

**SIEMENS**

# Plant Data Services

20 November, 2014

# Agenda

ALCON – The Company

Project Goal & Objectives

Why Siemens?

Project Application

Expected Benefits

## ALCON – THE COMPANY

- ❖ Alcon is the second largest division of Novartis
- ❖ Alcon is the global leader in eye care and offers the broadest spectrum of surgical, pharmaceutical and vision care products to treat many eye diseases and conditions
- ❖ Founded in 1945, Alcon has grown from a small ophthalmic shop to a global business with over USD 9 billion in sales annually
- ❖ Alcon operates in 75 countries around the world with 25,000 employees and has more than 20 state-of-the-art manufacturing and distribution facilities to ensure a reliable supply of products.
- ❖ Alcon-Couvreur Puurs Belgium – Production Site distributes towards 123 countries & manufactures
  - Ointments
  - Solutions (eye drops)
  - Visco-elastics (surgical aid)
  - Custom Paks





# ALCON – THE COMPANY



Distribution



Compounding, Filling & Packaging



Custom Paks



Lab Environment



Quality Control



## PROJECT GOAL & OBJECTIVES

- ❖ To obtain an adequate and reliable system to perform effective energy & efficiency monitoring
- ❖ Collecting energy data in a specific (smart) way to perform adequate analysis
- ❖ To reduce overall energy consumption and resources:
  - Electricity, gas, water, industrial steam, nitrogen, etc.
- ❖ To guard system efficiency, e.g.
  - Is the yield of the steam boilers within the defined limits?
  - Is the CHP running as expected?
- ❖ To monitor & guard energy reduction projects, e.g.
  - Are the right actions taken?
  - Lights off ? Compressed air valves closed? HVAC reduced?

## WHY SIEMENS?

- ❖ The presence of knowledge in a broad variety of disciplines such as steam, HVAC, CHP, cooling energy, ...
- ❖ Awareness of the latest developments in the market
  - Detecting opportunities by the use of new techniques
  - Development of improvements
- ❖ The ability to automatically collect and transfer data to the Siemens Energy Service Center where the data is analyzed by energy experts, returning intelligent reports and analytics through a personalized web portal
  - Minimum ownership with maximum output
  - By adequate definition of KPIs creating time that can be spent on improvement instead of analysis of the systems
- ❖ The promised degree of transparency in the manner in which the KPIs are determined and the data is processed
- ❖ The warranty on a certain flexibility that is required for a site of this size and which is subject to constant change

# PROJECT APPLICATION

- ❖ Definition of the different project partners
  - Alcon – Siemens Belgium – Siemens Germany
  
- ❖ KPI Workshop
  - Definition of KPI's and available/necessary tags for the following utilities [Overview](#)
    - Electricity & Gas & CHP
    - Industrial & Clean Steam
    - City, Softened, Purified Water & WFI
    - HVAC Cooling & Heating Energy
    - Compressed Air & Nitrogen
    - Waste Water
  
- ❖ Determination of the method of data transmission
  - Field instrumentation -> PLC data collection (TCP/IP) <-> OPC Server (Applicom) <-> iFix PDB OPC Server (R/O & Scan) -> IGS OPC Server (OPC DA) -> OPC DA Client (=Siemens Energy Box)
  
- ❖ Set-up of the Energy Analytics Portal with different dashboards [Electricity](#) & [Compr Air](#)
  
- ❖ Definition and creation of custom made reports (daily, weekly, monthly & yearly)  
[ALC\\_SR\\_CompressedAir\\_Daily.pdf](#), [ALC\\_SR\\_Sankey\\_Daily.pdf](#), [ALC\\_SR\\_CHP\\_Daily.pdf](#)

# BENEFITS

- ❖ Reports are assigned to the dedicated system sponsors (technicians) which allows a frequent and efficient analysis of the operation of the different systems the past day
  - ✓ By the definition of targets the KPI's can be easily evaluated
  - ✓ The limited time available can be devoted to effective improvements
  
- ❖ Unexpected changes in energy consumption will be noticed more efficiently due to weekly reports which are evaluated by the Facilities Supervisor & Manager
  
- ❖ Creation of reliable data on which future projects can be based
  - Site expansions vs utility demands - Is there a need for extra capacity?
  - Simple post-evaluation of measures taken to reduce energy consumption
  
- ❖ Definition of future energy projects as required by Novartis Guidelines
  - Energy Committee
  - Energy reviews & Audits