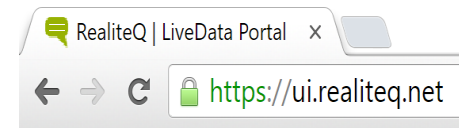
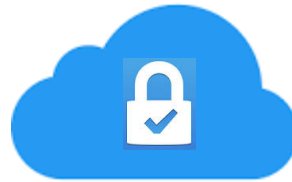
- False log-in activates delay & block.

- A Real time “Value Change” Notification

- Option for “Read Only” system.

- iCEX does not act as a server but rather as a client that access the **RealiteQ** servers cluster. iCEX firmware includes its own firewall.

- 2FA - Two Factor Authentication is an extra layer of security used to make sure that people trying to gain access to an online account are who they say they are



Del	Path	Access token
<input type="button" value="del"/>	/icex	6424dd9b534746c69b02fa6444e7adde

User : mekorot - Title: mekorot

Permissions :

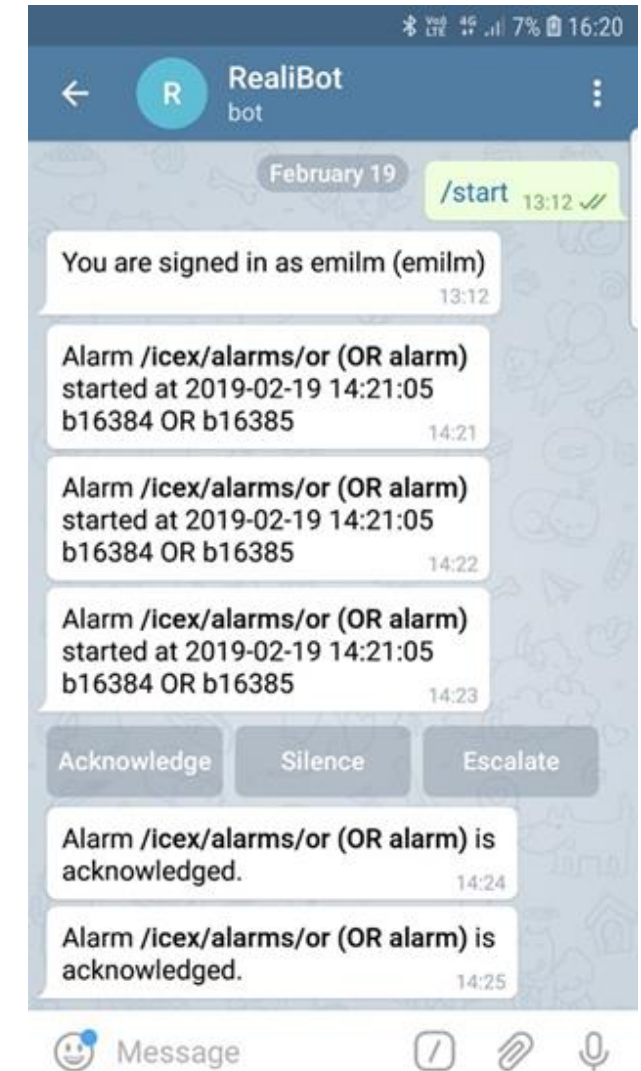
Del	path	Read	Write	Modify	Upload	Config
<input type="button" value="del"/>	/icex	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="button" value="del"/>	/icex/registers	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Email Address(es) :

Smart Alert Management

- Escalation mode (unlimited escalation steps)
- “Nagging” for alarms
- Combine Nagging + escalation.
- It is possible to get statistics of alarms as part of the BI (such as average alarm duration, amount of active alarms, amount of historical alarms over period)...

RealiteQ clients can receive alarms as: e-mail, SMS message, Telegram message or any combination of the above options.



5 + 1 good Reasons to use RealiteQ Cloud Based SCADA

1. **System reliability & safety**, fast recovery, and real-time crisis management capabilities
2. **Corporate level Optimization**
3. **Improved customer service**: Real-time information transfer & sharing enables rapid respond to the customer needs.
4. **Operational optimization** in routine and crises events
5. **Financial savings**: Significant savings in CAPEX & OPEX

And...

The world is moving very rapidly to the cloud technology. So long term investment in SCADA system Must be, at list, ready to work in Cloud environment (“cloud reediness”) in the coming Future.





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For more information
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