



# Creating the Perfect Conditions for Top Level Research

**The High Tech Campus Eindhoven, the Netherlands, is a global technology centre, providing the ideal facilities for a diversity of high tech companies. Originated from Philips Research, most of these companies work together with more than four thousand Philips scientists in the development of new technologies, from idea, concept to prototyping. These innovations are the base for new products in the (nearby) future that will help to improve the quality of people's daily lives.**

It is a fact that high R&D costs and time-to-market constraints make collaborative projects and open innovation an imperative. The Campus manages the facilities to support and accelerate the innovation rate, prototyping and technical design.

*"The remote facilities within iFIX allow a centralized approach of facility management, making climate control much more efficient."*

Antoon Couwenberg, System Manager,  
High Tech Campus Eindhoven

## THE NEED FOR CENTRALIZED CLIMATE CONTROL

The various kinds of research facilities at the High Tech Campus put high demands on surrounding climate conditions. Specific test and prototype development require specific surrounding air temperature, humidity and pollution conditions. Originally, these conditions had to be

created and managed for each R&D environment separately, with different controllers, different monitoring and differential alarming devices. When the campus turned towards a facilitator for more diverse and different kinds of research organizations, the need was born for a centralized system to monitor and manage the overall climate conditions.

## CHOOSING A STANDARD SOLUTION

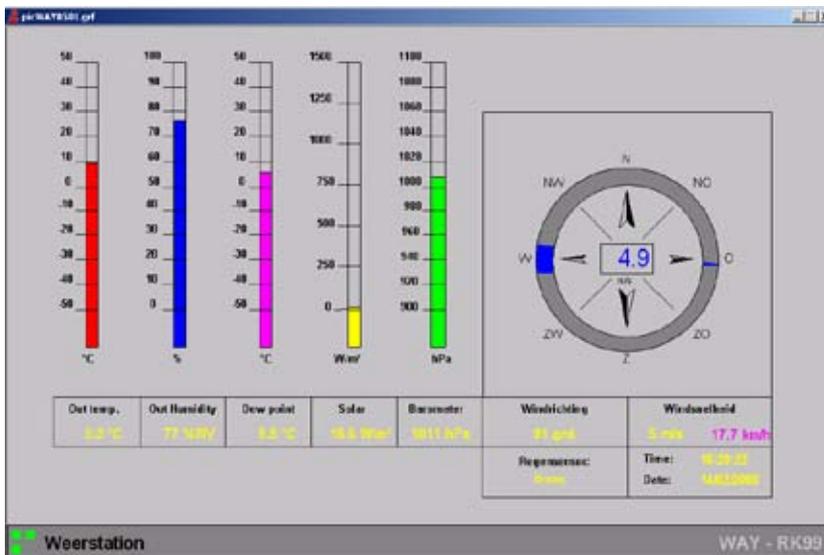
The facility service at the Natlab of Philips Research had developed a custom solution for climate control over the years, simply because at that time there was no standard solution available. Now, in order to increase the flexibility and keep pace with the continuously progressing technology, the Campus decided to search for a standard solution. SCADA systems seemed a good fit, as it provides realtime data acquisition and monitoring features, together with alarming functionality. After a selection process, iFIX from GE



was chosen for its remote control functionality, extensive driver library and broad installed base in building automation. System-integrator Regel Partners signed up for the integration services and brought in specific climate control experience.

control system, including eventual outstanding alarms and historical trends. The system architecture of iFIX allows installation of the client-tools (both development and runtime) on a terminal server. With this configuration both developers

iFIX to detect the severity of the alarm condition. Based on the time and other conditions the alarm is forwarded to the right contact person. Upon alarm receive this person can acknowledge it, view the attached alarm instructions and use the remote monitoring functionality to view the conditions that led to the alarm, and take appropriate action.



#### TRENDING ENERGY CONSUMPTION

By placing a central historian server in the system architecture network, the Campus facility management is able to trend climate control parameters of interest of all facilities into one central storage location. The integrated visualization in iFIX allows for detailed analysis of alarming conditions and/or energy consumption figures. The historian database also serves as a foundation for later reporting on performance characteristics.

#### SYSTEM ARCHITECTURE WITH TERMINAL SERVER

In order to monitor the climate controllers within the buildings, SCADA servers were placed in each building locally. Standard drivers ensured the communication to the various kinds of controllers, all leading to one central real-time operational database. Client screens are then used to visualize the status of the climate

and users like the reception or facility management have access to the control graphics from any location over the intra- or even internet.

#### ALARM HANDLING AND DISPATCHING

An important functionality of the current climate control system is the ability to direct alarms to the right person or instance at the right moment. The system uses the standard alarm level and area features within

#### REPORTING ON PERFORMANCE

Current goals of the department are to use the SCADA infrastructure for central reporting on performance issues like failure analysis, quality control and efficiency. These reports will then be used to make the control process more efficient.

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#### SUMMARY ON RESULTS

The use of a standard SCADA system is ideal for a centralized facility management department like at the High Tech Campus. It combines local data acquisition with remote control and monitoring, including rich alarming functionality and centralized trending. iFIX proved to be a leader in climate control by delivering this functionality with standard features



## SUMMARY

#### COMPANY

High Tech Campus Eindhoven,  
The Netherlands

#### SOLUTIONS

Automation solution

- Climate control
- Security management
- Alarm handling

#### PRODUCTS

- Proficy iFIX™
- Proficy iClientTS™
- Proficy Historian™

#### BENEFITS

- Centralized access to climate control functionality
- Remote access and real-time visibility
- Problem analysis to component level
- Reporting base for cost control

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