



# A FLEXIBLE COMMUNICATION SOLUTION LEADS TO SATISFIED CUSTOMERS

TRE-FOR's request for flexible data transfer led to the collaboration with Vikingegaarden. The flexible and reliable solution G2G has resulted in optimized operations and increased customer satisfaction.

TRE-FOR's strategy is to keep abreast of developing and applying solutions that ensures both heat supply and optimum lifetime economics of the installations. The APL lines that are being used for communication between decentralised measurement points and the SCADA system are being phased out by the supplier. Therefore, TRE-FOR requested a new and up-to-date solution.

## Specification from TRE-FOR

At TRE-FOR a team of four people has worked together on defining the specifications for a new solution for data transfer. Project manager Kim Dines Petersen has been involved throughout the entire development process.

” Throughout the development process, we have tested the device in different applications, and we made the solution future-proof by being able to handle both digital and analogue signals two-way

Elektriker Henrik Pedersen

## The project team identified the following requirements for the solution:

- Simple, user friendly and easy to mount
- Measurement of analogue values
- Flexible measurement points
- No use of signal converters
- Future proof

In order to ensure a stable communication between decentralized measuring points and control center in the future, it was decided to explore the possibilities of using a wireless telemetric solution. The team began to search for suppliers in the market.

## The development process

Vikingegaarden was one of the companies invited to submit a concept. The solution, called G2G (Gate2Gate), were chosen for further development.

The equipment was tested throughout the process, and the solution was future-proofed by being able to handle both digital and analogue signals two-way. All parameters can be set via the web-based system VMS, and modules can be updated. ➔



*Project manager Kim Dines Petersen has ensured the quality throughout the project*

## Facts about TRE-FOR

- TRE-FOR is a multi-energy company providing electricity, drinking water and heating to Trekantområdet.
- TRE-FOR Heating supplies Fredericia, Vejle and Kolding with district heating for 26,000 customers.
- Power supply to 131,000 households.
- Drinking water supply to 46,000 households.
- 530 employees.
- TRE-FOR Construction offers total solutions within electricity, plumbing, ventilation, fiber technology and automation.

## CASE // TRE-FOR



1

### Suitcase solution

To achieve mobility and flexibility the equipment has also been installed in a suitcase. The suitcase contains all the necessary equipment to carry out measurements, and it can be placed anywhere. Currently pressure and temperature are measured.



2

### Point Measurement - Quality

The suitcase is primarily used for temporary measurements. If a customer reports an irregularity in the heat supply, electrician Henrik Pedersen will bring the suitcase and make point measurements to check operational status. Measurements can last days or weeks. This will show if the problem springs from the heat supply or the customer's heating system.



3

All data measured and logged onsite are transferred directly to the SCADA system. This allows operational staff to quickly find any error and immediately take action so that the customer receives heat as promised.

Besides from the suitcase solution there are also plants with permanently installed devices.



4

### Point Measurement - operation

Another use of the suitcase is to make point measurements on supply lines to determine whether a stationary measurement must be established.

It is possible to move the measurement point in the system and make limited measurements of a given point. This is an economically sound solution, and by making several point measurements, data collection is further optimized.

### Communications surveillance

Henrik has discovered further savings through the use of G2G. Earlier, a GSM modem was mounted in the control cabinets for redundant data repatriation. The function is now taken over by G2G which saved a modem and a SIM card. Should the VPN disappear, an SMS alert is sent immediately directly from the G2G device to the day guard.

### Forecast

The measurements ensure optimal heat supply by providing reliable data for TRE-FOR's advanced forecasting system. The forecasting system is based on many historical data, and to verify them and add data, the operation is optimized. The G2G system has proven its strength for TRE-FOR, and it is now an integrated solution in data logging. The required stability and flexibility, which was defined prior to the project, are fully met.

### VikMote G2G

Based on the collaboration between Vikingegaarden and TRE-FOR, G2G is designed to handle standard digital and analogue input/output signals. Thus, it works as wireless communication between two devices.

All data are transferred in real time, so that any analogue or digital value immediately is transferred to the device, which is mounted centrally in the SCADA system. There may also be sent out signals to the decentralized unit from the SCADA system – both analogue and digital signals.

TRE-FOR is very pleased with the G2G solution. The desire to be at the forefront of flexible data communication is met.

“Every year we save large sums of money by ensuring a perfect balance between demand of heat and supply flow

Project Manager Kim Dines Petersen



1. Henrik Pedersen prepares the suitcase.
2. The suitcase containing G2G equipment and power supply.
3. The suitcase mounted in a cabinet.
4. Pressure and temperature measuring.