



# Smart Archive Server

ALL DATA TOGETHER

**A NEW  
GENERATION**

**PLANT|PROCESS  
INFORMATION SYSTEM**

ARCHIVE | DATA PROCESSING | VISUALISATION | REPORTS | EXPORT | USER CONTROL | INTERNET | NETWORK SECURITY

## SYSTEM OF SEVERAL FUNCTIONAL CORES

Central Archive Server

Trends and Reports

ADD-ON functionalities

User based

Build on latest IT technologies and techniques



**KNOWLEDGE  
EXPERIENCE  
HISTORY**

**Indispensable process optimization and cost reduction tool**

**Identifying of potential issues before become major problems**

**“Benchmark” , KPI**

**“Green” managing of production and process documentation**

**Easy to for use**



## FOCAL POINT

Process data

Ideal solution for multi-vendor automation application

## NO LIMITS

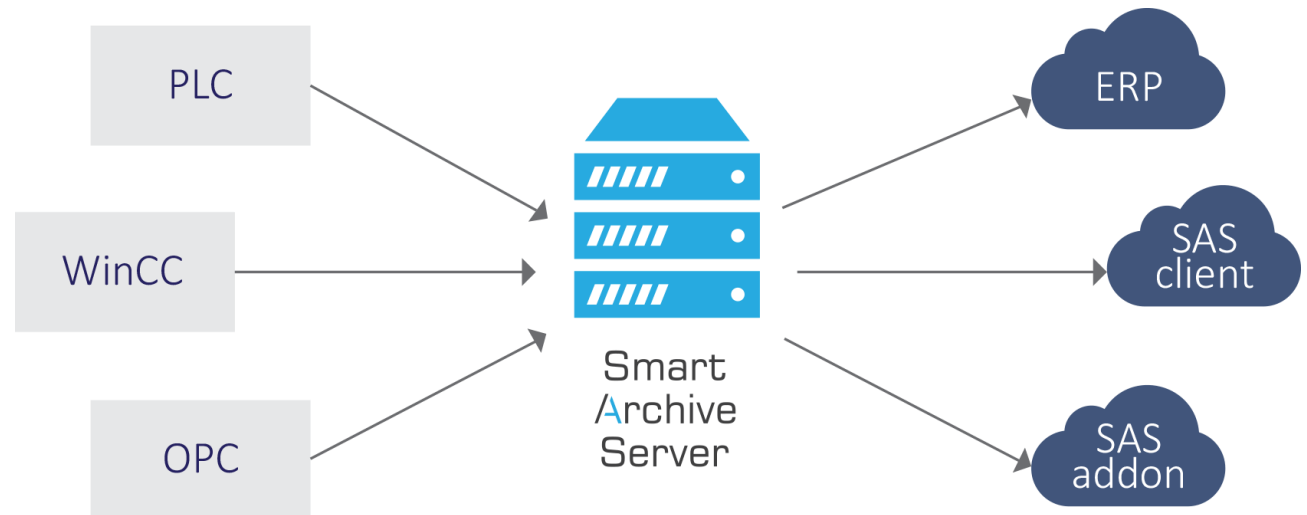
Number of process variables (TAG) and messages

Data sources

Simultaneously connected SAS client applications

## RICH SET OF ADD-ON FUNCTIONS

## FUNDAMENTAL DATA REPOSITORY SOLUTION OF ERP, EMS, PM SYSTEMS



## COMPATIBILITY

Most of commercially available automation systems

**SIEMENS | OPC « ABB | SCHNEIDER | OMRON»**

| WinCC 6.x – 7.x | PCS7 6.x – 9.x | OPC DA 1.x – 3.x | OPC HDA | OPC AE | OPC UA |

**MS Windows® Server 2008 – 2012R2, MS Windows® 7-10**

**Based on latest IT technologies**

**MS SQL® 2008R2 – 2014R2**

**.NET | TCP/IP | Firewall**

## ADVANTAGES

**Minimum 10 years process data archive**

**1 second per tag archiving resolution**

**Open to Intranet and internet**

**Migration of process control system**

## WARRANTY

**2 YEARS!**

**Free update to latest version and functionalities**

**Next day response support**

**Extend support package after warranty**

**Server Operation self diagnostic and alerting**

## ARCHIEVING FEATURES

All variable types

Archive groups

Variety of pre-process mathematical algorithms

All classes process messages

Facility stoppage logging

Automation redundant systems data sources

S.A.S. Idle recovery



## ADMINISTRATION

Users

Trends and reports

ADD-ON functionalities

Data sources

Process variables (TAG) and archive groups

Process messages and classes



## KEY FUNCTIONALITIES

**Easy to work with**

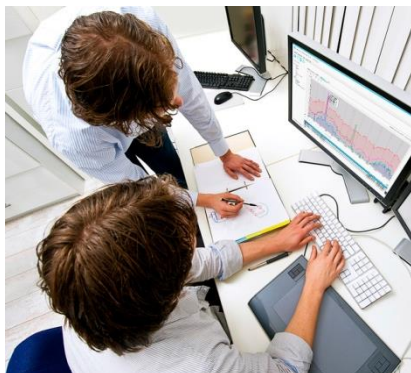
**Convenient navigation**

**On-line/Off-line work mode**

**Data export to MS Excel, PDF and print hardcopies**

**Entirely oriented to end user**

**Use other user reports and clone as template**



**DIFFERENT TREND  
STYLE**

**MULTI-AXIS**

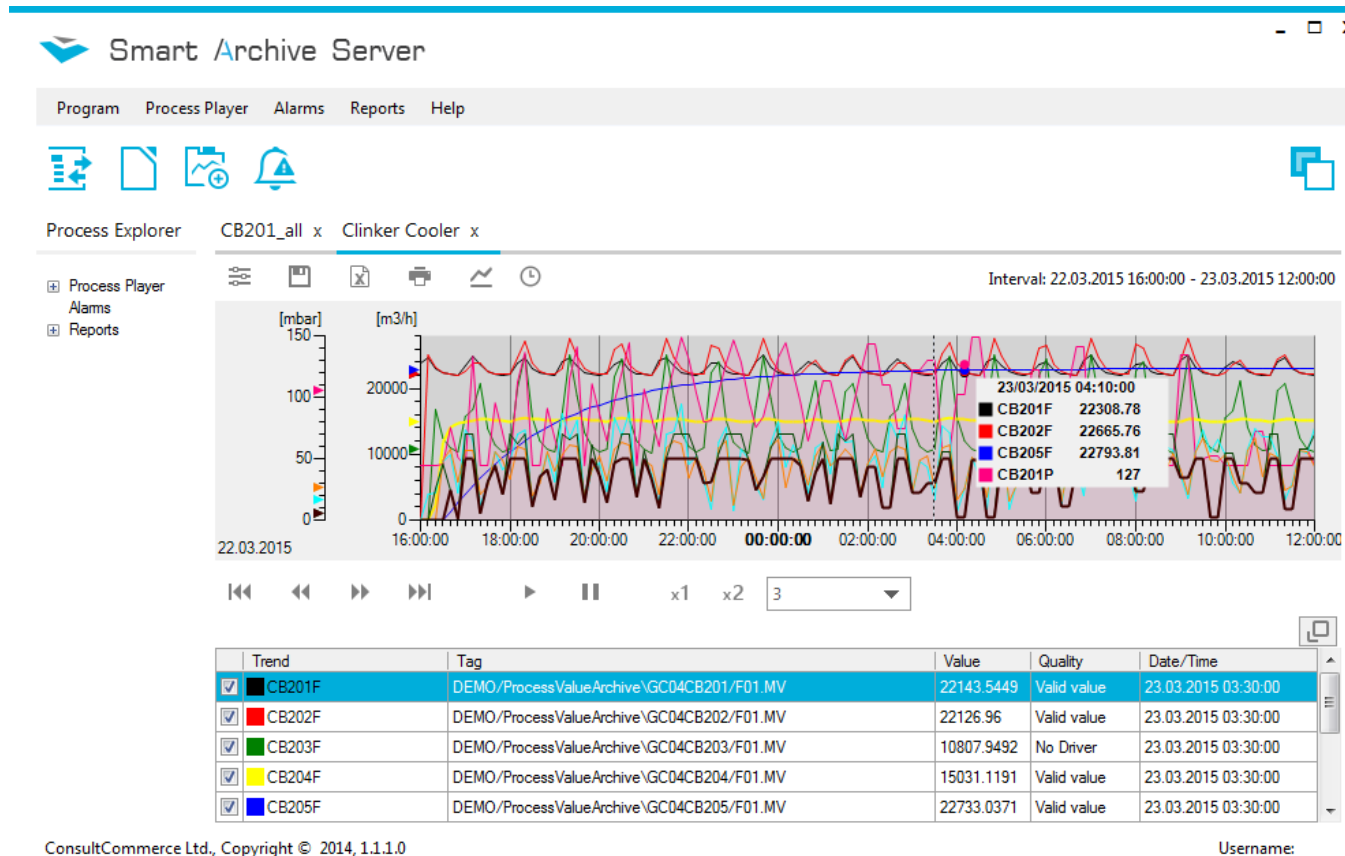
**MULTI-CHART**

**ZOOM-DRAG**

**RULER**

**PLAYBACK**

**MOUSE POINT  
VALUE**



## DATA SOURCES

**PERIOD**

## FILTER BY

## CLASS

## AREA

**SOURCE**

## EVENT

## INFO TEXT

## EXCEL EXPORT

## ON-LINE/OFF-LINE

[illegible]

## FACILITY

## FREQUENCY OF OCCURRENCE

**DURATION**  
**OUT OF LIMITS**  
**OPERATOR**  
**RESPONSE**

Smart Archive Server

Program Process Player Alarms Reports Help

Process Explorer CB201\_all x Clinker Cooler x Alarms x

Process Player  
Alarms  
Reports

Channels & Interval  
DBS2291 From 27.03.2015 17:25:04 To 28.03.2015 17:25:04 24h 7d

Classes  
☐ Error  
☐ Operator Input Message  
☐ OS process control system messages  
☐ PLC process control messages  
☐ Preventive maintenance  
☐ Request for Operator Input  
☐ Status Message  
☐ System, must be acknowledged  
☐ System, need not be acknowledged  
☐ System.requiresacknowledgment  
☐ System.withoutacknowledgment  
☐ Warning

Areas Source Event Info Text Read

All Areas

Alarms (98405) Statistics (50)

| Class   | Area  | Source        | Event               | Frequency | Duration    |
|---------|-------|---------------|---------------------|-----------|-------------|
|         | IAU 4 | GC04CB202/P01 | HH Limit 72.00 mbar | 681       | 03h 40m 41s |
|         | IAU 4 | GC04CB202/P01 | HH Limit 72.00 mbar | 681       | 23h 31m 22s |
| Warning | IAU 4 | GC04CB202/P01 | HH Limit 72.00 mbar | 681       | 23h 53m 14s |

Close

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## REPORT SELECTION

## PERIOD PREDEFINED

## STEP

## RESOLUTION

## EXCEL EXPORT

## ON-LINE/OFF-LINE USE YOUR SYSTEM EVEN IF YOU HAVE NO ACCESS TO THE SERVER


Smart Archive Server

Program
Process Player
Alarms
Reports
Help






Process Explorer
CB201\_all x
Clinker Cooler x
CCO4 Energy Report x

Process Player
Alarms
Reports

### ENERGY DEMO REPORT

From

To

Step

Period

27.03.2015 21:00:00

28.03.2015 21:00:00

24h

7d

1

Hour

Generate

| Time                | GC04610/CNT02.RT | GC04CB201/CNT01. | GC04CB202/CNT01. | GC04FN101/CNT01. | GC04610/CNT01.RT | SUM(All Tags)           |
|---------------------|------------------|------------------|------------------|------------------|------------------|-------------------------|
|                     | MILL MOTOR       | CRUSHER          | ID FAN           | PRIMARY FAN      | CONVEYOR         | SUM of all inserted ... |
|                     | [kWh]            | [kWh]            | [kWh]            | [kWh]            | [kWh]            | Add Dimension           |
| 28.03.2015 18:00:00 | 340              | 3600             | 36000            | 540              | 180000           | 220480                  |
| 28.03.2015 19:00:00 | 340              | 3601             | 36010            | 540.15625        | 180000           | 220491.156              |
| 28.03.2015 20:00:00 | 320              | 3599             | 35990            | 539.84375        | 180000           | 220448.844              |
| 28.03.2015 21:00:00 | 180              | 1799             | 17990            | 269.859375       | 90000            | 110238.859              |
| SUM                 | 8390             | 84599            | 845990           | 12689.86         | 4230000          | 5181669                 |

Created on:

28.03.2015 21:11:43

Created by:

ozkan

Close

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Username:

**NEW / CLONE**

**FAST FILTER**

**DRAG'N'DROP**

**PRE-PROCESSING**

**PREDEFINED  
MATHEMATICAL  
OPERATIONS**

**CUSTOM FORMULA**

**PUBLIC**

**SHARE FOR OTHER  
USERS USAGE**

## Report

Details

Name

CCO4 Energy Report

☒ Public

Tags

Filter

Tags

| Name              | Archive Group Name               | Description                           |
|-------------------|----------------------------------|---------------------------------------|
| 215HO13/YW01.MV   | Iva Test Do Not Delete           | Iron Hopper Weight Measure            |
| 215HO13/YW01.MV   | Iva Shift + 1 Test Do Not Delete | Iron Hopper Weight Measure            |
| 215HO13/YW01.MV   | Iva Shift - 1 Test Do Not Delete | Iron Hopper Weight Measure            |
| 215QR01/YI01.MV   | Iva Test Do Not Delete           | Reclaimer Conveyor Motor Current M... |
| 215QR01/YI01.MV   | Iva Shift + 1 Test Do Not Delete |                                       |
| 215QR01/YI01.MV   | Iva Shift - 1 Test Do Not Delete |                                       |
| 216AW33/R01.PV IN | Archive Group 1                  |                                       |

Insert

Formulas

Predifined:

☐ Sum All Tags
 ☐ Average All Tags

Custom:

☒ Custom Formula

Report

Title

ENERGY DEMO REPORT

Columns

| T1                                             | T2                                             | T3                                             | T4                                            |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|-----------------------------------------------|
| GC04610/CNT0...                                | GC04CB201/CN...                                | GC04CB202/CN...                                | GC04FN101/C                                   |
| MILL MOTOR                                     | CRUSHER                                        | ID FAN                                         | PRIMARY FAI                                   |
| [kWh]                                          | [kWh]                                          | [kWh]                                          | [kWh]                                         |
| Difference                                     | Difference                                     | Difference                                     | Difference                                    |
| <input type="checkbox"/> Smart Rounding        | <input type="checkbox"/> Smart Rounding        | <input type="checkbox"/> Smart Rounding        | <input type="checkbox"/> Smart Rou            |
| <input checked="" type="checkbox"/> SUM Column | <input checked="" type="checkbox"/> SUM Column | <input checked="" type="checkbox"/> SUM Column | <input checked="" type="checkbox"/> SUM Colou |

## Formula

( 216AW33/R01.QLMN\_HLM + 216AW33/R01.QLMN\_LLM ) / 3

Name

216AW33/R01.QLMN\_HLM  
216AW33/R01.QLMN\_LLM

Back

CE

(

)

7

8

9

\*

4

5

6

/

1

2

3

+

0

.

-

Save

Cancel

## SNAPSHOT

Value at exact time

## MINIMUM

## MAXIMUM

## AVERAGE

Value for the period

## DIFFERENCE

Between end and beginning of the period – counter usage

## SUM

All values of the period

### Report

Name
Energy daily report
Public

Filter
kwh

Name
Archive Group Name
Description

|              |        |                        |
|--------------|--------|------------------------|
| RND1/M02.KWh | RND100 | Crusher 1 Main motor 2 |
| RND1/M03.KWh | RND100 | Crusher 1 Main motor 1 |
| RND1/M04.KWh | RND100 | Crusher 1 Main motor 1 |
| RND1/M05.KWh | RND100 | Crusher 1 Main motor 1 |
| RND1/M06.KWh | RND100 | Crusher 1 Main motor 1 |
| RND1/M07.KWh | RND100 | Crusher 1 Main motor 1 |
| RND1/M08.KWh | RND100 | Crusher 1 Main motor 1 |

Insert

Predefined
☒ Sum All Tags
☐ Average All Tags

Custom
☐ Custom Formula

Insert

Title
Energy daily report

Columns

| T1                  | T2                  | T3                  | T4                  | T5                  | T6                  | T7                  | T8                  |   |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|
| 210CR01/M01.K...    | 210CR01/M02.K...    | RND1/M01.KWh        | RND1/M02.KWh        | RND1/M03.KWh        | RND1/M04.KWh        | RND1/M05.KWh        | RND1/M06.KWh        | F |
| Crusher 1 Main m... | Crusher 1 Main m... | Crusher 1 Main m... | Crusher 1 Main m... | Crusher 1 Main m... | Crusher 1 Main m... | Crusher 1 Main m... | Crusher 1 Main m... | C |
| kWh                 | kWh                 | kWh                 | kWh                 | kWh                 | kWh                 | kWh                 | kWh                 | k |
| Snapshot            | Snapshot            | Snapshot            | Snapshot            | Snapshot            | Snapshot            | Snapshot            | Snapshot            | S |
| Smart rounding      | Smart rounding      | Smart rounding      | Smart rounding      | Smart rounding      | Smart rounding      | Smart rounding      | Smart rounding      |   |
| SUM column          | SUM column          | SUM column          | SUM column          | SUM column          | SUM column          | SUM column          | SUM column          |   |

Snapshot
Min
Max
Average
Difference
Sum

Save

Cancel

**CLASSES**

Process/production  
Mechanical  
Electrical and process automation  
Saturation  
Planned maintenance  
Custom defined

**FACILITY**

Custom defined in «Plant structure»  
Failure reason (operator input)  
Duration – manual/automatic countdown

**REPORTS**

Sort by various criteria  
Automatic duration calculation by CLASS and/or FACILITY  
Mean time between failures calculation by CLASS or FACILITY  
Indispensable plant production and maintenance tool

**DATA INPUT**

WinCC OCX | .NET control  
Stand alone application



## Process Explorer

- Process Player
- Alarms
- Reports
- Downtime Analyzer
  - report 1 - Chronological - No Grouping
  - report 2 - Chronological - Grouping by Facility
  - report 3 - Chronological - Grouping by Class
  - report 4 - Chronological - Grouping by Facility - by Class
  - report 5 - Chronological - Grouping by Class - by Facility
  - report 6 - Statistical - Grouping by Facility
  - report 7 - Statistical - Grouping by Class
- RT View

## report 2 - Chronological - Grouping by Facility x



## report 2 - Chronological - Grouping by Facility

From 18.05.2015 21:00:00 To 09.02.2016 16:00:00 24h 3d 7d Generate

### Facility One

| Stoppage ID | Class               | Description  | Stoppage Begin      | Stoppage End        | Duration |
|-------------|---------------------|--------------|---------------------|---------------------|----------|
| 42          | Something Else      | EDITED       | 19.05.2015 11:18:18 | 19.05.2015 11:43:23 | 25m 05s  |
| 44          | Electrical          | Test1        | 27.05.2015 22:26:37 | 28.05.2015 22:26:42 | 1d 05s   |
| 46          | Process             | weee++       | 12.06.2015 16:48:05 | 12.06.2015 16:50:07 | 02m 02s  |
| 47          | Something Else      | wtf??+       | 12.06.2015 16:50:50 | 12.06.2015 16:51:18 | 28s      |
| 48          | Planned Maintenance | pps          | 12.06.2015 17:20:09 | 12.06.2015 17:20:14 | 05s      |
| 49          | Process             | efdeswtfgdsx | 12.06.2015 17:20:27 | 12.06.2015 17:20:34 | 07s      |

Total Stoppages: 6 | Total Duration: 1d 27m 52s

### Second Facility

| Stoppage ID | Class      | Description     | Stoppage Begin      | Stoppage End        | Duration         |
|-------------|------------|-----------------|---------------------|---------------------|------------------|
| 40          | Electrical | electrical stop | 18.05.2015 17:22:00 | 20.05.2015 09:12:50 | 1d 15h 50m 50s   |
| 45          | Electrical | 1112            | 29.05.2015 23:13:45 | 09.02.2016 15:11:00 | 255d 16h 57m 15s |
| 50          | Process    | 68              | 09.02.2016 15:14:40 | 09.02.2016 15:15:06 | 26s              |

Total Stoppages: 3 | Total Duration: 257d 08h 48m 31s

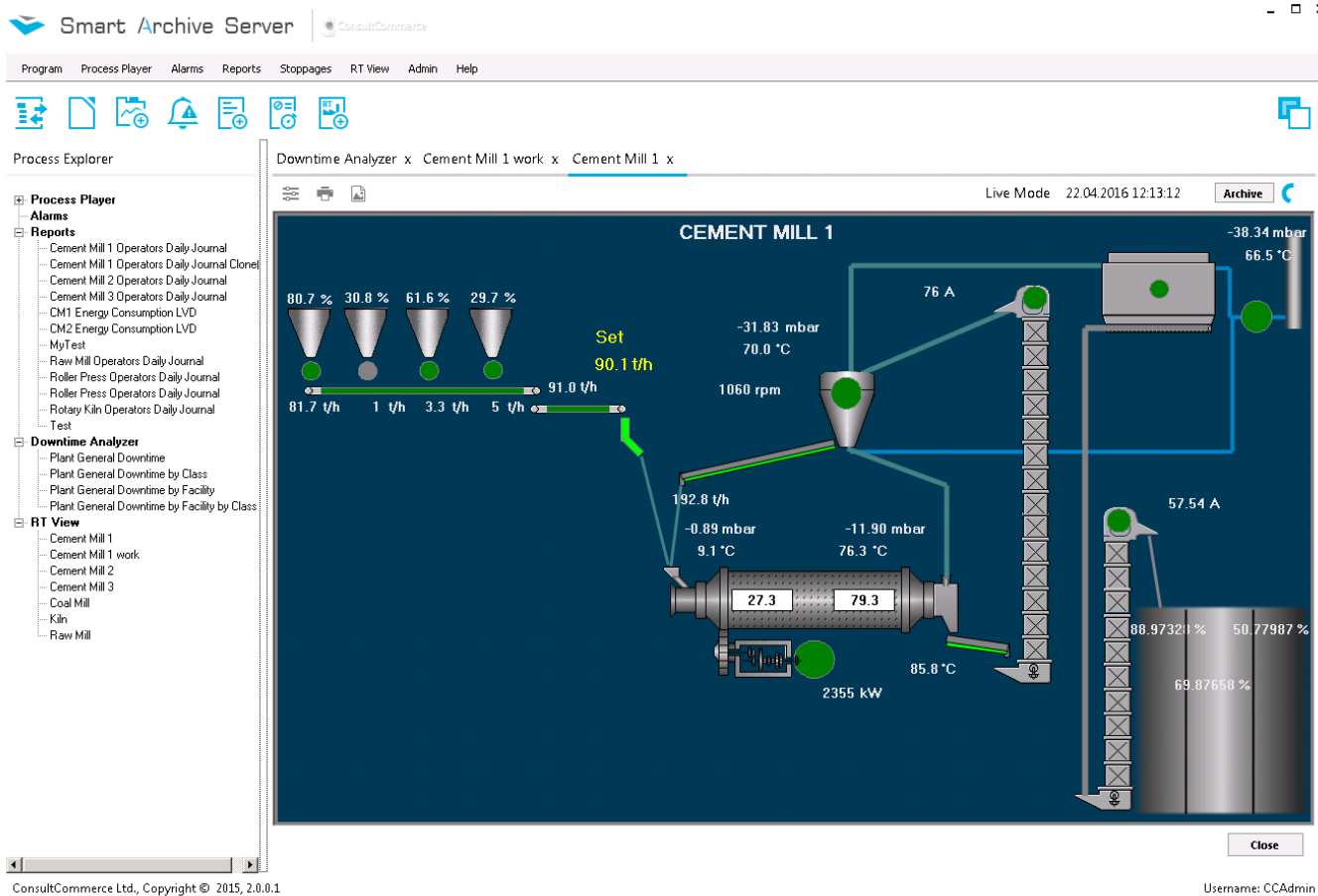
Total Stoppages: 9 | Total Duration: 258d 09h 16m 23s

Created on:  
21.04.2016 21:30:22

Created by:  
CCAdmin

## REAL-TIME PROCESS VISUALIZATION

ANYWHERE  
UNLIMITED USERS



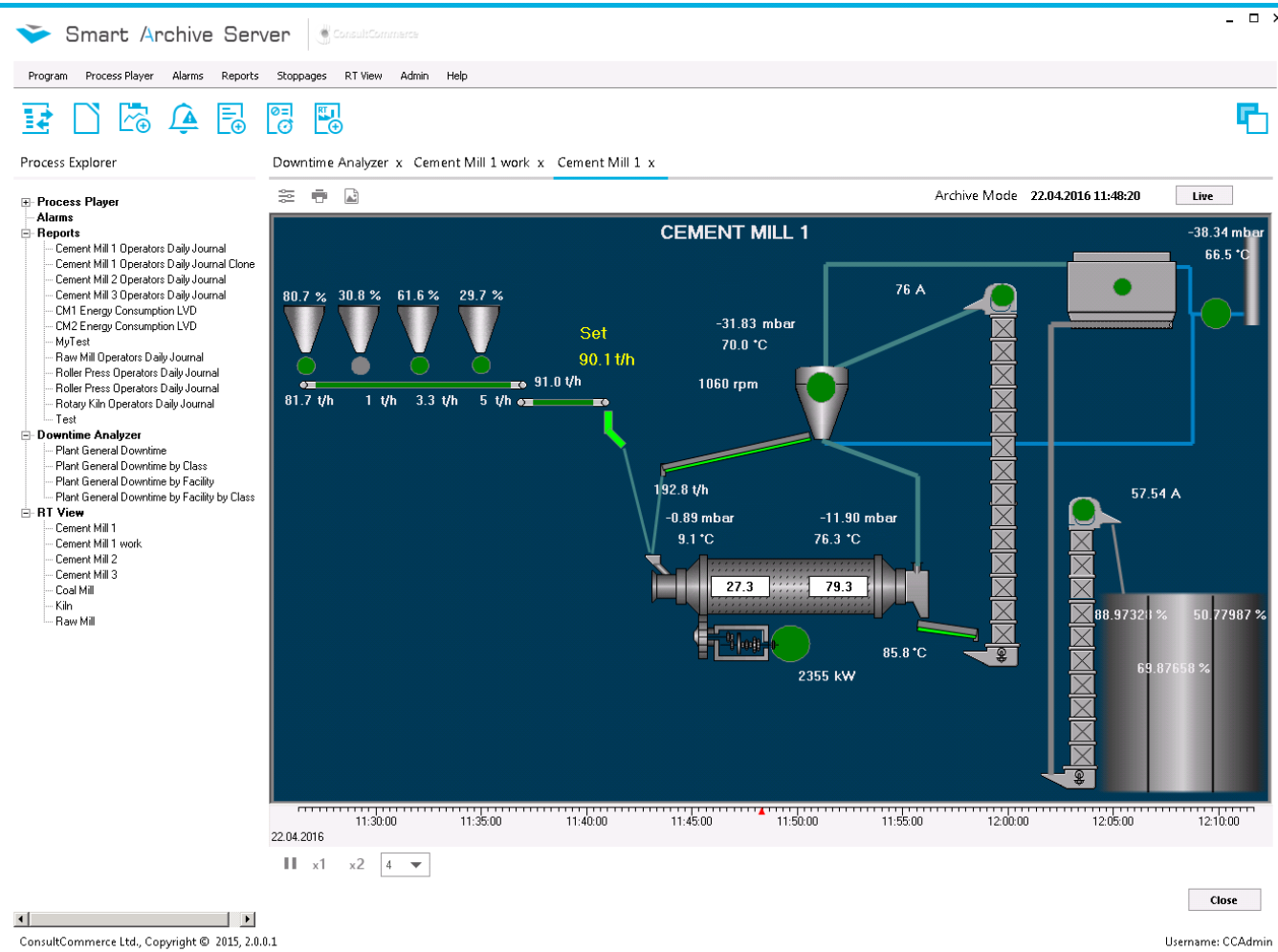
**HISTORICAL  
PAYBACK PROCESS  
VISUALIZATION**

**UNLIMITED BACK  
PERIOD**

**PLAY WITH  
DIFFERENT SPEED**

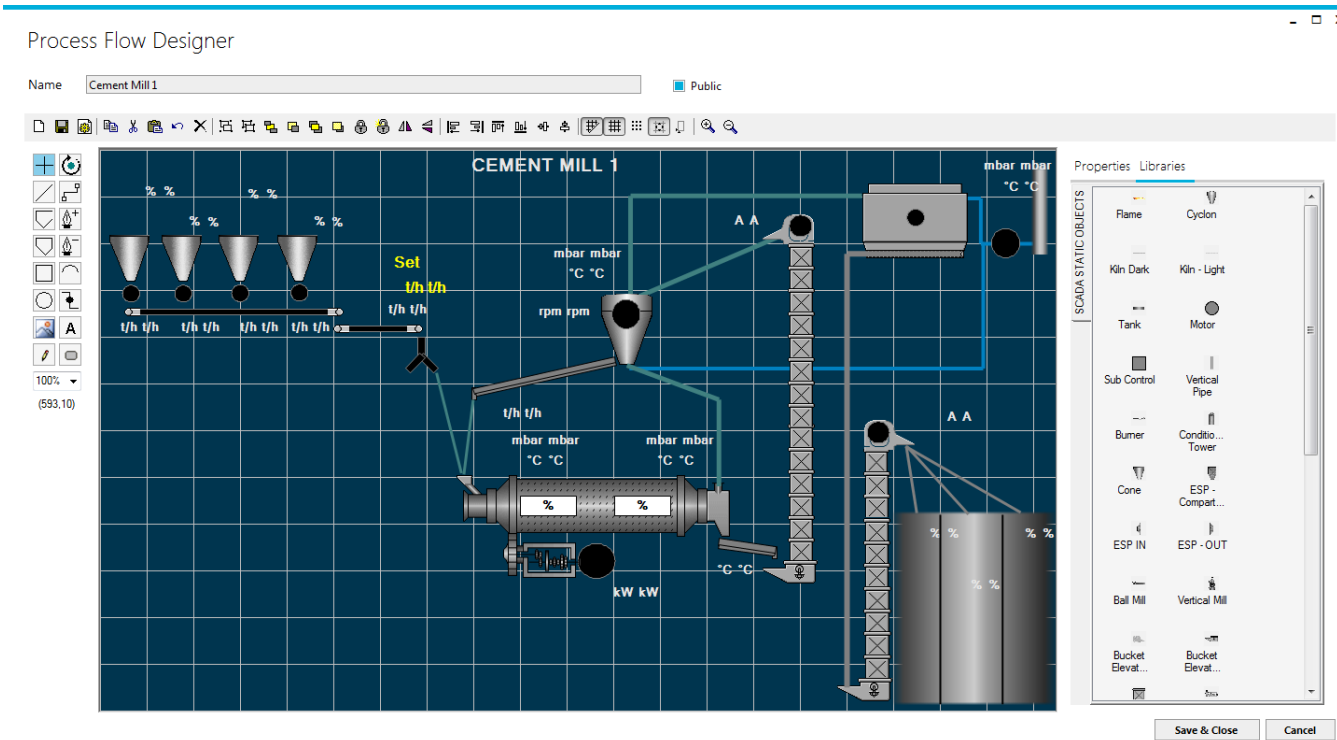
**EXPORT TO  
GRAPHICAL FILES**

**PRINT**



## PROCESS FLOW DESIGNER

CREATE ONW  
DESIGNS AND SHARE  
FOR USAGE BY  
OTHER USERS



## ERP/Connectivity

Automatic data exchange

Two directional data exchange (ERP ↔ S.A.S.)

WEB/API based

SQL based

## SMART TOOLS

Online/Offline data analyzer

Potential problem automatic notification



**goM!**

**Expand to mobile devices (IPAD, tablets smart phones)**  
**Emphasis on management and decision making features (KPI)**  
**Real time KPI development**

## **ADVANCED REPORT GENERATOR PACK**

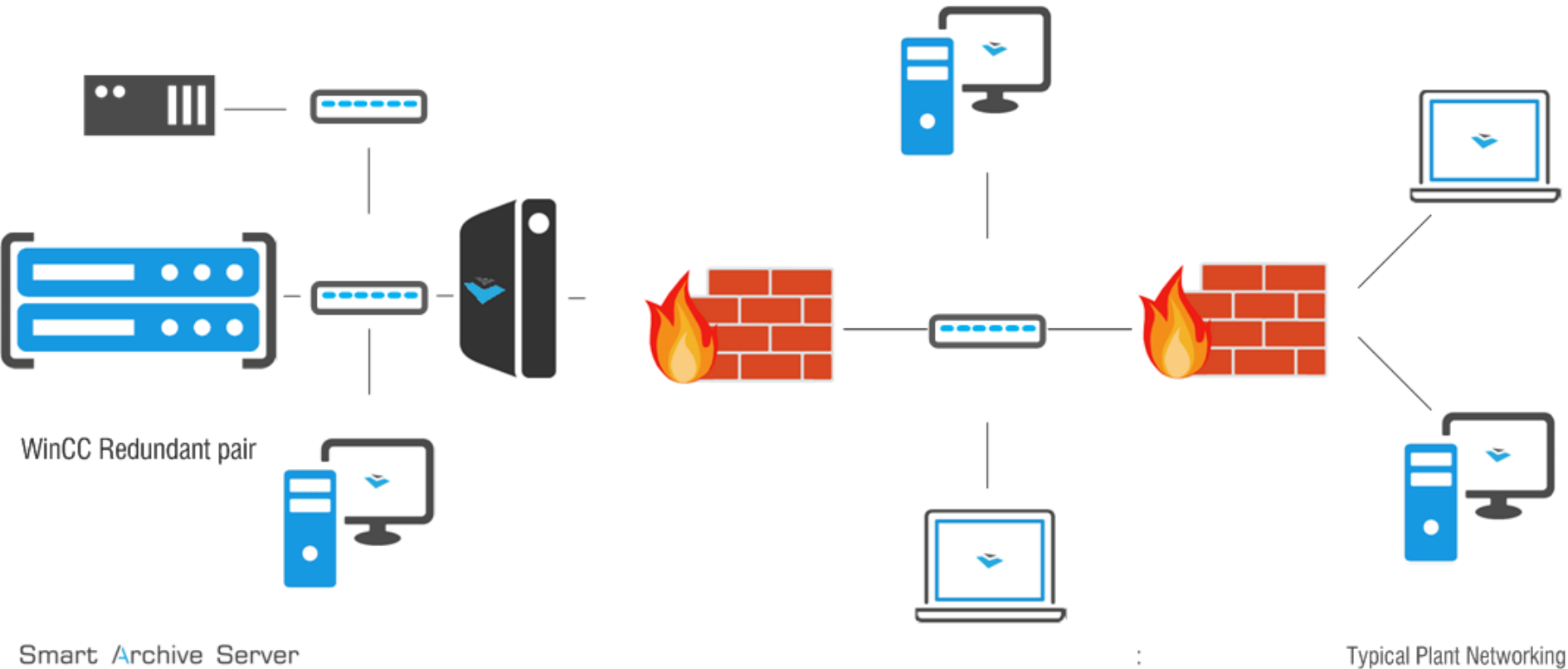
**KPI Builder**  
**Complex reports– tables | trends | text**  
**Operators journals**  
**Custom design**



Plant Automation network

Plant IT (office) network

Internet



## **ADVANTAGES COMPARE TO OTHER SIMILAR SYSTEMS**

**Easy to work with**

**Innovative functionality**

**NO LIMITS!!!**

**Automation systems version independence**

**Safe network access**

**Continuously improving**

**Unique chance client to be part of product improving process**

**Entirely practical oriented**

**2 years warranty with free functionality updates**

**Reliable support**

**After warranty support**



THANK YOU FOR  
YOUR ATTENTION!



# Smart Archive Server

ALL DATA TOGETHER



Msc. Eng. Dimitar Dyulgerski  
Operations Manager