

activplant Integration Toolkit



Activplant Integration Toolkit—your data wherever you need it

ActivEssentials provides the means to retrieve as much data as you could possibly want from the automation level of your production facility. At its most basic, ActivEssentials is a remarkable tool for retrieving and contextualizing your raw manufacturing data, and giving you the tools to manage your manufacturing operations, but you could get so much more by using the Activplant Integration Toolkit (ITK).

The ITK gives you the ability to get more from your ActivEssentials data. This data could contain vital intelligence about your manufacturing operations, data from which you could retrieve far greater value if exposed in the right way. The ITK is a set of tools that opens up your ActivEssentials database to intelligence harvesting.

So what does the ITK do?

In a primary sense, you need high quality reporting from a Business Intelligence for Manufacturing Operations solution, which ActivEssentials does well with a series of configurable, out-of-the-box reports that fit most manufacturing enterprises. However, your organization could need more than a generic set of reports; you could need reports that fit your specific needs. With the ITK, you can easily build custom reports to retrieve the precise manufacturing data you need.

However, the ITK is not just about custom reporting; its greatest purpose is in being able to retrieve contextualized ActivEssentials data and integrate it with the third-party applications that you use to manage your business. The ITK can produce data sets that comply with standards-based methods, which you can then use for the presentation of ActivEssentials data in, for example, MES, ERP, and BI applications. By combining ActivEssentials data with that from other aspects of your business, you gain greater insight into the overall performance of your operations.

Where could you use your ActivEssentials data?

The data you collect with ActivEssentials lies at the heart of your supply chain, on your production lines, as it is here that you make a considerable investment in the flow of your value stream. A manufacturing enterprise could use several systems to manage its operation, each with its own value proposition. You might use a combination of any of the following:

- ❖ **Business Intelligence (BI).** You might use a BI system to bring all of the



Knowing where you are going

As a manufacturer, the data you collect from your plant floor comes from the heart of your business. You spend time researching your market to understand what your customers need, but now you have to make it, and make it in the most efficient way.

Today, in an open world-market, manufacturers face more competition than they have ever faced before, so you need tools that give you a competitive edge. The Activplant Integration Toolkit, backed by the power and versatility of the ActivEssentials platform, provides you with more insight into your manufacturing operations than you could have ever have imagined.

With the ITK, your plant floor data becomes a tool to drive efficiency. And with the ability to expose this data to the third-party systems you use to run your business, your business becomes more intelligent.



knowledge about the company's operations into one application, where you can then aggregate manufacturing with other operational data in order to make strategic decisions about your company's future. The ITK can provide data for Balanced Scorecards and Strategy Maps, and extract aggregated data for use in your data warehouse.

- ❖ **Enterprise Resource Planning (ERP).** You might use an ERP application to evaluate what resources you need to perform the day-to-day operations of the company, where you can use manufacturing data to adjust inventory levels. The ITK can provide detailed information such as shift productivity, and parts produced versus rejects.
- ❖ **Manufacturing Execution System (MES).** You might use an MES application to oversee your production processes, where you can use the ActivEssentials data to reveal the operational performance of every piece of equipment on your lines. The ITK can provide plant floor automation data to provide more depth to your understanding of the factors governing output quality.
- ❖ **Supply Chain Management (SCM).** You might use an SCM application to oversee the ordering and processing of your materials into your final products, where you could use the operational data from your lines to understand events that lead to shipping delays. The ITK can expose cycle times, produce track and trace reports, and generally provide productivity analysis.
- ❖ **Statistical Process Control (SPC).** You might use an SPC application to analyze output quality, where manufacturing data at the asset level is important to understanding statistical variation. The ITK can expose myriad details about the performance of every piece of equipment on your line, and present it in the context you need.

In each instance, the Activplant ITK can play a role in extracting just the ActivEssentials data you need. The ITK provides a cost effective solution to retrieving ActivEssentials data, whether it be for custom reporting needs, or for integration with third-party systems.

Cost-effective solution

The tools that you use in the ITK expose the ActivEssentials data in an easily accessible way; typically, there's no need to develop special applications, which can require extensive development time and cost, to retrieve what you need. The ITK provides four levels of support to fit the skill sets available in your organization.

SSIS integration. The ITK includes an SSIS Data Flow extension that enables DBAs to work in SQL Server Business Intelligence Design Studio to develop custom queries of the ActivEssentials database. These users do not need to create stored procedures; they just need to use the tools in the BIDS working environment to create SSIS packages that can retrieve ActivEssentials data in the same way that they can from other data sources.

SSRS reporting. The ITK includes a data extension to our query service that enables you to create powerful queries of the ActivEssentials database through the SQL Server Business Intelligence Design Studio or through the Activplant



Staying on target

To run an efficient manufacturing operation, you need information you know you can trust; information you know is going to help you achieve your goals.

With the ITK, you can develop reports that directly reference your plant floor data, and in an easy to implement way, use aggregations of this data in whatever way you need.

Used in this way, your data gains greater relevance as it up to date and ready to use.



Query Builder. In both instances, users can develop queries using simple drag and drop techniques.

.NET development. The ITK includes a .NET data provider that opens up access to the ActivEssentials database through the Activplant Query Service. For instances where you need to use third-party applications that are compatible with Microsoft technologies, .NET developers can create custom applications that can access the ActivEssentials database.

Web Services. The ITK also offers a standards-based Web Services interface to the ActivEssentials database for applications that are not compatible with .NET technologies. This method enables developers to create applications in a variety of languages and still be able to make requests for data.

Upgrades to your systems won't break anything

Because the ITK exposes the ActivEssentials data in a standards-based way, any interaction with third-party systems remains assured. This means that as your third-party software providers update and improve their software, you are not locking yourself into using older versions in order to maintain communications with ActivEssentials; your existing queries continue to work as expected.

Activplant Query Builder

The Query builder allows you to develop custom queries of the ActivEssentials database, which you can then use as the basis for user requested reports.

The Activplant Query Builder presents a simple to use graphical interface into the ActivEssentials database. Users have access to your ActivEssentials configuration, where they can then define and test queries for use as standard production reports.

Query Builder users are able to use simple, drag-and-drop methods to create database queries that offer significant power and flexibility. The entire ActivEssentials configuration is available for inclusion in analytical parameters, groups, and filters. You can easily view result sets, and save queries for later use or for embedding directly in web services calls from external applications. When using Microsoft's SQL Server toolset, the Query Builder is embedded into the environment making use simple, efficient, and familiar.

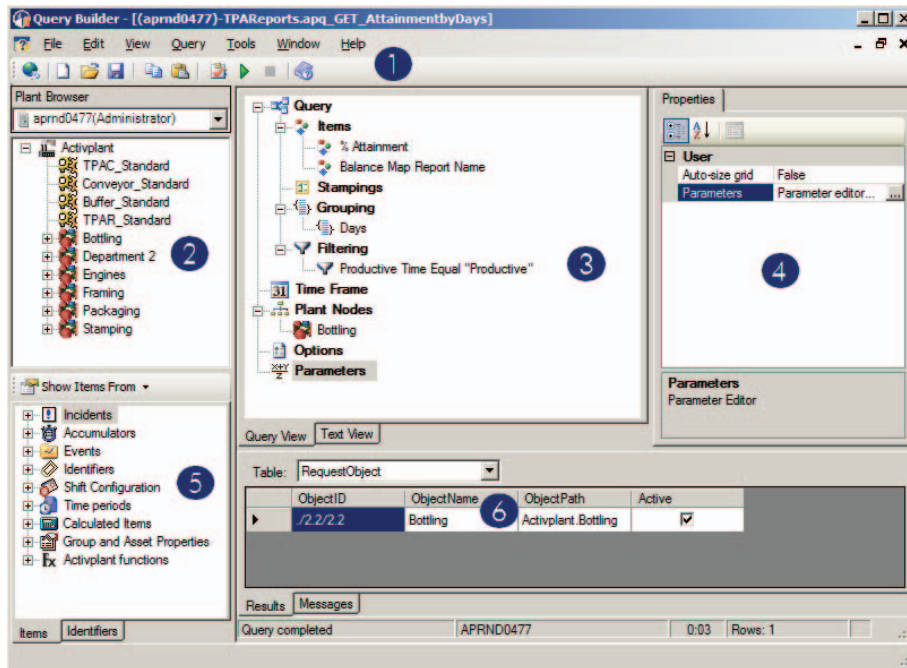
You can use the Query Builder as a standalone application, or embed it within the SQL Server Business Intelligence Design Studio. In both instances, users have access to the entire ActivEssentials configuration, so queries can draw data in the form needed to satisfy any reporting needs.



Reach for the top

The marketplace is the final arbiter in your competitive world, where factors such as price and quality rule. To truly succeed, to be at the top of your game, you need the right information at the right time

The Activplant ITK excels at retrieving just the data you need to make the right decisions. In combination with the data from other aspects of your business, you get relevant reporting that can help set your organization apart.



Activplant Query Builder

- 1 Toolbar
- 2 Plant Browser
- 3 Query Definition Pane
- 4 Properties Grid
- 5 Items and Identifiers Browser
- 6 Query Results Grid

ABOUT ACTIVPLANT

Activplant Corporation is a leader in Business Intelligence for Manufacturing Operations. Our software and expertise are setting the standard for operational excellence at some of the world's largest and most admired manufacturers. Our aim is to create world-class software that provides clarity to the management of medium- to large-scale, highly-automated, manufacturing facilities. Our software consolidates manufacturing data into relevant, real-time and historical information, which then enables manufacturers to successfully achieve productivity gains by optimizing product, people, equipment, and process. Activplant Corporation is a privately held company based in London, Ontario, Canada. For more information, please visit www.activplant.com.



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