The Business Process Management Toolkit
ADONIS

Strengths and application scenarios

ADONIS - make processes work
» ADONIS provided us with greater transparency on complex manufacturing processes «
Christine Schmetz, QSE Systems Manager, Emerson Climate Technologies

» ADONIS convinced us it was a professional as well as a technical solution «
Andreas Lüsebrink, Head of IT, Organisation and Controlling, Administration District Märkischer Kreis

» The visual integration of risks and controls in the daily business is one of the great strengths provided by ADONIS «
Andreas Pletscher, Head of Processes and Organisation, Schroders & Co Bank AG

» Process Management with ADONIS allows us to increase the quality of our processes while reducing the amount spent on overtime «
Paul Hoheneder, Head of Accounting, Generali Holding Vienna AG
» With the BOC Group, we have a competent partner and with ADONIS, a cost-effective, user-friendly and also a highly integrative solution «

*Alexander Kolter, Executive Director, Gesellschaft für KontoService mbH*

» As a software development company, quality comes first – good processes and ADONIS provide this support «

*Steve D. Kerényi, Quality- and Release Management, Audit Services and Risk Management, Raiffeisen Solution*

» ADONIS has been our reliable partner in business process management for over 10 years «

*Dimitrios Papageorgiou, Process Engineering Manager, OMV AG*

» Thanks to ADONIS process documentation, errors and flow disruptions could be identified which increased the security of our processes «

*Karsten Gerkens, Head of Urban Regeneration and Housing Subsidies, Urban Administration of Leipzig*
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1 Business Process Management with ADONIS

Analyse and improve the performance of your company

1.1 Cut through cost with powerful BPM solutions

One of the primary goals of business process management (BPM) is to boost company performance, followed by two equally important goals; to increase customer focus and the sense of responsibility for quality. That is why successful companies are constantly seeking best possible structures and powerful processes.

According to the German Chamber of Industry and Commerce, there is a demand for BPM: one third of the regular working hours per day are dedicated to duplication of work. The loss to the German economy caused by the lack of powerful business processes amount to approximately 5 bn Euro p.a.

According to Gartner, investing in BPM pays off well: 78 percent of the 154 monitored BPM projects managed to achieve a return on investment (ROI) of more than 15 percent. 55 percent of the projects managed to bring in approximately $100,000 – $500,000. 67 percent of the projects were finished in less than six months.

1.2 Boost performance and customer satisfaction with BPM

More and more companies with complex corporate structures are moving towards distributed service provision on an international level leading to an increasing need for efficient business processes. Moreover, the increasing number of merger and acquisitions brings about more complexity and the urgent need for standardisation. To overcome this challenge, it is necessary to continuously model, analyse, simulate and evaluate corporate processes.

Business process documentation must be created and signed off by different stakeholders. It should be possible to adapt the documentation to continuously change in a flexible way. At the same time, in order to ensure dynamic growth, it is necessary to provide an integrated management system to aid on-going improvement of process performance and decision-making. All of the above lead to more requirements for business process management.

Five reasons why business process management is essential

- Lean management and preventing waste of resources at process interfaces.
- Provide all stakeholders with an overall view of corporate workflows.
- Boost customer satisfaction.
- Use untapped potential to improve performance.
- Improve quality, cut costs and increase flexibility.
Process-driven companies say that they have gained significant competitive advantage by applying BPM corporate-wide naming the following advantages as the most important ones:

- Significantly increased transparency and performance.
- Clarification of responsibilities and a reduction in non-value-adding activities.
- Increased productivity and clear organisational interfaces.
- Increased adherence to schedules, customer satisfaction and employee motivation.

1.3 What is ADONIS?

ADONIS is a BPM tool that helps organisers, domain experts and business analysts to improve corporate performance and provides powerful interfaces for IT implementation. Use ADONIS to:

- Create process descriptions and instructions.
- Assess and carry out different scenarios, such as quality management, KPI management, performance management or risk management.
- Analyse and plan human resource requirements.
- Specify requirements documents for applications that implement business processes.
- Carry out business analyses for day-to-day business processes based on time, resources and costs.

ADONIS also provides you with comprehensive meta-modelling concepts to tailor the tool to your corporate methods and future business / IT architecture. Together with the extensive ADONIS interfaces, you will be able to smoothly bridge the gap between process modelling and application development and efficiently implement your processes.

Benefit from our extensive BPM experience: The BPMS best practice method of ADONIS reflects more than 15 years of experience in this field and provides you with tried and tested tools that help you decide on what BPM goal to tackle (See chapter 3).

Would you like to...?

- Make models,
- Design,
- Document,
- Analyse and evaluate,
- Optimise,
- Standardise,
- Implement IT in an efficient way,
- Realise,
- Get employees involved,
- Integrate management systems,

...if so, ADONIS is just the thing for you!
1.3.1 The ADONIS philosophy and architecture

ADONIS is a BPM tool for model-based design of corporate core elements:
Business Processes • Products • Organisational Units • Resources/IT

Figure 1 - The core elements of a company

ADONIS enables you to describe the core elements of a company and shows how the process organisation, organisational structures, products, product variants and the supporting resources/information technologies affect each other.

Figure 2 – Model types in ADONIS
Further information can be added to complement the named core elements: documents, data, risks and controls, UML (the Unified Modelling Language/a language for the design of IT systems) and additional model types that can be defined during meta-modelling based on your individual requirements.

ADONIS is an easy-to-use multi-user client/server application. You can combine it with the ADONIS Process Portal (APP, see chapter 2.14) to get web access to your processes. The following figure depicts the architecture of ADONIS and APP:

![Figure 3 - The architecture of ADONIS and APP](image)

### 1.3.2 Ongoing BPM support

The outline of the BPM approach - keeping your goals in mind – usually includes the following core activities: Capturing, modelling, analysing and optimising processes.

![Figure 4 - The BPM approach](image)

This tried and tested approach is successfully being applied in many projects.
### Activity | Description
--- | ---
**Set your goals** | Define your goals for process design. For example: More customer focus by increasing quality, decreasing processing time or standardising processes. Define KPIs and target values to compare current and future processes and for later analysis of scenarios.

**Capture** | Capture, model and document your current state.

**Analyse** | Identify and analyse improvement potentials.

**Design** | Design, model and assess your target state.

**Evaluate** | Compare the current and target states, assess different future scenarios and audit them based on goals and KPIs.

### 1.3.3 All-in-one: the ADONIS BPM components

All of the above-mentioned core elements are supported by ADONIS components, with the proper sequence of the BPM approach also taken into consideration. The integrated ADONIS user interface provides the user with the components Acquisition, Modelling, Analysis, Simulation, Evaluation and Documentation, making the method available at the same time.
To get a first idea of what you can do with the components, here is an overview of the most important features of each component:

**Modelling**

The intuitive visual editor in ADONIS enables you to create new models or change available models to depict the corporate processes and structures quickly and easily.

The most important features are listed below:

- Modelling assistant (“Hover modelling”).
- Auto insert and auto heal (when inserting or deleting objects).
- Depict swim lanes (incl. automatic generation of swim lanes) and extensive features for working with swim lanes (move, insert, automatic expanding etc.).
- Views, variants and automatic layout.
- User-specific views and notebooks (property box).
- Make a number of changes at the same time (global change function).
- Model size is not limited to a specific number of pages.
- Positioning and numbering function.
- Display different hierarchy levels of models.
- Display different levels of sub-models.
- Tabular modelling.
- Bridging function in models and connector marks.
- Many options for printing (scalable, page layout etc.).
- Obligatory attributes (attributes that are necessary and must be populated).
- Different checks on modelling forms and arrangements, cardinality and syntax (e.g., based on BPMN 2.0 syntax).
- Versioning and release workflow support.
- Comparison of models.
- And much more…

There are two types of modelling methods in ADONIS: standard methods, such as BPMS, BPMN, EPK, UML, FaMos, LOVEM etc., and customer-specific methods.

We believe that intuitive modelling is imperative (making the provision of it one of our main goals), especially to users that have little or no technical knowledge, so that they can start working with ADONIS immediately.

Decentralised modelling is equally important. Especially in departments which could have a significant impact on corporate-wide quality and buy-in of BPM. Many large companies use ADONIS on an international level, and often to manage more than 10,000 models in one central database.
Acquisition

In addition to capturing information in a visual way (using models), you can also use the component “HOMER”, which is based on MS Excel. HOMER allows for:

- Capturing of information in a structured and decentralised way based on MS Excel sheets (no need to have an ADONIS Client installation).
- Configuration to capture scenarios (for process flows, process maps, organisation charts etc.) in different ways.
- Creating questionnaires for capturing information.

Analysis

The analysis component provides you with the capability to carry out queries and reports using all of the content of the created models. The user can:

- Analyse and evaluate all captured information in a structured way.
- Carry out pre-defined queries (provided by the administrator).
- Define standard queries with the aid of a “wizard”.
- Define tailored, user-specific queries.
- Create relation matrices.
- Export all of the results from queries and analyses in different formats.

Simulation

Using the simulation component, you can assess the changes made to business processes and organisational structures and their impact. ADONIS provides you with:

- Analytical evaluation (probability calculation and expected value calculation).
- A simulation library including four simulation algorithms. They can be used for identifying process paths, frequencies, process times and costs, and human resource requirements or resource workload (path analysis, capacity analysis, workload analysis).
- Capability to view or process the results of the simulation (e.g., for further assessments in Excel or workforce management tools).

Evaluation

The evaluation component provides you with features to conduct:
• Comparative analyses for different future scenarios.
• Assessments of real processes that are currently running.
• Assessments of performance indicators for each reporting period (by calculating the status of the indicators using a traffic light rating system).

**Documentation**

You can use the documentation component to easily publish the modelled corporate information and with no expense incurred:

• Publish organisational manuals or process documentation in Word or PDF based on your ADONIS models.
• Publish a HTML report based on the information in ADONIS. It enables you to share all your ADONIS content including graphical views on your intranet (or Sharepoint or Lotus Notes).
• Use your individual corporate identity when publishing documents or HTML reports. Using the attribute and class filter, you can choose what content to publish.

**Import/Export (incl. standard interfaces)**

The import/export component enables you to share data between different ADONIS databases. Furthermore, ADONIS provides you with internationally accepted standard interfaces for process implementation and process-based software development:

• Export and import XML and ADL files.
• Export XPDL, BPEL and BPMN-DI files (internationally accepted standard interfaces).

**1.3.4 Administration and access rights management with the ADONIS Administration Toolkit**

In the ADONIS Administration Toolkit, the administrator can manage access rights, users, models and modelling methods. The detailed access rights concept and the possibility to create a multi-tiered administration concept are particularly important for international companies or multi-corporate enterprises: they can define different sub-administrators who would each manage select groups of the users, models and access rights.
Furthermore, ADONIS can access user group and user information from the Active Directory so you can use single-sign-on functionality.

<table>
<thead>
<tr>
<th>Components</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>User Management</strong></td>
<td>• Create users and user groups.</td>
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<tr>
<td></td>
<td>• Assign users to user groups.</td>
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<tr>
<td></td>
<td>• Define access rights for the ADONIS components and models located in the ADONIS database.</td>
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<tr>
<td></td>
<td>• If using the multi-tiered administration concept: Define sub-administrators and their responsibilities.</td>
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<tr>
<td><strong>(Method) Library Management</strong></td>
<td>• Adapt or extend your modelling methods.</td>
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<tr>
<td></td>
<td>• Change the visual appearance of the modelling objects.</td>
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<td></td>
<td>• Extend or change the notebooks (property box) of the modelling objects.</td>
</tr>
<tr>
<td></td>
<td>• Create new model types.</td>
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<tr>
<td></td>
<td>• Change model types and modes.</td>
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<tr>
<td></td>
<td>• Add new values to the enumeration attributes.</td>
</tr>
<tr>
<td></td>
<td>• Create new pre-defined queries.</td>
</tr>
<tr>
<td></td>
<td>• Make new page layouts (for printing).</td>
</tr>
<tr>
<td></td>
<td>• Adapt the simulation settings and the assessment of the results to your corporate standards.</td>
</tr>
<tr>
<td><strong>Model Management</strong></td>
<td>• Make your own folder structure for storing models.</td>
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<tr>
<td></td>
<td>• Manage the access rights for models (based on user groups/roles).</td>
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</tbody>
</table>

In addition to the standard components, we provide additional components or service modules in ADONIS. The most important are listed below:

**ADONISpkr**

ADONISpkr enables you to conduct process cost analyses based on cost centres and costs related to activity quantity as well as non-related costs.

**ADONISdms**

Use ADONISdms to store and manage your documents in the ADONIS database. A release workflow enables you to version and sign off documents.

**ADONISorg**

Use this component to get your information from models of different sources, such as SAP HR, into ADONIS automatically (e.g., positioning of organisation chart on different hierarchy levels).

**FWFplus**

With this component you can extend the standard release workflow in ADONIS in many ways. It should especially be noted that you can set up multi-tiered releases with this component. In addition, it provides you with a feature for the extension of process run-times (“prolongation” of processes).
ICS/Risk Management

Based on ten years of experience in helping create risk management systems, we provide modules for ADONIS and APP for establishing internal control systems (ICS) and risk management systems.

Measures Management

Each management system or management cycle needs measures to be able to continuously pursue the defined goals. Our solution enables you to define and monitor measures based on clearly defined responsibilities. You can use this solution in a risk management context, for managing performance indicators based on specific goals or in general for establishing task and measure management in your company.

1.3.5 The BOC Management Office

ADONIS is part of the BOC Management Office – a comprehensive tool suite that supports the IT-based introduction and incorporation of management approaches in your company. In this tool suite, you will find all the functional and technical know-how for Strategy and Performance Management, Business Process and Supply Chain Management and IT Management (To learn more about the tool suite see chapter 4).
The BOC Management Office at a glance:

- All products of this tool suite are in-house developments of the BOC Group.
- For you this means: increased confidence in investment and packaged experience and knowledge in one tool suite.
- It also means: We guarantee you the complete integration of all components, and we can work completely independent from third parties and other vendors.
- Benefit from more than 15 years of experience in the areas of development of management solutions and the usage of state-of-the-art technology in our web and rich client, cutting-edge products and solutions.
- Thousands of SMEs and large enterprises are using ADONIS worldwide to get a clear overview of their processes and to optimise their processes continuously.
- Benefit from our close links to our customers and individual, high-quality customer care.
2 The strengths and benefits of ADONIS

A simple and flexible system for business process management

ADONIS has become a leading toolkit for business process management over the past years. Its rapid growth, its present market position and its spread throughout the world can be contributed to:

- On-going innovation.
- The comprehension and realisation of relevant functional application scenarios (for example risk management in recent years).
- A flexible licence model and a transparent cost model.
- Recommendations by satisfied customers.
- Continuous implementation of project and customer feedback into product management/development.
- And finally, a number of functional strengths and advantages, which distinguishes ADONIS from other toolkits.

In the following, some of these strengths will be described in more detail. Many of the benefits are the result of continuous innovation work, such as the modelling assistant, the multi-level administration and BPMN “fit for business”, whereas others have been setting new standards on the market for many years, for example its easy and intuitive handling.

2.1 Easy and intuitive handling

ADONIS is mainly characterised by its clear structure and ease of handling, making it particularly suitable for departments and employees without comprehensive IT knowledge.

ADONIS provides a simple and intuitive user interface which is similar to the widespread MS Office products. In addition, there are numerous assistant functions which permit quick and easy handling, e.g., modelling assistant and automatic swim lane generation.

The following additional aspects are clear proof of intuitive handling and permit quick and easy working with ADONIS.

2.1.1 Clearly structured modelling editor

The modelling editor is clearly structured, simply designed and can be used intuitively.
2.1.2 Easily understandable BPMS standard modelling method

The modelling technique and the terminology of the BPMS standard modelling method are easy to understand, based on ISO standards and tailored to a target group without profound IT knowledge, for example by using terms such as “activity” and “decision”, whereas comparable business process management tools with a fixed modelling method use - to the detriment of the users - terms which are difficult to understand for those without IT knowledge, e.g., functions instead of activities or XOR instead of decision.

2.1.3 Customisable start page and favourites concept

For fast access to the most frequently required information every user may define its own favourites (“my models”). When starting ADONIS, these favourites are displayed directly on the start page by small graphical tiles which can be clicked on to open the models. The start page also provides direct access to the last and currently opened models. Furthermore, additional relevant functions are directly accessible on the start page.
2.1.4 Modelling assistant (Hover modelling)

The modelling assistant helps you to generate graphical models more efficiently and more quickly. The assistant is particularly helpful when process modelling by proposing possible subsequent objects you may model, placing the subsequent object chosen automatically and linking it with the previous object. This feature reduces the number of steps when modelling and enables you to complete models more quickly.

![Modelling assistant in action](image)

2.1.5 Automatic right-angled connectors

When using this function, ADONIS ensures that connectors are arranged with right angled bend points automatically.
2.1.6 Auto-Insert / Auto-Heal

If you are required to update models by inserting new activity steps or by deleting existing objects, e.g., decisions, – ADONIS will automatically update the model, add new connectors at the appropriate places and prevent any “gaps” in the process when objects are deleted.

If you want to create more space within the model or remove any empty spaces there is also an ‘Insert/Remove space’ tool at your disposal.

2.1.7 Swimlane handling

Visualisation in the form of “swimlanes” is a frequently used method of process description enabling you to see at a glance the interfaces between different roles and/or departments. ADONIS offers you all conveniences: vertical or horizontal lanes, moving them (with all their contents) to another place, deleting existing or inserting new lanes, automatic adaption of model or swim lane widths / lengths, automatic type testing for admissible objects, etc. – features which will make working with swimlanes fun.

2.1.8 Automatic layout algorithms

The layout algorithms in ADONIS ensure that models are automatically arranged “from left to right” or “from top to bottom”.

Thanks to the assignment of activities to roles / organisational units, ADONIS is able to automatically generate appropriate swimlanes and to arrange the specific objects in them.

2.1.9 Dynamic notebooks

Each object has a notebook for entering object data, e.g., descriptions or times and costs. There are often dependencies between the individual attributes, e.g., it makes only sense to indicate a type of cooperation and further cooperation details when the activity itself has been classified as cooperative. The concept of dynamic notebooks supports this: Only attributes which are possible and in context are made available for entry.

2.1.10 Scenario-specific views / model filter

Today, process management includes many application scenarios for different target groups within an organisation. As a result, a great deal of attribute information may be entered into the notebook for one activity, e.g., descriptions, responsibilities, inputs/outputs, information on times and costs, risks, controls, etc. The sum of this information may overwhelm users especially if they only need a subset of this information for their specific application scenario. Thanks to the concept of scenario-specific views / model filters it is possible to preconfigure different modes (“profiles”) which show only the required information.
This concept was also applied for the implementation of BPMN 2.0 in ADONIS: BPMN contains a great number of attributes and ADONIS divides the attributes into different (sub) conformance classes – this feature is reflected in various modes in ADONIS.

Users who are just starting with BPMN and who only wish to “paint processes” can therefore start with the reduced basic mode, which provides only the absolutely necessary objects, saving users from being overwhelmed.

### 2.1.11 Integration of external documents

ADONIS offers the possibility of integrating external documents/media, e.g., MS Word files, video clips, sample screenshots, into the tool as well as into generated HTML publications. This way, multimedia and integrated process documentation is generated, which may serve your employees as working instructions and online support for process performance.

ADONIS also offers the functionality to store and manage documents directly in the ADONIS database - for more information see section 2.9 DMS functionality.

### 2.1.12 Adaptable modelling method

ADONIS provides the capability to create company specific modelling methods. This includes, among other things, the designs of the graphical objects and method terminology (for further information on the metamodeling capacity of ADONIS see section 2.6).

With ADONIS you have an object-oriented meta-modelling concept permitting you to define all model types, modelling classes, their graphical representation, and analysis and evaluation mechanisms in full accordance with your requirements.

### 2.1.13 Display of sub-models

Another example of functionality to manage complex dependencies and hierarchies is the capability to display sub-models, “exploding” them directly in the process model (see the following diagram).
The number of displayable levels is not restricted and the function may be used for any model, e.g., to display lower-level company maps and process levels at the company map level or to see multi-level organisation charts at a glance.

The display of sub-models is an almost indispensable feature, particularly when applying the BPMN method, because BPMN has a number of sub-model concepts.

2.1.14 Automatic consistency check in modelling

ADONIS supports the modeller in the design of consistent models and in adhering to basic modelling principles. ADONIS offers different mechanisms for an automatic consistency check. In the analysis component it is possible to perform queries on the consistency of the models, e.g., output of all activities without description, etc.

Furthermore, there are mechanisms for the definition of mandatory attributes which can be defined using the Administration Toolkit. Additional features of ADONIS, called cardinalities, for the applied method determine the basic principles of modelling and can also be defined using the Administration Toolkit. The cardinalities defined can be automatically verified using ADONIS and inform the modeller where the rules are not fulfilled, e.g., after a decision there must be at least two outgoing paths. In order to control the logical sequence of the process the user may start a process evaluation. In such a case the simulation checks if the process can be performed with all its possible paths “from the start to the end” and with the involvement of any sub-processes.

All these consistency checks are available for different modelling methods. Furthermore, additional BPMN-specific notation checks, e.g., for the correct application of message flows were incorporated in the course of the implementation of BPMN.
2.2 Comprehensive analyses and business simulation

ADONIS includes efficient components to enable model analysis and assessments to aid with decision making. These functions provide the basis for additional functionalities for process cost accounting (see section 3.7) and manpower requirement planning (see section 3.8).

The powerful functionalities become particularly apparent in the analysis and simulation components.

2.2.1 Analysis and reporting functionality (analysis component)

The analysis component permits the generation of selective reports, such as:

- Report of all activities which are performed by the role “mail service”.
- Report of all activities in released processes which include manual activities requiring more than 15 minutes, or
- Representation of all activities that have the risk of data loss.

With these reports it is possible to access all model contents/attributes. Frequently required reports are available in a pre-prepared form and can also be predefined in the ADONIS Administration Toolkit. Fur-
The users may flexibly create new queries by using wizards or directly in the ADONIS query language AQL. The query results can be directly supplemented or modified with additional information. ADONIS also offers the possibility of exporting the query results, via the clipboard, to other tools such as Excel and Word or generating reports in various formats.

### 2.2.2 ADONIS simulation library

ADONIS has a simulation library with four simulation algorithms which can be used depending on the scenario.

<table>
<thead>
<tr>
<th>Simulation algorithm</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Path analysis</strong></td>
<td>Gives, for example, an answer to the following questions:</td>
</tr>
<tr>
<td></td>
<td>• “How many possible paths exist in my process?”</td>
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<tr>
<td></td>
<td>• “How likely are they?” “What is the default path and can it be improved?”</td>
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<tr>
<td></td>
<td>• “Does my process possibly violate service-level agreements?”</td>
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<tr>
<td></td>
<td>• “Which path has the longest cycle time, the longest processing time?”</td>
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<td></td>
<td>• “Where is the critical path?”</td>
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<td></td>
<td>Simulates a main process (including all its sub-processes) or sub-process without considering a working environment. You can obtain key performance indicators for the whole process and for every execution path.</td>
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<tr>
<td><strong>Capacity analysis</strong></td>
<td>Gives, for example, an answer to the following questions:</td>
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<td></td>
<td>• “What are the manpower and resource requirements for the simulated processes?”</td>
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<td></td>
<td>• “What are the fixed and variable costs of activities?”</td>
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<tr>
<td></td>
<td>• “How much will my processes cost on average?”</td>
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<tr>
<td></td>
<td>• “What is the basis of internal cost accounting or the input for my external price model?”</td>
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<td></td>
<td>• “Which activities are most expensive?”</td>
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<td></td>
<td>One or several main processes (including all sub-processes) or individual sub-processes with consideration to a working environment are simulated.</td>
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<tr>
<td><strong>Workload analysis</strong></td>
<td>Gives, for example, an answer to the following questions:</td>
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<td>• “How can I optimally use my employees and resources?”</td>
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<td></td>
<td>• “Where do resource bottlenecks occur?”</td>
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<td></td>
<td>• “Which waiting times are caused by bottlenecks and how do they affect the process?”</td>
</tr>
<tr>
<td></td>
<td>• “What about my resource utilisation?”</td>
</tr>
<tr>
<td></td>
<td>One or several main processes (including all sub-processes) or individual sub-processes with consideration to a working environment are simulated.</td>
</tr>
</tbody>
</table>
The following illustration shows a path analysis and the results of a process path and of the whole process.

Simulation is based on an event-based simulation machine taking into account the probabilities and frequencies entered. For specific simulation queries so-called simulation agents can be defined, e.g., for recording customer-specific key figures. The simulation results may be edited in tabular form or in a graphic view. Furthermore, the results can be saved in the ADONIS models for additional evaluations.

To conclude, simulation in ADONIS is characterised by the following aspects:

- Processes may be evaluated quickly and easily.
• Many decisions can be made based on the path analysis results, such as cycle times, (critical) paths, probabilities and volume of manpower requirements.
• With the capacity and workload simulation, powerful tools suitable for detailed analyses with regard to times, costs, manpower requirements and utilisation of resources are at your disposal.
• Planned changes and various possible scenarios can be quickly analysed and investigated for their possible effects on cycle times, costs and manpower requirements - thus you obtain a solid basis to aid decision making.

2.3 BPMS Best Practice Method including BPMN 2.0 “fit for business”

BOC has many years of experience in process management, which is reflected in the BPMS Best Practice Method provided in the ADONIS tool.

It is a well-proven and sector-independent method for process management and supports all current application scenarios. It conforms to the most important standards, e.g., ISO standards, and its terminology is specifically targeted to business users.

With the release of BPMN 2.0 by the OMG the full BPMN 2.0 standard (business process, choreography and conversation diagrams) is included with the BPMS method in ADONIS as standard. When implementing BPMN in ADONIS we addressed one of the existing points of criticism of BPMN 2.0 by supplementing it with specific concepts (responsibilities, times, costs, information on quality and risk management, etc.) of business process modelling, so that it cannot only be used for technical process execution but also for specific application scenarios, such as quality and risk management, organisational analysis, process analysis and optimisation. Thus, BPMN in ADONIS is “fit for business”!

The following illustration gives an overview of the BPMS method and its elements.
The most important elements of the BPMS method can be summarised as follows:

**Process landscape / Company maps**

The company map provides an overview of the company’s process architecture. Here the processes are identified, structured and modelled on several levels starting from the top “company map” and then drilling down into the other levels. This task is generally coordinated with the management/board of directors.

At this level so-called cooperation diagrams may also be created. These charts clearly illustrate the most important actors and their interactions / cooperations.

**Product models**

Further structuring is possible by means of a product model, which describes the company’s products and product components, and relates them to the processes – this facilitates access to the world of processes for ‘product-focused’ employees. Furthermore, the dependencies between products and processes can be described and analysed and a cost calculation for products and their components can be made.

**Business processes (process procedures)**

The business process model is at the “heart” of the BPMS method and facilitates clear graphical visualisation of process procedures. The BPMS method is focused on the description of processes from a business point of view, designed to capture process activities and interfaces as well as decisions and concurrcencies (parallelities) etc. The BPMN business process diagram can be used for describing the process procedures from a technical point of view or, alternatively, for illustrating an integrated view. A decisive factor is that the process is not modelled “in isolation”; the responsible roles, the required IT systems and documents, the possible risks, etc. can be integrated directly, using references, into the process. This provides an integrated management system in which the modelled data can be systematically evaluated.

**Working environment, organisational structure**

By means of the working environment model the organisation of a company is represented in an organisational chart and the employees and their roles are described. Furthermore, modelling and assignment of cost centres can be made for process cost analysis.

**Risks and controls**

Risk and control catalogues are available for risk management or for establishing an internal control system.

**IT architecture**

The IT system model enables the mapping of a catalogue of IT services, IT applications and IT infrastructure elements. This catalogue may also be synchronised with ADOit (the BOC Management Office product for IT architecture management – see section 4.2).

**Documents, data, resources and definition of requirements with UML**

In addition, it is possible to structure documents and, if necessary, to generate an object-oriented data model. Manufacturing companies can also map their production resources. For application specifications different types of models, such as UML and Use Cases are available.

**Notes, aggregations and graphic elements**
In all models, notes and different forms of aggregation are available in order to represent model information graphically. External graphics are also permitted to help represent additional information in the models.

**Key performance indicators**

In nearly all models it is possible to add key performance indicators. When used with ADOscore (the BOC Management Office product for performance management) the key performance indicators can be bi-directionally exchanged, and further detailed by Scorecards and visualised in dashboards (see section 4.3).

The authorisation system in ADONIS also guarantees that the end users, e.g., business department, are only presented with relevant modelling objects and data for their target group.

### 2.4 Web publishing and flexible reporting

There is already a high level of service provided with the standard web publishing and document generation functionality:

- Besides two different layouts, the HTML publication of ADONIS provides the possibility of creating a start page, integrating print documents and utilising other configurations, such as zoom levels. The HTML pages generated in ADONIS can also be integrated into existing portals, e.g., via Sharepoint integration.
- In addition to a universally applicable standard report, there are a great number of predefined print documents available, e.g., QM report, process master data sheet as well as risk management reports (risk / control matrix, etc.).
- For the inclusion of corporate identity / design (CI/CD) the user may generate and manage different CIs directly in ADONIS.
- The content to be exported can be directly defined by the user in ADONIS by using the attribute and class filters.

If required, content, structure, layout and even the format of the documents to be generated can be freely defined with very little effort.

The following graphic illustrates some of these possibilities.
2.5 Multi-level administration / Comprehensive rights concept

Rights and access administration are considerable issues. Pure modelling tools do not address these features at all or insufficiently. ADONIS, however, provides an authorisation system for access to the database and to all stored data. This permits the definition of rights for individual ADONIS users, for example read/write access rights for specific models or model groups.

Thus, ADONIS permits a wide range of modellers to work in an orderly and structured way on the same stock of models in a central database (repository).

With the innovative multi-level administration concept, ADONIS provides optimal support to companies with multiple locations and/or group structures.
It is possible to define several sub-administrators who will be assigned particular ‘sub-areas’ (numbers of users and models) to administer. This simplifies a group’s administrative tasks and permits companies within the group to work with ADONIS and to administrate their respective areas autonomously.

2.6 Method openness and flexible adaptability by meta-modelling

ADONIS can be configured in full accordance with the objectives of specific projects as well as the generally accepted corporate notations and target architectures. The ADONIS customising concept permits the implementation of almost all methods. ADONIS provides a fully object-oriented meta-modelling concept in which the model types, modelling classes, their attributes and graphical representation as well as the interpretation mechanisms can be freely defined. The concepts of meta-modelling are comprehensive: for example, there are complex data types for attributes available. In addition to the obligatory text and different number types, it is possible to define records, enumerations (lists) and reference attributes for handling relations between models and/or objects. Modifications do not need any programming work.

The following illustration shows the customising possibilities in ADONIS by means of four well-known methods: BPMN 2.0 (Business Process Model and Notation), LOVEM (Line Of Visibility Enterprise Modelling), EPC (Event-driven Process Chain) and FAMOS (specific modelling standard for public administration).

Further familiar methods supported by ADONIS are for example UML, IDEF or the method of exemplary business process modelling (eBPM, cooperation pictures).

The user may either select the desired method or combine several methods. Thanks to the fact that only the modelling objects and data which are relevant for the respective objective are available, ADONIS provides the end user (e.g., competent department, corporate organisation) with a very simple tool easy to use and to learn.
2.7 Support of standards and open interfaces

The capability to work with file-based, bi-directional interfaces, such as XML or ADL (ADONIS Definition Language) as well as API-based interfaces (such as AdoScript, use of external functions from DLLs, SQL statements) allows ADONIS to be quickly and sustainably integrated into existing IT infrastructure and application maps. This also applies to the ADONIS Process Portal, permitting flexible control and integration into web services via APIs and SOAP.

ADONIS supports different formats for standardised export of information, including several graphic formats (jpg, png, svg, emf, etc.) for model graphics and HTML, RTF as well as csv/txt for the export of data in tabular form.

For supporting the standards for process implementation and exchange of information, ADONIS provides, in addition to the configurable XML import/export interface, support for BPMN-DI, BPEL, XMI and XPDL, all of them enabling rapid transition to execution environments or flexible interface realisation.

BOC is an active member of the Object Management Group (OMG) and intensively follows international developments in this sector. In addition, existing interfaces are continually developed based on feedback from customer projects.

2.8 Versioning and configurable release workflows

In ADONIS a version number can be attributed to each model. By means of the “model comparison” any differences in content may be identified.

Versioning and release of models can be executed by means of a multi-step release procedure. Such procedures support the structured administration of processes.

![Figure 18 - Multi-step release procedure](image)

In ADONIS the life cycle of a process is described by various process stages. Each model has a distinct status as you can see in the following illustration.

![Figure 19 – Life cycle of a process in ADONIS](image)
BOC provides different release mechanisms with different configuration possibilities according to the customer and application scenarios. For example, it is also possible to define the status and transitions and to configure notifications / e-mail dispatch. The use of the ADONIS Process Portal offers the opportunity to perform the release step or steps in the web portal.

A further important scenario, in the context of transparent sign-off procedures, is the so-called prolongation of processes. This means a validity extension of process description based on verifications and including all information on activities, responsibilities, risks and controls. Regular process evaluation will become obligatory for more and more enterprises and organisations and is reflected in relevant regulations, e.g., Solvency II. This EU solvency margin directive on the capital adequacy of insurance companies requires, among other things, annual monitoring of all controls for ensuring the functionality of all components of the risk management system.

Also in this field, support is provided by the configurable ADONIS release workflow for process models and the ADONIS Process Portal. The process owners are automatically informed about prolongations, thus ensuring functional reviews in time.

### 2.9 DMS functionality

With the help of ADONISdms you can store, open and manage external documents directly in the ADONIS database. The result is consistent and process-oriented documentation. The ADONISdms functionality is available in three versions:

- The light version permits uploading of documents to the ADONIS database and thus facilitates centralised document management in ADONIS.
- The power version provides versioning of documents. Old documents are archived in the ADONIS database, enabling users to work with only with latest versions of documents.
- The premium version includes status administration, facilitating role-based quality assurance and release of documents. For better identification of document status, “traffic light” visualisations for documents have been integrated.

![Diagram of DMS workflow](image)

*Figure 20 - Release workflow for documents in ADONIS*

Among others, the following application scenarios are supported:

- Administration and archiving of documents within the framework of QM and ISO certification.
- Safe and comprehensive filing of documents according to a principle of order stipulated in writing.
• Structuring and administration of documents in risk management.

2.10 Independent acquisition component

ADONIS provides a data capturing component called HOMER which can be used in various application scenarios, so that business experts of information collection do not necessarily need to work directly with ADONIS to collect and capture information. HOMER offers functions for:

• Firstly, data collection from Excel.
• Generation of questionnaires.
• Evaluation of answers and
• Import of results into ADONIS (generation or updating of models).

2.11 Quick installation and simple operation

ADONIS is easy to install and easy to handle in operation. For the operation of ADONIS it is only necessary to prepare the database on the database server and to install the ADONIS clients on the respective computers. Supporting standard database systems, this step can generally be performed quickly and without any problems by a database administrator. The client installation can be performed directly or by means of standard software distribution procedures – also supporting a ‘silent’ installation.

ADONIS can also be operated by using terminal server technologies, such as Citrix.

During the operation of ADONIS there are no system or database administration activities necessary, apart from (automated) standard activities such as database backups and updating of database indices.

2.12 Flexible support of standard DBMS and large installations

ADONIS supports the widely spread standard databases, such as DB2, Oracle and SQL. This ensures efficient installation and administration by using the existing database know-how of the company.

In addition, its scalability permits world-wide installations with many hundreds of users on a central ADONIS database.

2.13 Flexible licensing

ADONIS Client/Server licenses are offered either as “Concurrent Use” licence (floating licenses) or “Named Use” licenses. This allows companies to flexibly choose the most suitable license model according to the planned usage. For small enterprises the Named Use principle guarantees a cost-effective start-up, considering the fact that only few staff members will work directly with ADONIS. However, for larger enterprises the Concurrent Use model will be of interest due to the fact that there are many users (modellers, analysts, etc.) where typically not all of them will work with ADONIS at the same time. This offers an attractive price advantage compared with toolkits without “Concurrent Use” license models.

ADONIS also offers integrated HTML generation, no further licence costs are incurred for reading the generated HTML documents on the web/intranet. Especially for larger installations this feature will bring significant price advantages.
2.14 Online web access via the ADONIS Process Portal

Process management is of maximum benefit for an enterprise, if it is firmly anchored in the organisation and as many employees as possible are actively involved in the improvement and change processes.

The ADONIS Process Portal (APP) provides online web access to all process management data. The APP supports role-specific and easy web access to the data which is relevant for employees to perform their functions (target group specific publication).

In this way, the management and executive levels as well as all employees are directly involved in business process management as process performers. The employees quickly find their processes and working instructions and are able to put forward ideas and suggestions for improvements, thus participating directly in process improvement. Process owners or process managers have direct access to their processes as well as key performance indicators and can decide on the release or prolongation of processes. This way you can ensure that business process management will provide consistent benefit and will lead to the desired sustainability within your company.

The users are able to directly access information via a web browser, to read information or to edit its content according to their rights. The user interface is deliberately kept lean, thus enabling your employees to immediately use the APP even without training.

The APP is an ideal supplement to the ADONIS Standard-Rich-Client and ensures full support over the complete life cycle of business processes. Via the APP, the example roles shown in the illustration below may obtain intuitive online web access to required data and functions necessary to perform their tasks.

![Diagram of the ADONIS Process Portal (APP)](image)

Figure 21 - The ADONIS Process Portal (APP) provides online web access to all process management information

The most important application scenarios of the ADONIS Process Portal can be summarised as follows:

- Online publication of processes / process-based working instructions.
- Improvement management.
- Quality assurance and sign-off of processes via the web.
• Key Performance Indicator (KPI) management.
• Documentation of internal control system (ICS), risk management and audits.

For more detailed information about the ADONIS Process Portal, its functions and application scenarios refer to the ADONIS Process Portal Whitepaper – available from your BOC contact or available for download from the BOC website at www.boc-group.com.
3 ADONIS application scenarios

The main BPM application scenarios at a glance - Benefits of implementation with ADONIS

3.1 Process design and documentation

The aim of designing and documenting the processes of an organisation is to identify the existing process information, document it in an adjustable way, and ensure that the organisation meets their customers’ current and future needs, which in turn helps the organisation to achieve their strategic goals.

Designing and documenting processes with ADONIS allows, among other things:

- Developing a deep and detailed understanding of your processes.
- Creating comparability and transparency between your business processes.
- Mapping of business areas with clearly defined roles and rights.
- Analysing and controlling/monitoring of business processes.
- Identifying weak points of the organisational and operational structure.
- Creating a good starting point for the optimisation of processes and quality management (i.e., for certification).
- Identifying process cost drivers.
- Establishing clear interfaces between processes.

![Process design diagram](image)

Figure 22 - Process design with representation of inputs, outputs and responsibilities
ADONIS supports you in designing and documenting processes. Through the intuitive model editor (a detailed description can be found in section 2.1) and flexible tools for data collection, interfaces and responsibilities are presented quickly and clearly. ADONIS excels especially for departments and employees with no IT knowledge.

With the documentation component it is possible to generate organisational manuals or process documentation from ADONIS models in MS Word or HTML formats. Thereby it is possible to distribute the model content, including the graphical representation, via the intranet (also Sharepoint or Lotus Notes). ADONIS offers not only static HTML documentation but also the dynamic ADONIS Process Portal. The strength of the ADONIS Process Portal is the role-based delivery of information and functions which ensure efficient teamwork between the many different roles involved in business process management.

Benefits of using ADONIS for process design and modelling

- An easy-to-use model editor.
- Many documentation possibilities.
- Role-specific web publication with the ADONIS Process Portal.

3.2 Process-based instruction system

The process-based instruction system describes the creation and distribution of work instructions based on process descriptions. Providing your employees with comprehensive, quality-assured information needed to fulfil their tasks not only increases quality and motivation but it also provides an important pre-requisite to comply with legal requirements, such as having rules for procedures set out in writing.

3.2.1 Versioning and release workflow

The release workflow in ADONIS distinguishes different user groups which have different user profiles. Automatically generated version numbers, assigning a unique status and an automatic change history provide clear identification and transparency. The release workflow can be adjusted specifically according to customer requirements. For more information, see section 2.8 Versioning and configurable release workflows.

3.2.2 Read receipts and extensions

Regular confirmation and development of processes by the process owner is becoming mandatory for more and more organisations. This includes activities, assigned responsibilities, risks and controls and is ideally supported by ADONIS and the ADONIS Process Portal.

As part of the release, you can set expiration dates and extension schedules. The ADONIS Process Portal server monitors the dates and deadlines and starts the required extension workflows on time. The process owners are automatically notified by e-mail about upcoming renewals and the tasks to extend the processes in the process portal are set. The escalation management of the ADONIS Process Portal informs additional e-mail addresses if required when processing does not take place. In this way the ADONIS Process Portal keeps all your processes in view and ensures the review within the prescribed period.
3.2.3 Role based process publication

ADONIS offers many features to provide users with their corresponding processes and all related information.

Word and PDF documents, with numerous templates and individual setting options, provide exactly the information required. With the generated HTML documentation from ADONIS, it is possible to make the processes and all related information available without needing ADONIS. The intuitive navigation and clear visibility offers employees with no process experience the opportunity to move naturally in the world of processes.

ADONIS Process Portal exists as a complementary component for web-based user-specific online access to process information.

![ADONIS Process Portal](image)

This offers the ability to provide each user exactly the functions he needs, e.g., individual views and feedback mechanisms.

The process portal supports not only the documentation of processes, but also the release and prolongation of processes as well as the scenarios mentioned above.

**Benefits of using ADONIS for a process-based instruction system**

- Integration of release workflows and versioning mechanisms.
- Provides user friendly information and functions.
- Flexible adaptability of documentation.
3.3 Process analysis and optimisation

The most common goals of process analysis and optimisation are to increase process efficiency, improve product quality and performance as a contribution to customer and employee satisfaction, and to increase the business income by reducing costs and cycle times. ADONIS provides extensive analysis and simulation support mechanisms for these purposes (see section 2.2 Comprehensive analyses and business simulation).

In the analysis component, alongside queries for consistency checks such as completeness of the model tests, predefined standard queries can also be used and can be extended. Thus all questions on the contents of the processes and associated elements can be answered, i.e.:

- Documents: Which documents are used in what processes? What documents are not in use?
- Organisation: Who is responsible for which processes, for carrying out the activities or updating the documents?
- IT: What systems are used in which processes?
- In addition, it is possible to determine for example, manual or non-value-adding activities, internal and external interfaces or information on the organisational structure.

The ADONIS simulation library can be used with its four simulation algorithms (for more information about the available algorithms and their results see section 0). The simulation evaluates probabilities and transition conditions in the relations. It can simulate key processes (including all its sub-processes) or individual sub-processes.

This enables identifying effects of changes in the employee/organisational structure, intensive processing activities and bottlenecks in processes. Simulation can also help identify activities that are rarely executed or roles and employees with low processing contribution in processes.
The simulation component also provides functionalities for process costing and human resources planning.

**Benefits of using ADONIS for process analysis and optimisation**

- Comprehensive analysis component including predefined and self-defined queries.
- Identification of all relevant process information, i.e., interfaces, documents, etc.
- Four powerful simulation algorithms for determining workloads, waiting times, resource requirements, and process times and costs.

### 3.4 ICS and risk management

Risk management is not a new topic, yet in this environment a major change has taken place. The perspective has shifted from a focus purely on financial risks and now includes business risks, such as operational risks. The use of business process management in risk management - which consists of identifying, analysing, evaluating, monitoring and controlling risks – provides various options to address risks sustainably.

Thus, risk management itself can be understood as a business process that has the following aspects as goals:

- Secure the company's existence sustainably.
- Increase the effectiveness and efficiency of business operations.
- Ensure the accuracy of financial reporting and
- Comply with legal requirements.

The process model of the BOC Group for the implementation and operation of risk management is divided into the following phases:

![Figure 25 - Components of process-oriented risk management (BOC Risk Management Life Cycle)](image-url)
The technical support for the various phases of the life cycle can be implemented within ADONIS. During the definition of the risk strategy, the definition of objectives, roles, methods and scoping takes place. Using the process map and the risk portfolio, you can determine which business processes and risks categories the risk management and internal control system (ICS) should focus on.

The risk analysis, which consists of the identification and evaluation of risks, begins with the process documentation. This allows linking of operational risks from the risk catalogue and linking of controls from the control catalogue both on activity and process map levels. The risks and controls associated with activities and processes are displayed with a graphical icon next to the activity or process, see the following figure.

There are different types of information that can be documented as risks such as "error rate", "impact" or "risk categories". The controls necessary to reduce or eliminate the risk can also be documented with the relevant information on "control type", "control execution", "control frequency", "effectiveness of the control", etc. and can be linked to the risks.

By offering various reports and control history, adequate governance is ensured.

Using the web-based ADONIS Process Portal (APP), the phases of optimisation, implementation, execution and evaluation of the BOC Risk Management Life Cycle can be implemented. In line with the roles set out in the strategy, there are several individual views in the APP, see also Figure 27.

Depending on the role it is possible to adapt which features the user has, for example in the control dashboard the user sees a list of all the controls, while the control implementer only has a list of his controls and can validate their execution.
Figure 27 - Roles in risk management - support provided by ADONIS and ADONIS Process Portal

Benefits of using ADONIS for risk management and ICS

- Identification of risks in process overviews and process flows.
- Allocation of risks and risk assessment.
- Definition and evaluation of control activities, i.e., definition of ‘To-Be’ processes to ensure optimal risk management.
- Automated creation of risk and control reports and risk/control matrices as support for audits and financial statements.
- Continuous assessment of risks and controls, particularly in terms of their design and operating effectiveness.
- Introduction of measures and continuous measure management.

3.5 Process indicators and process performance

In the context of controlling and strategic management, business processes are evaluated efficiently using indicator systems to increase a company’s competitiveness and improve the business management results.

In the context of process performance measurement, continuous process monitoring is applied to minimise lead times, reduce costs and ensure quality standards and thus increase the overall performance. Strategic realignments bring the most changes to the business processes and make efficient reporting and targeted control essential.
ADONIS provides the ability to integrate and configure process indicators into business processes. Using traffic light visualisation, deviations from the ‘To-Be’ values are quickly and easily recognised and strategies to address these discrepancies can be developed.

Processes can be evaluated directly in ADONIS by linking indicators. They can be entered either manually and/or be directly imported from external data sources (such as Excel, or using SQL commands) in order to perform a comparison of the ‘As-Is’ and the ‘To-Be’ values and also to define tolerance limits. By integrating with ADOscore, indicator hierarchies can be mapped and process scorecards and dashboards created, see section 4.3 Strategy and Performance Management with ADOscore.

The functionality described above is what BOC class as "process indicators". In a broader sense we also classify calculation results from simulation or process costing as "process indicators", which are determined by input indicators of productive systems (volumes, processing times, wait times, etc.).

**Benefits of using ADONIS for process indicators and process performance**

- Transparent representation of process indicators including traffic light visualisation.
- Easy integration of external data sources for the ‘As-Is’ / ‘TO BE’ analysis.
- Integration with ADOscore will provide indicator hierarchies and process dashboards.

### 3.6 Process-oriented quality management

The ISO standards for quality management or similar process-oriented standards such as environmental management (ISO-9001, ISO 14001, ISO 13485, ISO TS 16949, etc.) require that certain processes / issues...
are regulated and documented in the company. For example, for certain topics the processes must be defined and responsibilities set and described. ADONIS can store all of this information and can be used for all process-oriented standards. Certification is well supported by the HTML documentation.

Quality management is well supported by the unique data management and the linkability of the individual elements of the various model types. Repository models such as resource models, product models, and document models are applied in the context of quality management. There is a special quality management view with the business process model as the core model type (this can be enabled in the administration component). In addition to quality management representation of the models there are also compliance specific documentation features (such as a quality management report chapter structure) available.

In ADONIS, it is also possible to display an overview of the responsible role, input, output, and used resources. Likewise, all information according to the "RACI-principle":

- Responsibility for execution,
- Accountability for approving results,
- Cooperation / participation and
- Persons to be Informed,

Can be stored in any activity and be visualised next to the process in the "RACI - view".

To manage the quality management manuals and ensure the technical accuracy and audit requirements ADONIS has an approval process with integrated versioning; see integrated version control in chapter 0.
Benefits of using ADONIS for quality management

- Modelling, documentation and description of all quality-related issues.
- Easy assignment and visualisation of responsibilities.
- Ensuring the technical accuracy and auditability by using a release method with integrated versioning.
- Creation of quality management manuals and quality management reports in standards-structured form.

3.7 Process costing

The process costing considers the entire process of creating a product or providing a service. The focus on the value creation process greatly contributes to a transparent view of the cost creation and allows a clear and source-related assignment of different types of costs. The aim is to calculate, analyse, plan, manage, monitor and allocate the costs of repetitive processes. Process costs are calculated mainly in three steps:

ADONIS supports these steps and offers the capability to import all relevant information (e.g., quantities, material costs, personnel costs, roles, cost centres, etc.) from existing systems via CSV and XML and document the information at the relevant points in the process. Based on this information there are a number of algorithms which allow you to perform a process cost calculation. During the simulation, all relevant values and data (reference objects, periods, etc.) can be set according to the initial objectives. For further information on simulation in ADONIS please see section 2.2.2 ADONIS simulation library.

Depending on the objective, the costing can be done using different approaches and to different degrees of detail. Although the process costing in ADONIS can be extended with regard to specific requirements, it also offers a light version based on the high level process maps. This capability can be used to remove complex modelling tasks and can therefore achieve results quite quickly.

Benefits of using ADONIS for process costing

- Provide cost and process transparency in indirect performance areas.
- Appropriate assessment and allocation of internal services.
- Improvement of product and customer result analysis.
- Identification of the impact of changes in the process flow, of removing unnecessary processes and of the different number of process executions.
3.8 Process-based manpower requirement calculation

A critical success factor in organisations is the effective and efficient deployment of staff. With an appropriate determination of the personnel requirements the following objectives are pursued:

- Provide an accurate, controllable and comprehensible basis for decisions on the best use of staff.
- Ensure an appropriate distribution of the workforce.
- Ensure the performance and execution of functions in the organisational units.
- Ensure a flexible workforce or internal task distribution when there are changes in the task volume.

A process-based manpower requirement calculation is especially useful for core processes or recurring activities such as the processing of requests and performance.

ADONIS allows you to document the relevant information necessary for manpower requirement calculation, such as processing times and quantities in the processes as well as the hours the employees work, in specific model types for organisational structure and link the models and information together.

This data is analysed in the simulation. The calculated total required capacity in relation to the net working time of an employee results in the required manpower.

The required staff can be determined using different criteria, e.g., per role or organisational unit. Different export functions allow to continue working with the results even outside ADONIS, e.g., in Excel.
Benefits of using ADONIS for process-based manpower requirement calculation

- Determination of the optimal staff needs based on responsible roles.
- Testing of best- and worst-case scenarios and/or preview in case of process changes (comparison of ‘As-Is’ and ‘To-Be’ personnel requirements).
- Comprehensibility using graphical business process models.
- Creation of a single communications platform for all stakeholders.
- Support for better internal and external effects of manpower requirement calculation.

3.9 Technical implementation of processes

An application area of business process management is the development of operational applications, which are the core elements of any business and contribute significantly to the effective implementation of processes.

Process-based application development is characterised by the fact that on the basis of functional business processes the requirements of applications and IT systems are analysed and defined in detail.

From these technical workflows are derived, which are then executed on the chosen target platform such as SAP, in-house developed applications or open source workflow engines. Typically this process is divided into four phases:

1. Technical specification of the system to be developed (“Process Design”).
2. Detailed requirements definition and technical specification of the system to be developed.
3. Implementation of the system.
4. Testing, operation and roll-out of the system.

ADONIS supports all four phases and through ADONIS the different artefacts of the specification within a single tool and meta-model can be integrated. This makes it possible for ADONIS to build up a technical and methodical "roof" over the software specification.

The following figure clarifies the central role that ADONIS can adopt during the specification phase - up to a complete functional and technical specification in ADONIS.
3.9.1 Introduction of standard software (i.e., SAP)

Standard software, such as SAP or Oracle, is now positioned as process-based software. The particular advantages of using ADONIS lie in the possibility to bring together the functional process modelling with the transactions or functions of the other selected system. So-called “process templates” in Standard-Software/ERP-Systems are generally a collection of transactions and functions and have only an indirect reference to the technical process. In addition, the technical process also uses purely manual activities that find no equivalent in the other systems.

ADONIS supports you in these different scenarios:

1. Process-based implementation of standard software based on the functional processes, starting from a "classical" blue printing process and a GAP analysis.
2. The introduction of standard software based on templates, e.g., the CPD content (Business Process Repository) of SAP Solution Manager, and
3. The analysis and optimisation of an existing standard software system for, e.g., optimising the configuration of a running SAP system.

As it is usually not possible to represent technical business processes 100% in (ERP) systems, when modelling there is a separation between the business process view and the (ERP) system-process view. The following figure gives an example of the integration of ADONIS and SAP Solution Manager.
3.9.2 Process engines and usage of service-oriented architectures

For this purpose ADONIS makes a close technical and methodological integration with the methods and tools for the development of (semi-) automatic transmission of specification artefacts in application development tools based on standard interface formats such as XML, BPMN DI, XPDL, BPEL or XMI.

ADONIS also supports the identification of technical service repositories and allows an integrated approach to constitute a service-oriented architecture (SOA).

There are three levels of model-based design (MDA = Model Driven Architecture) for designing technically viable processes (workflows):

**Benefits of using ADONIS for the introduction or optimisation of the use of standard software**

- Consideration of the technical view of the end-user and the involvement of all stakeholders.
- Development of a system blueprint directly from ADONIS.
- Use of Business Process Repository (BPR) from the ERP system in ADONIS and balance / integration with the existing technical processes.
- System profiling (e.g., analysis of a SAP landscape and delivery of active transactions).
- Test case generation (generation of test case documents based on the technical processes).
- Integrated documentation for the planning and execution of the rollouts.
- User documentation for end-users in the technical departments, based on the technical processes.
The first two levels can be mapped entirely and integrated in ADONIS. Especially using BPMN 2.0, a standard that is integrated into ADONIS, which allows the modelling of the CIM and PIM (and depending on the target platform also parts of the PSM). Other models for data and for the specification of UML artefacts such as use cases, classes, etc. can be created. The information is exported to the target platform using the previously mentioned interfaces and resides there in order to complete manufacturer-specific information and execution. For the execution of applications, both large manufacturers (i.e., IBM, Oracle and TIBCO) and Open Source BPMS (i.e., ActiveBPEL, Activiti, Bonita), licensing systems are possible.

### 3.9.3 Development of individual software

The requirements for the development of custom software are typically derived and documented from the business process models, use cases and interaction descriptions in the context of requirements engineering (see #1 below in Figure 34 - ). Also, data and class models for the existing business objects or user interface prototypes (GUI designs) can be created which can be considered as draft models with which the application can be developed.
The technical business process models (#2) and the test cases (#3) are derived on the basis of the requirements as well as the design of the application components (#4).

**Benefits of using ADONIS for process-based application development and successful implementation of processes**

- Integrated modelling of the process and application development in one tool.
- Representation and linkage of different levels (professional business processes as well as elements of the target architecture) and evaluation of the dependencies of these elements.
- Prototyping of technical processes and applications, i.e., with sequence diagrams based on the specified GUIs.
- ADONIS can be customised in terms of the target architecture for which the application is being developed and the selected development methodology.
- Basis for the creation of a process oriented online help and test management.
- Automatic versioning and status and change tracking.
- Support for the requirement management and assignment process.
- Automatic generation of specification documents for development.
- Standards-based, yet flexible extensible interfaces for development tools (CASE-Tools etc.) as well as execution environments (Workflow-Engines).
4 Additional Services and Products

Implement the highest possible quality - The BOC Service Portfolio

The BOC Group offers, in addition to the BOC Management Office, consulting services for strategy-, business process- and IT management. Learn more about the ADONIS complementary products and services that BOC offers.

4.1 Business Process Management Services

Many years of project experience in business process management provides the BOC group with a high level and wide range of know-how in many sectors.

Business process management service portfolio includes consulting services on:

- Process Analysis and Optimisation.
- Process Performance Management.
- Quality and Information Management.
- Governance, Risk and Compliance.
- Introduction of Business Process Management in IT Systems and
- Supply Chain Management.

Selected areas are described in more detail below.

4.1.1 Introduction of Business Process Management

To ensure that Business Process Management (BPM) does not only remain a keyword, the implementation needs to be prepared professionally and the necessary basis for the further setup and extension needs to be defined.

Company and organisation wide implementation of BPM is among the core competences of the BOC Group. BOC actively support you with the definition and coordination of your BPM goals providing the expert assistance you need.

Define procedure models to which your employees need to comply, optimise your processes along the value added chain and benefit from the continuous enhancement and consistent improvement of the processes in your company.
4.1.2 Quality and Information Management

A successfully established high-class level of management is an essential competitive factor. It creates differentiation between your company and the competition and also lowers costs by minimising error rates, loss through waste and helps reduce levels of complaints.

When implementing and establishing quality and information management systems (QIMS) it is necessary to define targets and responsibilities regarding the organisation strategy, tighten quality management policies and related frameworks under consideration, and to integrate QSE (Quality, Security, Environment) information into a central management system. BOC supports you with our experience during the establishment and continuous improvement of your QIMS.

Initial certifications and re-certifications are often linked to high costs and effort. The BOC services aim to provide efficient documentation of the information relevant for certification and to ensure optimisation of the maintenance process for future updates and certifications. As part of the preparation BOC supports you with the elevation, identification and assessment of relevant process landscapes and processes, by integrating quality, security, and environmental aspects into the central system. BOC can also support you with the definition of key quality indicators for the continuous controlling and monitoring of the implemented QIMS.

The establishment of a controlled and sustained release and versioning process ensures current related target group information is presented in the latest version. The BOC Group supports you in defining and realising appropriate release and versioning mechanisms culminating in automated publication.

4.1.3 Governance, Risk, & Compliance

Process Governance is more than a keyword: transparent and clearly defined processes are a part of the organisational culture which should be demanded when establishing a governance framework. In particular risk management and an ICS are not limited to the pure definition of processes.

BOC supports you when carrying out the necessary organisational changes and we establish the essential management system together with you.

4.1.4 Implementation of Business Processes in IT Systems

The analysis and definition of IT system requirements is a crucial step for their design and subsequent development. Insufficient requirement analysis can cause increased follow-up costs in the system development or they can become the principal reason for failed acceptance tests. This can lead to the failure of the whole project. BOC have supported many different software-developing projects in this area and have extensive knowledge in relation to action models and methodologies for requirements management and requirements design.

IT services are another main focus for the utilisation and further development of applications in your company on a long term basis. Hence, it is essential to homogenise IT landscapes with the purpose of reducing the number of interfaces (technologies) between applications. BOC supports you in developing a function driven service-oriented architecture (SOA) which leads to the simplification of the structures of your IT landscape, providing you with cost savings and more flexibility.
4.2 Enterprise Architecture Management with ADO\textit{it}

Enterprise Architecture Management (EAM) is a holistic approach to creating business/IT alignment in organisations. In other words, organisations usually use this approach to understand how to optimise the IT support for value-adding activities (usually represented by business processes).

In order to achieve business/IT alignment, it is necessary to understand how business and IT architectures are connected and what types of dependencies exist on both sides. During the following planning activities, the path from the current state to the future state of the architecture is described and evaluated along with the definition milestones and projects (roadmap) and an optimal blueprint of the future architecture.

Many methods and frameworks have evolved over the years that show how to introduce and carry out an EAM approach. More recently however, the Open Group framework TOGAF has probably turned into the most popular and most frequently used framework among enterprise architects.

Regardless of what framework is used to tackle the above mentioned weak spots, it is all the more important to understand the benefits and potentials that can be expected from the introduction of EAM in an organisation.

![Figure 36 – ADO\textit{it} – presenting details of a property box of an application](image)

In order to unlock the potentials that EAM offers, it is essential to choose the right tool for the EA programme. EA tools must be capable of supporting EAM sub-categories, such as Application Portfolio Management, Technology Management, Data Management, Risk Management, IT Service Management etc. (EAM key aspects) and also be able to interface to other tools (for example, BPM tools such as ADONIS).

The EA tool ADO\textit{it} was specifically developed for the above mentioned purpose. It supports core EA scenarios and also incorporates related sub-categories. ADO\textit{it} is a repository-based tool compatible with the
TOGAF metamodel which also has an easily adaptable metamodel to meet any specific customer requirements. Our clients use ADOit as their key EA information platform to address different stakeholders and as a means to help plan business/IT alignment.

ADOit is a customer and project-driven tool that has been designed and developed to correspond closely to EAM. It reflects our extensive experience in EA consultancy.

ADOit provides a firm basis for introducing EAM, implementing EA processes in a sustainable way and extending the many benefits of EA.

### 4.3 Strategy and Performance Management with ADOscore

The communication of company strategy as well as achieving more transparency and clarity within corporate governance are crucial for the sustainable future of a company. Being able to base decisions on promptly and properly aggregated data is becoming more and more important within corporate environments. The ADOscore toolkit offers IT support for achieving these goals and provides functionalities to effectively develop and operate goal oriented Balanced Scorecards (BSCs) and Performance Management. The application scenarios for the tool are Strategic Corporate Management, Management Planning and Controlling, Process Strategy and Performance Management as well as Project- and Initiative-Management.

ADOscore supports the flexible development of controlling systems for strategic business objectives, e.g., as a part of a Balanced Scorecard, or in the context of Performance Management by freely defining key performance indicators (KPIs). By integrating initiatives and projects within the scorecards it is possible to not only measure goals and KPIs but actively influence and shape the management of continuous improvement. The combination of reactive figure-based controlling and actively performed initiative management is one of the key strengths of the method and tool.

When creating Balanced Scorecards with ADOscore the tool is distinguished particularly by its graphical representation of cause and effect relations that provide easy to use analysis and reporting results. The status of strategic and operative goals is based on a strategic- and operational-approach. A significant benefit of the BSC-creation process with ADOscore is the ability to create Controlling Cockpits. They allow cen-
centralised access to clearly captured performance management information including any relevant monitoring information.

The hierarchical structure, divided into objectives, KPIs and initiatives, combined with clear visualisations and detailed historical analyses means crucial decision making information can be easily identify and interpreted.

The BOC web portal, which is a complementary add-on for ADOscore, enables web-based access to all relevant performance management related functions. This includes providing customised access to reports and Controlling Cockpits as well as providing the possibility to enter KPI and initiative data. The web portal is incredibly flexible and can be tailored for customer specific scenarios.

ADOscore is based on the meta-modelling concept from the BOC group and therefore supports flexible extension and adaption regarding method, analyses, reports and (web-) publications.