AcceleratedSAP

Business Blueprint
STEP-BY-STEP guide
Business Information Warehouse

Document Version 1.0
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Introduction
This document is intended to guide you step by step through the Business Blueprint Phase. In our approach Business Blueprinting comprises 3 steps:
- Collecting requirements
- Business content check and
- Data Design

In parallel the structure of this document is organized. Additionally in the appendix you can find descriptions of the accelerators mentioned in the text.

In the following chapters we focus on transferring practical knowledge from an implementation point of view. Therefore for every section there are templates and hints for tools that help you to master the tasks.

This document was written specifically for BW version 2.0B.

References
For a higher-level demonstration please check the latest version of the Business Blueprint overview presentation on SAP Service Market Place For an in depth discussion of data modeling issues we refer to the Multi-Dimensional Modeling with BW Accelerator.

Preliminary
Each time when you are starting a BW project there is the question about how you approach this goal. Usually people have been using reporting tools before that you have given them a kind of idea what they can expect from a reporting oriented solution. However, people like to stick to their attitudes not thinking about the opportunities a real BW could bring. It is by far more interesting to see the old reports again, or maybe one or two additional cross functional, then to think about overall (holistic) concepts. Moreover, reports have been developed individually which means for every requirement that has been identified a solution was provided. However in the BW you are trying to build an information model, which covers all possible reporting requirements without the need to build these solutions separately.

This step-by-step document should give people involved in the Business Blueprint phase an idea what objectives are defined for each step and how these definitions influence the later steps of the project.

Business Blueprinting Step by Step
In a first step we will describe how to collect the requirements and which tools and techniques are important. Furthermore the way is shown how a structured and comprehensive documentation of the requirements is done. This chapter will heavily stress on the use of templates instead of starting from the scratch.

The second step consists of conducting a Business Content Check. This means to match the requirements against the preconfigured BW content and to find strategies for enhancements if any gaps should occur. We will propose a draft method how to master this critical task.

In a third step techniques for doing the data design are shown. The focus lies on demonstrating how to conduct concrete Data modeling workshops in your BW project.
For more detailed information on data modeling and the BW Schema please refer to the Multi-Dimensional Modeling with BW Accelerator on SAP Service Market Place. As an overview please check the list of accelerators related to the steps of Business Blueprinting below:

### Business Blueprinting Step-by-Step

#### Activities

I. Collecting Requirements
II. Business Content (BCT) Check
III. Data Design

#### Accelerators

1. Interview Script
2. PI-Tree Documentation
3. PI Documentation Template
4. Project Measure Glossary
5. Data Access Documentation Template
6. MetaData Repository Business Content-Documentation
7. Data Design Documentation and Sizing
8. Data Flow Documentation

Thus requirements for a business blueprint are different for the various approaches. However, the following proposal should cover those different project types. In this document, we will also describe how to use the templates delivered with the ASAP methodology.

### Step 1: Collecting the requirements

The information requirements analysis is user-driven. It starts with the examination of the user requirements because their requests have a great impact on almost every field of the implementation. The main target of the requirements analysis is to:

- Develop an information model that fits to the users needs
- Focus on how executives measure their business and how key figures are related to the business subject areas
- Address data supply conditions. That means on a more technical level: exploring where the relevant data might come from

### Objectives

The objective should be to secure standard multidimensional reporting needs of end-users but also as a challenge to consider the integration of more advanced analytical business applications (e.g., other mySAP.com components like SEM). The overall goal of the analysis is to deliver a comprehensive information model. This model intends to catch the requirements and serves as a blueprint for the later data design. In this stage of Business Blueprinting it is not necessary to develop a perfect star schema.
Furthermore it is recommended that in facilitated sessions all important requirement aspects are brainstormed and carefully hammered out.

**Preparation**

Before diving into the analysis it is recommended to take care of the following important aspects:

- **Readiness**: Check a list of characteristics that comprise the optimal situation for a data warehouse project. For example: Level of management commitment for the BW project, feasibility in terms of available skilled resources and technical infrastructure, etc. Please check the latest version of the Project Start up Accelerator on SAP Service Marketplace.
- **Project roles and responsibilities**: ensure that one or more people are identified to fill each of the roles that are needed for the project.
- **Prior Communication**: It can be very useful to communicate your interview/workshop objectives beforehand to the interviewees/workshop participants. Not only time duration and location information should be distributed, but also a draft script with your key questions.

**Recommendation**

As a good start use the BW Business Content as a first step to structure and catalyze the analytical process. For each business area involved it is recommended to give a short overview of the available Business Content objects. For demonstration purpose you can use the BW HTML-Repository offline or any Business Content related PowerPoint presentation on the SAP Service Marketplace.

**Techniques**

There are two main techniques to collect the information requirements: Conducting workshops or interviews. Each has advantages: Interviews are normally scheduled with individuals or small groups. This garantes a high degree of attention and ensures that every voice is heard. Workshops are usually conducted with larger groups and are led by a facilitator/consultant. This setting can help to encourage brainstorming and in a relative short period of time a lot of information is transferred. In most cases a hybrid of both devices fits best.

**Interview Scenarios**

Interviewing could be a very successful technique to explore requirements. As further mentioned the overall goal of the requirement analysis is to build a comprehensive information model. However this model comprises a business focused view and a more technical related view. Business requirements as well as data source relevant conditions need to be considered in-depth during the analysis.

Generally we suppose to differentiate between three types of interview scenarios. The following order is proposed: Our recommendation is to start first with planning the interviewing cycle. Afterwards you could continue with business requirements followed by touching IT-topics.

- **Interviews on project management level (planning)**
  The objective is to identify which roles should be covered by the BW, to classify potential users (power-user, frequent user, consumers) and pick out one concrete person for each role as an interviewee. Furthermore you should specify which persons are candidates to give you clear information about the existing IT landscape and data supply topics concerning internal and external source systems.

  **Persons involved**: Project Managers from the customers and consultants side.
  **Action items**: Schedule business and IT interviews, Prior communication of the key questions, Preparing Business Content presentation

- **Interviews with information owners**
It is recommended to talk to one information owner for each specific role about his tasks, his responsibilities and measures of success. Nail down the descriptions of the key concepts as clearly as possible

**Persons involved:** Interviewer and information owner as a role representative

**Action items:** Structured documentation of the interviews results

**Accelerators:** PI Documentation Template, PI Tree Documentation Template, Project Measure Glossary, Business Content Check Template

Check the appendix, how to use the accelerators.

- **Interviews with IT-persons**

  The objective is to get detailed information about the data sources and data supply chain. This should enhance the PI analysis and help to complete the requirements and conditions for using Business Content.

  **Person involved:** Interviewer, IT-person

  **Action items:** Enhance requirements documentation

  **Accelerators:** PI Documentation Template, PI Tree Documentation Template, Project Measure Glossary, Business Content Check Template

**Focus on Performance Indicators**

This section intends to figure out the underlying structure streamlining the process of catching the requirements. It is not only a question of how to document a workshop or interviews output but in the first place how to build the requirements analysis from a methodological point of view.

The core element comprises the Performance Indicator (PI) analysis

**Accelerators:** The PI Documentation Template gives you a detailed demonstration how to ask the relevant questions and how to summarize the results. In the Project Measure Glossary you nail down every final results concerning technical details, definitions and responsibilities.

**Definition:** *Performance Indicator*

A Performance Indicator (PI) is a numeric value describing the performance of a certain business process. It gives a user role or a number of user roles information on how their business goals and objectives are met.

**Definition:** *Information Owner*

An information owner is a person that has the responsibility for a certain business area as an executive or manager with respective to a certain role.

**Motivation**

The PI analysis is a core example for targeting info owners. The objective is to track and explore requirements related to business analytical needs. In the first stage of the PI analysis a role and business process responsibility analysis is done. For this purpose you have to define the different groups of people the BW should support in the future. For each group name the persons assigned to this group. Additionally you need to specify how this specific person is going to interact with the later BW. Thus a user could just be a consumer using predefined reports without any interaction on the front end or an analyst who is able to use the drill-down slice and dice functions or it could be finally a power user who is able to create his own queries based on a predefined structure of an InfoCube.
It might also be possible that one person is a power user in one business area whereas he is a consumer in another one.

The next stage of the analysis includes a detailed detection of the PIs that drive the users reporting requirements. PIs sit in the center of this approach because:

- PIs are the fundamental basis of every analytical information system
- In most cases information owner heavily use PIs to manage and control their business processes
- PIs are a good starting point to communicate with information owners unless they usually have a strong opinion about how to measure success
- On PI-Level you might easily bring Business Content objects into discussion. In best case for example using Business Content key figure can accelerate the whole implementation cycle.

Due to the importance of PIs however, in most cases there doesn't exist a company wide, well-documented PI "bible". Although it is possible to divide PIs into base and derived ones it is often not trivial to get an overview. You may be confronted with a large amount of different measures and the challenge is to consolidate and build a comprehensive model out of it. In our definition base PIs are measures of numeric facts that exist on a non-breakable level: this means base PIs cannot be calculated from other values. All PIs that are not base PIs are automatically defined as derived PIs. In a well defined model you track a relative small set of base PIs and all other measures are calculated from this basis.

In this approach it is important that all base PIs are accounted for and every step of calculation rule for the relevant derived PIs should be reflected.

Since PIs always refer to certain business subjects like for example "revenue by product group" you have to attach these entities to complete the initial model. Describe and refine the business subjects as far as possible and carefully check the validity of assignment to the base PIs. Revisions and changes are natural in this stage of the analytical process. However, as an output you receive a draft initial logical schema that should be able to answer the key questions of your potential BW users.

Procedure
As discussed earlier facilitated workshops or interview sessions are good devices to manage especially the PI analysis task. The most effective method to gather the information is using Post-its or flip charts. During detecting and discussing you might wallpaper the meeting room with Post-its representing your basic entities like PIs and Business Subjects. Using that technique you can easily remove, enhance or change items while outlining the model.

As working through the session it is recommended to have a clear concept in mind, which are the important steps to do:

- Break down the PIs to a non-breakable base level

In some cases with a large set of interdependent entities this may lead to the generation of a PI-Tree: the root describes the consolidation path and the nodes comprise the level of consolidation. Within this task you have to detect underlying calculation rules and identify applied restrictions and conditions concerning the measures.

- Describe all important Business Subjects as dimensions like for example Customer, Product, Sales Organization, etc. that are the targets of the PI measurements.

Additionally find a precise description of the Business Subjects' attributes.

- Attach the Business Subjects with their attributes to the relevant base PIs and consider also time aspects and exceptional or conditional behavior
Cluster your base PIs with reference to your definitions and calculation rules and check the correctness of the Business Subject assignment on every consolidation level. Thus there is no strict rule to follow the steps it seems to be a natural behavior to stop the flow when necessary and move back and forth during the analysis. After sketching the initial model it is important that the info owners approve the result. Ideally in a follow up session all assignments, definitions and calculations should be proved against validity and completeness. You have to ensure that nothing is skipped and that the descriptions cover the requirements.

**Accelerators:** Use the Project Measure Glossary and PI-Tree Documentation Template as a working document.

**Data Access Analysis**
A further objective for a follow up session is to discuss and document the data access conditions. The main target is to hammer out the requirements concerning the presentation of information as for example navigational behavior, authorization questions, tracking historical data, query response time tolerance etc. which could have a great impact for the later data design.

**Accelerator:** The Data Access Documentation Template delivers an example how to structure your research and summarize the results.

**Step 2: Business Content Check**

**Purpose**
The SAP-BW provides not only tools to administer and manage data-loading, -staging, scheduling and presentation but also a huge amount of content which is already pre-configured to be used by simple activation. This Business Content is available for different industries as well as roles and processes. The content can be build on simple process key figures or on high-level performance indicators relevant for management decisions. Therefore during the analysis a business content check should be established.

Since Business Content is represented on different MetaDataLayers several benefits can be accomplished which might have a big impact on:

- Implementation time
- Consistency in the data model
- Stability for future developments
- Integration into other mySAP.com Components

Thus the following MetaDataLayers should be taken into account during the Business Content Check:

- InfoObjects
- DataSources (Master data, transactional data)
- Transfer rules
- Update rules
- InfoCubes, MultiCubes, RemoteCubes
- Queries, Web reports
- Templates, restricted and calculated key figures
By using the existing InfoObjects you ensure that the selected Object will be unique and consistent.

If you set up the rule of purely using business content, nobody will question that the existing 0MATERIAL of the Standard Business Content is the one and only MetaData definition of a product in the company.

If you allow users to easily create their own Metadata models, especially if they are working at different sites, it might happen that you do not end up with just one unique definition of a business object like product. The problem that arises afterwards is then how to consolidate the different data based on different Metadata to a common picture, which is indispensable for BW. (e.g. material, product, mymaterial)

This is even more important if you think about an information model, which should also be valid for the integration into other mySAP.com components like CRM, APO or B2B.

By using existing DataSources you stick to standard extraction. (R/3 only)
In the R/3 World DataSources describe what data will be available for a standard-process or -object. DataSources can be easily enhanced or newly defined but this is then under the responsibility of the customer. The more you stick to the standard the less effort you have to maintain your extraction model in the future.

By using transfer rules and update rules you follow SAP-Logic to consolidate and manipulate data for storage. (R/3 only)
Certain rules are applied on the BW to be independent of any logic on the source-system. In R/3 cases this sometimes means separation or aggregation of data based on customizing settings done on the R/3. To avoid the complex reprogramming of these rules which are essential for correct query results routines in the transfer rules and update rules should be used or copied and enhanced with customer specifics.

InfoCubes, MultiCubes and RemoteCubes represent an information model independent of the source system.

E.g. cost center controlling can almost completely be standardized although the data might not always come from the same kind of source system. Therefore it is worth to check what kind of information models is shipped with the standard business content to avoid the reinvention of the wheel. This specifically fits to FI, CO and HR.

Query-Components can be used as templates or demo scenarios.
Since some of the values shown in the query do not directly come from the database but are a result of complex calculations it might be valuable to also check if these solutions already prepared for quicker implementation cannot be used as templates for your own queries. Beside that queries and their embedded templates can also be used to show rapid results in a prototyping project.

Tools
Several Tools are provided, mostly with the 2.0 releases, to make the search for the right business content easier and to document the final results. On the following pages you will see a collection of screenshots with some descriptions on how to use the different tools. Additionally you will find more information about the overall procedure in the section ‘Approach’.

Tools for documenting relevant Standard Business Content:
Project Measure Glossary to define Business Content Match on lower level (InfoObjects)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Characteristics</th>
<th>Phase</th>
<th>Description / Meaning</th>
<th>Contact Person</th>
<th>Calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company</td>
<td>Company is the base unit used in the FI, for which individual financial statements are prepared in readiness for consolidation</td>
<td>1</td>
<td></td>
<td>FI EPO</td>
<td></td>
</tr>
<tr>
<td>Controlling Area</td>
<td>Organizational unit within a group, for which cost accounting can be performed.</td>
<td>1</td>
<td></td>
<td>FI EPO</td>
<td></td>
</tr>
<tr>
<td>Credit Control Area</td>
<td>Organizational unit in an organization that specifies and checks credit limits for customers. A credit control area can include one or more company codes. It is not possible to assign a company code to more than one credit control area.</td>
<td>1</td>
<td></td>
<td>FI EPO</td>
<td></td>
</tr>
<tr>
<td>Purchase Organization</td>
<td>Organizational unit within logistics, subdiiving an enterprise according to the requirements of Purchasing. A purchasing organization procures materials and services, negotiates conditions of purchase with vendors, and bears responsibility for stock.</td>
<td>1</td>
<td></td>
<td>MM EPO</td>
<td></td>
</tr>
<tr>
<td>Plants</td>
<td>Organizational unit within Logistics, serving to subdivide an enterprise according to production, procurement, maintenance, and materials planning aspects. A plant is a place where certain materials are stocked, produced or goods and services provided.</td>
<td>1</td>
<td></td>
<td>MM EPO</td>
<td></td>
</tr>
<tr>
<td>Storage Locations</td>
<td>Place where Materials are stored. An organizational unit that allows the differentiation of material stocks within a plant.</td>
<td>1</td>
<td></td>
<td>MM EPO</td>
<td></td>
</tr>
</tbody>
</table>

**KPI-Tree to define Business Content Match on higher level**

The KPI-Tree will be documented in three different phases represented by the different colors of the columns. The Business Content Check is the last phase and will document which InfoSources, InfoCubes, Queries and Structure Elements can be taken from the Standard to fulfill the requirements of the customer.
Columns to document the Business Content that fits to the customer’s

Tools for Browsing through Standard Business Content:

The new documentation contains functional descriptions as well as Business Content Documentation.
The new HTML Help provides a complete...

MetaData Repository Browser (Offline with 2.0b)
(Can be extracted from any BW-2.x-System by running report:
RSO_REPOSITORY_EXPORT_HTML)
**AcceleratedSAP**

**Approaches**
The approach to check relevant business content for your project mainly depends on what type of project you are running. If it is R/3 driven or at least R/3 is part of the source systems then the bottom-up approach is recommended; however, the top-down approach is possible as well. If you only source a or a number of legacy systems then the top-down approach fits more.

The approach is also very much dependent on the person you are interviewing. If it is a pure business person, the bottom up approach might be too technical. Whereas if you follow the recommended interview technique you will first talk to business people about their requirements and then to technical people to gather information about where to find the relevant sources.

**Top Down Approach**
Find existing PIs or InfoCubes
Accelerators: Business Content Documentation, HTML-Offline-Tool

The Top Down approach is a little bit harder since the terms of the customer do not usually match with the terms of the Standard Business Content. Consequently, you have to find a method to communicate on a quite abstract level and then to compare this with the existing solution.
Although the role of an interviewee might not fit completely to what SAP provides in the Standard Business Content it is still a good level to start with.

From here you should first try to present what kind of information models we provide to avoid discussions about terms. This usually gives the customer a chance to translate our world into his business world to identify similarities or matchings. If this is the case it is quite easy to navigate through the MetaData repository to find the relevant InfoCubes and Queries to be activated. Now the information model can be filled with sample data from the customer to check the overall model.

Find InfoObjects
Accelerator: MetaData-Repository (BW-Online)

If Standard Business Content does not fit to the requirements on the PI- or InfoCube-Level there is still a chance to utilize existing MetaData Information on the InfoObject level.

This would be a second level of Business Content Check.

This can only be done by means of the BW-System since the other mentioned tools do not provide similar functionality. In the MetaData Repository it is possible to search not only for terms (names) but also for technical attributes. Thus, before creating your own object, you could first check, if an InfoObject exists which follows certain criteria (e.g. show me all InfoObjects that are of type currency, 10 Digits long). This should also be the approach if you are working in a multi-project environment, because you want to ensure that you are going to implement consistent InfoObjects for the entire (global) solution.

**Overview of approaches and tools to be used**

<table>
<thead>
<tr>
<th>Approach</th>
<th>Step</th>
<th>(what to find)</th>
<th>Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>InfoObjects</td>
<td>MetaData-Repository (BW-Online)</td>
</tr>
</tbody>
</table>
Bottom Up Approach

Find DataSources, InfoObjects
Accelerator: Business Content Documentation (http://help.sap.com/)

Since the customer already knows quite a lot about R/3 he is usually very keen on getting the right data into BW. Therefore it is much easier for a BW-Consultant to talk in R/3-Terms since these are familiar to the customer. This is usually the level of the DataSource.

Example:
You could start to analyze on billing information the customer would like to see in the BW. Now you select the relevant DataSource (2LIS_S262) by using the documentation tool. This will give you a list of fields related to InfoObjects. If the customer now identifies the fieldnames he would like to see in the BW you as a BW-Consultant directly have the link to the respective InfoObject.

Tip: Since searching in the documentation is limited you can copy the DataSource information to an Excel-Sheet. This allows to find the right field quicker and to easily copy it later to the glossary.

Find InfoSources, InfoCubes, Queries
Accelerator: Business Content Documentation (http://help.sap.com/)

Once you have analyzed on the details of the DataSource and you found out that all relevant fields are existing you can go ahead with searching for the respective InfoSources and InfoCubes assigned to it. (if Fields are missing it has to be checked if they can be added, i.e. if they are available in the system) From here you find the queries to check what kind of Business Content might already been represented in existing performance indicators.

Step 3: Data Design

Objective
The overall goal of the data design is to succeed in multi-dimensional data modeling and to map the multi-dimensional model to the BW schema. The key steps are:

- Mastering the translation from the business requirements to a multi-dimensional approach and
- Translate the multi-dimensional model to an InfoCube Model in BW.

Procedure
As discussed earlier in this paper the output from the Business requirements analysis comprises a draft information model of the respective analytical needs. During this analysis we have focused on building a structure where the Performance Indicators sit in the center and different Business Subjects or Dimensions with their attributes are assigned to them. The Performance Indicators as facts or key figures show how to measure certain business processes and the Dimensions determine the required view on the facts. If you carefully outlined the structure as described for the requirement analysis you have already considered the main ingredients of multi-dimensional modeling.

In picture below the main translations are shown:
As already discussed facilitated workshops are good devices to manage especially the data design task. The most effective method to gather the information is using Post-its or flip charts. During detecting and discussing you might poster the meeting room with Post-its representing your basic entities like candidate facts and Dimensions with their attributes. Using that technique you can easily remove, enhance or change items while outlining the model.

For documentation purpose you can use any modeling tool like for example VISIO.

### Appendix

#### Interview Script

This document intends to support you preparing interviews session in the Business Blueprint phase. Interviewing could be a very successful technique to explore requirements. As mentioned in the Business Blueprint overview document the overall goal of the requirement analysis is to build a comprehensive information model. However this model comprises a business focused view and a more technical related view. Business requirements as well as data source relevant conditions need to be considered in-depth during the analysis.

**Interviews with information owners**

It is recommended to talk to one information owner for each specific role about his tasks, his responsibilities and measures of success. Nail down the descriptions of the key concepts as clearly as possible

- **Persons involved**: Interviewer and information owner as a role representative
- **Action items**: Structured documentation of the interviews results
- **Accelerators**: PI Analysis Documentation Template, PI Tree Documentation Template, Project Measure Glossary, Business Content Check Template

**Potential questions for Information Owner**
The following catalogue of questions could give you a clue what are the main topics and help you to structure an prepare the interview flow:

### General
- Goals of the BW-Implementation?
- What are the success criteria for the implementation?
- Describe your business?
- Name the most important challenges of your business area?
- What are the main products and services?
- Who are your customers?
- Name your target market?

### Objectives
- Which information do you need to manage your business?
- Which decision should be made concerning your business?
- Name the goals and objectives of your business area?
- How do you measure success?

### Measures and Business Subjects
- Which are the most important key figures of your business unit?
- For example which key figures do you need for presentations?
- Do you need information from other business units to conduct your analysis?
- Are there any dependencies between your main key figures?
- Do you know how the main key figures are calculated?
- Can you differentiate between mater data key figures and business process metrics?
- What are the main Business Subjects you want to report on?

### Reporting
- Example for your standard reporting?
- What opportunities exists to improve current reports: quality of information, navigation, visualization, query response time, availability, etc?
- What is the time level you need to report the data on: daily, monthly, etc.?
- How often do you need the required information?
- What types of ad-hoc querying could be useful?
- Do you need Top/Bottom-Ten-lists for your analysis?

### History
- Do you need historical data/how much historical information is required?
- Should changes be documented in history?

### Browsing
- Which attributes could be used for navigation?
- What kind of navigation steps are required?

### Presentation
- What kind of presentation is required: tables, charts, Web based, Excel?
- Example for layout of the reports?

### Query response time
- How long are you willing to wait for a querying response?
**User/Authorization**

<table>
<thead>
<tr>
<th>How many user are planned and how can you categorize them (power, frequent, consumer)?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are there any restrictions to access information due to authorization?</td>
</tr>
</tbody>
</table>

Interviews with IT-responsible persons

The objective is to get detailed information about the data sources and data supply chain. This should enhance the PI analysis and help to complete the requirements and conditions for using Business Content.

*Person involved:* Interviewer, IT-person  
*Action items:* Enhance documentation  
*Accelerators:* PI Analysis Documentation Template, PI tree Documentation Template, Project Measure Glossary, Business Content Check Template  
*Potential questions for IT-responsible persons*

<table>
<thead>
<tr>
<th>System Landscape</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sketch out a draft picture of source system environment?</td>
</tr>
<tr>
<td>Are there any reporting tool in use, how do you evaluate already existing solutions?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Implementation Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>What kind of implementation is planned: central approach or multiple BW system approach?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>What kind of data sources are involved to feed the BW: internal, external, SAP, Non-SAP, flat files?</td>
</tr>
<tr>
<td>Which business processes are supported by which sources?</td>
</tr>
<tr>
<td>From where does the master data information come from?</td>
</tr>
</tbody>
</table>

**Performance Indicator Tree Documentation**
Each of the bars on the top of the sheet represents a phase of the project. Accordingly this template is a working document for the below mentioned phases.

- **PI-Analysis**
  Definition of the Performance Indicators and their Base PIs for each role.

  Performance Indicators are the major content of the BW. Usually there are just a few PIs relevant for a role therefore it is reasonable to start analyzing those. Since we have to check later if we can provide this information to the user we also need to know if the certain PI is based on a field content on the source system or if it is derived from other PIs with any kind of calculation. This is the way how we differentiate between PIs and Base PIs. Thus a Base PI cannot be broken down into. The upper screenshot shows a quite simple structure of the PI-Tree, which is most probably not the case in a BW-project, i.e. you can have many more PI-Tree levels. Consequently in this case there could be another PI calculated from the Price Index and other PIs. This would require a new column left to the current PI-Column.

- **Business Subject Assignment**
  Definition of the Business Subjects, which the PIs will be reported on.

  Once you have a clear picture what PIs the InfoOwners want to report on you then go ahead to find out on which business level this information is needed. Usually people ask for many ‘different’ reports which actually only differ in the usage of characteristics but not in the facts. (e.g. Revenue/Customer, Revenue/Material, Revenue/Division, Revenue/Country). These examples are all related to just one PI (or Base PI), i.e. in the PI-Tree you would have one entry in the PI-Section and a few entries in the Business Subject Section. When we talk about Business Subjects in this part of the project we do not care where these will be stored later, either in the InfoCube as dimensional attributes or in the master data tables as navigational attributes. Each requirement on a business subject for a particular fact will be defined in the business subject assignment column.
Finally it is important to find out on which time level that information is needed. From a modeling point of view there is no difference between time and any other characteristic. We just separate those since it might differ from a users point of view, i.e. some reports might only be necessary on monthly level whereas other need to be on daily level.

- **Business Content Assignment**
  In this section you fill out the results of the Business Content Check (see accelerator Business Content Check). Since we have different levels of business content you find different columns representing those levels. If you find Business Content on higher levels (structure elements) you should still document the lower levels as well.
  - **InfoSource**
    Is there an InfoSource in the BW Standard Business Content, which provides this kind of information?
  - **InfoCube**
    Is there an InfoCube in the BW Standard Business Content, which provides this kind of information?
  - **Query**
    Is there a Query in the BW Standard Business Content, which provides this kind of information?
  - **Structure-Element**
    Is there a Structure Element in the BW Standard Business Content, which provides this kind of information.

*Note:* In case the single cell-content does not explain enough what a certain definition means, you can use cell-comments to attach a little documentation. (Right mouse-click on cell: Insert Comment). These comments will be later displayed if you touch the respective cell with the mouse-pointer.

**Performance Indicator Analysis Documentation**

**Introduction**

Each time when you are starting a BW project there is the question about how you approach this goal. Usually people have been using reporting tools before that have given them a kind of idea what they can expect from a reporting oriented solution. However people like to stick to their attitudes not thinking about the opportunities BW could bring. It is by far more interesting to see the old reports again, or maybe one or two additional cross functional, then to think about overall (holistic) concepts. Moreover reports have been developed individually which means for every requirement that has been identified a solution was provided. However, in the BW-approach you are trying to build an information model, which covers all possible reporting requirements without the need to build these solutions separately.

Requirements for a business blueprint are different for various approaches. However the following proposal should cover those different project types although customers sometimes are reluctant to invest such an effort only to see the same reports on the BW again. Due to the fact that these reports also describe their business model and give a good foundation for organizing different activities during the BW installation we think that this effort is still worth it.

In this document we will describe how to use the different sections of the business blueprint templates delivered with the ASAP-Methodology. The goal is to gain knowledge about the reporting requirements the customer has and to ask appropriate questions to the right people; i.e. we should try to avoid bothering business people with
technical questions but use their input to define technical details in later interviews with the right IT-staff.
The sections below match one to one with the sections of the ASAP-Templates and should give people involved in the blueprint phase an idea what objectives are defined for each step and how these definitions influence the later steps in the project.

The first section can be considered as an overview section where the analyst describes the BW environment. From this section you will then find link to the more detailed PI-section where you define specific key performance indicators relevant to run your business or to support business functions.

Definition: A PI (Key Performance Indicator) is a numeric value describing the performance of a certain business process to give a user role or a number of user roles information on how their business is going.

Roles
Define the different groups of people the BW will support in the future.
For each group name the persons assigned to this group. Here it is possible that one person belongs to more than one group. Maybe you also want to define the organization the person works for. This might be relevant in a later stage of the project to differentiate on the global view of the data what part of it is relevant for the respective person; e.g. the Sales Representative in the Sales Organization UK is not interested to see data from the Sales Organization Spain.
Additionally you need to specify how this specific person is going to interact with the later BW. Thus a user could just be a consumer using predefined reports without any interaction on the front end or an analyst who is able to use the drill-down, slice and dice functions or it could be finally a power user who is enabled to create his own queries based on a predefined structures of an InfoCube. Here again it might be possible that one person is a power user in one organization whereas he is a consumer in another one.

Questions: Which group of people would you like to support with the BW?

Structure

<table>
<thead>
<tr>
<th>Role</th>
<th>User</th>
<th>Organization</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales Representative</td>
<td>Mr. Jackson</td>
<td>Sales UK</td>
<td>Power User</td>
</tr>
</tbody>
</table>

Define the typical processes the previous users are responsible for / interested in. Based on this information you might later be able to identify what Data Sources are relevant to be activated in order to provide the relevant information. This question might be an output of the interview with the information owner but might not be really asked, i.e. the interviewer might find out that the Sales Manager is mostly focussing on the invoicing process rather than on the sales order process since he only wants to see figures based on 'real sales'.

Questions: What type of business processes do you want to analyze?
What are your targets for this year? Can they be measured?

<table>
<thead>
<tr>
<th>Role</th>
<th>Business Process 1</th>
<th>Business Process 2</th>
<th>Business Process 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales Representative</td>
<td>Invoicing</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sales Controller</td>
<td>Invoicing</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
The easiest way to talk to the business person is to ask him what typical questions are representing his responsibility either to check whether he fulfills the predefined objectives or to investigate on a fuzzy area he tries to analyze on for better performance, e.g. Do I meet the 20% Sales growth we have agreed on at the beginning of the period? or Why do we have a different sales behavior in one region compared to the other? You might want to break these questions down to different tasks the interviewee has to fulfill to avoid mixing up different areas. Thus a sales manager might have a sales responsibility as well as a HR-function. Try to already now identify key measures the business person analyses on. They might not be specified in detail at this point of time but can be used in a later session to be described more specific. If you have typical reports from the current solution you can try to assign those the respective question. You might also want to try to generate other questions out of the context you have got from the interview.

**Question:** Can you identify typical tasks of a:
What are typical questions a ... asks?

<table>
<thead>
<tr>
<th>Role</th>
<th>Task</th>
<th>Information required</th>
<th>PI</th>
<th>Report Spec.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales Representative</td>
<td>Sales volume analysis</td>
<td>revenue / product group</td>
<td>NetValue</td>
<td>1,2,3,7</td>
</tr>
<tr>
<td>Sales Controller</td>
<td>Sales volume analysis</td>
<td>revenue / product group</td>
<td>NetValue</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cost / product group</td>
<td>Costs of goods sold</td>
<td>1</td>
</tr>
</tbody>
</table>
Net Value

<table>
<thead>
<tr>
<th>Definition</th>
<th>Net Value of the Invoice item in Document Currency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role</td>
<td>SalesRepresentative&lt;br&gt;MarketingManager&lt;br&gt;ProductManager</td>
</tr>
</tbody>
</table>

Structure

Calculation
Is this PI being calculated from other key-figures? (Define the formula)
In what unit is this PI being represented?
May key figures be visible to all users?
*If not, the query has to be split or authorization management needs to be set up respectively!*

<table>
<thead>
<tr>
<th>PI</th>
<th>calculated</th>
<th>Formula</th>
<th>Unit</th>
<th>Authorization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Value in document currency</td>
<td>N</td>
<td></td>
<td>document currency</td>
<td></td>
</tr>
</tbody>
</table>

How is the aggregation of the individual PI?
*Usually PIs are just summarized on higher levels but sometimes this is not possible from a business point of view, (e.g. stock level in inventory management). Here you have to use other functions to make the key-figure meaningful.*

<table>
<thead>
<tr>
<th>Key Figure</th>
<th>Aggregation (Sum, Max,Last)</th>
<th>Characteristic</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Value in document currency</td>
<td>Sum</td>
<td>all</td>
<td>all</td>
</tr>
</tbody>
</table>

Characteristics
On which business objects do you want to see the respective facts?
Is there any hierarchical order existing which you would like to report on?
Do you want to restrict the output on certain object due to authorization?

<table>
<thead>
<tr>
<th>Hierarchy</th>
<th>Display Authorization</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company Code</td>
<td>D + A</td>
<td>Sales Representative</td>
</tr>
<tr>
<td>Distribution Channel</td>
<td>D</td>
<td>Sales Representative</td>
</tr>
<tr>
<td></td>
<td>D + A</td>
<td>Marketing Manager</td>
</tr>
<tr>
<td>Division</td>
<td>D</td>
<td>Sales Representative</td>
</tr>
<tr>
<td></td>
<td>D + A</td>
<td>Product Manager</td>
</tr>
<tr>
<td>Product hierarchy</td>
<td>D</td>
<td>Sales Representative</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>Product Manager</td>
</tr>
</tbody>
</table>
**Period**
What is the time level you need to report the data on?

<table>
<thead>
<tr>
<th>Period</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>day</td>
<td>Product Manager</td>
</tr>
<tr>
<td>month</td>
<td>Sales Representative</td>
</tr>
<tr>
<td>quarter</td>
<td>Sales Representative</td>
</tr>
<tr>
<td>year</td>
<td>Marketing Manager</td>
</tr>
<tr>
<td>fiscal period</td>
<td>Marketing Manager</td>
</tr>
<tr>
<td>fiscal year</td>
<td></td>
</tr>
<tr>
<td>other</td>
<td></td>
</tr>
</tbody>
</table>

**Technical Requirements**

**History / Future**
What is the maximum relevant time span into the past?
If you do any time comparisons; how do they look like?

<table>
<thead>
<tr>
<th>Time span</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three years</td>
<td>Sales Representative</td>
</tr>
<tr>
<td>Two years</td>
<td>Product Manager</td>
</tr>
<tr>
<td></td>
<td>Marketing Manager</td>
</tr>
</tbody>
</table>

**Sources**
Do you know where the relevant data comes from?

**File**

**Project Measure Glossary**
The Project Measure Glossary Template is a working document for the following phases:
- Performance Indicator Analysis and
- Business Content Check
The main purpose is to document all relevant Business Subjects and Key Figures and to assign Business Content objects.
If you carefully complete the glossary during the requirement analysis phase you will receive a confirmed documentation of all relevant InfoObjects either Key figures or Characteristics.
The template contains the following columns:

- Measure: the name of the respective characteristic or key figure
- Phase: gives a brief description of the characteristic or key figure
- Contact Person: name of the info owner who is responsible for this data
- Calculation: only relevant for performance indicators: determines the formula to calculate the specific measure
- Source: name of the source system, where the data comes from
- Business Content InfoObject: determines the InfoObject in the BW Standard Business Content which provides the requested information

**Data Design Documentation**

As an output from the Business requirements analysis we should gain a draft information model of the respective analytical needs. During this analysis we have focused on building a structure where the Performance Indicators sit in the center and different Business Subjects or Dimensions with their attributes are assigned to them. The Performance Indicators as facts or key figures show how to measure certain business processes and the Dimensions determine the required view on the facts. If you carefully outlined the structure as described for the requirement analysis you have already considered the main ingredients of multi-dimensional modeling.
As already discussed facilitated workshops are good devices to manage especially the data design task. The most effective method to gather the information is using Post-its or flip charts. During detecting and discussing you might poster the meeting room with Post-its representing your basic entities like candidate facts and Dimensions with their attributes. Using that technique you can easily remove, enhance or change items while outlining the model.

For documentation purpose you can use any modeling tool like for example VISIO.

Example 1: Sales Volume Analysis
Example 2:
Alternatively you can figure out your data model within Excel. The InfoCube Sizing Accelerator comprises the possibility to visualize your InfoCube Model and furthermore to carry out an initial sizing estimate

The InfoCube Sizing Accelerator comprises the possibility to visualize your InfoCube Model and furthermore to carry out an initial sizing estimate.
This can be very useful when you are confronted with the demand to value storage requirements for later hardware order decisions.

Data Flow Analysis Documentation

Documentation of DataFlow into Infocubes
The Sheet consists of three major parts identified by the color of the bar at the very top.

The Excel-Sheet has to be created for each InfoCube.

Each of the bars on the top of the sheet represents on part of the data flow. Accordingly the documentation consists of definition of:

- **User exit in R/3 for Extraction**
  In case the standard extraction does not provide all the information that you need, you can program a user-exit, which reads additional information from any table that you specify and fills it into a certain field transported to BW.

- **Transfer Rules (Match Fields from DataSource to InfoObjects from InfoSource)**
  In the transfer rules you either define the match between the source-system-field and the BW-InfoObject or you specify a routine, which does certain technical adjustments.

- **Update rules**
  - **Match InfoObjects from InfoSource with InfoObjects from InfoCube**
    define which InfoObject from the InfoSource should fill which InfoObject of the InfoCube. If necessary you can add additional information, like currency translation, into the comment (see note below)
  - **Routines**
    If you want to restrict the update to certain criteria, do any kind of calculation or read additional information from the database you need to define this in the Routines.
  - **Automatic reading from master data**
    If the InfoObject contains master-data which you would like to post to the InfoCube as well just specify which attributes shall be read from the master-data table.
  - **Additionally you can specify that some data will be taken from the Master Data as navigational attribute, if necessary.**

Note: In case the single cell-content does not explain enough what a certain definition means, you can use cell-comments to attach a little documentation. (Right mouse-click on cell: Insert Comment). These comments will be later displayed if you touch the respective cell with the mouse-pointer.
In the MultiCube-Definition you have the structure of all used InfoObjects of the MultiCube on the left hand side whereas on the right side you have an overview of all InfoCubes that built the source for the MultiCube. In between you now have to define which InfoObjects from which Source-InfoCube have to fill which InfoObject of the Target-MultiCube.

The green fields represent what Source-InfoObject is going to fill a Target-InfoObject, the red ones define that these InfoObjects are not taken for the MultiCube.

E.g. the *Invoiced Quantity* comes from the Invoice Cube whereas the *Planned Quantity* comes from the SOP-InfoCube, but both Cubes provide the Characteristic *SalesOrganization*.

It is a bit difficult to describe that a navigational attribute matches with a dimensional attribute from another InfoCube as it is defined here with the *Division*, i.e. cross InfoCube-Reporting can be done on Division-Level since in the one InfoCube (Invoice) the InfoObject is filled by the dimensional attribute whereas in the other InfoCube it will be taken from the Navigation Attribute of 0MATERIAL.

Note: In case the single cell-content does not explain enough what a certain definition means, you can use cell-comments to attach a little documentation. (Right mouse-click on cell: Insert Comment). These comments will be later displayed if you touch the respective cell with the mouse-pointer.

### Documentation of Data Flow into Master-Data

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---

**InfoCubes comprised to one**

**Structure of MultiCube**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Multicube</td>
<td>Key-figure</td>
<td>Dimension</td>
<td>Characteristic</td>
<td>Attribute</td>
<td>INFOCUBE</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>Time char.</td>
<td>Unit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Nav.attrib</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Quantity</td>
<td></td>
<td></td>
<td></td>
<td>Invoice</td>
<td>SOP</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>0INV_GTQ</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>PLANNED Q</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>FORECAST Q</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Organization</td>
<td>0SALESORG</td>
<td>0DIVISION</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Material</td>
<td>0MATERIAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Prod._ hier</td>
<td>0PRODH4</td>
<td>0CUST_GRP2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Location</td>
<td>0CUST_GRP3</td>
<td>0CALMONTH</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Time</td>
<td>0FISC_PER</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Unit</td>
<td>0BASE_UOM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---
Finally it is also important to document the data flow for the master data InfoObjects. You create one sheet for each Master-Data InfoObject.

In this example we have just one InfoObject, which needs some master data. As you can see from the definition we have just defined what is necessary for the designed Information Model.

This does not necessarily mean that we just load this information into BW. Since 0MATERIAL contains many more Attributes in the Standard you need to decide if you want to restrict the data flow in a way that it just fits to your Information Model or if you still load all the provided information and define in the InfoCube, which attributes will be applicable in the query builder.

The data flow looks very similar to the one of the transactional data into the InfoCube since the overall procedure is the same, i.e. you

- Define the DataSource and its fields
- Decide if you need to reread information in the source-system via user-exit (only R/3)
- Define any technical conversion in the transfer rules or simple matching
- Decide whether the uploaded attribute is navigational or just display

If necessary you can also document the DataFlow for texts since they also follow the general principle of DataSource, user exit and transfer rules.

Hierarchies do not follow the DataSource principle. Therefore it is not necessary to define any transfer rules. All you need to define is what kind of hierarchies you want to upload from a source system, how these hierarchies are structured and what each structure level means for the end-user. Bear in mind that one InfoObject can have different hierarchies.
loaded from one or many source systems. Since this document highlights the document flow the definition of manually created hierarchies will not be documented here.

Note: In case the single cell-content does not explain enough what a certain definition means, you can use cell-comments to attach a little documentation. (Right mouse-click on cell: Insert Comment). These comments will be later displayed if you touch the respective cell with the mouse pointer.

Thanks: SAP Database