



**Cyberwater 2018 - Security in practice**  
Christian Borge, Technical Manager, Beijer Electronics AS

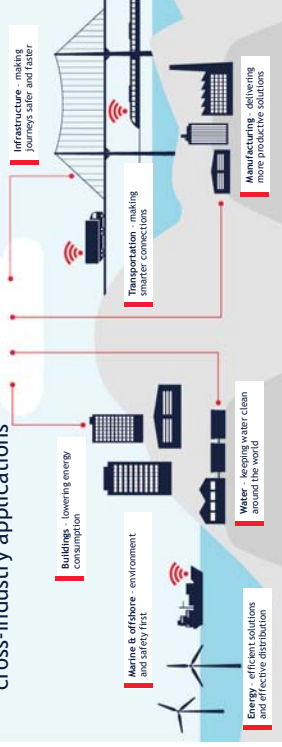


### Beijer Electronics in short

- Beijer Electronics is a multinational cross-industry innovator of flexible solutions to **CONTROL**, **CONNECT** and **PRESENT** data for business critical applications.
- Founded 1981 in Malmö, Sweden
- A global supplier present in 11 countries
- R&D and manufacturing facilities in Sweden, Taiwan and USA



### Innovative solutions for cross-industry applications



### Small companies face major challenges

- The sites may be spread around in remote desolate places (e.g. pump stations, elevated reservoirs).
- Usually, the municipality uses local companies to do the installation and services.
- Most of them don't have the knowledge, time or economy to set up and maintain complicated solutions.
- We still see a lot of unsecure solutions in the field.



### Real life challenges of our customers

- **Remote service**
  - Connect on demand. Typically connect to troubleshoot or reprogram.
  - How to make it secure over time.
- **Client-server communication**
  - Fixed installation 24/7. Typically for connecting distributed components to centralized Scada.
- **Cloud connectivity (IIOT)**
  - Service to update information to the cloud about equipment reliability, predictive maintenance, continuous improvement. NB: IIOT to monitor water quality in wells etc.
  - Typically encrypted MQTT to Azure.



### Safe access to internal network

- Customers need simple, reliable solutions.
- They need to install the solution with very little knowledge.
- The solution must be updated and work when needed, not the day after.



## Safe access to internal network



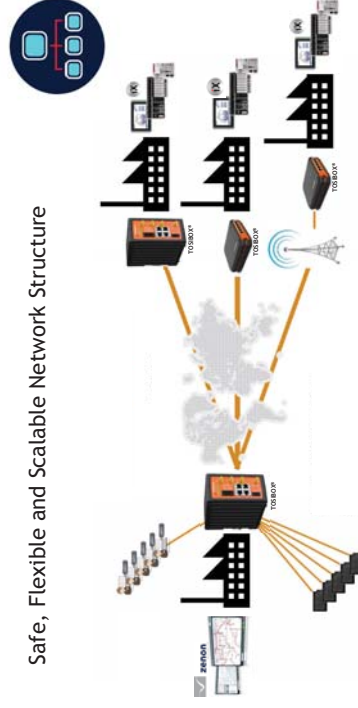
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## Safe, Flexible and Scalable Network Structure



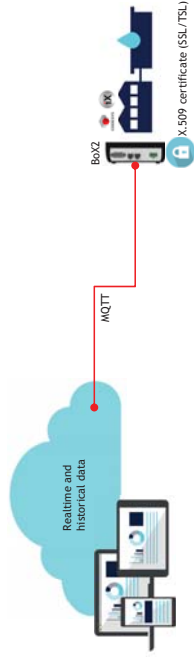
Look to the IEC standard IEC 62351 for details on security for protocols

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## Cloud connectivity



- A cloud gateway transforming the local machine data to data that is accessible in the cloud. A high level of safety and security needs to be provided.



<https://www.youtube.com/watch?v=HIR7qgDRMf4> feature=youtu.be

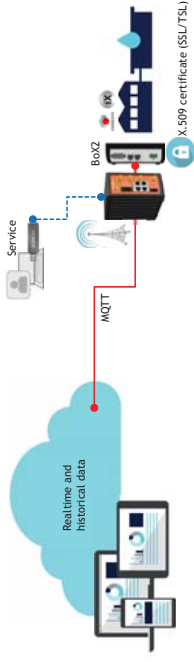
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## Norwegian export adventure in Cameroon

Turn-key project from intake to distribution for safe drinking water plants in Meyomessala, Nkongsamba, Melong & Bare



<https://inrigo.no>  
<https://www.eksportkredit.no/en/Case/norwegian-export-adventure-in-cameroon/>  
<http://matrazine.amvxt.no/dmxt/ctnr-5-2019/0359890013726497>

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## Norwegian export adventure in Cameroon

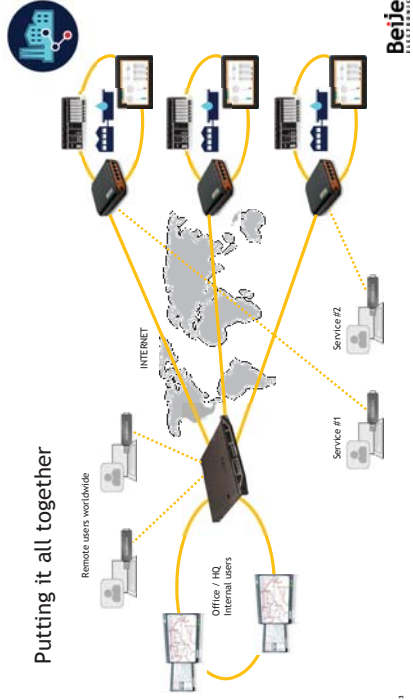
Prefab modules shortens the installation time, and reliable secure connections to Norway makes it easy to remote assist the customer.



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## Putting it all together



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- ✓ Have security in mind when designing systems for communication over public internet.
- ✓ Remember the small remote systems and the small companies that serve them.
- ✓ Select easiness not complexity.
- ✓ Keep the systems updated automatically.



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