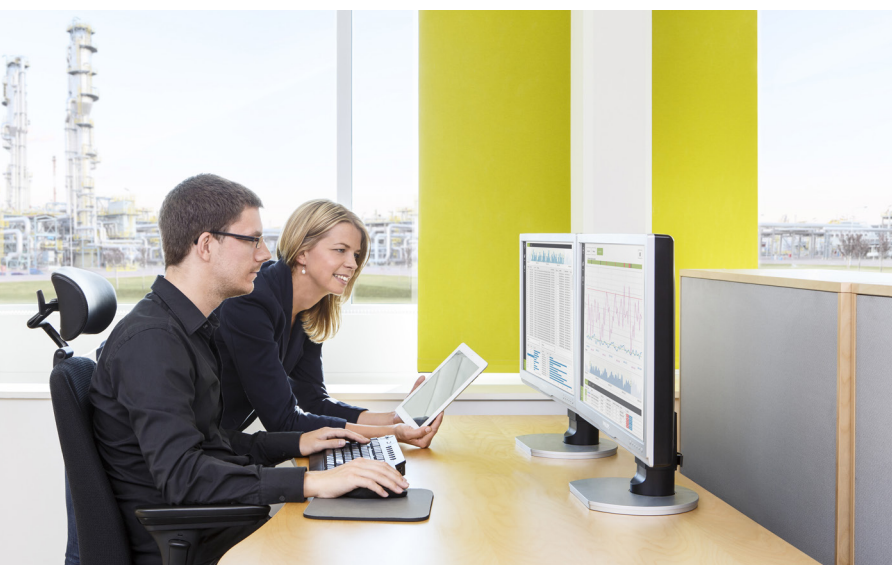# ABB Ability™ Manufacturing Operations Management
Excel Analyze Application

An ABB Ability Manufacturing Operations Management (MOM) system collects a large amount of process and production data. This data is essential to keep track of the process and plant performance. The Manufacturing Operations Management Excel Analyze Application simply puts MOM data into Microsoft Excel.

Microsoft® Excel® is the tool of choice for many process engineers to work with this process and production data. Microsoft Excel is typically used for creating reports, perform calculations and analyzing process data. The Excel Analyze Application provides tailor-made Microsoft Excel functions to fast and easy access process and production data in a well-known spreadsheet format. It allows users to take full advantage of the Excel calculations and analysis capabilities.

The Solution
The Excel Analyze Application is an add-in to Microsoft Excel. The add-in provides a secure connection from the MOM server to the Microsoft Excel client. The functions in the add-in give users access to any MOM data such as time-series data and events from MOM History or any report data available as report data sources. This means all data available in MOM Reporting can also be retrieved into Microsoft Excel.

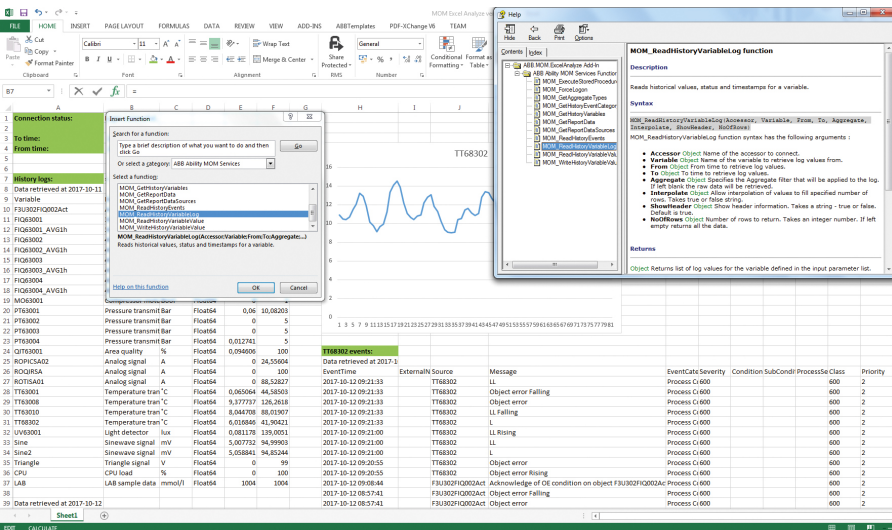The add-in includes not only read functions but also write functions. This means Microsoft Excel also can be used to enter data into the system. The standard MOM access rights are also applied inside Microsoft Excel, e.g. single or double authentication can be applied when using a write function to write data to the system.

The Excel Analyze Application is easy to get started with by using your existing Microsoft Excel knowledge.

Key Benefits of the Excel Analyze Application
The Excel Analyze Application supports users with:
- A secure connection between MOM server and Microsoft Excel
- Predefined tailor-made Microsoft Excel functions to access all MOM Data Storage data
- Predefined tailor-made Microsoft Excel functions to access all MOM Report data sources
- Take advantage of all capabilities in the well-known spreadsheet format
- Microsoft Excel based reporting

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01

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01 Excel spreadsheet with
time series and event data

How does it work?
The Microsoft Excel add-in is available to install using the click-once installation. The Excel Analyze user-defined functions included in the add-in are divided into two categories:

1. Read/write functions towards MOM History accessor (typical access to process data such as time-series data and events)
2. Execute stored procedures towards SQL Server accessor
3. Report functions to access MOM Reporting report data sources. These functions enable access to any Application specific report data source, i.e. any application report data can be retrieved in Microsoft Excel and MOM Reporting.

The Excel Analyze functions are easy to use and well documented in an online help file directly accessible from the standard Microsoft Excel function arguments dialog.

The Excel functions inherit the access rights defined by the accessor on MOM server side. This means that the Excel Analyze add-in has the same access rights as all other apps. A typical example is if the current access rights configuration in History accessor requires a double authentication for a write command. This will also apply in Microsoft Excel when using a write function such as MOM_WriteVariableValue.

Pre-requisites
Excel Analyze is a native application within ABB Ability™ Manufacturing Operations Management (MOM). Its common services and four modules, User Experience (UX), Reporting, Connectivity and Data Storage ABB Ability Manufacturing Operations Management, is an ISA-95 Level 3 plant data access and information system that ties any plant data from disparate data sources into one single information infrastructure. It is also a platform that hosts different industrial productivity software applications, MOM Applications. This enables MOM users to easily expand and add relevant industrial software applications as requirements or business objectives change.

Excel functions available

Excel functions available
MOM_ExecuteStoredProcedure
MOM_ForceLogon
MOM_GetAggregateTypes
MOM_GetHistoryEventCategoryInfo
MOM_GetHistoryVariables
MOM_GetReportData
MOM_GetReportDataSources
MOM_ReadHistoryEvents
MOM_ReadHistoryVariableLog
MOM_ReadHistoryVariableValue
MOM_WriteHistoryVariableValue

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