

## **Chapter 1. Executive Overview**

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There are very few instances in the world of business applications and information systems where you can look at something new and say "Wow, if I implement that we can really gain some tangible benefit to my organization..." SAP Event Management is just such an application.

Too many times we hear senior executives ask questions like "How are my processes performing against the plan?" or "Where are the issues in my processes and how many do I have?"

Companies need to improve productivity and one way to achieve this is by moving to a "manage by exception" operating model.

How is this accomplished? Simply put, by performing the following steps: create a plan, implement the plan, monitor the execution against the plan and manage the exceptions from that plan.

Why is this book entitled "SAP's Best Kept Secret?" Well, SAP Event Management is the answer to these questions, if you have SAP you most likely already have the software and yet you don't know about it or its benefits.

The intent of this book is to unravel this secret and make it clear to you about what it is, what it can do for you, and why it is such a valuable addition to SAP's solution landscape.

*"Management by Exception"*  
*"Bridging the gap between the Plan and the Execution of the Plan"*

## 1.1 What is SAP Event Management?

SAP Event Management (EM) manages, tracks and monitors events (both creation and update events), providing real-time visibility to process status together with alerting capabilities to all stakeholders of the process. It bridges the gap between "The Plan" and "The Execution of the Plan", providing visibility to any discrepancies between the two.

*Manages and Tracks Events across a Process*

The ability to monitor these events, in real time and in relation to their plan, enables the *management of processes by exception*. This allows an organization to manage only those processes that are not behaving according to the plan and let the remaining "normal" processes proceed with no active involvement.

### What it is...

- It tracks planned events and matches them up with actual events. It also tracks unexpected events that may occur within a process. This tracking provides visibility to the detailed activities, enabling more effective management of the overall process.
- It helps collapse the supply chain by reducing the time to action for exceptions. It accomplishes this through its tight integration with SAP Business Workflow and the SAP Alert Framework.
- It provides the ability to analyze processes through performance metrics and compliance requirements.

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- It provides companies with a set of pre-configured scenarios, called visibility processes, to help jump start a company's SAP EM implementation.

*"It allows companies to manage by exception rather than monitoring processes that are running smoothly, to be able to recognize and react to unplanned events in the supply chain, to provide a single point of access for collaborative processes, and finally to measure business partners' performance. In addition, managing supply chain risks requires taking a specific perspective on the supply chain and the involved business partners, locations and dependencies on different levels of the supply chain."*  
<sup>1</sup>(Diessner & Rosemann, 2008)

### **What it is not...**

- SAP EM is not an operational system to capture transactions or maintain master data... although it does take information from transactional systems as input.
- It is not a planning system or tool such as APO... although it constantly monitors processes and evaluates them against the plan.
- It is not a data warehouse such as SAP NetWeaver BI... although it does ultimately provide data to BI for analytical reporting needs.

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<sup>1</sup> From the Article "Supply Chain Event Management: Managing Risk by Creating Visibility" authored by Petra Diessner and Markus Rosemann. Published in "Strategies and Tactics in Supply Chain Event Management" by Springer 2008.

On its own, SAP EM is meaningless. It needs the input from your transactional systems, whether they be SAP systems or not, to be able to add value.

## 1.2 What is Supply Chain Event Management?

Supply Chain Event Management (SCEM) is defined by AMR as "an application supporting control processes for managing events within and between companies."<sup>2</sup>

This integrated software functionality supports five major business processes including the ability to *monitor* what is happening within the supply chain, *notify* the right person in case of a delay or critical event, *simulate* activities, *control* your processes, and *measure* your supply chain activities so that you can adapt your business process and make it more effective and efficient.

## 1.3 How does SAP EM relate to SCEM?

SAP EM is SAP's solution to fulfill the SCEM requirements of monitoring, notifying, simulating, controlling and measuring supply chain processes.

*Monitor -> Notify -> Simulate -> Control -> Measure*

### Monitor

- *Status management:* SAP EM assigns different status values to the different possible states for each instance of a process. E.g. Delivery Issued, Delivery Late, Delivered. By monitoring this status you can view which processes are or are not progressing according to plan.

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<sup>2</sup> AMR Research, January 2000 - <http://www.amrresearch.com>

- *User interface:* SAP EM provides a standard web interface that allows access to the SAP EM data relevant to the process. This UI is fully customizable to enable searches based on any value stored in the SAP EM database. It comes with a thorough attribute-based authorization and filter concept, allowing you to restrict access to the entitled audience.

### **Notify**

The entire management by exception concept is based on the premise that the correct people be notified immediately when an exception occurs. SAP EM uses two mechanisms to convey these exceptions to the correct user(s),

- *Alerts:* SAP's Alert Management system has been available since SAP Web AS 6.20. Although this SAP functionality is independent from SAP EM, it is designed to be tightly integrated. If your company is already utilizing the Alert Framework it's easy enough to add your alerts to the current architecture and exception process. The Alert Framework, in turn, can be used to alert the user using their alert inbox functionality (a function of SAP's Enterprise Portal) or forward it to the user via email, fax, SMS message, or page if the need is there to do so.
- *Workflow:* SAP EM is also tightly integrated with the SAP Business Workflow / Webflow functionality. You would typically use this option if a subsequent process should be initiated based on an exception. For example, if a PO acknowledgment discrepancy is detected, a workflow would be initiated where the PO and discrepancy detail would be forwarded to the responsible buyer for corrective action.

### **Simulate**

With SAP EM you have the ability to manipulate the values of events and event plans, thus allowing you to review what would happen should certain scenarios occur.

### **Control**

How do you control the various aspects of your process?

- *Expected events:* When an instance of a relevant business process is created (business object), important attributes are collected along with the milestones that we expect to accomplish throughout the normal course of the process. In the Outbound Delivery scenario, each Delivery Note that is created has an expected date/time for when it should be picked, packed, and goods issued.
- *Rule sets:* Through rule sets we are able to control the actions taken when events are received in the system. As the events arrive SAP EM analyzes them against the plan for that event and, if it deviates from the expected norm, we react accordingly by setting a new exception status and creating an alert or workflow.

### **Measure**

One of the largest benefits of SAP EM is that it provides the ability for organizations to analyze performance and answer questions like "How well did I do?" and "Where are my pain points?"

- *SAP NetWeaver BI extraction and reporting.* SAP EM is tightly integrated with SAP NetWeaver BI. Through configuration and native extracts, the data from SAP EM can be uploaded to BI where it can be presented in a usable fashion. This allows you to measure Key

Performance Indicators (KPI) and “slice and dice” data to uncover pain points or bottlenecks in your process. Without a benchmark of how well you are currently doing you will never know how successful any subsequent changes are. E.g. you realize that most of your orders are going on a credit block so you decide to run the customers through a new credit check giving them more up to date master data. After the change, you run the extraction and pull the same report and now you can compare the current value with the previous value to see what % improvement you have made.

#### **1.4 SAP EM Concepts**

Understanding SAP EM requires the understanding of some fundamental terms commonly used to describe the solution.

##### **What are the basics?**

- An *Event Handler (EH)* represents each relevant business object or instance of a process. Various data attributes (ids and parameters that describe the business object) and status values are linked to the event handler in order to describe it in its current state. An EH could be a logical object (business document) or a physical object (item serial number). E.g. an Event Handler may be a delivery line item with business object of Delivery. Attributes for the delivery may include ship to address, requested delivery date and delivery number. Status values for the delivery line could include picked, packed, delivered and late.
- *Expected events (EE)* are simply milestones in a process. EE, together with *expected measurements*, define “the plan” of what is supposed to happen to the business object during the process. In addition, SAP EM also allows you to

maintain a plan for the Event Message which is the mechanism used to tell you about the plan. It is distinctly different from the event itself. E.g. an event message could arrive, on time, at 3PM telling you that the delivery issued late at 2:30PM. The event message is in a normal status according to its plan but the event itself is in an exception status according to its plan. In addition SAP EM allows for the capturing of measurements, partners and locations against the expected event. E.g. the delivery needs to leave Warehouse A (the location) via carrier B (the partner) and should weigh 6lbs and be no more than 10 deg F (the measurements). If any of these are not true at the time of issuing from the warehouse then an exception can be captured for that expected event.

- *Actual events and measurements* are posted in SAP EM after they occur. SAP EM compares them to the plan (its corresponding EE) to uncover exceptions which it then reacts upon. This enables the all important concept of "*Manage by Exception!*"
- *Attachments*, such as digital signatures, can be posted together with the event.

### **1.5 The Components of SAP EM**

SAP EM consists of several components that encapsulate a comprehensive solution to SCEM.

#### **SAP Event Management**

SAP Event Management is installed as a component on an SAP system as described in section 1.8 on page 44. It handles the receiving, storing and processing of Event Handlers and Event Messages. It has a comprehensive rule set that is used to process inbound messages according to the design planned for.

In addition it controls the integration with workflow and the alert framework for the management of exception handling. It also manages the integration with SAP NetWeaver BI for the transmission of relevant data to BI for analytical reporting.

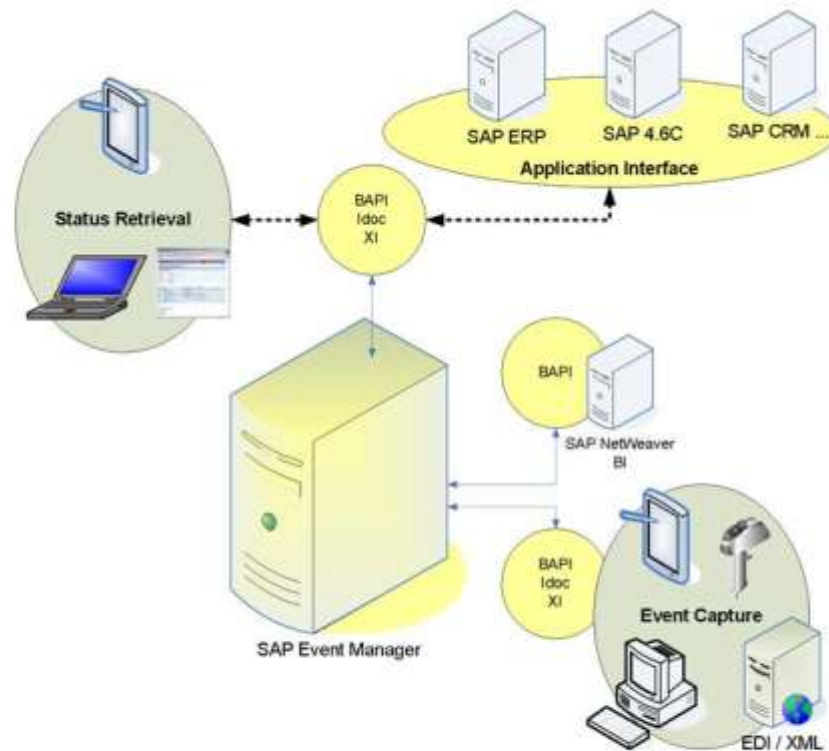


Figure 1: Application Interface - System View

### Application Interface

The Application Interface (AI) is added as a basis plug-in to SAP systems enabling them to communicate with SAP EM through configuration as opposed to coding. This implies code will not be required, which is misleading. It allows for easily

generating Application Objects, which drives the generation of Event Handlers in SAP EM.

*Note:* New custom Application Objects can be coded and then configured using the AI. It's basically a generic toolset that you can use to generate the required communication with SAP EM to get your process SAP EM enabled.

Referring to Figure 1 we will describe the various components of SAP EM.

### **User Interface**

*Event Capture:* Actual events and measurements may be captured using a user interface.

In addition to the SAPGUI transactions, which are mainly used for administrative purposes, a Web UI is available.

Furthermore, events and event handlers may also be raised using B2B mechanisms, the web, handheld devices, and more.

*Status retrieval:* A web interface is provided to allow a user to interrogate the EH data residing in SAP EM. This allows users to monitor their processes and search for instances that have a specific status *Note:* Although exceptions could be identified this way, it is a more reactive method; alerts and workflow are the proactive way of identifying exceptions.

### **SAP NetWeaver BI**

In order to provide detailed analytical capability to your process it is important to enable the integration with SAP NetWeaver BI. The extraction process to BI is all achieved through configuration with little to no code required, unless value conversions are required.

### **SAP NetWeaver PI**

SAP NetWeaver PI is an important part of your SAP EM solution if you are planning on receiving events from non-SAP systems or from external trading. SAP PI handles the conversion of the non-SAP messages into a SAP standard call to using a BAPI or IDoc. In addition, note that the Product Tracking and Authentication (PTA) visibility process enables the Object Event Repository (OER) option for an SAP EM implementation component. The PTA scenario is driven through standard SAP NetWeaver PI content delivered together with the scenario.

The OER is described in more detail in section 2.4.3 on page 66.

### **Visibility Process**

A visibility processes is SAP's way of assisting customers with their implementation of SAP EM. Visibility processes delivered in the current release include Procurement, Outbound Delivery, Purchasing and Production order malfunction.

For a complete listing of visibility processes for each release, see section 0 on page 198.

*Note:* SAP does not intend for you to use the visibility processes out the box, but rather to take them as templates and adapt them to your business needs.

It typically comprises of the following:

- *Application System configuration* - SAP provides the relevant code to a specific process that has been earmarked as a visibility process. It typically covers Application Object Type and Event Type creation including relevant IDs and parameters. E.g. the code needed to extract the Post Goods Issue message. The code needed

to create the Delivery Event Handler, against which the process is measured.

- *SAP EM Configuration* - SAP provides all relevant configuration entries to enable the visibility process on the SAP EM server. It includes Event Handler Types, event codes, parameter mapping, status profiles, rule sets and expected event profiles. In addition it provides the setup for both the classic and the standard Web UI. In certain scenarios the BI integration is provided for as well.
- *Documentation* - Two documents accompany each visibility process.

The *scenario description* describes what the visibility process covers and how to go about testing it. I.e. it provides you with a Business Process Procedure (BPP).

The second document is a *scenario configuration guide* which describes what steps need to be taken to enable this scenario in your system. Not all configurations can be delivered by SAP at the time of purchase. Some information is system specific such as with authorizations and alert management.

- SAP NetWeaver BI content - For some visibility processes the BI content is delivered for you.
- SAP NetWeaver PI content – SOA services, for the most relevant activities, are available. For the Product Tracking and Authentication scenario, when used as a SAP OER, specific SAP NetWeaver PI content is delivered to you.

## 1.6 Events

Events can be divided into two different types of events which can then be grouped into four categories.

*Actual Event vs. Planned Event*

Two types of events (refer to Figure 2):

- *Events that actually occur* (actual events). These are events that are raised by the various application systems interfacing with the SAP EM system. The events include information such as the date and time that an event was raised, the partner and location raising the event as well as any applicable measurements pertaining to the event. E.g. the material weighed in at 35lbs at Goods Receipt.
- *Events that you expect to occur* (we term these events planned / expected events or milestones). These are based on a plan of when each event in the process chain should occur, by whom, at what location and what measurements it should have. I.e. The plan is not just time based; it is also partner, location and measurement based.

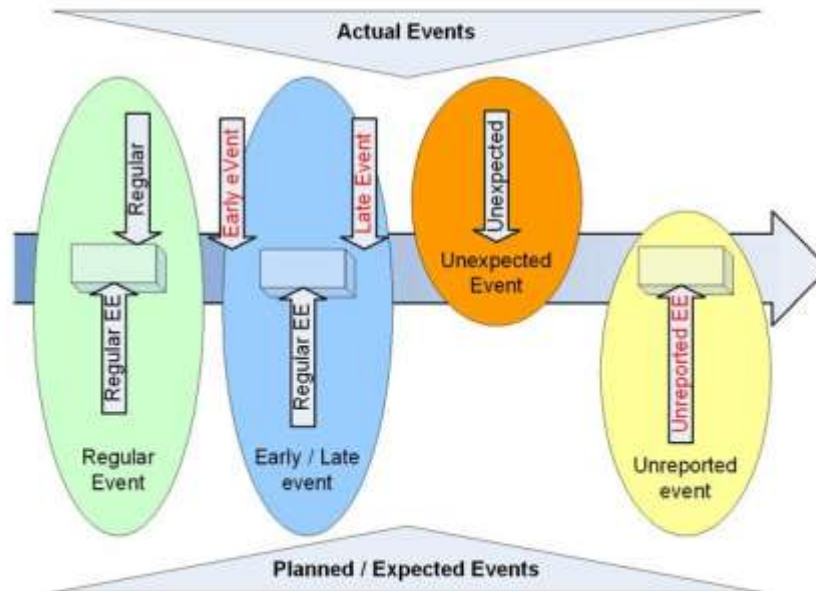


Figure 2: Types of Events

We have the need to compare these 2 event types against each other. I.e. compare what actually happened against what was planned to happen. We therefore further break down these events into 4 different categories.

*Regular vs. Early / Late vs. Unexpected vs. Unreported*

### **Regular event (The 1st oval in Figure 2)**

A regular event is an event that occurred within the planned expected time interval. The planned event has an early start date time entry and a late start date time entry. Any event received between these intervals is deemed a regular event and no exceptions are raised.

### **Early or Late event (The 2<sup>nd</sup> oval in Figure 2)**

An early event is an event that occurred before the start date time specified in the plan for that event. E.g. we planned of having Goods Receipt start at 3PM and finish at 4PM but the Goods Receipt came in at 2PM. It is therefore before the specified early start time and is thus labeled as an early event.

In most cases if a task is performed early it is not seen as an exception but in some cases it is. E.g. Customers may sometimes indicate that they do not wish delivery before 3PM as they have scheduled their warehouse staff to be there from 3PM onwards. If the delivery happens at 2PM then no one is there to receive and unload the shipment.

A late event is an event that occurred after the end date time specified in the plan for that event. In the above example, if we receive the Goods Receipt event at 5PM then it will be marked as a late event. Once again, we can choose to react to this late event as an exception or note. This is a design choice allowing you the flexibility to respond immediately to relevant exception cases.

### **Unexpected event (The 3<sup>rd</sup> oval in Figure 2)**

An unexpected event is an event that occurred but was not planned for in the normal operation of this process. E.g. a delay event, (Roadside accident) where not all processes experiences this event but there is still the need to cater for this event in the design. An unexpected event is an occurrence that may happen but is not part of the normal planned process. For some processes (e.g. RTI) it is not possible to have a plan for the event and all events in the process are treated as unexpected events.

These are typically treated as exceptions and subsequent processing is proposed and assigned to the responsible

partners for their immediate attention. The system may also take action automatically if so designed.

### **Unreported event (The last oval Figure 2)**

An unreported event is an event that was expected to happen at a certain time but never did. These events are also typically treated as exceptions where subsequent processing is proposed and assigned for immediate attention. E.g. the goods issue is late and the responsible sales rep for the order is notified that there is a potential delay in the shipment to the customer.

#### **1.6.1 Events and Event Messages**

SAP EM makes the distinction between events and event messages. The difference is subtle yet very important and very powerful.

An *event* is the recording of the actual occurrence of an event. E.g. A Post Goods Issue occurred at Warehouse A at 3PM. We have a plan for this event which is stored in SAP EM and the event is measured against this plan. E.g. the plan states that the event Post Goods Issue should happen at Warehouse A between 2PM and 4PM. In this example the event is a regular event.

An *event message* is the recording of the message detail that told SAP EM about the actual occurrence of the event. E.g. we received the Post Goods Issue event message at 5PM telling SAP EM that the Post Goods Issue event was raised at 3PM. We have a plan for the event message stating that we need to receive the event message by 4PM. In this example the event itself was on time but the event message was late by an hour.

*Event message information can differ from actual event information and may be significant*

This allows you to measure the performance of your message senders to see if there is a delay in their sending of timely information to you. This is especially handy in the area of Electronic Data Interchange (EDI) where responses are required to be sent timely to partners otherwise charge backs may be incurred.

*Note:* Attachments can accompany an event. E.g. a digital signature can be captured against the Proof of Delivery event and attached as part of the event for sending to SAP EM. SAP EM will then have a record of when the POD occurred together with the signature on file confirming it.

### **1.6.2 Components of an Event Message**

An event message is the mechanism to report an event that has occurred. It consists of several parts as described below.

#### **The Event Code**

*What* happened? E.g. Delivery was packed

#### **Tracking ID**

*What* objects are affected? E.g. Delivery 0008000000 line 000010 was packed so the tracking ID would be set as the concatenation of these 2 fields. i.e. 0008000000000010

#### **Location**

*Where* did the event occur? E.g. We expected the delivery to be packed in location 10, the warehouse in Los Angeles.

**Subsequent time adjustment**

*Are there changes* to subsequent event timings? E.g. New delivery date scheduled, or a completely different process behavior is to be expected.

**Subsequent status adjustment**

Will any *subsequent unexpected events be caused* leading to a status change? E.g. rescheduling a delivery might lead to a delayed status

**Measurement Result**

Confirmation of measurements results. E.g. the delivery was sent to warehouse A and the temperature at receipt was 32 deg.

**Reason**

A text message accompanying the event

**1.7 What are the benefits of SAP EM?**

The benefits of SAP EM are dependent on the specific challenges an organization faces. The sections below describe common challenges and how SAP EM addresses them.

**1.7.1 Current challenges in today's environment**

**Inflexible Business Model**

In today's environment, where supply chains are evolving into networks of entities, each performing their specialized tasks, having an inflexible business model leads to inefficiencies.

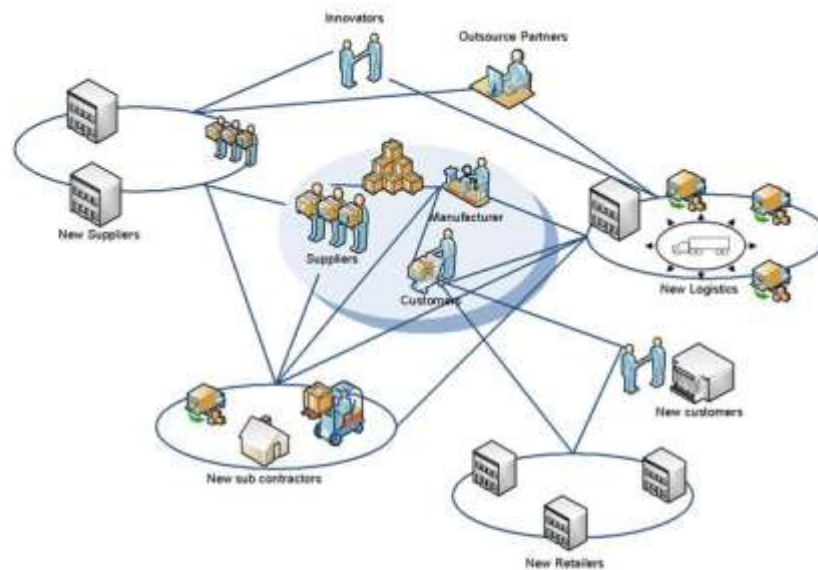
Referring to Figure 3, a typical supply chain involves many entities that perform their tasks. E.g. Supplier, Manufacturer, Logistics, etc... As time evolves, new suppliers and logistics companies come on board as well as totally new entities such

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as Innovators and Outsourcing partners. The challenge is to quickly on-board these entities and give them visibility to your supply chain network and integrate them into your supply chain processes.

*How can we quickly adapt to our changing supply chain needs?*



*Figure 3: Business Challenges*

### **Demand Driven Network**

Supply Chain Networks are *demand driven*. I.e. As demand increases, the supply chain should re-adjust to cope for that increased demand by increasing supply at all points of the network.

*How can we keep up with demand without overextending ourselves on supply?*

### **Globalization**

In today's global economy where your customer reach extends continents and your supplier and manufacturer locations are less relevant than before, it's imperative that we know how our global supply chain network is performing.

Different companies, different systems, different languages, different time zones, different legislation, and so on.

*How do we keep it all on track?*

### **Innovation**

The drive is constantly there to come up with something new, something that will drive the next revenue stream or realize the next reduction in costs. As and when these new innovative thoughts become reality, it's necessary to quickly bring them in to the supply chain in order to realize the benefits as quickly as possible.

If the innovation is a new product then time to market is critical and to achieve a short turnaround time you once again, need the help of your supply chain network to get it done.

*How do we on-board a new idea quickly and get everyone in the chain working towards a common goal?*

### **Limited Visibility to Process Status**

When your supply chain network spans several organizations you have limited visibility to your supply chain process status inside and outside of your company. I.e. you cannot see what's happening to your supply chain process as it crosses from one entity to another. This leads to implementing expensive manual process tracking and reporting capabilities to try to address this.

In addition, companies may decide to buffer their inventory to ensure delivery is achieved on time. This leads to inefficiency and bloated inventory levels.

*How is my process performing?*

### **Cycle Time**

There is the ever increasing need to collapse the supply chain. I.e. bring down the cycle time, for a process, from start to finish. In order to achieve this we need to reduce the time to action. I.e. Companies set forward the plan for the process and any deviation from the planned is immediately reacted upon as opposed to having it sit in someone's pigeon hole for a day or two, or even more commonly, simply going unnoticed until it's too late.

*How long does each process take?*

### **Customer Service**

What happens when a customer calls enquiring about the status of their order? Without the full picture of the supply chain process status we can only offer a limited out-dated response resulting in poor customer service.

Customer service is one area where your business can win long term customers and is thus seen as a critical part of the process. It goes without saying that without good customer you are heading for a short term business experience.

*Where is my product? Why is it delayed? When can I expect it to be delivered?*

### **Resource Wastage**

When your supply chain experiences an unexpected turn of events causing a delay in the delivering of goods or services at a critical point, how do you react to it?

What if this event causes resources to waste time or material at a later part of the process?

E.g. Product is meant to be shipped to our warehouse and arrive at 3PM. Resources are scheduled to be at the warehouse at 3PM to offload the material. If the goods are delayed in any way and will only be arriving the following morning, you now have a shift of warehouse workers twiddling their thumbs...

*If an exception happens in my supply chain, can I automatically adjust the resource planning to future activities?*

### **Risk mitigation**

With globalization, outsourcing, and the threat of terrorism, there is an increasing amount of regulation around the supply chain network that is meant to ensure the safety and security for each country's citizens. Companies need to show compliance at each leg of the supply chain network.

Sarbanes Oxley (SOX) and other government mandates require companies to gain more visibility in to their extended supply chain and certainly those that take it a level further and cooperatively work with their partners to manage risk will fair better against the SOX requirements.

### **Reporting**

Regulations are hard and firm these days. How can you make sure that these regulatory needs are met through your reports? In addition, with a fast moving, demand driven, global process that is constantly changing, how can you make sure that all the partners are performing? How do you ensure that bottlenecks are being addressed and load balancing is occurring?

How often do we miss our targets / expectations? How often do we experience exceptions to the rule?

### **Summary**

You will notice that there is a commonality amongst all the challenges listed above.

The first is the *ability to respond*.

Inflexible business models unable to cater for innovation, globalization and an increase in demand means that companies simply cannot respond to the challenge they are faced with. They cannot cope and end up putting greatly inefficient and expensive processes in place rendering a lot of the benefits of globalization, increased demand and innovation null and void.

The second commonality amongst the challenges is *efficiency*.

With the need to new innovations to market quickly, efficiency is key. In addition, with the drive to lower costs across the supply chain network, efficiency is key to achieving this without sacrificing quality.

*Business ability to respond quickly / adapt...  
How efficient can you make your process?  
=> lower costs and time to deliver*

### **1.7.2 Addressing these challenges**

How does SAP EM address the above challenges?

#### **Visibility**

SAP EM provides visibility across your supply chain network allowing for the capability to detect deviations in the supply and demand of goods and services.

Various types of visibility are addressed by SAP EM.

***Process visibility*** allows for an end-to-end view of the status of your supply chain process. This view can be provided to all

partners in your supply chain showing them their relevant information as and when it occurs.

*How well are we doing now? Are there any immediate issues to address? Has an event occurred requiring rescheduling or re-resourcing?*

**Asset and planning visibility** gives details of asset availability, planning and scheduling for the process to and from each of the partners.

*Where is my product? How much is going to arrive and when? Are we going to run into issues? Do we have sufficient capacity to complete the current process?*

**Reporting visibility** allows for the setting of Service level Agreements (SLA). Business related goals need to be measurable and visible to all across the process both inside and outside the boundaries of the company.

*How well are we doing overall? How is vendor A performing? What percentage of orders are delivered on time?*

### **Ability to Respond**

Through various integrated technologies within SAP EM, such as alerts and workflows, SAP EM can make the right partner aware of an action they need to perform when an exception has been encountered. The correct information which includes the planned execution time for the task is forwarded to the partner for action. E.g. A machine breaks down and the event is reported to SAP EM. SAP EM notices that this machine is currently being used in 3 processes and is coming up in another 3. It forward a workflow to the planner to tell them to assign the work orders for this machine to another machine. The 3 that are currently being worked on will be rescheduled and re-assigned. Future task deadlines will be realigned with the new schedule.

These alerts and workflows can come to the users email inbox or stay within SAP. The user interface is a key to the success of any product and SAP EM provides a simple, easy to use web interface for reporting and capturing purposes.

### **1.7.3 What value do we derive from SAP EM?**

The immediate value of SAP EM is its ability to allow you to manage your process by exception leading to improved customer service through reduced time to action and status visibility to your Customer Service Reps, as an example.

It's a solution that is immediately available to help minimize your exposure to regulatory requirements, increase visibility to your process for your network, react to exceptions, monitor the process and analyze the process in detail via the built in KPIs.

Tight integration between events and their schedules leads to proactive monitoring and less fire-fighting. There is less of a need to buffer inventory when the process is known to be efficiently and effectively monitored.

The outsourcing of non-core processes can be effectively achieved by ensuring the outsource partner complies with sending the required events through to SAP EM.

*Visibility  
Manage by Exception*

## **1.8 What is the history of SAP EM?**

### **SAP EM 4.x**

Following a few pilot implementations, SAP Event Management, as SAP's solution for the industry requirement for a Supply Chain Event Management, was first released in 2004. It was

introduced as SAP Event Management as part of the SAP SCM 4.0 solution. It came bundled with a few visibility processes including procurement, fulfilment, production malfunction, and transportation.

Release 4.1 was released and adopted at the end of 2004. It came bundled with the first RFID-enabled visibility process which was the outbound delivery process.

### **SAP EM 5.0**

2006 was the year for release 5.0 which included additional RFID enabled visibility processes which were the outbound / inbound delivery and Returnable Transport Item processes. By then SAP EM provided content for railcar management, seasonal procurement and ocean carrier booking.

### **SAP EM 5.1**

Release 5.1 was shipped in 2007. The emergence of the eSOA functionality makes its appearance for the first time. In addition the SAP EM functionality is seen as being more generally used than just within SAP SCM so additional deployment options are made available as of this release. Options for SAP ERP 6.0, SAP AII, SAP TM and SAP SNC are made available. This means that if you had these solutions then you could simply enable or configure the SAP EM functionality without having to purchase new hardware. This, of course, assumes you have the license to use the software.

### **SAP EM 7.x**

2008 saw the emergence of SAP EM 7.0 when all the modules and their names were being aligned. A major effort was applied to this release which featured a new web user interface with better usability.

## 1.9 Where can I find the SAP EM functionality?

### Deployment Options

SAP EM can be installed with the following SAP application solutions:

- SAP ERP 6.0 as an Add-On
- As a component of SAP SCM
- As an optional Add-On component to
  - SAP Transportation Management (TM)
  - SAP Auto-ID Infrastructure (AII), which then forms an SAP Object Event Repository (OER) instance
  - SAP Supply Network Collaboration (SNC)

### 1.10 Conclusion

To summarize, SAP EM is used to **monitor** your processes, **notifying** you of *exceptions*, allowing you to **adjust** your process accordingly to *gain efficiencies* and *minimize exceptions*, and finally to **analyze** you and your partner's *performance* to *learn* what's going on and take *control* of your processes.

- *Monitoring* takes place through a standard SAP EM web interface.
- *Notification* takes place through the alert framework with email, pager and fax integration or through a workflow notification.
- *Adjusting* the process takes place through workflow items, activities in SAP EM or kicking off actions in other systems.
- *Analyzing* the process allows you to measure performance in your process, and this takes place in SAP NetWeaver BI

where Key Performance Indicators (KPI) can be determined

*Gain **visibility** to your processes and act on **exceptions** against the plan to gain process efficiencies and thus drive down costs.*