



**The  
BPTrends 2010  
BPM Software  
Tools Report  
on  
BOC's Adonis  
Version 4.0**

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**ADONIS**

Version: 4.0

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Web: [www.boc-group.com](http://www.boc-group.com) E-mail: [voc@voc-group.com](mailto:boc@voc-group.com)**1. Product Overview**

ADONIS is a key part of The **BOC Management Office** (which also includes ADOScore, ADolog, and ADOit) – a family of products for the integrated management of strategy, business processes, people, IT and performance. This report focuses on **ADONIS**, BOC's graphical business process modeling and analysis tool, outlining its standard components, optional add-on components, and various interfaces. The report also contains information based on the latest addition to the BOC Management Office family – The **ADONIS Process Portal (APP)**. The APP is a new web based tool that provides role based access to company models through a standard web browser. The APP provides the user with easy-to-use functionality for reviewing and editing model content supporting the process management lifecycle.

Table 1 provides an overview of the ADONIS toolset (version 4.0) and its main add-on components and extensions. It also provides an overview of ADOScore, ADolog, and ADOit, which – although they are separate products – are based on the same meta-model architecture as ADONIS and can therefore be used in conjunction with ADONIS. ADONIS is available in two editions. The **ADONIS Business Edition** focuses on process design, process analysis, process documentation, and process implementation. The **ADONIS Professional Edition**, in addition to all the features provided by the Business Edition, supports process simulation, process evaluation, process monitoring, and controlling tasks.

ADONIS supports the core activities of BPM methodologies, including information acquisition, modeling and design, analysis, simulation, and evaluation. ADONIS also provides various import/export facilities, Web and standard publishing capabilities, and administration tools. Optional add-on components are available for Web-based modeling, activity-based costing, workforce and capacity planning, and call center management.

Key design aspects of ADONIS include usability, openness, method flexibility (customizability), and model maintainability. ADONIS supports non-technical users such as business analysts, process owners, and process managers, as well as more technically skilled information systems and enterprise architects interested in business processes and business process-related information (views) such as data, documents, risks, controls, systems, applications, and the working environment with its roles and resources.

ADONIS operates as either a stand-alone tool on desktops or laptops, or in a multi-user environment utilizing a central repository. In February 2009 BOC launched a **freeware edition** called “**The ADONIS Community Edition**” (ADONIS:CE):

[www.adonis-community.com](http://www.adonis-community.com)

ADONIS:CE is a functional and feature rich stand-alone version of ADONIS, with few limitations in comparison to the commercial editions. At time of publication there are more than 10,000 active users in the community using ADONIS:CE.

ADONIS supports **standard modeling notations** such as BPMS, BPMN, UML, EPC, and LOVEM. In addition, ADONIS provides an underlying **meta-modeling technology** that allows

users to define new modeling notations and mechanisms for domain-specific or customer-specific needs. Various pre-defined reference models, templates, and meta-models are also available, including ITIL, CobiT, ISO 20000, SCOR, Six Sigma, SOX, NGOSS/eTOM and ERM. These are implemented as specific pre-built modules and templates designed to increase project efficiency and communication, reduce costs in developing procedures and to ensure a rapid return on investment.

ADONIS also easily integrates with other BOC products, including ADOScore for Strategy and Performance Management using the Balanced Scorecard approach, the ADolog SCOR implementation framework, and the ADOfit IT Architecture and Services Management toolkit.

**Table 1—Overview of ADONIS**

<p><b>ADONIS Business Edition</b></p>	<p>Repository-based graphical process modeling and analysis tool for process design, process analysis, process documentation, and process implementation. Provides a comprehensive but easy-to-use modeling tool, as well as interfaces for collecting external information (e.g. processes, structures, and statistical data, etc.). Model import/export capabilities include XML and ADL (ADONIS Definition Language) as well as various merge and update options. Uses query-based component for analyzing information stored in the ADONIS repository. Publishing capabilities include Web and standard (Office) publishing in various formats. Web-based modeling supports using additional Web Services interface component (i.e. ADOWeb).</p>
<p><b>ADONIS Professional Edition</b></p>	<p>In addition to all the capabilities provided by ADONIS Business Edition, ADONIS Professional Edition supports simulation, process evaluation, process monitoring, and controlling tasks. Features discrete event-based simulation with a library of 4 algorithms; allows comparison of analysis and simulation results, analysis of non-standard simulation results, and real-time data.</p>
<p><b>ADONIS Process Portal</b></p>	<p>The ADONIS Process Portal (APP) offers a unique concept which presents to your employees direct access via the Web to the exact information that they require to perform their work. This is all presented in an intuitive web interface which requires no training and is tailored precisely to the functions and needs of the role of the employee (for example, a process owner responsible for risk management).</p> <p>There are currently two APP scenarios available; the standard and personalized scenarios. The standard scenario allows users access to view processes and documentation that coincide with the models e.g. working instructions. The personalized scenario provides more functionality, enabling the user to define role specific access e.g. Modeler: can view and edit models and add improvement proposals; Process Expert: reduced interface specific for release workflow; Process Manager: access to models that have key performance indicators assigned. Thereby different stakeholders and their responsibilities are ideally supported by the APP. The scope of advanced management scenarios covered include Governance, Risk and Compliance (GRC), Quality Management, global Change Management, and Process Rollout.</p>
<p><b>Integration Modules</b></p>	<p>Various add-on diagrams/interfaces available for ERP systems (e.g. SAP Netweaver, SolMan); BPM suites and application servers (e.g. IBM Websphere Workflow, Tibco Process Suite, MS BizTalk Server, MS Sharepoint, Oracle BPEL Process Manager); XMI (e.g. IBM Rational Rose, Eclipse); and MDA approaches using the BMT (BOC model transformer).</p> <p>ADOWeb is a java-based Web Services interface that integrates ADONIS into portal applications and other BOC Management Office components; used to integrate with BPM portals to provide single point of access to 3<sup>rd</sup> party (web) services or data sources.</p> <p>ADOorg: Optional interface for importing organization information from operational systems such as HR Management Systems (e.g. SAP, Lotus Notes, etc.)</p>

	into ADONIS.
<b>Add-On Modules</b>	<p>Specific add-on modules include a Sarbanes Oxley solution based on COSO/ERM frameworks extending the BPMS Risk Management capabilities.</p> <p>Clinical Pathway calculation and capacity planning in healthcare</p> <p>Domain specific modeling notation for the analysis and documentation of public administration services.</p> <p>Activity based costing: Add-on module for process costing analysis (As-Is analysis and Should-Be analysis), including cost center evaluation</p> <p>Advanced capacity planning (such as call centers): Call Center Management: Add-on for workforce planning for call centers based on business processes and statistical data from ACD machines.</p>
<b>Pre-built Reference Models &amp; Templates</b>	ITIL, CobiT, NGOSS/eTOM, SCOR, TOGAF, Zachman, Risk Catalogs for Basel II, Solvency II, IT-security, Logistics and Health & Safety, Industry specific process maps, EFQM templates
<b>ADOScore</b>	Supplemental product – object-oriented performance management and balanced scorecard toolkit. Facilitates implementation of steps involved in introducing BSCs based on Kaplan and Norton concept – from documenting strategic variables, goals, and performance indicators via the definition of target levels and thresholds, to analyzing and controlling levels and operational goals via the ADOScore Cockpit digital dashboard.
<b>ADOlog</b>	Supplemental product – framework for the design, simulation, and analysis of supply chains based on the Supply Chain Council’s SCOR framework.
<b>ADOit</b>	Supplemental product – object-oriented IT toolkit for designing, modeling, documenting, and managing IT processes and IT architectures according to the ITIL and CobiT standards.

Typical ADONIS application scenarios include

<b>Business Process Transparency and Process Handbooks</b>	ADONIS offers numerous ways to provide an up-to-date instruction system which is acceptable to employees. With the help of the integrated publishing component the process information documented in ADONIS is readily available to all employees at the “touch of a button”, without the need for licensed access to ADONIS. The ADONIS Process Portal allows this information to be published, maintained, released and versioned in real time via web capabilities.
<b>Goal-oriented Process Management</b>	The concatenation of operational data with defined process goals and goals derived from business processes respectively is one of the crucial parts of Process Performance Management (PPM). The flexible reaction to variations in terms of defined measures and verification of results allow that the processes/operational procedures are not only controlled but are subject to continuous controlling and optimization.
<b>Maturity Model implementation and Process Assessment</b>	Maturity models represent an approved tool for assessing and improving process performance. An ‘as-is’ position can be clearly identified through a Process Management Maturity Check (PMMC). Maturity levels provide a transparent view of the actions and measures needed to achieve common goals. Our concepts help organizations to institutionalize a Process Management Life Cycle (PMLC) which complements basic process modeling and increases the performance of your organization and individual processes in each improvement cycle.



<b>Organizational Management</b>	<p>Requirements planning, organizational documentation, job descriptions and support for a rapid response to any role or hierarchical changes in the organization.</p>
<b>Quality Management</b>	<p>The quality of products and services define the way customers perceive your organization and is a key competitive factor. Quality Management not only minimizes error rates, rejections as well as customer complaints but also helps to reduce costs. ADONIS has contributed significantly in numerous projects to create and implement a certifiable QM system and to communicate the objectives and responsibilities within the organization.</p> <p>This includes in particular the definition and alignment with approved standards like ISO 9001:2008, ISO 14001, OHSAS 18001 and frameworks like EFQM, TQM, Kaizen and Six Sigma.</p>
<b>Governance, Risk &amp; Compliance Management</b>	<p>BOC support Basel II, Operational Risk Management (ORM), Sarbanes-Oxley (SOX), Enterprise Risk Management (ERM), Solvency II, and International Financial Reporting Standards (IFRS) projects.</p> <p>Risk Management in ADONIS not only means attributing risks to the processes, but also to be able to evaluate them. Based on this evaluation, controls for activities can be defined and the design of the processes adapted. With the aid of portal solutions, test centers and other mechanisms, the ability to control and monitor risks in the organization is greatly improved.</p> <p>We also support our customers through the application of other best practices and approved frameworks like COSO II (Committee of Sponsoring Organizations of the Treadway Commission) to develop and continually improve an integrated ICS. Our method in this case does not only refer to the development of an Internal Control System, but guarantees a continuous examination and improvement of the whole structure. We pay particular attention to the effective and efficient design and operating effectiveness of your internal controlling and risk management system.</p> <p>We also offer supplementary services to develop bespoke Risk Portfolios and carry out Risk Assessments. There are standard Risk and Control reports delivered as part of the base product suite.</p>
<b>Business Process Optimization</b>	<p>The continuous improvement of business processes through process simulation, conducting “as-is” and “should-be” comparisons, benchmarking, etc. Discover bottlenecks, assign additional resources or possibly eliminate redundant activities.</p>
<b>Process Costing &amp; Capacity Management</b>	<p>The ADONIS process costing feature captures the overheads in a cross-functional way to avoid subsidization between cost centers. This allows a fair and process-oriented allocation of support service costs to the cost centers. Concurrently, the ADONIS process simulation component calculates human resource demands. The accurate and transparent results assist management with decision making to ensure optimum resource allocation and performance throughout the organization.</p>
<b>Process-based Application Development</b>	<p>The process based application development services and products offer technical and organizational solutions to clarify the complexity of application development projects ERP systems implementation, integration with workflow and Web-based systems, MDA, BPEL, etc. The result is a seamless transformation of the functional requirements to application systems – the closure of the gap between business and IT.</p>

<b>Service-Oriented Architectures</b>	Transforming existing IT Architectures into an interoperable and agile Service-Oriented Architecture (SOA) offers companies the opportunity to simplify the structure of their IT in a revolutionary way. ADONIS enables business driven SOA to identify services required by processes to establish a business specific service repository. The orchestration of the services can be modeled and exported in standard formats such as BPEL / WSDL for execution.
<b>Controlling</b>	Financial Audit Compliance (Sarbanes Oxley), Process Cost Analysis, Business Activity Monitoring (BAM), and KPI & Risk Management are all supported
<b>Process Performance Management</b>	The definition of process goals and key performance indicators (KPIs) to measure performance represents a further important step in your process and quality management system. ADONIS provides tools and procedures to define, control, measure and improve process performance.
<b>Business Process and Performance Reporting</b>	Performance-Management-Reports, Process-Cockpits and Performance-Management-Portals provide the necessary tools for process owners, quality managers and key decision makers to make informed decisions based on current information.
<b>Supply Chain Management</b>	Implementation of the SCOR Model Harmonization of Supply Chain interfaces, Risk Management in Supply Chains.
<b>IT Process Governance</b>	Service Management Processes and ITIL library to govern the IT Processes related to the IT Service Catalogue

ADONIS is available in a wide range of languages, offering extensive support for multi-national organizations.

The BOC Group were recently recognized by the Object Management Group (OMG) in a case study competition where it won the category of “*Best BPM Application that demonstrates the use of one or more business process standards*” for its involvement in the EU project GENESIS. Some of the standards that were successfully implemented using ADONIS during the project were UBL, BPMN, BPEL, and CCTS. The GENESIS project clearly showed the importance of standards and BPM within a project focused on a model driven approach and demonstrated how organizations could save time and money.

Overall, ADONIS is a well-designed tool that provides a functionality rich modeling and analysis environment behind a very intuitive and friendly user interface. The complementary **ADONIS Process Portal** provides an intuitive and role-specific online access to the processes. Different user groups receive the exact ADONIS functionality that they require via the web. Both products can be customized to suit individual requirements such as the languages and frameworks they can support, role-based user access with various GUI and functionality tailoring.

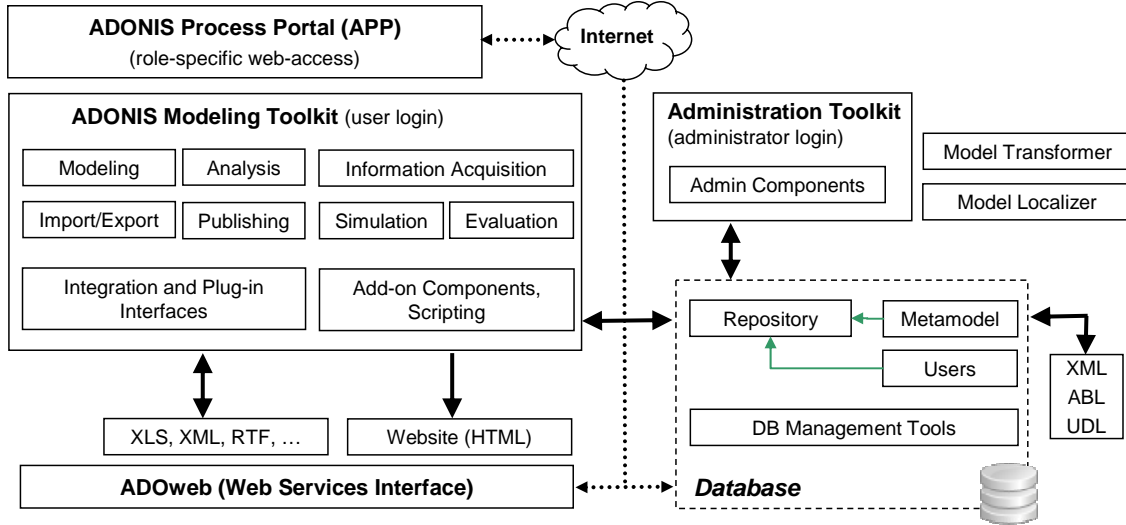
## 2. Product Architecture

### 2.1 Architecture Overview

Figure 1 shows the ADONIS architecture, which consists of three main levels: the repository, the application components, and the user interface. Optionally, the ADONIS Process Portal can be used to access the repository and the application components via the ADOWeb Web Services interface, which supports browser-based modeling with ADONIS. The ADONIS Process Portal can also be used to integrate ADONIS into corporate portal applications, and for creating “BPM portals” designed to provide a single point of access to corporate EA and process information.



The ADONIS architecture supports XML import/export, scripting, and plug-ins, allowing integration into existing customer specific infrastructures. All repository information such as configuration information (ABL proprietary format), user information (UDL proprietary format), and model information (XML) can be imported and exported between different ADONIS installations or to other environments.



**Figure 1. Overview of ADONIS Architecture.**

ADONIS is separated into two toolkits: the Administration Toolkit and the BPM Toolkit. The Administration Toolkit provides multi-level user administration, meta-model administration, and configuration management facilities. The BPM Toolkit provides the end-user with configured application components. This division provides a clear separation between administrator and end-user tasks. All of the necessary components are directly available from a single user interface within each toolkit.

**2.2 Usability and User Interface**

ADONIS supports general business users (e.g. process modelers, experts in business departments, business analysts, and performance managers) as well as more technical analysts. It features an intuitive GUI based on the MS Windows paradigm, and MS Office users should feel comfortable with its large number of functions and features. ADONIS also includes user-support features designed to assist users with modeling and analysis tasks, including

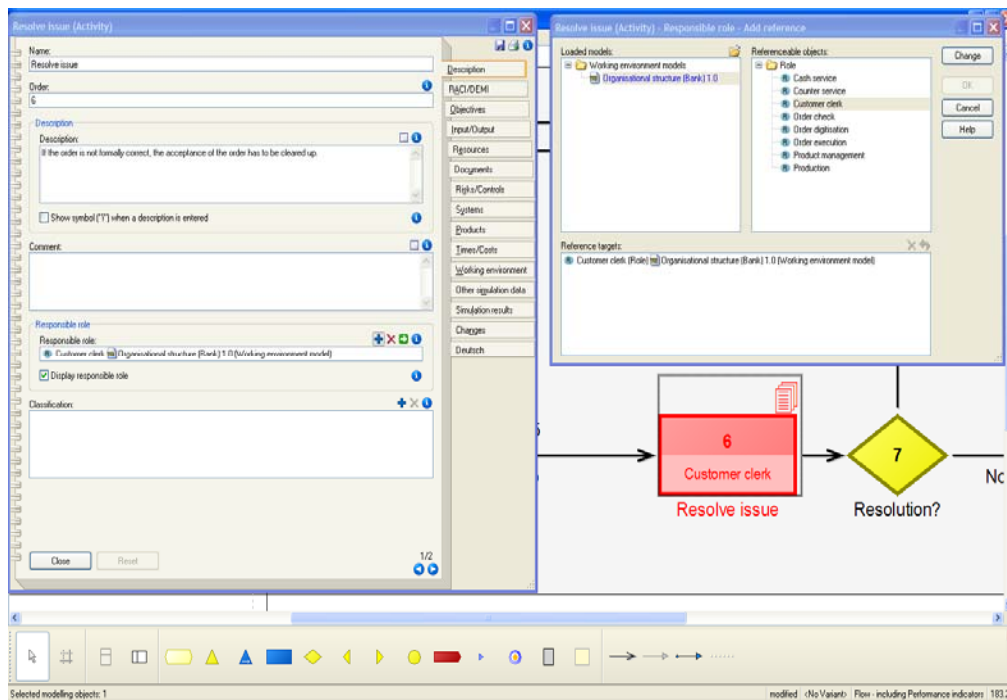
- Interactive framework picture – helps users to choose relevant model types
- Methodology wizard – assists users in following a methodology
- Integrated help files (including on-line help as well as printable PDF files)
- Embedded help on objects and attributes
- Context sensitive help

ADONIS facilitates intuitive modeling for creating and managing models. Model design features include the ability to drag-and-drop objects from the palette. A table view also provides a spreadsheet for users to display and edit the properties of each modeling object. If needed in “non-graphical scenarios” ADONIS provides the possibility to offer - for a set of configurable model types - only the spreadsheet (table view) for data maintenance. In either case ADONIS provides the ability to create new objects.

Each modeling object or connector has a specific set of attributes for capturing information. In the model editor, these attributes are shown via a property dialog box called “Notebook.” Double-clicking on an object opens its notebook in which you can add detailed information in tabs and fields. Fields are not only simple text fields as ADONIS supports many strongly typed attributes such as text, number, date, time, enumeration (simple/multiple selection), record, inter-reference, expression (user-defined formulae), and program calls. This range of attribute types provides considerable capabilities for structuring and formatting model information.

ADONIS’s dynamic Notebook paradigm provides users with a very powerful but intuitive way to manage process and process-related information. Notebooks are not only used to define detailed information about objects, but can also be used to navigate from one process to another process by referencing an object in another model. Notebooks can also be configured to work like a filter to specific information (e.g. cost) or capabilities (read/write, etc.) in order to support specific users with varying levels of functionality and access to information. (Customization is usually carried out by an administrator by organizing the various tabs and fields in the notebook.) The notebook concept also offers a mechanism for so-called dynamic notebooks, where attributes can be enabled/disabled depending on the value of other attributes. This feature enhances the notebooks and guides users during data entry. Figure 2 shows the notebook of an Activity object, with different chapters or pages. Help text is available for each field of each object by clicking on the blue “i” icon. The responsible role is documented by referencing an existing role from a working environment model.

ADONIS allows a large range of graphical representations – from geometrical shapes to importable images. Other shape properties include resizing, expand/collapse, auto-grow, and flexible text positioning. In addition, the tool supports complex graphical representations that embed customizable visualization logic; depending on attribute values (e.g. IF Activity has Input Documents THEN Display a document icon). This feature makes the tool particularly user-friendly; by displaying information stored in a notebook, users are afforded an at-a-glance view to a lot of information related to a model.



**Figure 2. Notebook, Object Selection, and Reference Dialog in ADONIS.**



For documenting processes, ADONIS uses the swim lane paradigm for its workflow model. Users have the choice of using horizontal or vertical swim lanes. The “distribution” of activities to swim lanes can be done automatically by ADONIS based on e.g. the ‘Responsible role’ attribute. Other helpful features include an undo/redo function, auto-save, and various user-friendly attribute types (e.g. list, radio buttons, check boxes, tables). Figure 3 shows a process flow model as well as KPIs displaying process-monitoring data from process execution environments. The modeling palette shows all available types of objects and connectors. You can display their names by highlighting them with the mouse.

Other notable model display features include a full-screen mode, zoom options, connector marks at page borders to ease working with large models, the ability to shrink or expand referenced sub-processes, and print preview with page setup.

The ADONIS model editor supports multi-page diagrams, movement of multiple objects, object alignment, automatic object numbering; automated positioning (via hierarchical positioning algorithms), and floating/docking windows and toolbars.

The model editor also provides automatic layout algorithms for arranging models in horizontal and/or vertical directions. In combination with swim lanes the user can switch between different variants of the same model to view it with or without swim lanes (and either horizontally or vertically arranged).

The modeling component of ADONIS is also equipped with some appealing and clever functionalities: these include the auto heal/auto insert functionality as well as hover modeling.

When deleting objects from an existing flow, the incoming and outgoing relations are automatically healed. Similarly when adding a new object to an existing flow, the necessary relations are automatically created and the graphic is updated with the existing objects repositioning themselves accordingly.

The hover modeling functionality is an assistant which determines the next logical object in the flow. As the modeler hovers the mouse over an object, ADONIS graphically prompts the user with the logical options available and allows the modeler to drag & drop or click the location of the new object to be added. This significantly increases the speed at which a modeler can model a process flow by saving them from having to determine what objects are valid to continue the flow and then having to locate the objects in the modeling bar.

Another interesting feature of the model editor is that it can allow the user to configure different views of the process diagram, showing inputs, outputs, responsibilities, IT-support, etc. in a structured form in lanes to the left or right of the process flow.

For assigning responsibilities in processes ADONIS supports several concepts, including the RACI (Responsible, Accountable, Consult, Inform) framework.

The ADONIS Model Explorer provides a number of features to support model navigation, including

- Model exploration – folder structure display, object and connector browsing within a model
- Model comparison and version management
- Model navigation – drill-down navigation with hyperlinks, a process stepper that “walks” the user through each step in a process, and path analysis
- Productivity-enhancing features – expressions for automated value definition, global change on attributes, tools for analyzing and managing references, and automated model generation



- Adding extensions – specific customization functions (scripts) that are available for model-driven role-based permissions (e.g. validation workflow, publishing rights, etc.).

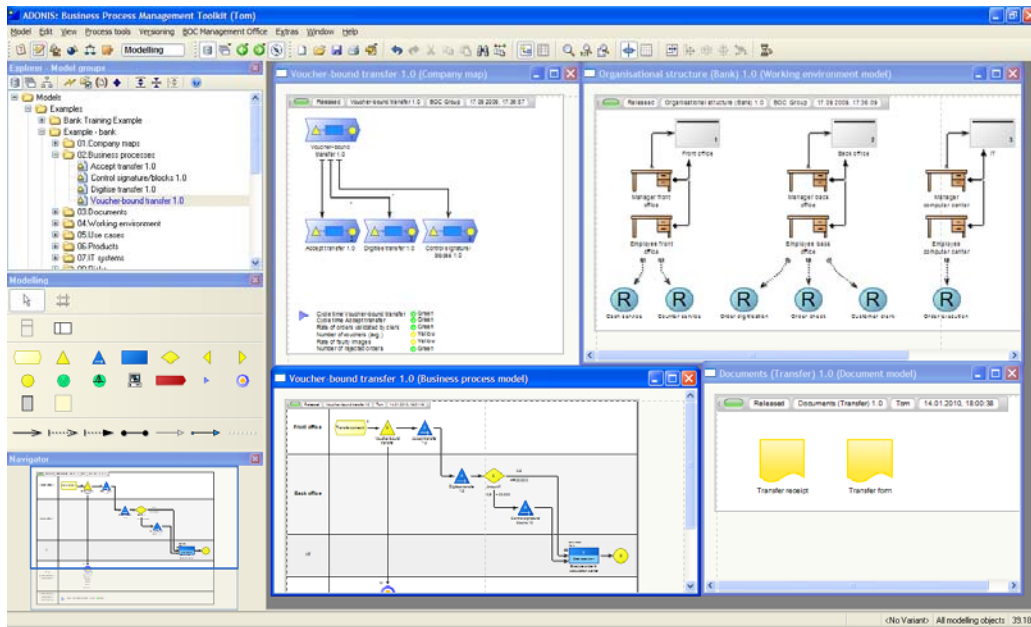


Figure 4. ADONIS Model Explorer GUI showing some model types and model navigation.

The ADONIS administrator configures the tool using intuitive menus, which are used to hide or lock items according to specific end-user audiences. In this manner, each user is presented with a personalized environment that displays information relevant to their role and needs.

ADONIS offers a number of features to cover various analysis requirements: standard queries, pre-defined queries, ad-hoc queries (supported by a wizard), search mechanisms, and cross-reference matrices. Queries can involve models, objects, and attributes. Users can follow documented interdependencies (through inter-references or connectors), carry out impact analysis and get a comprehensive understanding of the system. Results of such queries are provided as tables in dockable windows where users can directly edit information and use the results in the tables to navigate to the respective objects and models. Another solution is to visualize analysis results as a model (e.g. service dependency model).

Finally, ADONIS offers extensive support for multi-national organizations, with versions available for English, German, Spanish, French, Italian, Greek, Polish, Hungarian, Czech, Russian, Bulgarian, and Romanian languages.

### 2.3 Repository Options/Team Development

ADONIS is a repository-based tool. The repository can reside on IBM DB2, Oracle, and Microsoft SQL Server databases.

ADONIS supports multi-user workgroups in several ways. In addition to the ability to publish models on the Web, the ADONIS Process Portal provides real-time Web-based editing of ADONIS models but in a more limited capacity than the rich client. You can also integrate ADONIS into corporate portal applications using the ADONIS Process Portal.



**Figure 5. The ADONIS Process Portal for intuitive and role-specific web-based online access.**

ADONIS uses a file-based directory system (versioning numbers, etc.) for managing models in the database repository. All folders and the directories have different access rights based on user-assigned roles and privileges. A model comparison utility is also available for comparing different versions of models in the ADONIS repository.

For cooperative team work ADONIS provides a task and message system. These concepts are used to provide a Release Workflow mechanism in scenarios where a strict process needs to be followed in order to manage and track model creation and development of new versions. The Workflow assigns tasks such as the QA of models to users and informs the users with messages. The messages and tasks can be sent using the ADONIS Rich Client, the ADONIS Process Portal or by integrating an external mail system.

Further extending the ADONIS mechanisms for versioning and release control, ADONIS also integrates with Concurrent Version Systems (CVS) and other external Document Management Systems (DMS) that provide check-in/check-out capabilities. Such configurations are typically used for large projects in IT specification and MDA scenarios, involving multiple environments (IDEs, CASE tools, etc.). More sophisticated version management capabilities (than those found in the standard ADONIS package) are available through customization of ADONIS's version management and model-tracking capabilities.

## 2.4 Integration with Other Products

Integration with other products can be classified by technical criteria or based on the underlying use case for the integration. Based on these two classification criteria the following integration is offered:

1. ADONIS offers various techniques for integrating with third-party tools and applications, including
  - Links or program calls without data exchange – attributes in the notebook or functions in menus that can link and open an external program with given launch parameters (e.g. opens IBM Rational ROSE with the corresponding MDL/XMI file, integrates with a direct link to a place in the MS Sharepoint Web-Environment, etc.).
  - Interface for data exchange. Implementation is done with ADONIS API (i.e. AdoScript) or with one of the multiple import/export formats supported by the tool, which include: XML,

XMI, XPD, BPEL, FDL (IBM Websphere), XFR (TIBCO Process Suite), Text, CSV, XLS, RTF, DOC, and PDF.

2. ADONIS offers direct integration with the following third-party tools and applications:
  - BPM/EAI/Workflow platforms: Microsoft BizTalk Server, Oracle BPEL Manager, IBM Websphere Workflow, TIBCO Process Suite, SAP Solution Manager (SAP Netweaver framework) and DOMEA: to support MDA approaches and deriving technical workflows from business requirements; also to support reverse-engineering and mapping of technical to business models.
  - IDEs and CASE tools: IBM Rational ROSE, Eclipse, ERWIN, Enterprise Architect, and MS Visual Studio Team System: to support MDA approaches and align Business-IT and transfer structured business requirements for more-detailed system design and subsequent code-generation; also to support reverse-engineering and mapping of technical to business models.
  - Enterprise Content Management Systems, Document Management Systems: PC DOCS (ODMA), DOMEA, MS Sharepoint and Lotus Notes: to integrate with existing document and content repositories.
  - GroupWare: Lotus Notes (NotesCall) and MS Project (Microsoft Sharepoint Team Services).
  - Simulation tools: ARENA, MINITAB: for selected and highly-specialized simulation tasks.
  - Drawing/Modeling tools: MS Visio, IBO, Casewise, and ARIS: allow importing models from these tools for migration of existing models. Additionally any information available in structured format can be imported into ADONIS via Excel using the ADONIS acquisition component.

### 3. Analysis and Process Modeling

#### 3.1 Enterprise and Organization Models

##### Enterprise Architecture Models

ADONIS supports a number of EA frameworks including Zachman, TOGAF, DoDAF, NGOSS, and OSSAD. BOC also offers pre-built libraries for special frameworks (e.g. LOVEM) or guidelines on how to use ADONIS and other BOC products for a given framework.

Concerning EA framework (and methodology) support, ADONIS is very extensible. ADONIS is based on a meta-modeling technology that provides a very flexible architecture (meta-model) and meta-model design tools for customizing or designing any type of EA framework. All framework configurations are stored as libraries, and can be managed with other available libraries via the "Library Management" component of the ADONIS administration toolkit. (See Sections 2.2 and 4.1 for more on ADONIS' customization features.)

##### Organization Models

ADONIS provides modeling capabilities for depicting organization charts and for documenting organizational units, actors, and roles. Further documentation attributes include skills, presence, and availability. These various elements can also be referenced from the process model and linked to swim lanes, processes, activities, or any potential object. These links are very important for reporting issues based on cross-references (e.g. role-activity matrices, organizational unit-process matrices, etc.).

BOC also provides, with its optional ADOorg product, an interface to get current information related to the organization from Human Resources Management Systems (HRMS). This interface automates the management of nested organization charts by enabling



- Data collection from SAP HR module or other systems
- Automated model generation and import mechanisms with updating facilities
- Automated generation of hierarchically structured charts
- Documentation and aggregation of HR metrics

### **Resource and Cost Modeling**

ADONIS supports modeling of any resource involved in the process execution. Costs can be defined for each resource and used during simulation for personnel or equipment cost calculations. Schedules are documented using an attribute of type “Calendar,” which stores input data for workload analysis. (See Section 3.4 for more on simulation). Resources can also be shared and allocated to activities of a process.

Users can also adapt the “Resource” object to specify a large range of resource categories with optional graphical symbols – examples include plane, truck, warehouse, production plant, etc.

### **Mapping Organization Strategies to Performance Measures**

ADONIS supports documenting performance strategy and goals, and mapping organizational strategies to processes and performance measures. For example, ADONIS process models show indicators that can be documented with current and target values that lead to a score calculation. (This capability supports process monitoring and as the ADONIS Process Portal shares the same repository it provides online-Web-access to the KPI information).

BOC also offers several supplemental products for representing items related to strategy or performance in process models. ADOit features a meta-model that includes the following modeling objects: “Strategy,” “Goal,” “Project,” and “Indicator.” Relations between these objects allow users to map strategies to KPIs. Typical applications encompass IT governance, business-IT alignment, and IT project controlling. Processes in ADOlog include attributes to store values for SCOR-KPIs. In addition, ADOscore provides models and automation mechanisms designed specifically for configuring BSCs and Performance Management Scorecards in general, defining initiatives, collecting metrics, aggregating indicators, and for publishing dashboards via a Web-based controlling cockpit.

### **Managing Process Portfolios**

Once KPIs or other information (e.g. maturity level) are documented in the “Process” object, ADONIS’s analysis component allows users to filter process portfolios – for example, per org unit, per business domain, or per process owner, and so on. On the model management level, users can set up a practical folder structure to organize models into folders corresponding to specific portfolios. A graphical visualization of the portfolio is also possible using process maps.

## **3.2 Defining Processes**

### **Defining Processes**

Processes are described graphically as well as in a notebook. Process information is documented in attributes of the “Process” object, and as a model that graphically depicts a sequence of activities, with control or information flows.

Users can consider a number of documentation views including: functional (activities, sub-processes); organizational (actors, resources); dynamic (sequence, flows); content (artifacts, products); quantitative (times, costs, and other metrics); and context-oriented (version, variant).

ADONIS offers visualization modes to select which items in a model should be visible or not in order to provide better visibility of the models. This is important, because in some cases, trying to display all views in a particular model is inappropriate. For example, system integration projects typically require a description of the same process from a business perspective and a technical perspective. While the notation for the business perspective has to remain extremely user-friendly



(e.g. focusing on organizational issues), ADONIS can be tailored to provide a suitable notation for the technical perspective (i.e. related to Use Cases of IT systems [BPM, Workflow, ERP etc.]).

### **Process Information Storage and Integrity**

All information is stored in the ADONIS repository. Mechanisms for integrity management include access-rights, permissions, and locking mechanisms. (See Section 9 for more about system administration and security.)

### **Graphical Notations**

ADONIS supports a range of pre-defined graphical notations, importable as libraries or model types, including ADONIS (proprietary), BPMN, UML 2.0, LOVEM, EPC, and OSSAD. ADONIS can also be customized to support any graphical notation. (See Sections 2.2, 3 and 4.1 for more on customization.)

A model transformation utility is also available. For user groups working on the same process but using different modeling notations (e.g. ADONIS Standard vs. BPMN, etc.), the BOC Model Transformer provides automated transformation of models from one particular notation to another. It also provides visualization options to view a model using a selected notation.

ADONIS supports all elements and attributes ("Complete Element Set") of the BPMN 1.2 specification (Note: that for BPMN 2.0 a Beta 1 draft document is currently available and BOC will update this specification in 2010). Thus, BPMN processes can be created, analyzed, simulated, documented, and published using ADONIS.

In ADONIS, UML 2.0 fulfils the "Compliance Level Complete (L3)" – all 13 diagram types with all notation elements are implemented in compliance with the standard. The structure diagrams allow for an illustration ranging from class structures to the structuring of whole systems and architectures. You can also display the sequence of actions between static parts in various ways using behavior diagrams.

## **3.3 Subprocesses, Decisions and Activities**

### **Handling Subprocesses and Activities**

ADONIS supports any number of nested levels of decomposition. Users can easily navigate decomposition diagram hierarchies via hyperlink or by clicking on the symbol. Starting from a process map, a "Process" object may reference

- A process map, with a decomposition into subprocesses
- A process model with a sequence of activities, including references to other processes

If a lower granularity is required, users can link procedures or work steps to activities as external documents.

### **Defining Activities**

Activities in ADONIS are used to graphically describe which tasks are executed within a process. Because they can link many elements of an EA framework together (e.g. links to roles, applications, documents, etc.), activities are key modeling objects. Activities in ADONIS contain necessary information related to different views (See Section 3.1).

### **Documenting Decision Rules**

Rules that alter a process sequence are captured and depicted through logical operators, objects, or connectors as is appropriate to the notation used. Transition condition and probability are documented for each branch of the process. (See Section 3.4 for more on simulation). Rules/events that do not alter a process sequence can be either documented within attributes of the activity or shown as separate objects in the model.

### Rules Entry

See above.

### Activity Costs, Resources, and Time Data

In ADONIS, each process, subprocess or activity object offers several standard attributes to store cost, resource, and time data. User-defined metrics can be added via customization. This information can also be used for simulation purposes. A bottom-up aggregation of this data from individual activities to the whole process, through all decomposition diagrams, provides metrics on the higher description levels of the processes.

Various approaches for calculating costs are possible, allowing users to perform complex activity-based costing (ABC). The optional ABC module supports As-Is and Should-Be analysis. Typical results include resource costs, personnel costs, and activity costs. These results can be mapped to processes, organizational units, or cost centers.

## 3.4 Simulation

### Simulation Capabilities

ADONIS's simulation component is directly integrated within the tool and provides discrete, event-based simulation. A simulation library is included that provides four simulation algorithms as well as animation and playback capabilities.

### Path Analysis

Path analysis simulates a business process without taking the working environment ("resource model") into account. Results include times (e.g. cycle time, execution time, etc.) and costs of the business process, as well as details for each specific path that can be chosen within the process. A path analysis gives the opportunity to calculate the amount of personnel needed for a process. Using path analysis, the critical process path can be determined and every possible path in the process model can be analyzed regarding its frequency, execution time, cycle time, and resource costs, etc. Results are displayed in spreadsheet as well as graphically (i.e. in charts as well as directly in the process flow). The results of a path analysis provide a basis for determining process weaknesses (e.g. activities rarely executed, paths with very long cycle times, etc.) and offer an overall picture of the business process.

### Capacity Analysis

Capacity analysis simulates one or several business processes, taking into account the working environment of the organization. In addition to the results of the path analysis, the workload, personnel costs, and the personnel capacity required are also calculated. By simulating the processes in different working environments the implications of different scenarios can be modeled and analyzed.

### Workload Analysis

Workload analysis simulates one or several business processes within a given working environment model. Using a process calendar, the likelihood of a new process being started is defined (often this kind of information can be obtained from EDP supported applications – e.g. the call routing server of a call center – and may be imported via the ADONIS XML interface). For each employee, his/her availability is documented in an employee calendar. Results of workload analysis simulations enable users to determine the dynamic waiting times that occur during process simulation (e.g. due to a lack of resources, etc.), thus allowing you to identify bottlenecks in processes and to schedule an optimum utilization of the existing (personnel and material) resources. Bottlenecks are easily visible with the use of animation while process simulations are run. Two different types of workload analysis are available: one is based on the number of processes to simulate; the other on a fixed period of time (e.g. 1st - 30th June).

The inter-arrival times of processes and the resource calendars are described by statistical distributions such as normal, exponential, uniform, and discrete. The process flow is described by transition conditions (business rules). Complex transition conditions can be defined by composing simple conditions using AND, OR, and NOT operators. All statistical information such as times, costs, probabilities, conditions, and so on, can be either directly inserted within ADONIS or imported from external spreadsheets or via XML. Simulation input data is analyzed for consistency before execution of the simulation model – for example, to check the likelihood of all transition conditions at a decision point to be 100%, or to check the structural consistency of the business process models and working environment models, etc.

#### **Analytical Capabilities**

ADONIS uses a flexible process simulation meta-model. Thus, it can simulate business process models regardless of their underlying modeling language or notation (e.g. BPMN-based models can be simulated). ADONIS also integrates with third-party simulation engines (such as Arena) via its XML interface.

Simulation results can be stored within its corresponding input models and further analyzed using the ADONIS evaluation component. This allows evaluations such as “Provide all business processes with a cycle time greater than two weeks.” (See Section 2.2 for more on ADONIS’s analysis capabilities.)

#### **Real-time Data Utilization**

ADONIS’s simulation component does not support receiving real-time data feeds or interaction with operational systems during a simulation (i.e. ADONIS can import data from operational systems before a simulation but can not receive data once the simulation is begun).

#### **Model Distribution and Simulation on Enterprise Networks**

ADONIS does not support simulation of models from different repositories distributed across a LAN. Rather, all simulated models must reside in the same repository.

#### **Statistical Fit/Data Analysis**

See above.

#### **Capture and Reporting of Simulated Metrics**

Simulation results are displayed in spreadsheets and, graphically, in charts, as well as directly in a process flow. Using ADONIS’s publishing component, all simulation results can be made available in an organization via Intranet or email.

### **4. Business Process Methodologies**

ADONIS does not enforce any specific modeling methodology. Rather, it is designed to support whatever modeling approaches the user desires, based on standard components like Acquisition, Modeling, Analysis, Simulation, Evaluation, and Import/Export. Thus, ADONIS can be tailored to reflect these and other methodologies, with a specific repository structure, customized functions, and additional components. (For more on customization see Sections 2.2 and 3.)

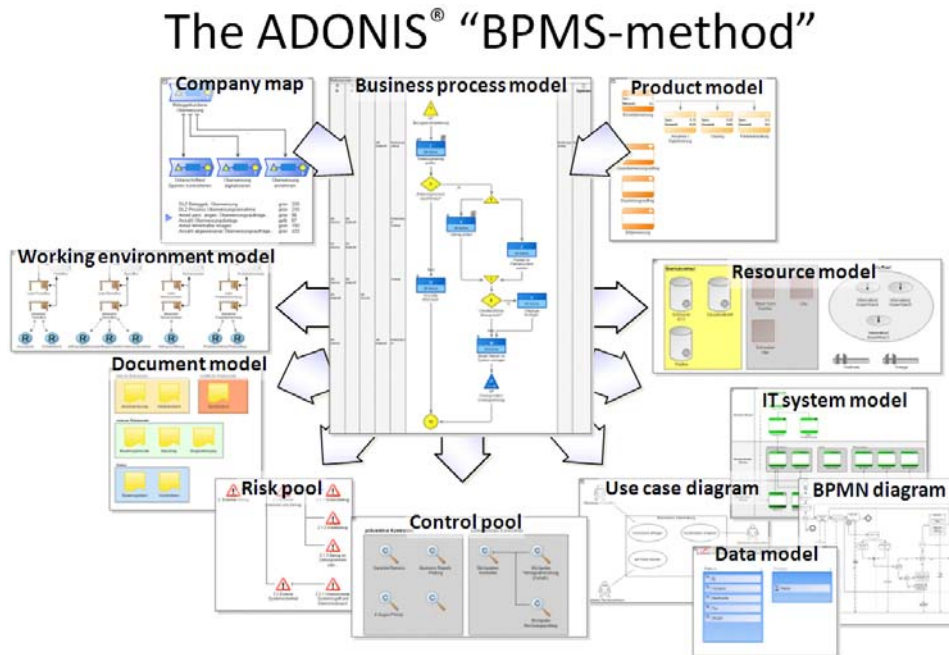
Examples of supported methodologies include

- Process Modeling: BPMS, BPMN, LOVEM, eEPC, PICTURE, IDEF
- Process Improvement: BPR, Kaizen, Lean Management, Six-Sigma
- Quality Management: ISO 9001, EFQM
- Risk and Compliance Management: COSO, CobiT
- Industry Reference Libraries: NGOSS/eTOM, ITIL.
- Application Development: UML, Zachman, TODAF, FEAF
- Performance Management: Business Activity Monitoring, Process Scorecarding

The following four sections describe examples of method implementations in ADONIS. BOC's BPMS method offers comprehensive process modeling but extends modeling by offering features for the whole process management life-cycle: Process Analysis and Improvement, Process Implementation and Performance Management. Further examples shown below include BPMN and Six Sigma.

**4.1. The Standard ADONIS Business Process Methodology - BPMS**

The ADONIS BPMS method describes a universal modeling technique for mapping processes and complementary business objects (see Figure 6.). The method is based on the experience and know-how applied by the BOC Group in business engineering projects and is an industry-neutral methodology for the modeling, documentation and optimization of all aspects of the business architecture. The available model types enable an integrated and consistent representation of the enterprise from strategy and design to implementation and deployment on the required levels of detail.



**Figure 6. The wide variety of model types available with the ADONIS BPMS method.**

The above diagram illustrates the wide variety of models available in ADONIS. You can model the essential basics such as process flow charts, process landscapes and organizational structures. For more advanced modeling activities the BPMS method encapsulates model types such as the Risk and Control pools for GRC activities and Document and IT System pools. The pool models provide the modeler with a single point of maintenance and encourages enterprise-wide re-use of objects. The impact on the processes as a result of an IT system change for example, can be easily discovered and managed due to ADONIS's powerful inter-model references.

**4.2. BPMN implementation in ADONIS**

ADONIS also provides the ability to illustrate the steps of a business process using Business Process Modeling Notation (BPMN). Expert knowledge of BPMN is not essential as ADONIS can automatically convert models created using the standard BPMS method into the BPMN format.

ADONIS can be used to depict the end to end flow of business processes and to coordinate the sequence of processes and the messages that flow between different process participants (orchestrations and choreographies) in a related set of activities. From the BPMN models developed, ADONIS can generate Business Process Execution Language (BPEL) and WSDL to aid with the transition from the business analysis phase to the implementation phase.

BOC's commitment to standards and support with ADONIS has been recently recognized by the Object Management Group (OMG) in a case study competition. BOC and ADONIS won the category of ***“Best BPM Application that demonstrates the use of one or more business process standards”*** for the involvement in the EU project GENESIS. Some of the standards that were successfully implemented using ADONIS during the project were UBL, BPMN, BPEL, and CCTS. The GENESIS project clearly showed the importance of standards and BPM within a project focused on a model driven approach and demonstrated how organizations could save time and money.

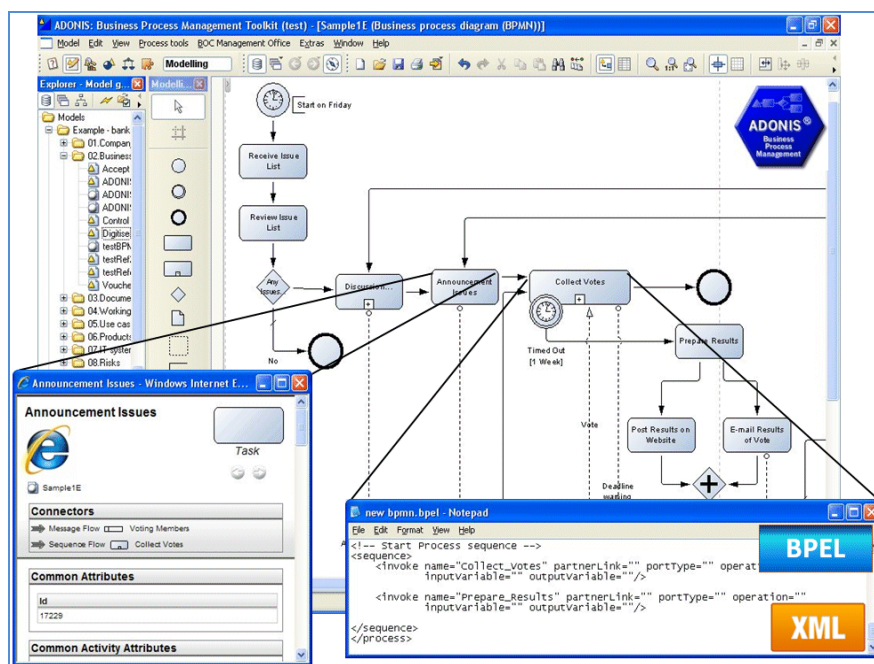


Figure 7. A BPMN model modeled using ADONIS with examples of HTML documentation and BPEL/XML file generation.

### 4.3 Six Sigma Support using ADONIS

ADONIS's general capabilities can be applied in the context of the DMAIC and DMADV cycles to support Six Sigma efforts. BOC consultants can provide guidance to set up all conventions for a Six Sigma project with ADONIS. With business modeling and simulation and evaluation mechanisms, ADONIS offers model-driven solutions for several Six Sigma applications. The ADONIS import/export component allows data exchange to MINITAB or JMP statistical analysis tools via MS Excel spreadsheets or CSV files.

### 4.4 NGOSS Support using ADONIS

The ADONIS BPMS method is a well suited modeling notation for the telecom industries NGOSS Framework (eTOM, SID & TAM). It allows for the intuitive and comprehensive mapping of business processes, information entities and applications. Reusable components of the NGOSS frameworks have been linked together to leverage the benefits of adopting TM Forum standards,



rather than implementing them separately. BOC's pre-built reference models for NGOSS can be imported into ADONIS, extended further for company specific needs, and easily published to the company Intranet as browseable documentation.

## 5. Report Generation and Document Management

ADONIS supports various formats for exporting repository content, including

- Text documentation of object or query results (XLS, CSV, TXT, HTML)
- Model graphics (PDF, BMP, JPG, EMF, PNG, PCX, SVG)
- Model information: XML, SGML
- Model information and graphic: HTML, RTF, Word, and PDF

Publishing functionality includes HTML document generation (interactive HTML pages that users can easily browse through the content, with different views, a search function, hyperlinks to external data, and which can be tailored to client-specific needs). Thus, users can obtain a generated website that meets their intranet/extranet layout requirements. Reports are available for a single model, a model list, or a model hierarchy (e.g. all referenced models). Other options include various layout settings, format profiles, and the application of filters on objects or attributes. You can also print models directly, and ADONIS offers enhanced features, including print preview, layout setting, or scale selection.

ADONIS offers document management capabilities ranging from a simple link to a complex interactive solution. For example:

- Embedded picture – models can embed pictures as background illustrations or as a graphical representation of modeling objects.
- Linked document – the ADONIS notebook has a typed-attribute called “ProgramCall” that lets users easily link to any type of document (e.g. videos, presentations, procedures, etc.). This attribute takes two parameters: a file-system path or a URL, and the program's name that should open the file. For example, this feature could be used to enter the URL of documents stored in a document management system (DMS). If necessary, referenced documents can be attached to the generated Website and included in the HTML package.
- Modeled document – the modeling of documents used means they are more easily managed by making them less abstract than links and by applying all analysis facilities of ADONIS to them. For this reason, ADONIS provides a modeling object called “Document,” used to specify meta-data of the document (e.g. keywords, responsible person, and last update). This allows users to get a better overview of documents, display a documents map, and visualize icons of the document's type (e.g. Word, PowerPoint, and Excel). It also provides a hyperlink or a file system link to directly open the document in ADONIS.

Related features in the process model:

- An icon is displayed on “Activity” objects to show when documents have been attached
- A list of input/output documents can be displayed close to the object referencing them, with navigation capability via hyperlinks

BOC has implemented solutions to integrate ADONIS with DMSs (e.g. PC DOCS). Users can directly link documents stored in the DMS, open these documents in ADONIS, and get meta-data from the DMS to fill attributes in the document's notebook. Links to DMS documents remain available on the generated Website using plug-in technology.



ADONIS also integrates with Lotus Notes. This includes import/export of data between both tools and the ability to reference/open Lotus Notes documents from ADONIS.

## 6. Development Environment

### 6.1 Language of Tool

ADONIS is written in C++, with add-on components in C and Java. The ADONIS Process Portal is written in Java and JavaScript, using AJAX and JMS for communication purposes. Other languages used include XML, XSLT, SGML, DSSSL, and SQL. ADOweb is written in Java.

### 6.2 Product Support, Maintenance, and New Versions

Minor versions (e.g. patches and minor functionality extensions) are delivered approximately every 4-6 months. Major versions featuring major functionality extensions are delivered approximately every 18 months. Both minor and major versions are delivered via CD and email.

## 7. Software Modeling and Code Generation

ADONIS supports business-driven software engineering with a number of modeling and reporting features that can generate comprehensive project documentation. Various model types or concepts can be added to cover project specific needs and to ensure integration of business process models with the corresponding technical models.

ADONIS also exports XMI files to CASE tools and IDEs with software code generation capabilities. Typical benefits are enhanced use case descriptions, comprehensive risk/impact analysis, and a better introduction of the system to its users. A comprehensive introduction to “Applying MDA concepts for Business Process Management” can be found in Petzmann et al (2007, appeared in: Fischer, L. (Ed.): Workflow Management Coalition: Workflow Handbook 2007. Future Strategies Inc., 2007, pp. 103-116).

ADONIS assists users in many activities of a software process, especially for business modeling or requirements of engineering disciplines and for the transition phase. ADONIS can also support different software process improvement approaches such as

- CMMI - SCAMPI (Standard CMMI Assessment Method for Process Improvement)
- ISO 15504 / SPICE (Software Process Improvement Capability determination)

Software models:

- Add-on library with all UML 2 diagrams or an extension of the customer’s library with some UML diagrams. Customers may purchase the whole library (consisting of all 13 diagrams), or ask for 1-2 models (typically use-case or class diagrams) to be integrated into their existing library. The first option is for the customers who want full UML-compliant modeling capabilities. The second is for customers who just want to bridge the gap between business and IT while integrating both business and UML models.
- XMI import/export.
- ADONIS integrates with Eclipse via XMI.

Workflow models and code:

- BPMN, tool-specific notations (IBM Websphere, MQ Workflow, Tibco Process Suite).
- Export: BPEL (e.g. Oracle BPEL Process Manager); Import/Export: XPDL, FDL (IBM Websphere Workflow), XFR (Tibco Process Suite).

- BPEL code can be generated from BPMN models or models using other another notation (e.g. ADONIS Standard Notation).
- API-based code generation for MS BizTalk Server.

### 7.1 UML Model Generation

As indicated above (see software models), ADONIS offers three levels of support for UML: modeling, XMI generation, and transforming business-level models to UML models (e.g. MDA approach, BMT).

### 7.2 BPEL Generation

ADONIS generates BPEL code from BPMN models or models using other notations. It supports the complete range of modeling levels, from the business side and optimization through to the technical realization. This integration has been demonstrated through a coupling with Oracle BPEL Process Manager.

## 8. Templates and Frameworks

BOC offers several products, including those designed to integrate directly with ADONIS's modeling functionality, as well as separate pre-packaged solutions that incorporate horizontal and vertical templates and frameworks.

BOC has built capabilities in ADONIS that enable it to expose templates or frameworks in a variety of ways, including

- Pre-built repository structure (new library/product/product configuration)
- Repository extensions (extensions of an existing library, shapes, etc.)
- Pre-built models with linked documentation (e.g. ITIL, BSC, SCOR documents, etc.)
- Pre-built reporting tools (e.g. SOX)
- Pre-configured tools for semantic-checks and correct-by-construction modeling

BOC offers the following pre-packaged and customized solutions:

- ADOscore (BSC), ADOit (ITIL), ADOlog (SCOR), and PROfit (ISO 9001:2000 and other quality standards).
- Various configurations of ADONIS: ADOMed (Healthcare) and ADOegov (Public Administration).
- An importable package of pre-built models: ITIL, CobiT, CMMI, eTOM/SID/TAF, MOF, SPICE.

BOC also offers services to extend a customer's product to support Six-Sigma, SOX, and Basel II.

Balanced scorecards and metrics definitions are also available for ADOscore for banking, healthcare, and IT.

## 9. Systems Administration and Security

ADONIS provides advanced features for security management, user administrations, and repository/model management.

The Administration features are "multi-level" and thereby increase the scope of security levels that individual departments can impose on their models and model groups. It decentralizes the need for a

single core ADONIS Administrator and allows the role of ‘Administrator’ to be split and/or shared in the organization at a localized level. The ‘local’ administrators will be able to set the access rights on the folder structure that has been assigned to him by the ADONIS Administrator. This further removes the burden of user administration from the de facto IT Department as the business users of ADONIS can now also be responsible for managing the users and groups assigned to them.

### **Security Management**

User authentication. ADONIS supports the Single Sign On (SSO) protocol that offers unified login and advanced security for user authentication and password management.

Information confidentiality. Administrators can control access (no access, read-only, full access) to information captured in models according to defined user profiles. Facilities for filtering object types and their attributes before publishing the models supports the selection of any published information.

Data storage. Database backups and security policies defined by the IT department can be applied to the ADONIS repository. Another way to secure data is to export the models as XML files, which could be periodically stored in external archiving systems (e.g. CVS).

### **User Administration**

User administration includes user groups, users, and user profiles. Users and domains can be imported from LDAP directories (Windows Active Directory). Administrators use the ADONIS administration toolkit, which offers intuitive menus to define user profiles and workspaces that specify access rights, permissions, and available libraries or components.

### **Model Administration**

Each model has meta-data that is entered by the modeler (e.g. table with change history, keywords, etc.) or automatically provided by the system (e.g. last user, date of last modification, etc.). Other coordination features include objects for information exchange (e.g. note) and teamwork attributes (e.g. To Do list, Open Questions field, etc.).

Each model has a version number. ADONIS supports any complexity level for version management, regarding version number policies (e.g. policy for minor or major versions) or model status strategies (e.g. workflow for reviewing, validating, publishing, archiving, etc.).

Some end-user organizations require enhanced change and history management capabilities. ADONIS can be customized with scripts (AdoScript) that generate audit-trails listing all changes.

## **10. Scalability**

ADONIS and the ADONIS Process Portal can scale from a single user to hundreds of users and enables the management of a shared repository across organizations and locations. It can be deployed stand-alone; client-server or in thin client-server configurations. Different deployment variants support low-bandwidth networks with only tens of kilobytes in a WAN up to high-speed networks within a LAN or Intranet.

Some projects require both stand-alone and client-server configurations, for example, when external consultants also work on models. For such cases, ADONIS offers import/export facilities, locking mechanisms, as well as model consolidation features to ensure the integrity of stored information.

Once validated, models and their documentation can be published as Web pages, exported from ADONIS as a separate HTML files package, and distributed among organizations via intranet/extranet.

Scalability also refers to languages and variant management. BOC has developed multilingual features for the ADONIS GUI and models. On the model level, users can access language-specific attributes

directly in the notebook and can choose to visualize the model in the required language. ADONIS supports complex variant management, for example, in the case of product- or country-specific processes/activities. BOC identifies three variant levels:

- Model – each variant is described in a specific model; navigation from the global model to specific models is achieved through model pointers and hyperlinks.
- Object/Path – each variant is represented on the same model using variant-related objects and paths.
- Attribute – each variant is documented in the notebook using tables or language-specific attributes grouped by tabs.

ADONIS supports simulation of complex processes, for example, with several hierarchical sub-processes, linked to large working environment models (organizational diagrams with roles and actors). The same business process models can be simulated related to different working environments without changing the models, just by combining them with so-called application models (i.e. simulation packages), saving considerable time in model building.

## 11. Platforms

ADONIS's client application runs on Windows 2000, 2003, 2008, XP Professional/Home, Vista and Windows 7. ADONIS is also compatible with leading terminal services technology (e.g. Microsoft, Citrix). Repositories are hosted on Windows NT 4.0 (SP6a), 2000, 2003, XP, HP-UX, AIX, Solaris, and Linux servers. *ADOnweb* runs on Java-based and J2EE environments.

The ADONIS Process Portal requires only an Internet Browser on the Client (MS IE version 6.0 and higher, Mozilla Firefox version 2.0 and higher) – no other SW is required to run the APP on the client side! On the Server-side the APP requires JDK, Webserver (Apache Tomcat or comparable Servlet-Container) and possible SSL-support.

## 12. Pricing

ADONIS distinguishes between stand-alone licenses (“named use” licenses for a dedicated machine) and multi-user licenses in a client-server environment (both “concurrent use” and “named use” licenses). Named use Client licenses tie the use to a dedicated user/PC, whereas concurrent user license means that organizations can install ADONIS on an unlimited number of client computers, but only the maximum number of purchased licenses can connect concurrently to the ADONIS database. Furthermore, two functionality sets are distinguished: the ADONIS Business Edition contains modeling, analysis, import/export, publishing, and administration components; ADONIS Professional Edition contains the following additional components: information acquisition, simulation, and evaluation components. All license information is configured and centrally stored via license numbers in the ADONIS repository. Site licenses and group licenses are also available.

Licensing for ADONIS Business Edition starts at 1.600,00 EUR (named use) and 4.600,00 EUR (concurrent use); ADONIS Professional Edition starts at 2.100,00 EUR (named use) and 6.300,00 EUR (concurrent use). In case ADONIS multi-user licenses are “concurrent use” licenses, typically at least three users can be covered by one “concurrent use” license.

In addition, BOC launched a **freeware edition** called “The ADONIS: Community Edition” ([www.adonis-community.com](http://www.adonis-community.com)). ADONIS:CE is a functional and feature rich stand-alone version of ADONIS, with no time-limitation and only few limitations in comparison to the commercial editions.

## 13. Company, Product Positioning, and Support

### 13.1 Company Background Information

BOC was founded in 1995 as a spin-off of the BPMS group of the Department of Knowledge Engineering at the University of Vienna. BOC is privately held and is headquartered in Vienna, Austria, with subsidiaries in Berlin, Madrid, Dublin, Athens, Warsaw, Paris, Winterthur/Zurich, and Vienna.

BOC has emerged as a worldwide consulting and software firm specializing in strategy management, BPM and IT management. It has over 145 employees working in platform and product development, technical support (40%); consulting services, customer projects and sales (50%); and training and seminars (10%).

BOC's customer base includes more than 1000 customers worldwide. The company has experienced steady growth since its formation, reaching an annual turnover of 17 million Euros.

Since its inception, BOC has been strongly committed to R&D and innovation in the field of IT-based management approaches. It is involved in national and international research projects and presents papers at relevant scientific conferences and workshops. Well-known BOC research results are the Business Process Management Systems paradigm (BPMS) and the Enterprise Model Integration approach (EMI).

### 13.2 Positioning

BOC has positioned ADONIS to support the full range of EA modeling and business process analysis and change activities, including

- Enterprise architecture modeling and analysis
- Process modeling and analysis, redesign, and improvement
- Detailed process modeling and analysis
- Documentation of Internal Control Systems (ICS) and support of the Risk Management cycle (risk assessment, design and operating effectiveness, managing initiatives)
- IT support/software development
- Human performance improvement initiatives
- Development of management and measurement systems

BOC has made a considerable effort to provide the features and functionality necessary to position its product to support the full spectrum of EA and BPM needs. In short, ADONIS is a very well thought out tool that provides powerful, feature-rich modeling and analysis functionality behind a very intuitive and user-friendly interface. It is also very customizable, from the languages and frameworks it can support to its GUI and role-based user access and functionality tailoring capabilities.

When used in conjunction with other BOC Management Office offerings (e.g. ADOscore, ADolog, ADOit, etc.), ADONIS offers a very capable platform – based on a common meta-model design – that supports business process modeling, enterprise architecture, IT architecture, and component analysis and systems design efforts. While its simulation capabilities support detailed process modeling and analysis. The addition of various frameworks and methodologies – including Zachman, TOGAF, DoDAF, Balanced Scorecard, etc. – make it well suited for supporting human performance improvement efforts and developing management and measurement systems. Finally, the pre-built reference models and templates offer organizations a practical means for jump-starting their EA and business process initiatives.

### 13.3 Product Training

BOC provides consulting and training support services delivered on site or at BOC offices. Training covers BOC products, including end-user training and administrator training classes, and use of

methodologies and approaches such as process costing and controlling, process management, strategy management, risk management, and service management. Classes are offered in local languages. Services also include the preparation of documents such as operations manuals or modeling guidelines.

### 13.4 Business Process Consulting

BOC's consulting services focus on industry verticals such as financial services, IT service providers, healthcare, public administration, trade, manufacturing, and logistics.

BOC offers various consulting services and workshops for EA and business process consulting. These include methodology workshops, project support in process definition, process analysis, process implementation, strategy management, introduction of information systems such as ERP systems or workflow systems, project assistance, and project management. Technical consulting services offered include product customization, integration of BOC's products into customer-specific infrastructures, and interface development.

## 14. Case Study: ADONIS at Telefónica

Telefónica is a world leader in the telecommunications sector, with market presence in Europe, Africa, and Latin America. It ranks third in the sector worldwide in terms of market capitalization and has over 100 million customers in a potential market of 500 million. Telefónica is also one of the integrated operators with the largest percentage of its business outside its home market and a reference point in the Spanish and Portuguese speaking markets. Telefónica's business activities cover fixed telephony and broadband, mobile/cellular telephony, business solutions, Internet access and content, and other business lines (e.g. guides and directories, contact center services, and content production, etc.).

### The Challenge

The main challenge for Telefónica was to create a common language for business process modeling to facilitate and improve communication between departments, including communication of corporate strategy. Another key challenge was the introduction of a horizontal business organization, involving end-to-end processes, instead of the existing vertical (departmental) approach.

Telefónica required a BPM tool that could support its specific methodology and depict the company's "reality" in a way that would provide easy-to-follow process documentation. In addition, BPM and standardization should allow Telefónica to control and manage the processes efficiently, thereby becoming more proactive in the future. Prior to the selection of ADONIS, Telefónica evaluated different tools regarding their functionality, usability, and pricing. Telefónica settled on ADONIS, purchasing a group license that supports an unlimited number of licenses for all companies belonging to the Telefónica Group.

### BOC's Involvement

BOC is a strategic partner of Telefónica, and its consultants have participated in various projects within the Telefónica Group. Initially, BOC supported Telefónica by designing a meta-model for process management, according to customer-specific requirements. In a second step, BOC customized ADONIS to implement the specific meta-model and other specifications sought by Telefónica. Additionally, handbooks explaining Telefónica's BPM methodology were created to facilitate both EA modeling and company-wide understanding of the models. BOC also provided Telefónica with advanced training on BPM concepts and ADONIS features to ensure a resource-effective application of the tool. The successful implementation of ADONIS in the main companies of the Telefónica Group in Spain, such as Telefónica Móviles, was followed by an additional rollout in Latin American companies. BOC also helped Telefónica deploy ADONIS (and trained Telefónica



employees) in several additional countries, including Brazil, Chile, Peru, Argentina, Mexico, and the Commonwealth of Puerto Rico.

### Results and Benefits

Telefónica has benefited from using ADONIS in various ways. First, ADONIS helped Telefónica to devise (and follow) a single procedure for its BPM projects, whereby processes are analyzed and redesigned, while business functions are defined and then assigned to processes. Next, the organizational structure is depicted (org charts), and the most appropriate systems are selected and implemented. The responsible persons approve models before publishing them as RTF or HTML documents. In the final stage, process indicators are monitored and evaluated to complete the process lifecycle and achieve continuous improvement.

Telefónica has modeled nearly all of its relevant business processes (including process maps, org charts, and process models); the repository contains about 20,000 models managed with ADONIS. As a result, Telefónica has gained better knowledge of its operations across the entire group. This allows best practices consolidation and sharing, especially for specific critical areas. ADONIS has also made it easier for Telefónica to get process certification according to the ISO 9001:2000 standards by integrating different quality management systems.

ADONIS models are shared via the company's intranet. Thus, all employees may browse published models and get up-to-date information about Telefónica's operations, process accountabilities, or their roles within the value-chain. Relevant documents for each process step and information regarding systems are also published to ensure comprehensive understanding of the processes and facilitate efficient knowledge management.

Telefónica has also carried out additional projects with BOC to develop solutions for Sarbanes-Oxley compliance, advanced KPI management, and extended publishing capabilities.

## 15. Company Offices

BOC markets and supports its products globally through a combination of its own resources, complemented by a network of business partners. BOC is represented by many regional offices throughout Europe. These are located in Athens, Berlin, Dublin, Madrid, Paris, Vienna, Warsaw and Winterthur/Zurich. Corporate Headquarters are in Vienna, Austria

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