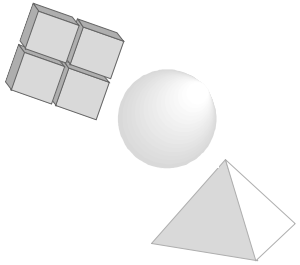

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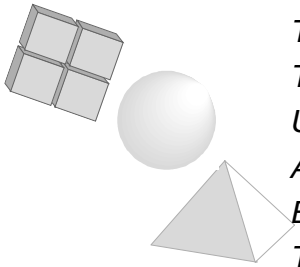
Chapter 1 Introduction



The BPA Solution
The need for BPA
UNIFACE BPA tools
Application Integration
E-commerce
The BPA process
Component Based Development

1 Introduction

The UNIFACE product line for version Eight is extended with tools to model, execute, monitor and tune the business processes. This module describes the concepts of Business Process Automation (BPA) and the usage of the UNIFACE BPA tools.

1.1 The BPA Solution

For the past decade applications have been developed to help companies to support their business. These applications were mostly developed for specific parts of the business of the company. One could think about sales, logistics and finance systems that satisfied the needs of specific units within the company.

BPA focuses on the business from the viewpoint of the customers, whether they are consumers, partners or suppliers. From their perspective the company in its entirety is the system they will interface with to get a product or service delivered in time and with quality. This other perspective implies that the business processes are centered around the customer, rather than sales, logistics, or any other internal function. The business processes centered around the customer, starting with the customers request and ending with the customers satisfaction typically crosses the different branch oriented also known as stovepipe applications. From the BPA perspective, not the individual stovepipe applications are important but the business processes that require services of these stovepipe applications are important

BPA has a strong process orientation. That is expressed in the activities to obtain insight in the business processes. With the gained insight the business processes will be evaluated and improved, resulting in increased customer satisfaction.

The BPA Solution

User driven
Process oriented
- obtain insight
- improve process
- added value

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1.2 The need for BPA

In the e-commerce era the customer supplier relation has become loose. To maintain and increase the persistence of this relationship, the customers have to be cherished to keep and increase the customers satisfaction. Systems that support the business should focus on the customer, therefore the need has raised to:

- have systems on the user level
- integrate systems.

BPA helps in achieving these goals.

1.2.1 Systems on the user level

Systems on the user level are systems that are modeled from the business users perspective. The models are not IT driven but represent models that are simple and understandable for the business users. To accomplish this level of understanding the requirements are modeled as business processes in flow chart like models, the organizational structure is modeled in orgcharts. Both models are very intuitive and comprehensible for the common user.

1.2.2 Integrating systems

Business Process Automation establishes the integration of systems on the business process level. The integration is accomplished by the definition of processes that comprises of functions of different applications like legacy, Customer Relationship Management (CRM) and Enterprise Resource Planning (ERP) applications and, components of middleware.

Why do we need BPA

Have system on the user level
To integrate systems

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1.3 UNIFACE BPA tools

UNIFACE supports Business Process Automation by providing tools that enable users to do:

1. Process modeling
2. Process execution
3. Process monitoring
4. Process tuning/(re)modeling

Process modeling enables the business engineer to model the business processes and the organization. The organization is modelled as units, actors and roles. The processes are modelled as tasks, compound processes or business-to-business messages where optionally units, actors or roles can be assigned to. Tasks may be realized by certain components.

Process execution is controlled by the Task Desktop where the user can initiate a task they are authorized to, or selects a task from the list of work to be done. When a user selects the task, all relevant data is made available to the user. When the user completes their task, all information created is stored and, if defined in the business process, another user is instructed to execute the next task in the business process.

Process monitoring allows users with supervisory responsibilities to manage the business process. Status information, such as deadlines, for example, can be monitored, possible bottlenecks with resourcing of tasks can be identified, and (temporary) measures can be taken.

Process tuning contains the adaptation of the business process by changing the business process flow, for example, by placing two initial sequential, tasks in parallel. The implementation of a business task can also be replaced by another component.

UNIFACE BPA tools

Enables users to do:

- Process Modeling
- Process Execution
- Process Monitoring
- Process Tuning/(re)modeling

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1.4 Application Integration

Business Process Automation helps to integrate systems on several levels. By accomplishing the integration, a closer alignment especially on the business level will be established, resulting in more information concerning the business. This opens the opportunity to increase the efficiency, decreasing the chance on and amount of incorrect or redundant data, resolving duplication of effort and increasing the rate of work done. Furthermore from the business perspective more knowledge of the customer and the marketplace will be gathered, enabling the company to face the competition. In summary application integration in combination with Business Process Automation enables companies to have an improve insight, allowing them to react flexible on new situations, what results in increased efficiency.

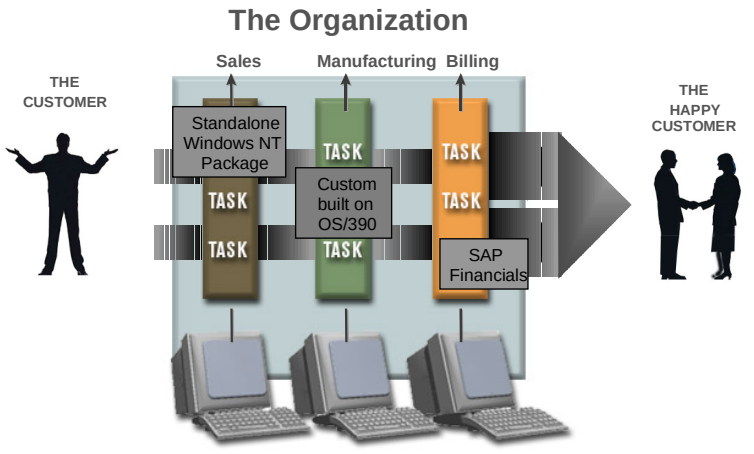
Business Process Automation in combination with application integration can be accomplished on the following levels:

- Enterprise Application Integration (EAI)
- Business-to-Business Integration (B2B)
- Supply Chain Integration

1.4.1 Enterprise Application Integration

Enterprise Application Integration in conjunction with Business Process Automation establishes an integration of stovepipe-like applications within a single company on the technical level (EAI) as well as on the business process level (BPA). Middleware like the UNIFACE Request Broker (URB) will enable the integration of the applications that are implemented with different technologies. On the business level one process model will be defined that typically crosses the different stovepipe applications, indicating the integrated and optimized processes from the business perspective.

Enterprise Application Integration



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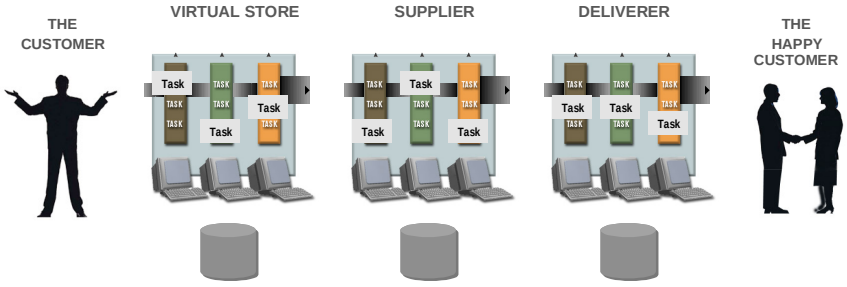
1.4.2 Business-to-Business Integration

Business-to-Business (B2B) integration in conjunction with Business Process Automation exceeds the scope of Enterprise Application Integration with respect to business processes that crosses applications of different enterprises, for instance those of the company's partners and suppliers. B2B integration is established on the technology level via HTTP with XML formatted data that communicate with engines of other enterprise or via components of other enterprises.

B2B integration informs partners and suppliers automated of the need for products or services for the companies business processes.

The B2B is established by defining a process model for each company. There where one company needs a service or product of another company specialized B2B tasks are defined, in both models of the companies, to send and receive the requests.

B2B Integration



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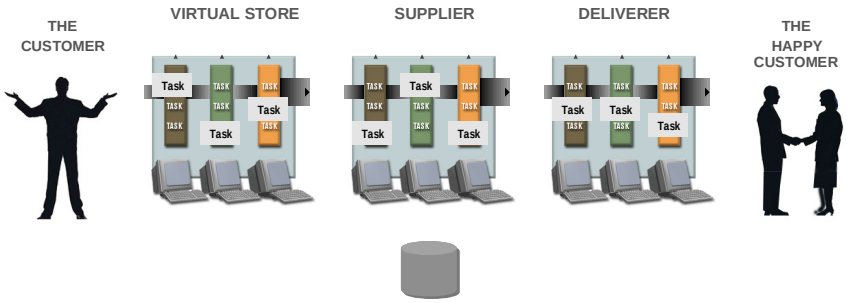
1.4.3 Supply Chain Integration

Supply Chain Integration uses Business Process Automation over the boundaries of companies. One overall virtual business process and organization will be defined for the company and its partners and suppliers. The partners and suppliers have access to the overall business process enabling them to proactively anticipate on the processes of the company. For the company that needs for instance components there is no need to inform the partners and suppliers to supply the component stock since that company itself will be responsible for the component stock. The company can optimally fulfill its task since it has full insight in the whole process that started with the users request and ends with the delivery to the user.

Supply Chain Integration



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1.5 E-commerce

The World-Wide Web offers new ways of doing business (e-commerce). E-commerce requires revision of existing business processes. Completely new customer-facing (internet) applications have to be developed to support the interface between companies and customers, that is, Business to Customers (B2C) integration. These customer facing applications should be realized with web components and should be executed from web task desktops (BPA). Furthermore the business processes have to be optimized to ensure and tighten the persistence of the customer relationship. To realize this 'back-end' applications have to be integrated, starting within the company (EAI), likely with other companies (B2B) and ideally integrated as one business model covering the whole supply chain among the different companies. (See former sections on application integration.)

E-commerce

Revisioning of business process resulting in:
- new customer facing (B2C) applications (web components and web task desktops)
- application integration (B2B, Supply Chain Integration)

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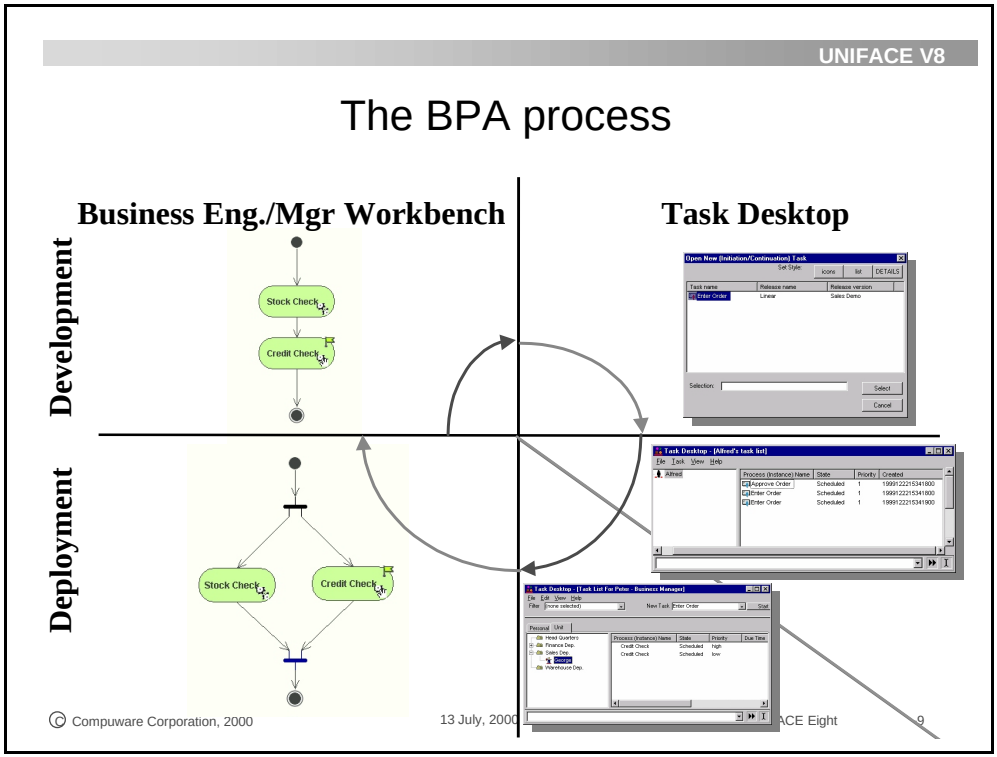
1.6 The BPA process

The BPA process consists of the following steps:

1. Define a business process in the Business Engineers Workbench. The newly defined business process consists of a start and end point with one or more tasks, business-to-business messages, and /or compound processes. All tasks and compound processes can be partly sequential, parallel, or conditional. Each task should be assigned to an actor or group of actors.
2. Test the business process using the Task Desktop. If the business process is correctly modeled, the business process can be deployed.
3. Deploy the business process. Each user has a Task Desktop with workflow-driven tasks to perform. A user-driven task can also be executed when the user is authorized. The business manager has their own Task Desktop, allowing them to intervene if appropriate in the business process. If an ad hoc decision concerning the termination of a task has to be made, and the decision has not been defined in the business process, the manager takes that responsibility. Furthermore, the manager can reassign incidental tasks from one user to another, for example.
4. If structural changes have to be made to the business process, excluding the extension of the business process with other tasks or compound processes or the changed implementation of tasks, the manager can do so in the Business Managers Workbench. In this environment, the manager can place tasks parallel, or sequentially, change the order of tasks, and make flows conditional. This is the fourth step of the BPA process.

The business process can also be adjusted by adding or removing tasks or compound processes and changing the task implementations. These kind of changes are done in the Business Engineers Workbench, the environment of the first step.

For more information on the first two steps of the BPA process, see chapter 2 *Development*. For more information on the last two steps of the BPA process, see chapter 3 *Deployment*.


UNIFACE V8
The BPA process
Business Eng./Mgr Workbench
Task Desktop
Development
Deployment
Stock Check
Credit Check
Stock Check
Credit Check
Open New (Initiation/Continuation) Task
Task Desktop - [Alfred's task list]
Task Desktop - [Task List For Peter - Business Manager]
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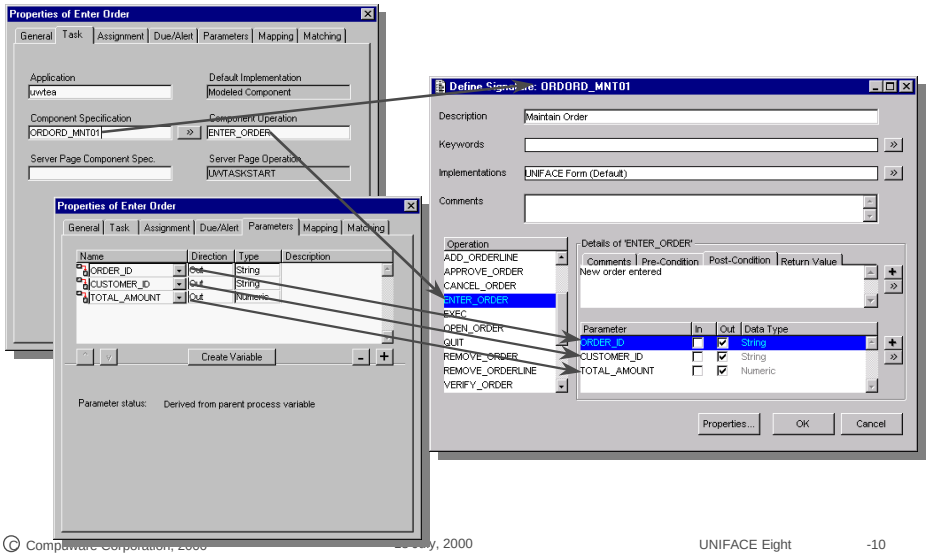
1.7 Component Based Development

To achieve an automated business process, make each task executable by a primary component, the task component. Similarly, assemble a business process from components you have created with their process information.

Business Process Automation cannot be realized without using component-based applications. It is therefore very important that you open legacy applications to reveal the business process information and migrate them to proper components with a clearly defined component interface.

BPA and CBD



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