

## Leveraging IoT - One Rose at a Time

Powered by MultiTech

With over 115 years in horticulture, Porta Nova is committed to producing the best roses in the world and this focus is reflected in all aspects of its operations. Implementing technologies that help its greenhouses has always been a priority but new IoT technologies available today are introducing new growth scenarios they never before thought possible.

IoT in several markets is still a promise, but for those innovative customers who are willing to invest and explore its potential the benefits are increasingly clear.

For one of the biggest rose greenhouses in the Netherlands, Porta Nova, growers of the coveted Red Naomi rose, the introduction of a new platform that leverages the unique power of IoT has resulted in the well being and success of its greenhouses and sought-after flowers.

Porta Nova's challenges began with monitoring the horizontal temperature distribution within their greenhouses. They required sensors that were not affected by solar interference to ensure correct measurements, to get the maximum production per square meter. Additionally they needed sensors that were precise enough to detect a fire, fine-tuned to go off at the first sign of smoke.

According to marketresearch.biz, the floriculture market is projected to reach a value of \$103.9 billion (US dollars) in 2026 at a CAGR of 5.0% over the forecast period with the market in Europe accounting for highest revenue share, owing to the increasing consumption of floriculture products in the countries such as Switzerland, Netherlands and Denmark. Realizing this market opportunity in conjunction with its past greenhouse success, closing down business was not an option.



### Problem

Monitoring horizontal temperature distribution and fire detection within their greenhouses.



### Solution MultiTech Conduit®

### Benefits

Equipped with the MultiTech Conduit, the "Sense2Grow platform" utilized the power of LoRaWAN to receive fine-grained data on their critical conditions to optimize the climate in the greenhouse, resulting in better quality, production, and savings.

After considering several solutions, Porta Nova opted for a simple and open universal platform that allowed them to receive data from four critical environmental conditions: temperature, humidity, CO2 and light intensity all using solar powered wireless sensors. Developed by Technolution and equipped with an IoT gateway from MultiTech the new “Sense2Grow platform” utilized the power of the LoRaWAN® protocol to receive fine-grained data on all their critical conditions. Now, the growers at Porta Nova have access to the kind of information they need to optimize the climate in the greenhouse, resulting in better quality, production, and savings.

“The new Sense2Grow system has provided us with a complete IoT chain: sensor nodes, communication to cloud, central data storage, central device management, data presentation, even installation support,” said Leon Dukker managing director at Porta Nova. “We now have access to all the information we need in the format we choose. Our sensor data is presented to us via colored heat maps - it’s an ideal format for us to review this kind of information.”

“The installation of Technolution’s innovative platform within Porta Nova’s greenhouses demonstrates the benefits of combining sensor and LoRa® technologies to capture vital, hard-to-reach information without relying on unpredictable cellular coverage,” said Neil Carey, “MultiTech’s **MultiTech Conduit**® is the industry’s most configurable, manageable, and scalable LoRa gateway and was ideally suited for the Sense2Grow platform. We are proud to be part of a solution that further reinforces the power, impact and potential of Smart Farming.”

Technolution’s Sense2Grow industrial IoT solution is not limited to agriculture, as it connects sensors to generate data that can be used to manage and monitor business processes for a wide variety of industrial use. “Simply put, it converts data into information, giving you a better and more up-to-date picture of your business practices. This can yield new insights on how to improve and renew your business practices,” said Olaf Peters, system architect at Technolution.

The Sense2Grow system implements data as a service, where the customer owns the data. In most situations, sensor data is forwarded to third parties for domain specific analysis and presentation. Raw sensor data can also be inspected in the Sense2Grow web dashboard.

Ready to learn more about how MultiTech products can take your business to the next level? Contact our team of experts online at [MultiTech.com](http://MultiTech.com) today!

For additional information, contact: [sales@multitech.com](mailto:sales@multitech.com)



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*Leon Dukker  
Managing Director  
Porta Nova*

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