

# Data Visualization Tools and Selection

## **Need a visualization tool for production management?**

Adding application modules to existing systems provides the capability to integrate and consolidate a presentation of real time data sources.

The ability to view and fully utilize overall organizational, operational and performance data helps to support business and operational decisions.



**EMERSON™**

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## What Emerson Can Do For Your Data Visualization?

The Data Management practice provides services for implementation and support for the best of industry Production Management visualization tools. Our consultants are experts in the following Data Visualization solutions; let Emerson help your organization leverage these tools to realize your reporting, optimization and data capture needs.

**Capstone Technology PARCView** The ParcView visualization toolset allows users to visualize production data through industry leading trending tool technologies, process graphics and dashboards. The tool-set is available via desktop and mobile platforms. The solution offering also includes Manual Data Entry functionality to easily develop data entry screens and custom applications such as operator logbooks. There is also a calculation engine to allow for complex calculations using data from any data source.

**OSIsoftPI Coresight** PI Coresight is an intuitive, web visualization tool that helps you quickly and easily analyze data enterprise wide. Support for desktop and mobile browsers and customized views for small screen devices means that you can access important process information from any device and from anywhere. PI Coresight provides secure access to PI system data and gives you new and flexible ways to interact with your data. Coresight allows users to develop rich dashboards to include trending, KPI gauges, tabular reporting and embedded HMI graphics into a single display.

**OSIsoftPI DataLink** PI DataLink provides a graphical interface to retrieve data and build functions and calculations through MS-Excel. These functions are embedded in spreadsheet cells and can provide active updates of real-time data from the PI Server. Combined with the computational, graphic, and formatting capabilities of Microsoft Excel, PI DataLink offers powerful tools for gathering, monitoring, analyzing, and reporting PI data. These excel based displays can also be templated using OSIsoft's Asset Framework tool to allow users to develop reports that can easily be re-used for all similar assets.

**OSIsoft PI ProcessBook** as the easy-to-use graphical display interface to the OSIsoft® PI System, PI ProcessBook makes it possible to efficiently display real-time and historical data residing in the PI System and other sources. PI ProcessBook can be used to create interactive graphical displays and trends that can be saved and shared with others. These displays can be templated using OSIsoft's Asset Framework tool to easily develop content that can be re-used. Operations HMI graphics can easily be replicated into this tool to minimize users on their critical control systems.

**OSIsoft PI WebParts** PI WebParts allow users to investigate real-time information—including time series, relational, and web services information—within a MS-SharePoint web-based environment. Data can be combined from different sources: real-time, maintenance systems, production planning systems, and financial systems. The flexible, configurable interface enables information workers to customize views and enables enterprises to architect security so that only the most relevant and appropriate information appears on a user's display.

**Transpara Visual KPI** Visual KPI is a web-based visualization tool that allows users to access information from any real time historian or data source. Users can create rich displays with trends, reports, heat maps and dashboards to view on desktops or any mobile device. The installation and configuration are very simple to allow users to easily create their own content.

**ECG Glance** Glance is a lightweight web-based client that runs on all modern devices without requiring add-ons. With Glance, users can house thousands of displays, view and even build displays on any modern web browser or mobile device. The intuitive interface allows users to easily navigate and maintain a collection of graphical process displays suitable for an entire fleet of industrial facilities.

**Siemens XHQ** XHQ Operations Intelligence product line aggregates, relates and presents operational and business data in real-time to improve enterprise performance. Through XHQ, you have a single coherent view of information, enabling a variety of solutions in real-time performance management and decision support. XHQ can extract data from virtually any data source and though it's a component-based model, this data is aggregated through real time views on any web browser or mobile device.

**Rockwell VantagePoint** FactoryTalk® VantagePoint EMI can give you manufacturing information when you need it, the way you want to see it to make informed decisions. Most of what manufacturers need to know about their production operations is buried in their greatest hidden asset—their manufacturing data. VantagePoint EMI is the gateway to that data and enables individuals to explore the wealth of information buried within the data. This software offers mobile access via any smartphone or tablet, and the ability to view web-based reports and KPI dashboards delivered through the software portal.

**Honeywell Operational Insight/Matrikon ProcessNet** Operational Insight is a web thin client that enables users to access virtually any data source in their enterprise and to correlate plant floor and business application data in a single location. With this data connectivity and a suite of application tools, Operational Insight can be implemented to provide process data analysis, process graphics, trending, reporting, data entry, notifications and display for applications such as alarm management, maintenance management, thermal performance, and key performance indicator (KPI) dashboards.



## Data Visualization

### Operations Management Tools

The Data Management consultants have many years' experience implementing Operations Management Systems (OMS). Properly configured and supported, the OMS system provides access to all plant key performance indicators across the organization, with low-latency access to both high frequency process data and verified daily metrics. The OMS aggregates, inter-relates and presents operational data in real-time to improve operational performance. Common names for these tool sets include:

- M.E.S. (Manufacturing Execution Systems)
- OMS (Operations Management Systems)
- Operations Intelligence Platforms

Examples:



## What is Data Visualization?

Adding application modules to existing systems providing the capability to integrate and consolidate a presentation of real time data sources. What does this give you? The ability to view and fully utilize overall organizational, operational and performance data to help support business and operational decisions.

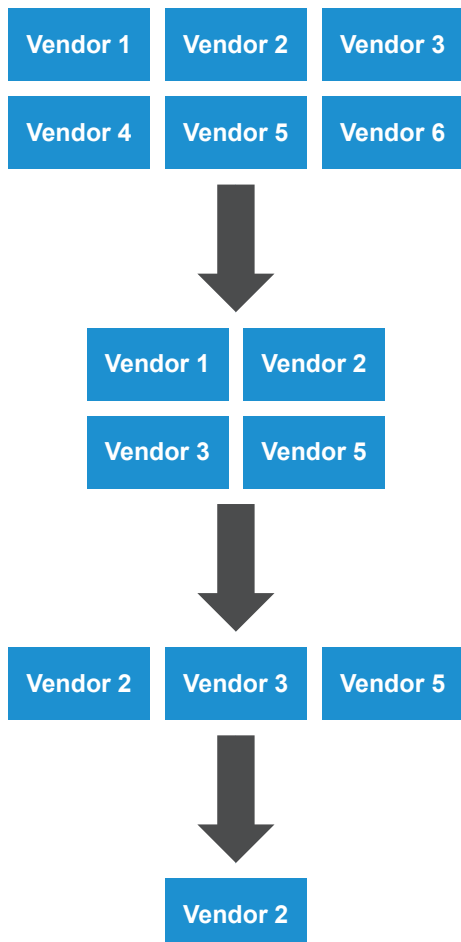
## Formal Selection Processes: Why? Necessity of the process

- The purchase decision is guaranteed to be driven by business requirements, rather than emotion-based.
- Business requirements are captured prior to meeting vendors in order to avoid contamination.
- Following a formal process, vendor pricing can be significantly reduced.
- The Data Management consultant's selection services eliminate second guessing.

## Product Evaluation

We obtain your objectives and requirements for OMS functionality, directs vendors to demonstrate their ability to meet these requirements, evaluates all data visualization vendor options using our weighted scoring matrix unique to client priorities, eliminates biases and provides you with the optimal choice.

## Selection Process Execution



### 1. Pre-Qualification:

1. iSolutions conducts a Stakeholder workshop to determine “must have” functionality and critical business processes.
2. iSolutions conduct initial market survey and initial vendor questionnaire.

### 2. Vendor Demo/Presentations:

1. iSolutions develops a ‘Scripted’ demo that each vendor is required to address in a live demo/presentation.
2. The script contains the business requirements for a typical OMS system.
3. iSolutions and Client Stakeholders view the presentations, iSolutions scores each item in the scripted demo. Scores are weighted according to clients’ requirements.

### 3. Review KT Scores/Weights:

1. iSolutions reviews scores, strengths, and weaknesses with Client Stakeholders to ensure agreement based on vendor presentations and priorities for weighting scores.

### 4. Recommendations:

1. Based on review and commercial considerations, recommend the best OMS system for Client Site.

### 5. RFQ

1. iSolutions will work with your procurement/SCM team to secure best possible price for selected product.

## KT Scoring Matrix

The Data Management consultants utilizes Kepner Tregoe decision making, a structured methodology for gathering information and prioritizing and evaluating it. In order to manage risk, we focus on critical business processes, product features and technical aspects of each solution reviewed. Our process ensures that the product chosen represents the best fit for client needs.

## Recommendations

Upon review of the completed matrix, a recommendation is made, Pricing parameters are confirmed, and approval is given to proceed to formal product procurement.

## Post Selection our consultants will:

1. Work with you to ensure best possible price
2. Generate an initial product implementation roadmap / plan
3. Work to complete product installation and proof of concept (if needed)

Contact us today to learn more about our case examples and how we can help your organization.

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