Master Guide for SAP EHS Management

THE BEST RUN **SAP**

Content

Document History

Version	Date	Description
1.0	2015-06-15	Initial Version
1.1	2015-11-18	Information for additional features for feature package 01 has been added: • Chapter Business Scenario: Environment Management [page 49]: Information for aggregation, and assigning of regulatory lists has been added. • Chapter Upgrade Process for Environment Management [page 77] has been added.

1.2	2016-10-19	Information for additional features for feature package 02 has been added:
		• Chapter Upgrade Process for Environment Management [page 77]: Information for automatic data collection and task processing features have been added.
		• Upgrade information has been added to the following chapters:
		  ○ Upgrade Process for Risk Assessment [page 68]
		  ○ Upgrade Process for Environment Management [page 77]
		  ○ Upgrade Process for Product Compliance [page 77]

1.3	2016-10-19	• Information about archiving objects for feature package 03 has been added.
		• The following chapters have been updated:
		  ○ Integrated Application Components for Health and Safety [page 25]
		  ○ Integrated Application Components for Environment Management [page 28]

1.4	2017-05-03	• Information for changes in feature package 04 has been added. • Chapter Apps for SAP EHS Management [page 44] has been added.
6.0.6	2017-12-13	Information for changes in feature package 06 has been added.
6.0.7	2018-04-30	Chapter Software Component Matrix [page 20]: Versions for mandatory software component have been changed.

1 Getting Started

1.1 About this Document

This Master Guide is the central starting point for the technical implementation of the *SAP EHS Management* add-on. Use the Master Guide to get an overview of *SAP EHS Management*, its software units, and how it supports you from a technical perspective.

The Master Guide is a planning tool that helps you to design your system landscape. It refers you to the required detailed documentation, mainly:

- Installation and security information
- SAP Notes
- SAP Help documentation

In this Master Guide, you can find business process-specific information for the following processes:

- Managing Incidents
- Managing EHS Risks
- Managing EHS Locations
- Managing Emissions
- Managing Product Compliance
- Managing IMDS Compliance

If you already use *SAP EHS Management* as part of *SAP ERP* and the product compliance functionality of *SAP Product and REACH Compliance*, you can also learn about how to migrate your data to the add-on *SAP EHS Management*. The central starting point for information about the migration of your existing EHS data to *SAP EHS Management* is the Migration Guide.

The Master Guide consists of the following main sections:

1. Getting Started
   - This section provides an introduction of what to expect from this Master Guide, planning information, important links, and SAP Notes.
2. Overview of *component extension 6.0 for SAP EHS Management*
   - This section provides an introduction to *SAP EHS Management*, mainly its software units, integrated application components, third party components, system landscape, and the overall implementation sequence.
3. Business Scenario: Health and Safety
   - This section describes the business processes used for this scenario and any relevant implementation considerations.
4. Business Scenario: Environment Management
   - This section describes the business processes used for this scenario and any relevant implementation considerations.
5. Business Scenario: Product Compliance

- This section describes the business processes used for this scenario and any relevant implementation considerations.
6. Solution-Wide Topics
    - This section describes integration topics and relevant implementation considerations
7. Upgrade Information
    - This section describes different upgrade processes that depend on your source release.

The Feature Pack 01 for product compliance of *component extension 6.0 for SAP EHS Management* contains the adoption of IMDS 10.0 including a different handling of weight tolerances

Product Compliance: Upgrade from Component Extension 5.0: Weight tolerance and IMDS 10.0

√	Activity
	If you upgrade to EHSM 6.0 with Support Package 01 or higher, make sure that you have carried out all relevant steps to adapt existing weight tolerance values to the new standardized tolerance ranges, as introduced with the following two SAP Notes: 2219639 Add Support for Weight Tolerance Ranges. 2207037 Support for IMDS 10.0 Requirements. Carry out the following steps: 1. Specify the weight tolerance values in the new Customizing activity *Specify Tolerance Values for Weight (EHPRCV_TOLERANCE)* under ▌▶ *Product Compliance* ❯ *General Configuration* ❯ *Compliance Object.* ▌ 2. Adapt existing tolerance values in the Compliance Data Object by carrying out the report R_EHPRC_MI-GRATE_TOLERANCES. Read the documentation carefully and first carry out the report in test mode. 3. If you want to carry out the checks again for all existing compliance requirements based upon the new weight tolerance values, carry out the report R_EHPRC_RECHECK_TOLERANCES. This report creates the necessary ACP entries for the affected parts. The ACP entries will be processed by the standard run of the automated change processing.

As of Feature Package 02 of *component extension 6.0 for SAP EHS Management*, the listed substances have been connected to a namespace. Listed substances within the SAP Namespace are now shipped with a GUID to uniquely identify the object. This however requires a data conversion as described in the table below.

Product Compliance: Upgrade to Component Extension 6.0 FP02 or higher

√	Activity
	If you upgrade to EHSM 6.0 with Support Package 02 or higher, carry out the following steps: 1. Run the report R_EHFND_LISU_MIGRATION after the upgrade. The report transfers listed substances from table EHFNDD_LISU_ROOT to the updated root table EHFNDD_LISU_RT. After the transfer is complete, the report removes redundant data. Note that this report has to be executed after each support package of software component EHSMREGC. 2. Run the report R_EHFND_LISU_SUBSTITUTE after the upgrade. This report ensures data consistency of the transferred listed substances by redirecting matching references between customer-created entries and content-delivered entries in the updated root table EHFNDD_LISU_RT. The mapping is done by CAS number. 3. If you are using BI, carry out an initial BI load for the data source 0EHSM_PRC_02 (Compliance Data). This in turn will trigger the generic extraction 0EH_DECLSUB_TEXT that is defined within the BI process chain. The latter is a generic text data source that is used to pull the names of the relevant listed substances into BI.

1.1.1 Product Compliance: Upgrade from Component Extension 6.0 for SAP EHS Management

This chapter describes the necessary steps for Product Compliance Management that have to be executed when upgrading from *component extension 6.0 for SAP EHS Management* to either of the Feature Packs 01 or 02.

Relevant changes with Feature Package 01

The Feature Pack 01 for product compliance of *component extension 6.0 for SAP EHS Management* contains the adoption of IMDS 10.0 including a different handling of weight tolerances

Product Compliance: Upgrade to Component Extension 6.0 SP01

√	Activity
	If you upgrade to EHSM 6.0 with Support Package 01 or higher, make sure that you have carried out all relevant steps to adapt existing weight tolerance values to the new standardized tolerance ranges, as introduced with the following two SAP Notes:
	2219639 Add Support for Weight Tolerance Ranges.
	2207037 Support for IMDS 10.0 Requirements.
	Carry out the following steps:
	1. Specify the weight tolerance values in the new Customizing activity *Specify Tolerance Values for Weight (EHPRCV_TOLERANCE)* under *Product Compliance* *General Configuration* *Compliance Object.*
	2. Adapt existing tolerance values in the Compliance Data Object by carrying out the report R_EHPRC_MI-GRATE_TOLERANCES. Read the documentation carefully and first carry out the report in test mode.
	3. If you want to carry out the checks again for all existing compliance requirements based upon the new weight tolerance values, carry out the report R_EHPRC_RECHECK_TOLERANCES. This report creates the necessary ACP entries for the affected parts. The ACP entries will be processed by the standard run of the automated change processing.

Relevant Changes with Feature Package 02

As of *component extension 6.0 Feature Package 02for SAP EHS Management*, the listed substances have been connected to a namespace. Listed substances within the SAP Namespace are now shipped with a GUID to uniquely identify the object. This however requires a data conversion as described in the table below.

√	Activity
	If you upgrade to EHSM 6.0 with Support Package 02 or higher, carry out the following steps: 1. Run the report R_EHFND_LISU_MIGRATION after the upgrade. The report transfers listed substances from table EHFNDD_LISU_ROOT to the updated root table EHFNDD_LISU_RT. After the transfer is complete, the report removes redundant data. Note that this report has to be executed after each support package of software component EHSMREGC. 2. Run the report R_EHFND_LISU_SUBSTITUTE after the upgrade. This report ensures data consistency of the transferred listed substances by redirecting matching references between customer-created entries and content-delivered entries in the updated root table EHFNDD_LISU_RT. The mapping is done by CAS number. 3. If you are using BI, carry out an initial BI load for the data source 0EHSM_PRC_02 (Compliance Data). This in turn will trigger the generic extraction 0EH_DECLSUB_TEXT that is defined within the BI process chain. The latter is a generic text data source that is used to pull the names of the relevant listed substances into BI.

- References
  - This section lists documents and sources used in this guide.

Constraints

- The business scenarios that are presented here serve as examples of how you can use SAP software in your company. The business scenarios are only intended as models and do not necessarily run the way they are described here in your customer-specific system landscape. Check your requirements and systems to determine if scenarios can be used productively at your site. Furthermore, we recommend that you test these scenarios thoroughly in your test systems to ensure they are complete and free of errors before going live.
- This Master Guide primarily discusses the overall technical implementation of *SAP EHS Management*. This means that additional software dependencies might exist without being mentioned explicitly in this document.

1.2   Related Information

1.2.1 Planning Information

For more information about planning topics not covered in this guide, see the following content:

Planning Topics Content on SAP Help Portal / Support Portal

Content	Description	Location
SAP EHS Management Security Guide	Information for technology consultants and system administrators about securing your data and processes to prevent unauthorized access to critical information.	SAP Help Portal at http://help.sap.com/ehs-comp60
SAP EHS Management Operations Guide	Information for technical and solution consultants, as well as support specialists and system administrators about managing and maintaining your SAP applications to run optimally.	
SAP EHS Management Sizing Guide	Information for system administrators, technical project managers, and consultants about sizing, calculation of hardware requirements, such as CPU, disk and memory resource.	
SAP EHS Management Migration Information	Learn about migrating data from *SAP EHS Management* as part of SAP ERP and the product compliance functionality of *SAP Product and REACH Compliance* to this add-on.	
Information about Support Package Stacks, latest software versions, and patch level requirements		http://support.sap.com/sp-stacks

1.2.2 Further Useful Links

The following table lists further useful links on the *SAP Help Portal* and the *SAP Support Portal*:

Further Useful Links and Their Location

Content	Location / Link
Application Help	See SAP Help Portal at http://help.sap.com/ehs-comp

Content	Location / Link
Role documentation for *SAP NetWeaver Business Client*	See *SAP Help Portal* at http://help.sap.com/ehs-comp
	Open the *Application Help* documentation and go to: ▶ *Foundation for EHS Management* > *Roles* ❯
BI Content for *SAP EHS Management*	See SAP Help Portal at http://help.sap.com under ▶ *SAP NetWeaver* > *BI Content* ❯. Choose documentation for Content 7.37, 7.47 or 7.57
	Note that no new BI Content is delivered with *competent extension 6.0 for SAP EHS Management*
SAP NetWeaver Business Client	See *SAP Help Portal* at http://help.sap.com/nw74 under *Application Help*. Open the *UI Technologies in SAP NetWeaver* documentation and go to *SAP NetWeaver Business Client*
Information about creating incident messages	http://support.sap.com/incident
SAP Notes search	http://support.sap.com/notes
SAP Software Distribution Center (software download and ordering of software)	http://support.sap.com/swdc

1.3   Important SAP Notes

You must read the following SAP Notes before you start the installation. These SAP Notes contain the most recent information on the installation, as well as corrections to the installation documentation.

Make sure that you have the up-to-date version of each SAP Note, which you can find on SAP Support Portal at http://support.sap.com/notes .

1.3.1 Information about Installation

Important SAP Notes for Installation

SAP Note Number	Title	Description
2147718	*Component Extension 6.0 for SAP EHS Management*: RIN	Release Information Note
2133413	Installation / delta update of EHSM 600 on SAP ERP	Installation Note

SAP Note Number	Title	Description
766191	Active Component Framework Installation	Read this SAP note for information about installing the ACF if you want to work on Microsoft Office documents (Microsoft Excel and Microsoft Word) as part of an investigation step in incident management or as part of an analysis method in risk assessment.
1098009	Web Dynpro ABAP - List of known Restrictions and Browser Support	Read this SAP Note for information about browser restrictions if you want to work on Microsoft Office documents (Microsoft Excel and Microsoft Word) as part of an investigation step in incident management or as part of an analysis method in risk assessment.
1728946	Browser: Browser Support Strategy for SAP NetWeaver	Read this SAP Note for information about supported Web browsers.
1853989	Main Browser Note for BS7i2013	Read this SAP Note for information about supported Web browsers.
1830437	Supported scenarios for installation of SPRC 2.0 and EHSM	Read this SAP Note for supported installation scenarios of the *component extension for SAP EHS Management* and *SAP Product and REACH Compliance 2.0*.
1916079	Clear POWL caches	Read this SAP Note for information about how to reset POWL caches.
2018535	Deactivation of memory protection for Shared Objects	If you install *component extension 6.0 for SAP EHS Management* on HP-UX, deactivate memory protection as recommended by this SAP Note to improve system performance.
2065178	Deprecation of data series and amounts as of *component extension 5.0 for SAP EHS Management Feature Package 01*	If you are using data series and amounts in a risk assessment process and you want to migrate to Feature Package 01 or higher for *component extension 5.0 for SAP EHS Management*, proceed as recommended by this SAP Note.
2160666	Health and Safety Explorer, Exposure Ass. Chart not functional on DB2 on OS400, MAXDB, SAP ASE	Read this SAP Note for information on a release restriction for certain analytical charts and lists on certain databases.
2147668	Content for *component extension 6.0 for SAP EHS Management*	Read this SAP Note for information on content.
2229955	Content for *component extension 6.0, feature package 02 for SAP EHS Management*	Read this SAP Note for information on content.

SAP Note Number	Title	Description
2311161	Enhancements to the migration report for listed substances (R_EHFND_LISU_MIGRATION)	Apply this SAP Note after you have installed *component extension 6.0, feature package 02 for SAP EHS Management*.

1.3.2 SAP Notes

The following SAP Notes are either mandatory to ensure faultless operation or are recommended for improving the operation of *component extension 6.0 for SAP EHS Management.*

Note that in the tables, the column *Description* provides information if the SAP Note is only relevant for a specific component of *SAP EHS Management* or for a specific integrated component. If you do not use the component, you do not need to implement the SAP Note, even if it is classified as mandatory.

SAP Notes mandatory or recommended

SAP Note Number	Title	Description	Mandatory/Recommended
1617578	Incorrect results for SELECT with correlated subquery	Apply this SAP Note when you are using MaxDB as a database system for *SAP EHS Management*.	Mandatory
2129151	Incorrect check of valid namespace in accordance with defined configuration	Apply this SAP Note to enable the business scenario Environmental Management	Mandatory
2161661	Customer namespace compliance check fails for the keys of a business configuration object node	Apply this SAP Note to enable the business scenario Environmental Management	Mandatory
2144290	SAP HANA SPS 08 Database Maintenance Revision 85.03	If you run *SAP EHS Management* on SAP HANA, then apply as at minimum revision 85.03 to solve the error that some columns do not show a value in the Health and Safety Explorer.	Recommended
1916070	Arabic: WebGUI does not display screens in RTL mode	Apply this SAP Note to solve the error causing WebGUI screens to be incorrectly aligned in Arabic.	Recommended
1980597	Short dump when doing cleanup in transaction manager	Apply this SAP Note to solve the error in reading certain objects in Risk Assessment	Recommended
1945143	POWL Dump on Detail area and Edit row data is not reflected upon lead selection	Apply this SAP Note to solve system dumps in POWL screens	Recommended

SAP Note Number	Title	Description	Mandatory/Recommended
2094197	Nested After Loading Determinations are not executed	Apply this SAP Note to solve the problem that many texts on screens are missing	Recommended
2108442	Authorization check loads transient fields although this is not necessary	Apply this SAP Note to improve performance of authorization checks	Recommended
2106448	Termination of technical help	Apply this SAP Note to solve a system dump in the technical help	Recommended
2115409	Event is validating even though it is defined as independent	Apply this SAP Note to avoid unnecessary screen validations	Recommended
2119912	Tabbed UIBB: Gaps when using layout Left-Right in standards mode	Apply this SAP Note to solve a rendering problem in several screens	Recommended
2122287	FPM Attribute Filter UIBB: Rendering Issue with MS Internet Explorer 11	Apply this SAP Note to solve a rendering problem in search screens with attribute filters	Recommended
2119474	Old List UIBB: Program abortion in case no column is configured	Apply this SAP Note to solve system dumps in some screens	Recommended
2123707	Chart UIBB: Dump CX_SXML_PARSE_ERROR	Apply this SAP Note to solve system dumps in the Health and Safety Overview	Recommended
2115816	List ATS UIBB: Texts for elements of display type button choice in toolbars	Apply this SAP Note to solve the problem with wrong labels on buttons	Recommended
2144051	Backend error occurred when changing mapping for material declaration import	This SAP Note recommends you upgrade to the latest 742 SAP Kernel	Recommended
2061267	Performance of language-dependent work item texts	Apply this SAP Note to improve the performance of the work list (inbox)	Recommended
2144319	Technical help do not show list of views an UI Element containers	Apply this SAP Note to solve the problem of displaying technical help	Recommended
2116859	SelectOptions20: Tooltip for Relative Dates in ACC mode to short	Apply this SAP Note to solve the problem of displaying tooltips	Recommended
2157764	SelectOptions20: Tooltip for RelativeDate is missing in some cases	Apply this SAP Note to solve the problem of displaying tooltips	Recommended
2144944	List ATS UIBB: Requesting the focus into a cell that is currently not visible	Apply this SAP Note to solve the problem of setting the input focus in a list	Recommended

SAP Note Number	Title	Description	Mandatory/Recommended
2144915	FLUID: Exceptions for List ATS UIBB in case wiring is active	Apply this SAP Note to solve system dumps when opening the FPM configurations of certain web dynpro applications	Recommended
2155501	Duplicating messages in Freestyle Search Help	Apply this SAP Note to solve the problem that messages are displayed twice in the search help	Recommended
2160070	Field labels in wrong language	Apply this SAP Note to solve the problem that field labels in the risk explorer are displayed in the wrong language	Recommended
2127351	Corrections for Unified Rendering up to SAP_UI 740/11 II	Apply this SAP Note to solve several screen rendering problems	Recommended
2185049	FPM SADL Attribute Filter: Wiring not updated at new data	Apply this SAP Note to avoid loss of filter selections in certain screens of Environment Management	Recommended
2151329	BOBF Attachment Folder - node 'Document' of type 'Folder' is validated for file contents	Apply this SAP Note to ensure that no empty content is stored in a compliance requirement in Environment Management	Recommended
2216263	List ATS UIBB: Wrong texts when adding button choice by API	Apply this SAP Note to solve a problem that a dropdown button shows wrong labels.	Recommended
2137609	reverse foreign key association for archived data - not brings data	Apply this SAP Note to solve a problem that several data of archived incidents are not displayed.	Recommended
2104203	FPM: GUIBB Form@GL2.0/ Form Rep. - Action menu misaligned	Apply this SAP Note to solve a problem that a longer description is not visible in the location aggregation details in Environment Management	Recommended
2137352	WD ABAP: Menu is not displayed in TextView in forms	Apply this SAP Note to solve a problem that a longer description is not visible in the location aggregation details in Environment Management	Recommended
2150756	List ATS UIBB and List IDA UIBB: Adding columns by config API: Header texts	Apply this SAP Note to solve a problem that column labels are missing occasionally.	Recommended

SAP Note Number	Title	Description	Mandatory/Recommended
2195906	MOVE-CORRESPONDING over a structure which has a secondary key defined may result in a corrupted key	Apply this SAP Note to solve a problem that the list of risks in a risk assessment is displayed incompletely.	Recommended
2144051	Backend error occurred when changing mapping for material declaration import	Apply this SAP Note when in the product compliance area for following issue: During material import you try to change the mapping, such as for exemptions. When pressing the Display->Change button, the system indicates 'Backend error occurred'.	Recommended
2295123	Transient data loaded for node having authority check	Apply this SAP Note to improve performance when loading compliance data	Recommended
2283251	ESC key in WD ABAP dropdown box results in dump	Apply this SAP Note to solve a system dump when choosing the escape key in a dropdown box	Recommended
2209307	Tree Component: Export to spreadsheet for invisible cells	Apply this SAP Note to solve a system dump when exporting to an Excel spreadsheet in the IPC Class D import in product compliance.	Recommended
1995776	ITS up/down: RESTGUI dialogs instead of applet execution	Apply this SAP note to avoid problems of the frontend services methods such as upload and download using a java applet.	Mandatory
2322550	Error messages not being displayed in the UI	Apply this SAP Note to solve a problem of a missing error message for locking issues.	Recommended
2070416	EOP check modules are not called when there is no entry in the table BUTEOPPRIOR-ITY	Apply this SAP Note to ensure proper execution of end-of-purpose checks for business partners in the context of deletion of personal data.	Recommended
2348476	Archiving terminated if one of the records hasn't yet reached end of residence	Apply this SAP Note to solve a problem with data archiving.	Recommended
2415306	Transient node attributes sometimes don't get populated after save	Apply this SAP Note to solve a problem that some data is not visible in the Compliance Product Structure in Product Compliance.	Recommended

SAP Note Number	Title	Description	Mandatory/Recommended
2203348	Archiving - runtime error during cross-BO association	Apply this SAP Note to solve a problem with data archiving.	Recommended
2341246	OData v2: Error message "Resource not found for segment *ET*" while using navigation with mutliplicity 0..1	Apply this SAP Note to solve a problem with SAP Fiori for SAP EHS Management.	Recommended

1.3.3 Additional SAP Notes Relevant for Integrated Systems

SAP Notes relevant for integrated systems

SAP Note Number	Title	Description	Mandatory/Recommended
1449845	BAPI_PTIMEOVERVIEW_GET: Multiple entries in RETURN	Apply this SAP Note on your HR system to avoid duplicate error messages when time data from HR is read from incident management. With this SAP Note, the performance is also enhanced when extracting time data into Business Intelligence.	Recommended
1526402	Implicit check of RFC authorization	Apply this SAP Note on your HR system if you use SAP_HRGXX with one of the versions and SPs mentioned in the SAP Note.	Mandatory
1534362	Reading data in the HRMS	Apply this SAP Note on your HR system if you use SAP_HRGXX with one of the versions and SPs mentioned in the SAP Note.	Mandatory
1581936	Reading data in the Human Resource Management System	Apply this SAP Note on your HR system if you use SAP_HRGXX with one of the versions and SPs mentioned in the SAP Note.	Mandatory
1998249	Report REHS_IAREP_DATA_DETERMINE: Internal system error	Apply this SAP Note on your HR system if you use SAP_HRGXX with one of the versions and SPs mentioned in the SAP Note.	Mandatory

SAP Note Number	Title	Description	Mandatory/Recommended
1583901	Error handling in the RFC to create Incident	Apply this SAP Note on your GRC system if you use the integration of incident management with GRC to improve dealing with errors in the integration.	Recommended
1782445	Remote enabled change request creation	Apply this SAP Note on your system for SAP Management of Change if you use the integration with SAP Management of Change.	Mandatory
1790994	Hazard-related proposals for health surveillance protocols	Apply this SAP Note on your system for Occupational Health (EHS-HEA) in SAP ERP Central Component if you intend to use the integration as described in chapter 2.3.1Integrated Application Components for Health and Safety	Mandatory

1.3.4 Additional SAP Notes Relevant for the SAP Business Warehouse System

SAP Notes for SAP Business Warehouse System

SAP Note Number	Title	Description	Mandatory/Recommended
1762908	Wrong DTPs after process chain activation w/ source systems	Apply this SAP Note to be able to activate the correct DTPs	Mandatory
1789776	Xcelsius Dashboard: activation from BI Content fails	Apply this SAP Note to be able to activate the Xcelsius dashboards for EHSM	Mandatory
1630248	SP30:Field descriptions of Error stack gets lost	Apply this SAP Note to avoid short dumps during content activation	Mandatory
1883305	F4-sequence (attribute) = 0 for Content-IOBJ	Apply this SAP Note to make sure the InfoObject 0EH_LO-CATIN can be activated properly in BW. Otherwise, the F4 help for locations on BW reports may be difficult to read because too many attributes are displayed.	Recommended

SAP Note Number	Title	Description	Mandatory/Recommended
1990572	Errors when publishing or transporting Xcelsius Dashboards	Apply this SAP Note if you want to edit and publish Xcelsius dashboards	Recommended

2 Overview of Component Extension 6.0 for SAP EHS Management

2.1 Introduction

Component extension 6.0 for *SAP EHS Management* is based on the SAP ERP application and *SAP NetWeaver*. It is a Web-based application that is realized in Web Dynpro (ABAP).

This add-on provides integration points throughout the application to other SAP systems, such as Human Capital Management, Plant Maintenance, and Financials, and also to externally hosted systems via the Internet, such as the International Material Data System (IMDS) for product compliance in the automotive industry. Integration is described in section 2.3 Integrated Application Components.

SAP EHS Management also utilizes existing tools such as the SAP Business Workflow to provide the engine for its process foundation, and SAP Interactive Forms by Adobe to collect information in questionnaires and to create print forms in PDF format.

In addition you can continue to use *SAP NetWeaver* Business Warehouse and BI content of EHSM 6.0 to generate analytical reports.

This section provides an overview of the required and optional software components and tools, integrated application components, and third party components that you can use in *SAP EHS Management*.

2.2 Software Units of Component Extension 6.0 for SAP EHS Management

> → Recommendation
>
> If you are not familiar with the business scenarios and processes in *SAP EHS Management*, we recommend reviewing chapters 3. Business Scenario: Health and Safety, 4. Business Scenario: Environment Management, 5. Business Scenario: Product Compliance.

2.3 Software Component Matrix

The following table contains an overview of the software components that are required or optional in *SAP EHS Management*. The relevant details can be found in SAP Note 2147718 .

Mandatory or Optional Software Components

Required/ Optional	Product Version/Software Component	Version	Comment
Required	*Component extension for SAP EHS Management*	SAP Environment, Health and Safety Management Extension (EHSM) 600	
		Regulatory Content for SAP EHS MGMT. EXTENSION (EHSM REG CONTENT) 100	
	SAP NetWeaver Application Server ABAP	*SAP NetWeaver* Application Server ABAP 7.4 SP Stack 09 or higher	
	User Interface Technology	SAP_UI 7.50 SP Stack 04 or higher	
	SAP NetWeaver Gateway Foundation	SAP_GWFND 7.40 SP Stack 14 or higher	
	SAP ERP	SAP enhancement package 7 for SAP ERP 6.0 SP Stack 06 or higher	
	SAP Business Suite Foundation 747	SAP_BS_FND 747 SP Stack 07 or higher	
	SAP NetWeaver Application Server (Java) with Adobe Document Services (ADS)	*SAP NetWeaver* 7.4 or higher	Required for generation of Adobe Interactive Forms.
Optional	*SAP NetWeaver* Business Client for Desktop	4.0	
	SAP NetWeaver Portal	*SAP NetWeaver* 7.31 SP06 or higher	For more information about creating *SAP EHS Management* Content for *SAP NetWeaver* Portal, see SAP Note 2083956

Required/ Optional	Product Version/Software Component	Version	Comment
	SAP Active Component Framework (ACF)	7.12 PL 26	Required if you want to work on Microsoft Office documents (Microsoft Excel and Microsoft Word) as part of an investigation step in incident management or as part of an analysis method in risk assessment.
			For more information about installing the ACF, see SAP Note 766191.
			For more information about browser restrictions regarding Office Integration, see SAP Note 1098009.

The following components are optional. However, if you want to use SAP Business Warehouse and BI content (see Integration of SAP BusinessObjects (Dashboards)), the components are required.

Required/ Optional	Product Version/Software Component	Version	Comment
Optional	*SAP NetWeaver* Application Server (ABAP)	*SAP NetWeaver* BW 7.30 (SP08) or higher or *SAP NetWeaver* 7.31 (SP05) or higher	
	BI Content (Use one of the listed content packages)	7.37 SP06 Technical content package: BI_CONT 7.37	For *SAP NetWeaver* Business Warehouse 7.30 (SP08 or higher)
		7.47 SP06 Technical content package: BI_CONT 7.47	For *SAP NetWeaver* Business Warehouse 7.31 (SP05 or higher)
		7.57 SP0 Technical content package: BI_CONT 7.57	For *SAP NetWeaver* Business Warehouse 7.40-SR1 (SP05 or higher)
	BI Content Extension (SAP BusinessObjects Dashboards) (Use one of the listed content packages)	7.37 SP06 Technical content package: BI_CONT_XT 7.37	For *SAP NetWeaver* Business Warehouse 7.30 (SP08 or higher)

Required/ Optional	Product Version/Software Component	Version	Comment
		7.47 SP06 Technical content package: BI_CONT_XT 7.47	For *SAP NetWeaver* Business Warehouse 7.31 (SP05 or higher)
		7.57 SP0 Technical content package: BI_CONT_XT 7.57	For *SAP NetWeaver* Business Warehouse 7.40-SR1 (SP05 or higher)
	SAP NetWeaver Application Server (Java)	*SAP NetWeaver* 7.30 (SP07) or higher or *SAP NetWeaver* 7.31 (SP05) or higher	Including BI-Java, EPC, EP (EPC includes the iView for dashboards)
	Adobe Flash Player	Version 9 or higher	Required for dashboards
The following component is optional. However, if you want to use an SAP-defined Web service (an Enterprise service) to record incidents for incident management, the components are required. For more information about the service, see Incidents: Optional Software Units under 3.1Managing Incidents			
Optional	XI Content for SAP Environment, Health and Safety Management Extension	5.0	
	SAP NetWeaver PI	7.0 or higher	
The following component is optional. However, if you want to use the Enterprise Search services for incident management, the component is required.			
Optional	Search and Classification (TREX)	TREX 7.10, Revision 27 or higher	*SAP NetWeaver* standalone engine
The following components are optional. However, if you want to collaborate with partners for product declarations or want to communicate data to IMDS, you can use the corresponding components.			

Required/ Optional	Product Version/Software Component	Version	Comment
Optional	SAP Product Stewardship Network (An *SAP EHS Management* OnDemand solution)		SAP Product Stewardship Network is integrated into the compliance interfaces in a business context viewer side panel. *SAP Product Stewardship Network* is also integrated into the Regulatory Management UI. The integration allows you to update existing content or to create a new revision with content provided by *SAP Product Stewardship Network*. For more information, see Customizing for *SAP EHS Management* under ▶ *Product Compliance* ❯ *Integration* ❯ *SAP Product Stewardship Network* ◀.
	International Material Data System (IMDS) Batch client		The IMDS batch client is required to communicate with IMDS for the automotive industry.

For more information about the system prerequisites for using mandatory and optional software components, see 2.5 System Landscape.

2.4   Integrated Application Components

You can set up *SAP EHS Management* to use and integrate the functions of other SAP solutions as well as to provide data to other solutions that integrate with SAP EHS Management. The following sections each contain a table of the application components that *SAP EHS Management* integrates with and a second table of the application components that integrate to *SAP EHS Management*. The tables also include any special installation requirements and how these components support your business scenarios in *SAP EHS Management* for health and safety, and product compliance.

For an overview of all integrated components and their use in *SAP EHS Management*, see SAP Help Portal at http://help.sap.com/ehs-comp. Open the Application Help documentation and go to ▶ *Foundation for EHS Management (EHS-MGM-FND)* ❯ *Integration* ◀.

2.4.1 Integrated Application Components for Health and Safety

Note that the integrated application components are used in the business processes relevant for managing health and safety and are described in the following chapters:

- 3.1 Managing Incidents
- 3.2 Managing EHS Risk
- 3.3 Managing EHS Locations

> **i Note**
>
> Some data described in Table 8: Integration from Health and Safety to Other Application Components must be available on the local system. For more information about the specific data that must be available on the local system, see the documentation for Customizing activity Specify Destination for Integration under
>
> ▎▶ *SAP EHS Management* ❯ *Foundation for EHS Management* ❯ *Integration* ◼.

Integration from Health and Safety to Other Application Components

Application Component	Special Installation Requirements	Usage in *SAP EHS Management*
SAP Business Partner	Specific business partner roles must be available locally. R/3 Enterprise 4.70 Extension Set 2.00 (Basis 620) or higher is required for the remote system	Call of RFC-enabled function modules enable data from SAP Business Partner to be read, changed, and created directly from *SAP EHS Management*.
Plant Maintenance (PM)	Specific PM data must be available locally. R/3 Enterprise 4.70 Extension Set 2.00 (Basis 620) or higher is required for the remote PM system. SAP ERP 6.0, enhancement package 5 or higher is required for locations to read geo location data and partner data of a linked PM technical object.	You can use RFC-enabled function modules to use PM data in the following ways: Read and replicate data for PM technical objects (functional locations, sites, vehicles, and equipment). Read and create PM notifications. Read and create maintenance orders. Maintenance orders are also a cost collector for financial tracking in incident management. Partner data (such as function, name, and address).
	SAP ERP 6.0, enhancement package 5 or higher and activation of business function LOG_EAM_SIMPLICITY	Navigate to PM Web Dynpro screens to view details of technical objects that are assigned to locations
Materials Management (MM)	Materials must be available locally.	Material numbers and material descriptions can be read.

Application Component	Special Installation Requirements	Usage in *SAP EHS Management*
Customer Service (CS)	Specific CS data must be available locally. R/3 Enterprise 4.70 Extension Set 2.00 (Basis 620) or higher is required for the remote CS system	Call of RFC enabled function modules enable CS notifications to be read and created. Service orders are also a cost collector for financial tracking in incident management.
Quality Management (QM)	Specific QM data must be available locally. SAP ERP 6.0 (Basis 700) or higher is required for the remote QM system	Call of RFC enabled function modules enable QM notifications to be read and created.
Personnel Management (PA)	R/3 Enterprise 4.70 Extension Set 2.00 (Basis 620) or higher is required for the remote system	Call of RFC enabled function modules enable data for employees and applicants to be read.
Personnel Time Management (PT)	R/3 Enterprise 4.70 Extension Set 2.00 (Basis 620) or higher is required for the remote system	Call of RFC enabled function modules enable data for absences to be read from PT and assigned to an incident, and enables data for absences to be created directly in PT (optional).
Organizational Management (PA-OS)	Only locally. If the original system for Organizational Management is not the local system, then ALE distribution into the local system shall be performed. To make the person information available, distribution of the relevant HR data (HR minimaster) is required.	Different structure information that is used, for example, "Find line manager", "Find team members", organizational unit hierarchy, organizational assignment of incidents, organizational assignment of locations. Read positions and assign to locations and jobs. Read assigned objects (such as persons) to positions.
Accounting (AC)	R/3 Enterprise 4.70 Extension Set 2.00 (Basis 620) or higher is required for the remote system	Call of RFC enabled function modules enable data for internal orders to be read and created. Internal orders are a cost collector for financial tracking in incident management.
Currency Conversion/Expiring Currency (BC-SRV-BSF-CUR)	Only locally. We recommend distributing this data using Application Link Enabling (ALE). This way, you can update the data regularly.	Currency and exchange rate data can be read.
Hazardous Substance Management in SAP ERP Central Component	R/3 Enterprise 4.70 Extension Set 2.00 (Basis 620) or higher is required for the remote system	Replication of data of chemicals and listed substances relevant for risk assessment from the specification management.

Application Component	Special Installation Requirements	Usage in *SAP EHS Management*
SAP Management of Change	SAP Management of Change 1.0, SP02 or higher. Alternatively to using SP02, you can apply SAP Note 1782445.	Call of RFC enabled function modules enable the creation of change requests in SAP Management of Change as a corrective or preventive action triggered by an incident or risk assessment.
Occupational Health (EHS-HEA) in SAP ERP Central Component	SAP ERP 6.0 (Basis 700) SP23 or higher is required for the remote EHS-HEA system. Alternatively to using SP23 or one of its equivalents, you can apply SAP Note 1790994.	Call of RFC enabled function modules enable proposing health surveillance protocols based on risks. Alternatively, such health surveillance protocols can also be proposed to third-party occupational health systems, by implementing a BAdI.
Incident and Risk Assessment Archiving	Activate ILM in the Switch Framework (transaction SFW5).	The EHHSS_INC and EHHSS_RAS archiving objects comply with the rules of Information Lifecycle Management (ILM).
SAP Jam Social Media Platform	SAP Jam is a cloud-based solution that can be used by customers to utilize features such as communities, discussion groups, or wikis integrated into SAP-supported business processes. The use of the SAP Jam integration in the component extension 6.0 of *SAP EHS Management* is optional. See chapter 6.4 of this document for further information.	Health and safety processes allow you to start discussion groups and monitor the feeds in these discussion groups for business objects such as the chemical or the location. Groups/discussions started for a specific chemical or location are tied to that object allowing all discussions belonging to a single location/chemical to be centrally documented or collected.

Application Components that Integrate to Health and Safety

Application Component	Special Installation Requirements	Usage in *SAP EHS Management*
Plant Maintenance (PM)	SAP ERP 6.0 enhancement package 6 or higher and activation of business function /EAMPLM/LOG_EAM_WS is required for activation of integration of risk assessment with the worker safety feature in PM	Communication of risk information (such as risk, controls, and safety measures) from risk assessment to PM when the risk assessment status is set to Closed.
SAP Management of Change	SAP Management of Change 1.0, SP01 or higher	Call of RFC-enabled function module enables a user of *SAP Management of Change* to send a risk assessment request from their system to the *SAP EHS Management* system. You can simulate a risk assessment to fulfill the request.

Application Component	Special Installation Requirements	Usage in *SAP EHS Management*
SAP BusinessObjects Risk Management A component included in SAP BusinessObjects governance, risk, and compliance solutions (GRC solutions)	GRC 10.0 (based on NW 7.02) or higher	Call of RFC enabled function module enable incidents to be reported to risk management, depending on a certain severity level.

2.4.2 Integrated Application Components for Environment Management

Note that integrated application components information for health and safety also applies to environment management. The integrated application components used in the business processes for managing health and safety and are described in the following chapters:

- 4.1 Managing Emissions
- 4.2 Deviation Reporting

Integration from Environment Management to Other Application Components

See Table: Integration from Health and Safety to Other Application Components

Optionally, for the new automatic data collection feature, you can integrate Environment Management with SAP Manufacturing Integration and Intelligence as a data transfer middleware system.

Integration from Environment Management to Other Application Components

Application Component	Special Installation Requirements	Usage in SAP EHS Management
Manufacturing Integration and Intelligence (MII)		Call of RFC-enabled function module enables a user of SAP Environment Management to send an automatic data collection request from their system to a third-party system that has integration to the *SAP Manufacturing Integration and Intelligence* system.
Environment Management Tasks of Category Action Archiving	Activate ILM in the Switch Framework (transaction SFW5).	The EHENV_SAC archiving object complies with the rules of Information Lifecycle Management (ILM).

Application Components that Integrate to Environment Management

See Table: Application Components that Integrate to Health and Safety

2.4.3 Integrated Application Components for Product Compliance

Note that the integrated applications are used in the product compliance processes that are described in the following chapters:

- 5.1 Managing Product Compliance
- 5.2 Managing IMDS Compliance

> **i Note**
>
> Some data described in Table: Integration from Product Compliance to Other Application Components must be available on the local system. For more information about the specific data that must be available on the local system, see the documentation for Customizing activity *Specify Destination for Integration* under ▶ *SAP EHS Management* ❯ *Foundation for EHS Management* ❯ *Integration* ◀ .

The table below displays the application components that the product compliance component integrates with.

Integration from Product Compliance to Other Application Components

Application Component	Special Installation Requirements	Usage in *SAP EHS Management*
SAP Business Partner	Specific business partner roles must be available locally. R/3 Enterprise 4.70 Extension Set 2.00 (Basis 620) or higher is required for the remote system	Read of business partner details.
Materials Management (MM)	Materials must be available locally.	Read of material number and description.
Purchasing (MM-PUR)	Suppliers must be available locally. Approved manufacturer parts lists and the purchasing info record with purchasing source list information must be available locally.	Read of supplier details, purchase info records, approved manufacturer part lists, and purchasing source list.
Bill of Material (Logistics (LO), Product Lifecycle Management (PLM))	Bill of materials must be available locally.	Read of bill of materials.

Application Component	Special Installation Requirements	Usage in *SAP EHS Management*
SAP Product Stewardship Network (an *SAP EHS Management* OnDemand solution)	Configure the Web service consumer clients	Call of Web service to enable integration of information from *SAP Product Stewardship Network*: Call *SAP Product Stewardship Network* web services Get compliance information from *SAP Product Stewardship Network* Get regulatory content information from *SAP Product Stewardship Network*

The table below displays the application components that integrate with the product compliance component.

Application Components that Integrate to Product Compliance

Application Component	Special Installation Requirements	Usage in *SAP EHS Management*
Materials Management (MM)	Material master transactions See customizing activity for configuration under ▷ *SAP EHS Management* ❯ *Product Compliance* ❯ *Integration* ❯ *Logistic Integration* ❯ *Material Master* ❯.	Call of RFC enabled function modules in the *SAP EHS Management* system enables the integration of compliance information into material master: Maintain basic material composition Show released compliance information
Purchasing (MM-PUR)	Purchase order transactions See Customizing activity under ▷ *SAP EHS Management* ❯ *Product Compliance* ❯ *Integration* ❯ *Logistic Integration* ❯ *Supplier and Purchasing* ❯ *Integrate Compliance Information into Purchase Order* ❯.	Call of RFC enabled function modules in the *SAP EHS Management* system enables the integration of compliance information into purchasing order transaction: Show released compliance information
Sales and Distribution (SD)	Sales order transactions See Customizing activity under ▷ *SAP EHS Management* ❯ *Product Compliance* ❯ *Integration* ❯ *Logistic Integration* ❯ *Customer and Sales* ❯ *Integrate Compliance Information into Sales Order* ❯.	Call of RFC-enabled function modules in the *SAP EHS Management* system enables the integration of compliance information into sales order transaction: Show released compliance information
Product Lifecycle Management (PLM)	CAD Desktop	Show released compliance information Note: Can be implemented via RFC

Application Component	Special Installation Requirements	Usage in *SAP EHS Management*
SAP Product Stewardship Network (an *SAP EHS Management* OnDemand solution)	Configure the Web service consumer clients See Customizing activity under ▶ *SAP EHS Management* ❭ *Product Compliance* ❭ *Integration* ❭ *SAP Product Stewardship Network* ❭ *Specify SAP Product Stewardship Network Integration* ❭.	Call of Web service to enable integration of information to *SAP Product Stewardship Network*: Provide compliance information to *SAP Product Stewardship Network* Provide regulatory content information from *SAP Product Stewardship Network*

2.5 Third Party Components

Although *SAP EHS Management* is not delivered with third-party components, you can use third-party components for the following functions:

- Map function for locations
  To support you in managing EHS locations (see 3.3), you can integrate a third party map provider by implementing a Web Dynpro CHIP component. This component interprets and displays the address information from the location address. This allows users to see the position of a location on a map. For more information, see the Customizing activity *Configure Integration of Map* under ▶ *SAP EHS Management* ❭ *Foundation for EHS Management* ❭ *Locations* ❭.

- Encryption function for inquiry forms
  The inquiry forms used in *SAP EHS Management* can contain sensitive and confidential data. These forms are sent via e-mail. If you do not already use an encryption function, you can configure SAPconnect to send e-mails via a secure e-mail gateway application that is capable of encrypting outbound and inbound e-mails. For more information, see SAPconnect documentation on SAP Help Portal at http://help.sap.com/nw74 -> *Application Help*. Open the Function-Oriented View documentation and go to ▶ *Application Server ABAP* ❭ *Other Services* ❭ *Services for Business Users* ❭ *SAPconnect (BC-SRV-COM)* ❭.

- International Material Data System (IMDS)
  To support you in managing IMDS compliance (see 5.2 Managing IMDS Compliance), you can integrate the IMDS advanced interface. For more information, see Customizing for *SAP EHS Management* under ▶ *Product Compliance* ❭ *IMDS Compliance* ❭.

- Occupational Health
  Alternatively to proposing health surveillance protocols based on risks into Occupational Health (EHS-HEA) in *SAP ERP* Central Component, you can also integrate a third-party Occupational Health system by implementing the BAdI for Occupational Health Integration. For more information, see Customizing for *SAP EHS Management* under ▶ *Risk Assessment* ❭ *Integration* ❭ *BAdI: Occupational Health Integration* ❭.

2.6   System Landscape

This section describes several possible system landscapes and the prerequisites for using their mandatory and optional components. For more information about components and the minimum release information, see 2.2 Software Component Matrix.

> ### i Note
>
> The system functions properly without optional servers and components. However, you may choose to include optional servers and components in your system landscape depending on your business needs. For more information about when you may want to use optional servers or components, see 3 Business Scenario: Health and Safety and 4 Business Scenario: Product Compliance.

2.6.1 User Interface

You can access the user interface of *SAP EHS Management* using the following user interface clients:

- *SAP NetWeaver* Business Client for Desktop
- *SAP NetWeaver* Business Client for HTML
- *SAP NetWeaver* Portal
  For more information about creating EHS Management Content for *SAP NetWeaver* Portal, see SAP Note 2083956 .

For more information about these user interface clients, see *SAP Help Portal* at http://help.sap.com/nw74 under Application Help. Open the UI Technologies in *SAP NetWeaver* and go to *SAP NetWeaver* User Interface Services.

We recommend that you access the user interface via *SAP NetWeaver* Business Client (NWBC) because it integrates the latest UI technologies.

SAP EHS Management is optimized for the SAP Corbu theme. We recommend that you use SAP Corbu to ensure an optimal screen layout. For more information, see SAP Help Portal at http://help.sap.com/nw74 under Application Help. Open the UI Technologies in *SAP NetWeaver* and go to UI Theme Designer

> ### ⚠ Caution
>
> If you use *SAP NetWeaver* Portal, there are restrictions regarding UI elements such as charts which require HTML rendering in standards mode:
>
> - SAP Note 1814711 - SAP applications iViews in EP: Rendering Modes
> - SAP Note 1458799 - Limited supportability for IE8 and above in the Portal
>
> The following SAP Notes provide possible workarounds:
>
> - SAP Note 1737445 Headerless Portal Window
> - SAP Note 1827687 new UFP (Unified Framework page)

> With *SAP NetWeaver* 7.31 SP14 and 7.4 SP9, the restrictions have been released. See the following SCN article for more information:
>
> http://scn.sap.com/community/enterprise-portal/blog/2014/11/27/ajax-framework-page-on-ie-standards-mode🔗

> **i Note**
>
> For more information about the recommended Web browsers, see SAP Notes 1728946🔗 and 1853989🔗.

2.6.2 Full System Landscape

The full, productive system landscape of the *SAP EHS Management* add-on is based on *SAP ERP* and *SAP NetWeaver*.

The following graphic depicts the full system landscape:
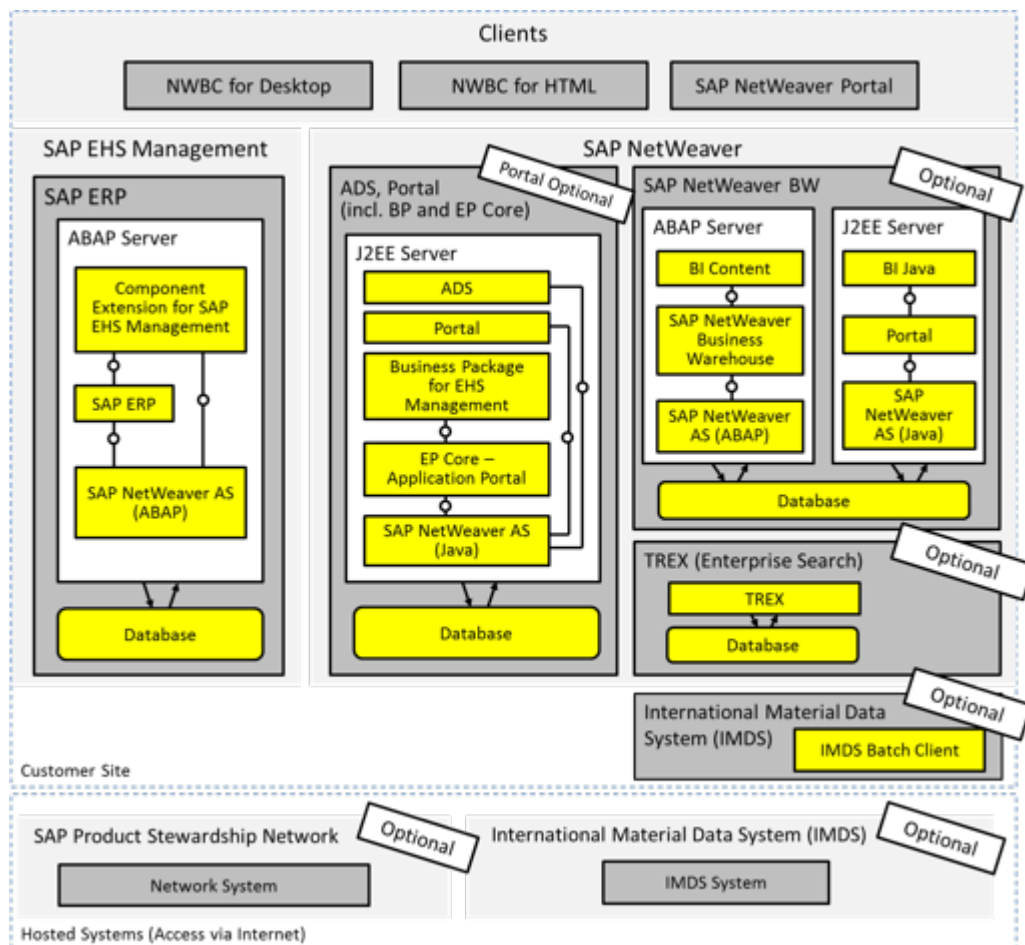
Full System Landscape

The full system landscape contains the following elements:

- *SAP ERP* on ABAP Server
  SAP EHS Management is an add-on to *SAP ERP*. The *SAP EHS Management* add-on uses the *SAP ERP* application and *SAP NetWeaver* Application Server (SAP NetWeaver AS) for ABAP.
  The components run on the same ABAP server as *SAP ERP*. This server exchanges data with the database.
- Portal (optional) and Adobe Document Services (ADS) on J2EE Server
  In *SAP EHS Management*, you use Adobe Document Services (ADS) for local printing and for SAP Interactive Forms by Adobe. You have the option to use the *SAP NetWeaver* Portal and the EP Core - Application Portal).
  The *SAP NetWeaver* AS for Java enables the Web services for these components. The components run on a J2EE server that exchanges data with the database.
- *SAP NetWeaver* Business Warehouse (BW)
  Using the components of *SAP NetWeaver* BW is optional. The data entered into *SAP EHS Management* can be extracted and stored in BW for use in analytical reporting.
  BI Content contains BW modeling/objects, BEx queries, and SAP BusinessObjects Dashboards. We recommend that you run BI Content, BW, and the corresponding *SAP NetWeaver* AS for ABAP on an ABAP server dedicated to analytical reporting.
  You use BI Java to run SAP BusinessObjects Dashboards software and SAP Business Explorer (BEx) Web analyzer and to support local printing via the SAP List Viewer (ALV). BI Java can be deployed on the same J2EE server that is used for ADS, or together with the portal and the *SAP NetWeaver* AS for Java on a separate J2EE server (recommended). The portal is optional as a client, but technically required for SAP BusinessObjects Dashboards and BEx Web analyzer.

> **i Note**
>
> As of *component extension 6.0 for SAP EHS Management*, no new BI content is delivered. However, you can use the BI Content that is delivered with *component extension 5.0 for SAP EHS Management*.

- TREX (Enterprise Search)
  You can use *SAP NetWeaver* Enterprise Search to search for incidents in the application.
  To use Enterprise Search, see also SAP Note 1164979 .
- *SAP Product Stewardship Network*
  The use of the on demand networked application SAP Product Stewardship Network is optional. It enables you to download regulatory content information as well as collaboration with business partners in complying with substance-related regulations, such as requirements for product declarations. This system is not installed at the customer site. You can access it via the Internet using calls to web service endpoints.
- International Material Data System (IMDS)
  The use of IMDS is optional. It enables the exchange of product-related data, such as material compositions within the automotive supply chain. This is required to comply with legal requirements such as the EU directive on end-of life vehicles. This system is not installed at the customer site. You can access it via the Internet.
  For more information about the installation requirements, see SAP Note 1712603 .

2.6.3 Minimum System Landscape

The minimum system landscape of the *SAP EHS Management* solution is based on *SAP ERP* and *SAP NetWeaver*.

The following figure illustrates the minimum system landscape:
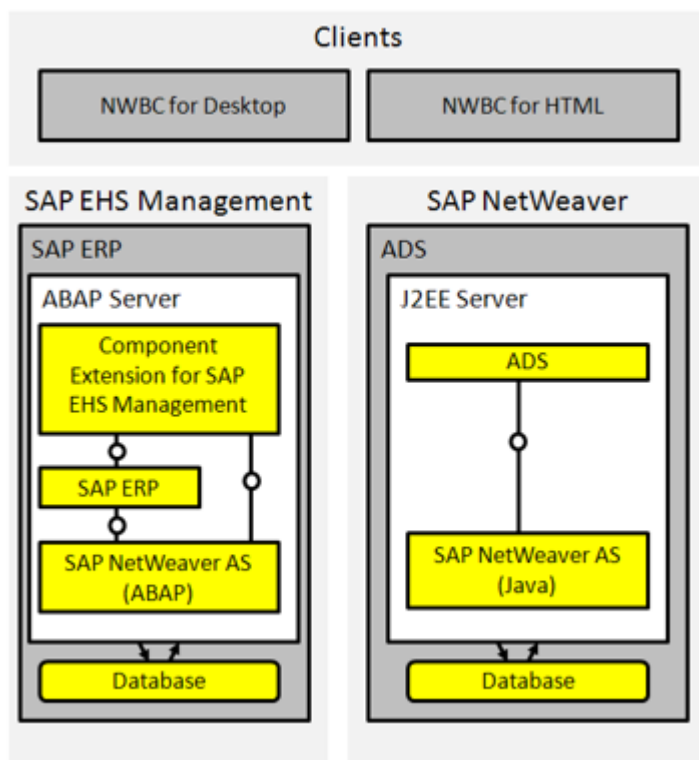
Minimum System Landscape

This landscape has a minimum number of required components to run the solution. The minimum system landscape contains the following elements:

- *SAP ERP* on ABAP Server
  SAP EHS Management is an add-on to *SAP ERP*. The *SAP EHS Management* add-on uses the *SAP ERP* application and *SAP NetWeaver* Application Server (SAP NetWeaver AS) for ABAP.
  The components run on the same ABAP server as *SAP ERP*. This server exchanges data with the database.
- ADS on J2EE Server
  In *SAP EHS Management*, you use Adobe Document Services (ADS) for local printing and for SAP Interactive Forms by Adobe.
  The *SAP NetWeaver* AS for Java enables the Web services for these components. The components run on a J2EE server that exchanges data with the database.

2.7 Tools and Resources for Planning Your System Landscape

To plan your system landscape, you can use a few tools and resources that are available to you as an SAP customer.

Tools for Looking Up Information about Business Processes, Scenarios, and Implementable Steps

Tool	Purpose
Business process repository (BPR) viewer The BPR Viewer displays all descriptions, but only a selection of the configuration documentation. To view all configuration documentation, install and use *SAP Solution Manager* at your customer site.	To look up descriptions of business scenarios, business processes, and implementable steps Call up the BPR viewer directly using the Internet address https://implementationcontent.sap.com/bpr . Alternatively, you can also call up the Internet address http://service.sap.com/bpr first, to see more background information about the BPR viewer and additional material on *SAP Service Marketplace*. 1. Select ▎ *Solutions/Applications* ❯ *SAP EHS Management* ❭. 2. Select the relevant scenario, for example, Health and Safety. 3. Select the relevant business process, for example, Managing Incidents.

In addition, there are tools in *SAP Solution Manager* that support you before, during, or after the installation of your SAP product or SAP enhancement package. These tools include:

Tools for Supporting Installations and Upgrades

Tool	Purpose
SAP Solution Manager System Landscape	To model and set up your system landscape
SAP Solution Manager Maintenance Optimizer	To install support packages and SAP enhancement packages
Business process change analyzer (available with SAP enhancement package 1 for *SAP Solution Manager* 7.0)	To analyze the effects of transports and support packages as well as activation logs for business functions

> **i Note**
>
> As of *SAP Solution Manager* 7.0 with support package 23, these tools have been enhanced to provide better support for the setup of your system landscape and for installing and activating business functions. For more information, see Application Help for *SAP Solution Manager* on *SAP Help Portal* at http://help.sap.com/solutionmanager.

To receive implementation content that supports you during the configuration of your business processes, business scenarios, and implementable steps, you need the *SAP Solution Manager* add-on Implementation Content ST-ICO_SP38 (SP38).

2.8   Integration Scenarios with ERP

You can run the following integration scenarios with *SAP ERP*:

- Add-on is installed on top of the productive *SAP ERP* system (see 2.7.1 Add-On Installed on Productive ERP).

- Add-on is installed side-by-side with the *SAP ERP* system (see 2.7. 2Add-On Installed on ERP System (Operated Side-by-Side to an Earlier ERP System).

2.8.1 Add-On Installed on Productive ERP
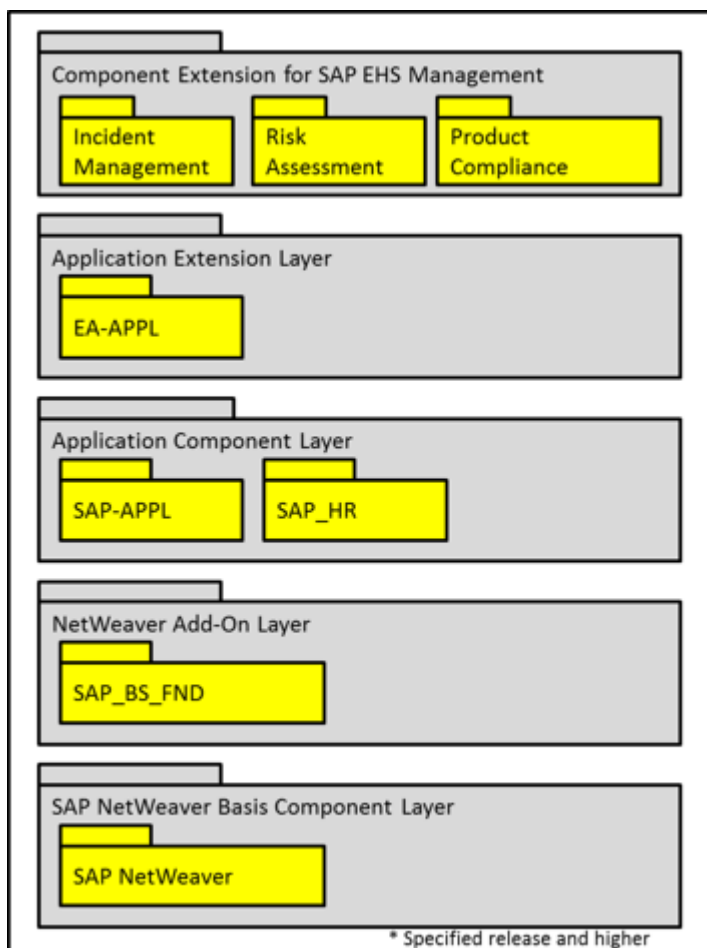
Deployment of SAP EHS Management as Add-On on Productive ERP System

Figure 3 depicts that you can deploy all components of *SAP EHS Management* as an add-on to a productive ERP system. In this scenario, you can use an ERP system that is upgraded to enhancement package 7 for the productive business processes, and the *SAP EHS Management* add-on for the supported components. The add-on reuses master data of the following lower software layers:

Application extension layer, including EA-APPL 617

Application component layer, including SAP_APPL 617 and SAP_HR 600 and higher

> **i Note**
>
> SAP_HR is only relevant for health and safety processes (see chapter 3).

- *SAP NetWeaver* add-on layer, including SAP_BS_FND 747.

- *SAP NetWeaver* Basis component layer, including *SAP NetWeaver* 740.

2.8.2 Add-On Installed on ERP System (Operated Side-by-Side to an Earlier ERP System)

To enable existing customers that run a productive ERP system on an earlier release (earlier than 617) to benefit from the functions of *SAP EHS Management*, the customer can use a side-by-side scenario. In this scenario, the customer additionally installs and operates an ERP 617 system with this add-on. This 617 system (with the add-on) is dedicated to running *SAP EHS Management* only. All other business processes still run in the earlier ERP system. To run the side-by-side installation, the following two main scenarios are possible:

- Data is read remotely from the earlier ERP system by the 617 add-on system (see Figure 4Figure 4: Side-By-Side Scenario: Data is Read Remotely).
- Data is replicated from the earlier ERP system to the 617 add-on system (see Figure 5 Side-By-Side Scenario: Data is Replicated).

> ⚠ Caution
>
> Regardless of which side-by-side scenario you choose, there is specific data that can only be read locally. This data must be replicated. For more information about the specific data that must be replicated, see the Customizing activity *Specify Destination for Integration* under ▷ *SAP EHS Management* ❭ *Foundation for EHS Management* ❭ *Integration* ❭.
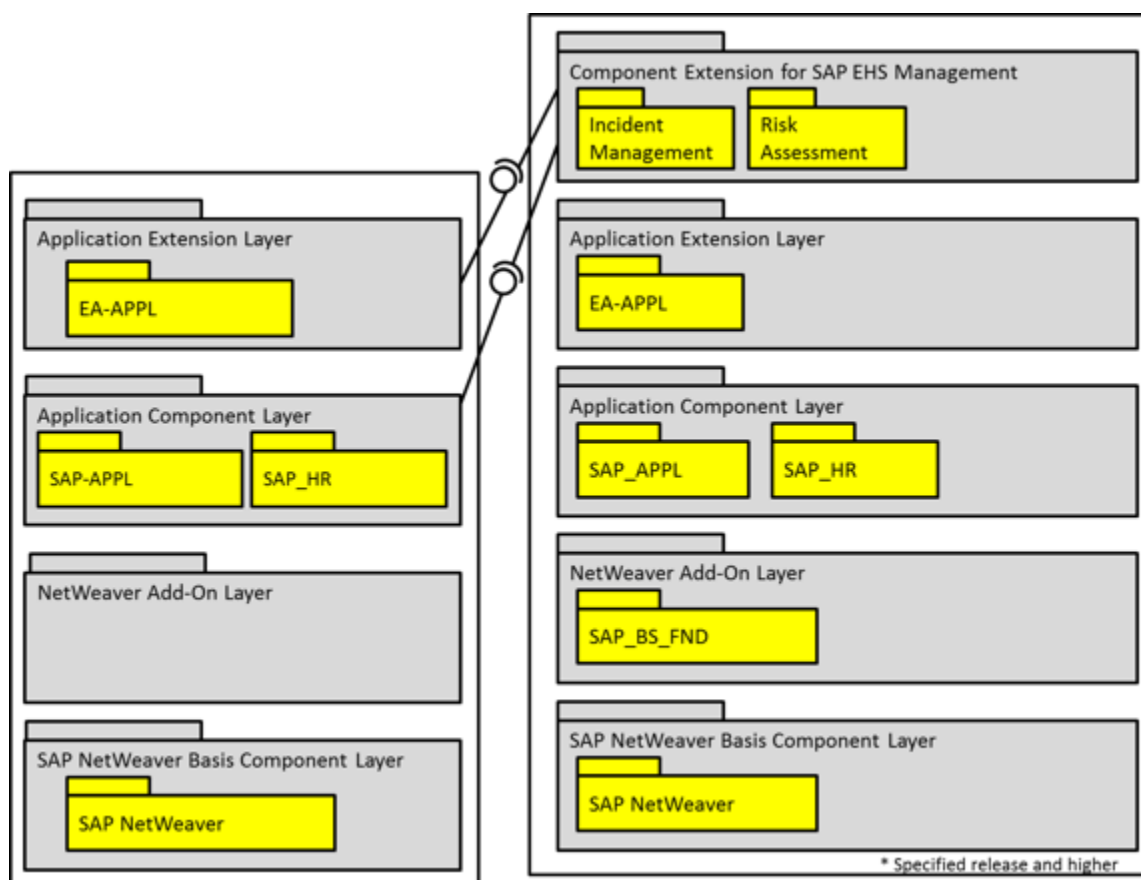
Side-By-Side Scenario: Data is Read Remotely

Figure 5Figure 4: Side-By-Side Scenario: Data is Read Remotely illustrates how you can use a side-by-side scenario for the health and safety processes of *SAP EHS Management*. Here, with Figure 4, the *SAP EHS Management* system reads data from the earlier ERP system remotely, specifically from the following software layers of the earlier ERP system:

- Application extension layer, including EA-APPL 470 or 600 and higher
- Application component layer, including SAP_APPL 470 or 600 and higher, and SAP_HR 470 or 600 and higher
- *SAP NetWeaver* add-on layer
- *SAP NetWeaver* Basis component layer, including *SAP NetWeaver* 620 or 700 and higher

> **i Note**
>
> See chapter 2.2 Integrated Application Components for details on supported versions per application component in a side-by-side scenario.

If necessary, the add-on system reads replicated data from the following lower software layers:

- Application extension layer, including EA-APPL 617
- Application component layer, including SAP_APPL 617and SAP_HR 600 and higher

> **i Note**
>
> SAP_HR is only relevant for health and safety processes (see chapter 3).

- *SAP NetWeaver* add-on layer, including SAP_BS_FND 747
- *SAP NetWeaver* Basis component layer, including *SAP NetWeaver* 740
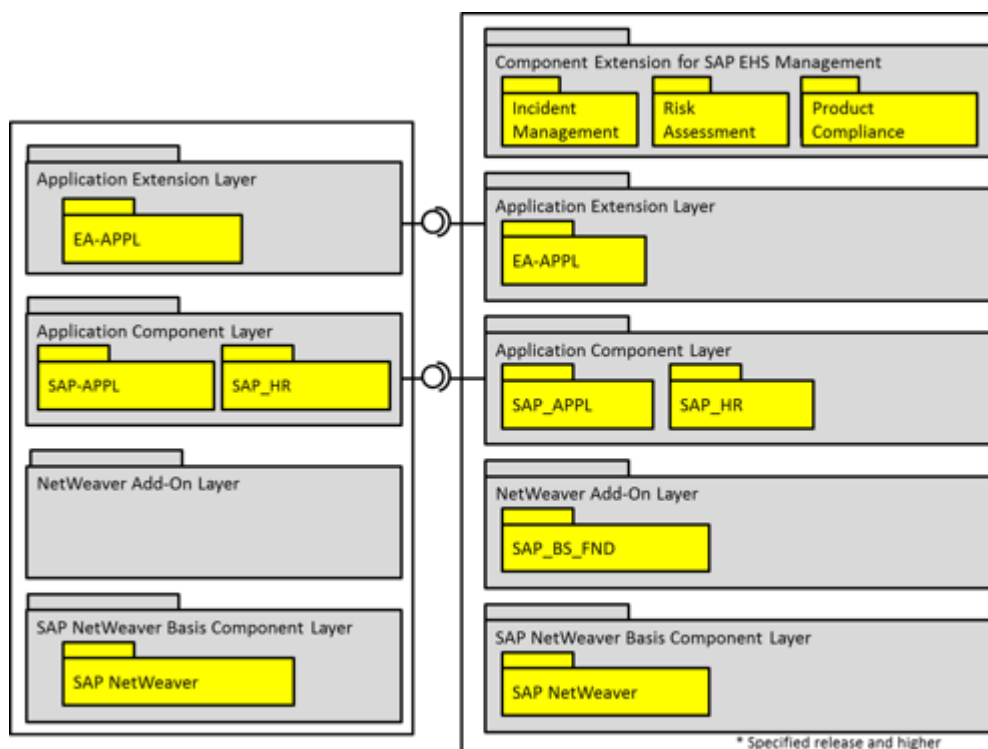
Side-By-Side Scenario: Data is Replicated

Figure 5 is similar to Figure 4. However, in this side-by-side scenario, the data in the application extension layer and the application component layer of the earlier system is replicated in the corresponding application extension layer and application component layer of the add-on system. The data is not read remotely. This scenario can also be used for all components of *SAP EHS Management*.

2.9   Overall Implementation Sequence

The following table describes the overall installation sequence for *SAP EHS Management*.

For the latest component version and patch level requirements, see http://support.sap.com/sp-stacks.

The Feature Pack 01 for product compliance of component extension 6.0 for *SAP EHS Management* contains the adoption of IMDS 10.0 including a different handling of weight tolerances.

Product Compliance: Upgrade from Component Extension 5.0: Weight tolerance and IMDS 10.0

√	Activity
	If you upgrade to component extension 6.0 for *SAP EHS Management* (Support Package 01 or higher), make sure that you have carried out all relevant steps to adapt existing weight tolerance values to the new standardized tolerance ranges, as introduced with the following two SAP Notes: 2219639 ✈ Add Support for Weight Tolerance Ranges. 2207037 ✈ Support for IMDS 10.0 Requirements. Carry out the following steps: 1. Specify the weight tolerance values in the new Customizing activity *Specify Tolerance Values for Weight (EHPRCV_TOLERANCE)* under ▌▶ *Product Compliance* ❯ *General Configuration* ❯ *Compliance Object.* ❯ 2. Adapt existing tolerance values in the Compliance Data Object by carrying out the report R_EHPRC_MIGRATE_TOLERANCES. Read the documentation carefully and first carry out the report in test mode. 3. If you want to carry out the checks again for all existing compliance requirements based upon the new weight tolerance values, carry out the report R_EHPRC_RECHECK_TOLERANCES. This report creates the necessary ACP entries for the affected parts. The ACP entries will be processed by the standard run of the automated change processing.

As of component extension 6.0 Feature Package 02 for *SAP EHS Management*, the listed substances have been connected to a name space. Listed substances within the SAP name space are now shipped with a GUID to uniquely identify the object. This however requires a data conversion as described in the table below.

Product Compliance: Upgrade to Component Extension 6.0 SP02

√	Activity
	If you upgrade to component extension 6.0 for *SAP EHS Management* (Support Package 02 or higher), carry out the following steps: 1. Run the report R_EHFND_LISU_MIGRATION after the upgrade. The report transfers listed substances from table EHFNDD_LISU_ROOT to the updated root table EHFNDD_LISU_RT. After the transfer is complete, the report removes redundant data. Note that this report has to be executed after each support package of software component EHSMREGC. 2. Run the report R_EHFND_LISU_SUBSTITUTE after the upgrade. This report ensures data consistency of the transferred listed substances by redirecting matching references between customer-created entries and content-delivered entries in the updated root table EHFNDD_LISU_RT. The mapping is done by CAS number. 3. If you are using BI, carry out an initial BI load for the data source 0EHSM_PRC_02 (Compliance Data). This in turn will trigger the generic extraction 0EH_DECLSUB_TEXT that is defined within the BI process chain. The latter is a generic text data source that is used to pull the names of the relevant listed substances into BI.

2.9.1 Product Compliance: Upgrade from Component Extension 6.0 for SAP EHS Management

This chapter describes the necessary steps for Product Compliance Management that have to be executed when upgrading from component extension 6.0 to either of the Feature Packs 01 or 02.

Relevant Changes with Feature Package 01

The Feature Pack 01 for product compliance of component extension 6.0 for *SAP EHS Management* contains the adoption of IMDS 10.0 including a different handling of weight tolerances

Product Compliance: Upgrade to Component Extension 6.0 SP01

√	Activity
	If you upgrade to component extension 6.0 for *SAP EHS Management* (Support Package 01 or higher), make sure that you have carried out all relevant steps to adapt existing weight tolerance values to the new standardized tolerance ranges, as introduced with the following two SAP Notes:
	2219639 Add Support for Weight Tolerance Ranges.
	2207037 Support for IMDS 10.0 Requirements.
	Carry out the following steps:
	1. Specify the weight tolerance values in the new Customizing activity *Specify Tolerance Values for Weight (EHPRCV_TOLERANCE)* under ▸ *Product Compliance* ▸ *General Configuration* ▸ *Compliance Object.* ▸
	2. Adapt existing tolerance values in the Compliance Data Object by carrying out the report R_EHPRC_MIGRATE_TOLERANCES. Read the documentation carefully and first carry out the report in test mode.
	3. If you want to carry out the checks again for all existing compliance requirements based upon the new weight tolerance values, carry out the report R_EHPRC_RECHECK_TOLERANCES. This report creates the necessary ACP entries for the affected parts. The ACP entries will be processed by the standard run of the automated change processing.

Relevant Changes with Feature Package 02

As of *component extension 6.0 Feature Package 02for SAP EHS Management*, the listed substances have been connected to a namespace. Listed substances within the SAP Namespace are now shipped with a GUID to uniquely identify the object. This however requires a data conversion as described in the table below.

Product Compliance: Upgrade to Component Extension 6.0 SP02

√	Activity
	If you upgrade to component extension 6.0 for *SAP EHS Management* (Support Package 02 or higher), carry out the following steps:
	1. Run the report R_EHFND_LISU_MIGRATION after the upgrade. The report transfers listed substances from table EHFNDD_LISU_ROOT to the updated root table EHFNDD_LISU_RT. After the transfer is complete, the report removes redundant data. Note that this report has to be executed after each support package of software component EHSMREGC.
	2. Run the report R_EHFND_LISU_SUBSTITUTE after the upgrade. This report ensures data consistency of the transferred listed substances by redirecting matching references between customer-created entries and content-delivered entries in the updated root table EHFNDD_LISU_RT. The mapping is done by CAS number.
	3. If you are using BI, carry out an initial BI load for the data source 0EHSM_PRC_02 (Compliance Data). This in turn will trigger the generic extraction 0EH_DECLSUB_TEXT that is defined within the BI process chain. The latter is a generic text data source that is used to pull the names of the relevant listed substances into BI.

References.

Implementation Sequence

Step	Activity
1.	Ensure that you have performed the preparatory steps: You have planned your system landscape [see Tools and Resources for Planning Your System Landscape [page 35], System Landscape [page 32], and Integration Scenarios with ERP [page 36]]. This means, you have decided how many systems you require, how you want to use each of these systems, and which standalone engines and clients you require. With the help of your hardware partner, you have mapped your systems and standalone engines to correctly sized hosts.
2.	You have read all relevant SAP Notes and guides. For navigation paths to this documentation, see Related Information [page 10], Planning Information [page 10], and Important SAP Notes [page 11].
3.	You install the add-on. For more information, see SAP Note 2133413. Note that installation is supported on Unicode systems only. For more information about supported languages and code pages in general, see SAP Notes 73606 and 838402.
4.	If you want to use optional components described in Software Component Matrix [page 20] for all business scenarios in *SAP EHS Management*, see the following installation guides: *SAP NetWeaver* (optional components) See the *SAP Help Portal* at http://help.sap.com/nw74 under *Installation and Upgrade*. BW/BI Content See the *SAP Help Portal* at http://help.sap.com/nw under *SAP Business Warehouse*. To run embedded analytics, you need to order the necessary *SAP BusinessObjects* software. See SAP Note 1486885 for details.
5.	If you want to use optional components described in Integrated Application Components for Health and Safety [page 25], see the following installation guides: • TREX • See the *SAP Help Portal* at http://help.sap.com/nw under *SAP NetWeaver Enterprise Search*. • To use Enterprise Search, see also SAP Note 1164979
6.	If you want to use optional components described in Integrated Application Components for Product Compliance [page 29] for IMDS compliance (see chapter Managing IMDS Compliance [page 52]), see the SAP Note 1712603.

2.10 Customizing and Extensibility Options

To configure your system, we recommend using the *SAP Solution Manager* tool as a starting point. For more information about using *SAP Solution Manager*, see 2.6 Tools and Resources for Planning Your System Landscape. Note that the steps for configuring analytical reporting are also described in *SAP Solution Manager* (see also 6.1 Integration of SAP BusinessObjects (Dashboards)).

You can extend functions and adapt this add-on to suit the needs of your organization. The following extensibility topics are described in the Application Help documentation on *SAP Help Portal* at http://help.sap.com/ehs-comp60

- Adding Fields to the User Interface
- Field Control
- Adding Print Forms and Interactive Forms
- Process Configuration
- Changing Workflow Templates

2.11 Apps for SAP EHS Management

As an add-on for the component extension for SAP EHS Management, SAP Fiori apps are delivered with SAP Fiori for SAP Business Suite.

For more information on setting up SAP Fiori for SAP EHS Management, see the product assistance for SAP Fiori Apps for EHS Management on the SAP Help Portal at http://help.sap.com/ehs-comp.

3 Business Scenario: Health and Safety

3.1 Managing Incidents

Incidents: Overview

You can use this business process to record the following types of incidents that occur in your organization and to report these to the relevant authorities:

- Incidents
- Near misses
- Safety observations

The process also supports you with additional activities such as an incident risk assessment, investigations, and financial tracking, and allows you to initiate actions to prevent unsafe conditions and future incidents. Managing incidents not only ensures compliance with legal requirements, it also helps to increase employee health and safety and to safeguard the organization's assets by reducing the risk of further incidents in the future.

The business process runs as follows:

1. Report an incident (initial recording)
2. Review and complete an incident record
3. Perform an incident investigation
4. Generate analytical reports
5. Generate BI analytical reports (optional)

Incidents: Technical System Landscape

For more information about the system landscape, see 2.5 System Landscape

Incidents: Software Units

For more information about the required software, see 2.2 Software Component Matrix.

Incidents: Optional Software Units

- If you want to use analytical reports to analyze incident data, you can use SAP BusinessObjects and SAP BusinessObjects Dashboards with incident data from SAP Business Warehouse (BW).

- For more information about BI content and embedded analytics, see Integration of SAP BusinessObjects (Dashboards).
- If you want to use an SAP-defined Web service (an Enterprise service) to record incidents for incident management, you can use the process component EHS Incident Processing.
  - For more information about service-oriented architecture, see 6.2Service-Oriented Architecture (SOA).
  - For more information about the optional software units, see 2.2Software Component Matrix.

Incidents: Implementation Sequence

For more information, see 2.8. Overall Implementation Sequence

For more information about configuration and extensibility options, see 2.9Customizing and Extensibility Options.

Incidents: Further Information

Further Details for Incidents

Content	Location
Enterprise service documentation (interfaces for initial recording of incidents are the following: Manage EHS Incident In and Action EHS Incident In)	For more information, see *SAP Help Portal* at http://help.sap.com/ehs-comp. Open the Application Help documentation and go to ▌ *Incident Management* ❯ *Enterprise Services* ❯ *EHS Incident Processing* ▐. For more information on installing and accessing the SOA documentation, see the PDF attached to SAP Note 1224284 .

3.2   Managing EHS Risks

You can use this business process to identify, analyze, evaluate, treat, and monitor risks that exist in your organization. You can perform the following types of risk assessments:

- Health risk assessment
- Safety risk assessment
- Environmental risk assessment
- Job hazard analysis

The assessment steps for each risk assessment type are customizable, and you can use the standard analysis methods or incorporate your own analysis methods.

The business process supports measuring and analyzing exposure data for physical agents and chemicals. You can compare exposure data to occupational exposure limits (OELs) set by your organization or regulatory agencies to determine whether exposure levels are acceptable for the corresponding locations or jobs. You can also group the people together into similar exposure groups (SEGs) and generate exposure profiles for each person.

The managing EHS risk process not only supports compliance with regulations, but also enables you to minimize identified risk within your organization by implementing risk-related controls, tasks, and proposals for

health surveillance. Rating the effectiveness of controls is supported by regular question-based control inspections.

This helps you to effectively improve the health and safety of your employees as well as to prevent harmful effects to the environment. After you have assessed and treated risk, you can communicate information about the risk at a location (and the controls to reduce that risk) to the *Plant Maintenance* (PM) system for the corresponding PM technical object. This enables you to embed risk information into the PM processes, and the maintenance planner can include the risk information on the job card for the maintenance worker.

The business process provides you with various configuration options that you can use to adapt the process to your organization-specific requirements. You can also set up the application to receive requests to perform risk assessments from an integrated system, such as *SAP Management of Change*.

This process has the following steps:

1. Identify Risks
2. Analyze Risks
3. Evaluate Risks
4. Treat Risks
5. Monitor Risks
6. Generate BI Analytical Reports

Risk: Technical System Landscape

For more information about the system landscape, see 2.5System Landscape.

Risk: Software Units

For more information about the required software, see 2.2Software Component Matrix.

Risk: Implementation Sequence

For more information, see 2.8Overall Implementation Sequence

For more information about configuration and extensibility options, see 2.9Customizing and Extensibility Options.

There are also specific adaptions that you can make for risk assessment. For more information, see SAP Help Portal at http://help.sap.com/ehs-comp. Open the Application Help documentation and go to Risk Assessment → Technical Solution Information → Extensibility Options.

3.3   Managing EHS Locations

You can use this business process to create and edit the locations that are required in *SAP EHS Management* (EHS-MGM), and to organize these locations in a structure. In the EHS-MGM applications, you can use locations, for example, to describe where an incident occurred, or to specify a workplace for which a risk assessment is performed.

You can also use this business process to import locations from the *Plant Maintenance* (PM) component into the *SAP EHS Management* component.

The following business process runs in *SAP EHS Management*:

1. Import Locations from PM (optional)
2. Edit Location Structure
3. Edit Locations

Locations: Technical System Landscape

For more information about the system landscape, see 2.5System Landscape.

Locations: Software Units

For more information about the required software, see 2.2Software Component Matrix.

Locations: Implementation Sequence

For more information, see 2.8Overall Implementation Sequence.

4 Business Scenario: Environment Management

4.1 Introduction

This business scenario supports your company in fulfilling environment, health, and safety requirements on a regional and global scale. It makes day-to-day business safer by integrating EHS into the core business. This section provides an overview of the business processes in this scenario.

For more information about the configuration of business processes in Environment Management see the documentation in *SAP Solution Manager* under ⧉ *Solutions/Applications* ❯ *SAP EHS Management* ❯ *Scenarios* ❯ *Environment Management* ❯ *Business Processes* ⧉.

4.2 Managing Emissions

You can use this business process to manage the collection of emission data in order to ensure compliance with emissions-related environmental requirements and regulations such as the Mandatory Greenhouse Gas Reporting.

Managing emissions includes the following tasks involved in semi-automatic data collection:

● Set up and schedule manual or automatic data collection in compliance scenarios
● Specify expected range for amounts and assign regulatory lists in compliance requirements
● Create and assign tasks
● Enter collected values
● Schedule sampling of environmental data
● Carry out monitoring and validation
● Carry out calculations and aggregations of environmental data

Emissions: Technical System Landscape

For more information about the system landscape, see 2.5System Landscape

Emissions: Software Units

For more information about the required software, see 2.2Software Component Matrix

Emissions: Implementation Sequence

For more information, see 2.8Overall Implementation Sequence.

4.3 Deviation Reporting

This business process enables your company to identify processes, and to investigate, treat, and report deviations to environmental legal requirements.

Reporting deviations includes the following tasks:

- Identify deviations
- Process deviation information
- Investigate cause of deviations
- Take corrective and preventative measures
- Export data and generate report forms

Deviation: Technical System Landscape

For more information about the system landscape, see 2.5System Landscape

Deviation: Software Units

For more information about the required software, see 2.2 Software Component Matrix.

5 Business Scenario: Product Compliance

5.1 Introduction

SAP EHS Management supports your company in fulfilling environment, health, and safety requirements on a regional and global scale. It makes day-to-day business safer and helps you achieve compliance by integrating EHS into the core business. This section provides an overview of the business processes in this scenario.

For more information about the following business processes and their configuration, see the documentation in *SAP Solution Manager* under ▎▶ *Solutions/Applications* ❯ *SAP EHS Management* ❯ *Scenarios* ❯ *Product Compliance* ❯ *Business Processes.* ▎

5.2 Managing Product Compliance

The product compliance supports discrete manufacturers in complying with product-related environmental regulations such as the EU directive for the restriction of hazardous substances (EU RoHS) and the REACH substances in articles (REACH SVHCs).

The business process supports you in performing the following tasks:

- Assess products compliance requirements
- Assess components compliance requirements
- Assess basic material compliance requirements
- Integrate into business processes
- Collaborate with suppliers and receive compliance
- Set up *SAP Product Stewardship Network*
- Analyze product compliance

Product Compliance: Technical System Landscape

To support you in this business process, you use the following components depicted in Figure 1: Full System Landscape:

- *SAP ERP* on ABAP Server
- *Portal and Adobe Document Services* (ADS) on J2EE Server
- *SAP NetWeaver Business Warehouse* (BW)
- *SAP Product Stewardship Network*

If the Business Context Viewer side panel shall be used to integrate compliance information or the *SAP Product Stewardship Network*, the business function /BCV/MAIN must be activated.

If you want to integrate the side panel into a SAP GUI transaction, the following requirements must be fulfilled:

- NWBC 3.5 for Desktop
- SAP GUI version 7.20 patch level 9
- ERP 6.0 EHP 6 (mandatory for the side panel system)

You have activated the business functions /BCV/MAIN and /BCV/MAIN_1.

Product Compliance: Software Units

For more information about the required software, see 2.2Software Component Matrix.

Product Compliance: Optional Software Units

If you want to use analytical reports to analyze compliance data, you can use *SAP BusinessObjects* and *SAP BusinessObjects Dashboards* with product compliance data from *SAP Business Warehouse* (BW).

For more information about BI content and embedded analytics, see Integration of *SAP BusinessObjects* (Dashboards).

Product Compliance: Implementation Sequence

For more information, see 2.8Overall Implementation Sequence.

For more information about configuration and extensibility options, see 2.9 Customizing and Extensibility Options

5.3   Managing IMDS Compliance

For the automotive industry, *SAP EHS Management* supports the collaboration and electronic data exchange using the International Material Data System (IMDS). IMDS is used to exchange product-related data, such as material compositions within the automotive supply chain. This is required to comply with legal requirements, such as the EU directive for end-of life vehicles.

SAP EHS Management provides an interface to the IMDS database that communicates via the exchange of material data sheet (MDS) files. This allows products to be sent to the IMDS database, and also enables the back-end system to receive information about purchased products.

IMDS compliance can act as an in-house solution for handling IMDS processes. All necessary data can be stored in the system (outside the IMDS server).

The business process supports you in performing the following tasks:

- Set up IMDS
- Assess IMDS compliance requirements
- Collaborate with suppliers (MDS)
- Collaborate with customers (MDS)
- Analyze IMDS compliance

Technical System Landscape

To support you in this business process, you use the following components depicted in Figure 1: Full System Landscape:

- *SAP ERP* on ABAP Server
- Portal and *Adobe Document Services* (ADS) on J2EE Server
- *SAP NetWeaver Business Warehouse* (BW)
- International Material Data System (IMDS)

Software Units

For more information about the required software, see 2.2. Software Component Matrix.

Implementation Sequence

For more information, see 2.8Overall Implementation Sequence

For more information about configuration and extensibility options, see 2.9Customizing and Extensibility Options.

6   Solution-Wide Topics

6.1   Integration of SAP BusinessObjects (Dashboards)

The integration of *SAP BusinessObjects* and *SAP BusinessObjects Dashboards* in *SAP Business Suite* provides you with analysis functions that are integrated in the user interface and processes: Embedded Analytics.

Predefined reports and dashboards provide a detailed, graphical, or interactive display of (transaction) data from *SAP Business Suite* or from *SAP NetWeaver* BW.

Embedded Analytics contains the following integrations:

* *SAP BusinessObjects Dashboards* for the graphical or interactive display of data from queries in dashboards

Users can call these functions in *SAP NetWeaver Business Client* or *SAP NetWeaver Portal*.

Note

As of component extension 6.0 for *SAP EHS Management*, no new BI content is delivered. However, you can use the BI Content that is delivered with component extension 5.0 for *SAP EHS Management*.

6.1.1 Technical System Landscape

This business scenario uses the required components, and the optional components for *SAP NetWeaver Business Warehouse* as described in 2.2Software Component Matrix.

The following technical requirements are also required:

* *SAP BusinessObjects Dashboards* with Queries
    * To display the dashboards provided, you require *Adobe Flash Player* version 9. Note also the license terms for *SAP BusinessObjects*.
    * To create your own dashboards, you require *SAP BusinessObjects Dashboards 2008* (SP03, FP1). Note also the corresponding license terms.

For dashboards, the following system requirements also apply:

* *SAP NetWeaver 7.0* including enhancement package 2 (SP04)
* *SAP NetWeaver 7.0* BI Content Add-On 5
* Extension for *SAP NetWeaver 7.02* BI Content Add-On 5

The connection between the ABAP back end and the BI system must be configured as a secure connection with single sign on. Otherwise, the user will be prompted to log in and the navigation context will be lost.

To run embedded analytics, you need to order the necessary *SAP BusinessObjects* software. See SAP Note 1486885 for details

6.1.2 Implementation Sequence

To implement this business scenario, see the implementation sequence described in 2.8Overall Implementation Sequence.

6.1.3 Further Information

For more information about the BI content documentation for *SAP EHS Management*, see Further Useful Links [page 10] and the information sources in the following table.

Table 17: Further Details for BI Content

Application Component	Special Installation Requirements
General Information	*SAP Help Portal* at http://help.sap.com under *SAP ERP* or *SAP CRM* ▶ *Processes and Tools for Enterprise Applications (CA-EPT)* ❯ *Embedded Analytics* ❯
Installation Information	*SAP Help Portal* at http://help.sap.com/nw under *SAP Business Warehouse*.
Configuration Information	*SAP Solution Manager* under ▶ *Solutions/Applications* ❯ *Basic Configuration* ❯ *Embedded Analytics* ❯ *SAP Solution Manager* under ▶ *Solutions/Applications* ❯ *SAP EHS Management* ❯ *Scenarios* ❯ ❯ • ▶ *Health and Safety* ❯ *Business Processes* ❯ *Managing Incidents* ❯ *Generate BI Analytical Reports* ❯ • ▶ *Health and Safety* ❯ *Business Processes* ❯ *Managing EHS Risk* ❯ *Generate BI Analytical Reports* ❯ • ▶ *Product Compliance* ❯ *Business Processes* ❯ *Managing Product Compliance* ❯ *Analyze and monitor product compliance* ❯ • ▶ *Product Compliance* ❯ *Business Processes* ❯ *Managing IMDS Compliance* ❯ *Analyze and monitor IMDS* ❯

6.2 Service-Oriented Architecture (SOA)

The SAP delivery on SOA (service-oriented architecture) differs from the pure architectural concept of SOA in the delivery of ready-to use enterprise services. Enterprise services are SAP-defined Web services that provide end-to-end business processes or individual business process steps that can be used to compose business

scenarios while ensuring business integrity and ease of reuse. SAP designs and implements enterprise service interfaces to ensure semantic harmonization and business relevance. This section deals with the service-enablement of component extension for *SAP EHS Management* for the following services:

- EHS Incident Processing

For more information, see *SAP Help Portal* at http://help.sap.com/ehs-comp. Open the Application Help documentation and go to ▶ *Incident Management* ❯ *Enterprise Services* ❯ *EHS Incident Processing.* ❯

6.2.1 Service Enablement

The service enablement of *SAP Business Suite* consists of one or more of the following SAP components:

- Component extension for *SAP EHS Management*
  - An Enterprise service for initial recording of incidents for incident management provides a technical interface to the further processing functionality available in the incident management application.
- *SAP NetWeaver PI 7.0* or higher
  - *SAP NetWeaver Process Integration* (SAP NetWeaver PI) is an open integration and application platform that provides tools enabling you to set up a service-oriented architecture for business applications. You can use the platform for providing, discovering, and consuming services, integrating applications using the integration server, and managing business processes. Process integration is required in a runtime environment to consume enterprise services in a mediated scenario.

Note

Most asynchronous services can only be consumed in a mediated scenario.

We recommend that you use the highest version of *SAP NetWeaver Process Integration*. For more information, see SAP Note 1515223 and SAP Note 1388258 .

- Enterprise Services Repository
  - The Enterprise Services Repository (ES Repository) is the central repository that contains the definition of all enterprise services and models. ES Repository is shipped with *SAP NetWeaver PI 7.1* and with *SAP NetWeaver CE 7.1* or higher. The Enterprise Services Repository is a design time environment that enables you to create and enhance enterprise service definitions and to view enterprise service models.

Note

In a *SAP NetWeaver 7.0* landscape, you will require the Integration Repository to create and enhance enterprise service definitions in a design time environment.

- Services Registry
  - The Services Registry is shipped with *SAP NetWeaver PI 7.1* and *SAP NetWeaver CE 7.1* or higher and is required for the publication of enterprise service end-points (Web services) that have been configured and activated in the *SAP Business Suite*.
  - *SAP NetWeaver CE 7.1* or higher
  - The *SAP NetWeaver Composition Environment* (SAP NetWeaver CE) provides a robust environment for the design and implementation of composite applications.
  - The design time environment of *SAP NetWeaver CE* can be used for the model-driven design and development of composite applications based on enterprise services. *SAP NetWeaver CE* offers the

tools and the environment necessary for running composite applications fast and efficiently in a runtime environment.

- ○ *SAP Solution Manager 7.0*
- ○ The Solution Composer, shipped with *SAP Solution Manager 7.0*, is required to host the enterprise service online documentation.
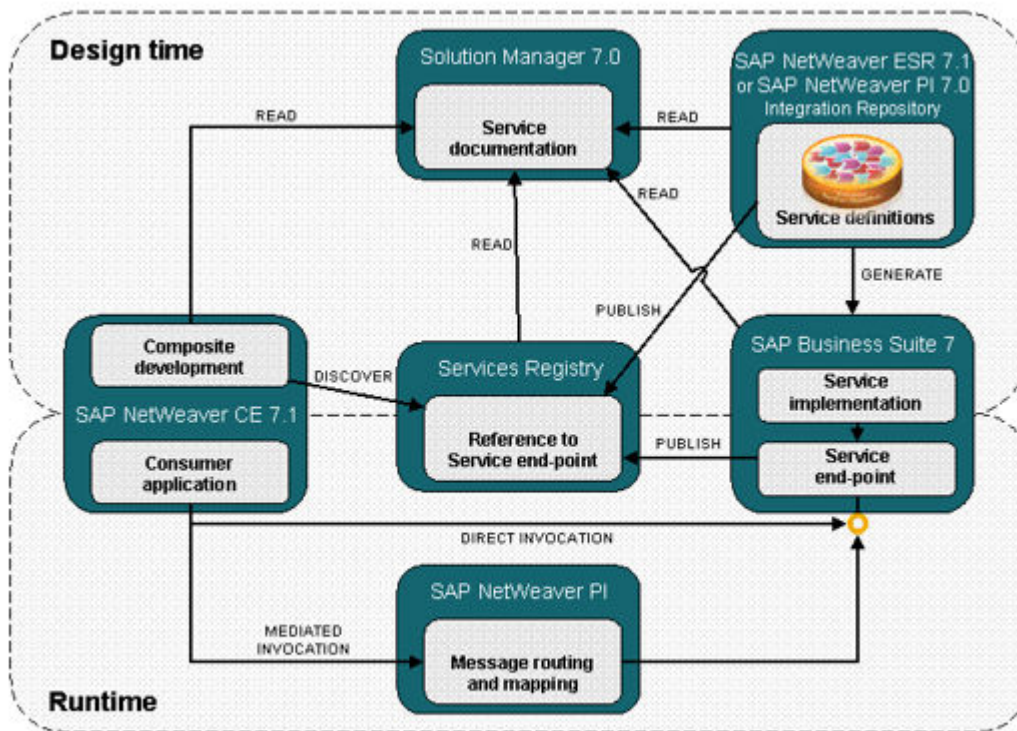
Overview: SAP's Applications for SOA Enablement

The following table describes the SAP applications required or recommended for different runtime and design time use cases:

Table 18: SAP Solutions required or recommended

	SAP EHS Management / SAP Business Suite	SAP NetWeaver PI 7.0 (Integration Repository)	SAP NetWeaver PI 7.1 (ES Repository)	SAP NetWeaver CE 7.1 (ES Repository)	SAP Solution Manager 7.0 (Solution Composer)
Runtime Usage:					
Enterprise Service Provisioning	Required				Optional
Process integration and mediated communication		One option required			
Design Time Usage:					

	SAP EHS Man-agement / SAP Business Suite	SAP NetWea-ver PI 7.0 (Inte-gration Reposi-tory)	SAP NetWea-ver PI 7.1 (ES Repository)	SAP NetWea-ver CE 7.1 (ES Repository)	SAP Solution Manager 7.0 (Solution Com-poser)
Create and en-hance enter-prise service definitions	Required	One option re-quired	Recom-mended		
View enterprise service models			One Option Re-quired	Recom-mended	
Design and de-velop compo-site applica-tions				Required	Recom-mended Recom-mended
Enterprise serv-ice online docu-mentation					Required
Publications of enterprise serv-ice end-points					Optional Required

6.2.2 Installation of the Service-Oriented Architecture (SOA)

The installation of service interfaces, and therefore the service enablement of *SAP Business Suite*, consists of one or more of the following phases:

- Identification of software components and required business functions
  - You use the technical data section of the enterprise service documentation to identify the following data for each enterprise service:
  - Software component version with which the service was shipped
  - Business function(s) to activate
- Identification of technical usages
  - SAP Note 1324838 provides a mapping of business functions and software component versions to technical usages. You use this documentation to identify the required technical usages for your list of software component versions and business functions.
- Installation of the software component ECC-SE
  - The software component ECC-SE contains service implementations for ECC (the ERP Central Component). This component must be explicitly installed if you intend to use enterprise services for ECC functionality. In this case, you must also select the technical usage "ESA ECC-SE" during the enhancement package installation.
- Selection and installation together with the other parts of the enhancement package
  - In the enhancement package installation process you must select all the technical usages you have identified for service enablement together with the technical usages you identified for enhanced features in SAP Business Suite. The selected technical usages will install the corresponding software components that contain the enterprise services interfaces and implementations.

- Enterprise service definitions for *SAP NetWeaver PI 7.0* or ES Repository (*SAP NetWeaver 7.1*) (optional)
  - To install the content required for the enterprise service definitions you must select the technical usage "XI Content" in the enhancement package installation process. This usage type downloads the content files for both *SAP NetWeaver 7.0* and 7.1 versions. Unpack the ZIP file and copy the tpz files corresponding to your *SAP NetWeaver* version into the import directory of your Integration Repository (for *SAP NetWeaver PI 7.0*) or Enterprise Services Repository (for *SAP NetWeaver ES Repository 7.1*). Use the import function to import the content files into the corresponding repository (Integration Repository or Enterprise Services Repository). (Choose Tools Import Design Objects)
- Enterprise service models for ES Repository (*SAP NetWeaver 7.1*) (optional)
  - To install the content required for the enterprise service models you must select the technical usage "ESR Content" in the enhancement package installation process. This usage type downloads the content files for *SAP NetWeaver ES Repository 7.1*. Unpack the ZIP file and copy the tpz files into the import directory of your Enterprise Services Repository. Use the import function to import the content files into the Enterprise Services Repository. (Choose Tools Import design objects)

Note

The enterprise service models are not available for the Integration Repository (*SAP NetWeaver PI 7.0*).

- Enterprise service online documentation for Solution Composer (optional)
  - To install the content required for the enterprise service online documentation you must download the content file for the corresponding *SAP Business Suite* application product version from the *SAP Support Portal*. Then you must import the content file into your Solution Composer. For further information, refer to SAP Note 1224284 .
- Services Registry (optional)
  - The services registry is shipped with *SAP NetWeaver PI 7.1* and CE 7.1. You must install the services registry and then publish the enterprise services from the *SAP Business Suite* application to the registry using the transaction SOAMANAGER in the backend.

For further information regarding the installation of *SAP NetWeaver PI*, CE and ES Repository, see the corresponding *SAP NetWeaver* Installation and Master Guides.

6.2.3 Related Documentation

For more information about the service-oriented architecture (SOA), see the following information sources:

- The *SAP Enterprise Service Workplace* at http://ESWorkplace.sap.com
- SAP Note 1224284 : Enterprise Services, Installing and Accessing the SOA Documentation
- SAP Note 1359215 : Technical prerequisites for using enterprise services
- SAP Note 838402 : Problems with non-Unicode system landscapes
- SAP Note 1097348 – Configuration of idempotent services.

6.3   Adobe Document Services

Adobe document services are included in AS Java. This means that you have to install an *SAP NetWeaver* system with usage type AS Java regardless of the development language of your application (ABAP or Java).

The following Adobe software is included for *SAP Interactive Forms* by Adobe:

- *Adobe LiveCycle Designer*
  - A graphical tool for designing form layouts; it is integrated into *SAP NetWeaver Developer Studio* and ABAP Workbench.
- *Adobe Document Services*
  - Web services used to generate the PDF forms at runtime; in interactive scenarios, they extract the XML data from the form and send it to the system.

On the front end, you require *Adobe Acrobat* or *Adobe Reader*. For information about the required version, see SAP Note 834573 .

For more information about the configuration of Adobe Document Services for Form Processing, see documentation at *SAP Help Portal* under http://help.sap.com/nw74.

6.4   SAP Jam Integration

In order to enable the integration of the component extension 6-0 of *SAP EHS Management* system to *SAP Jam*, please follow the corresponding configuration guide: Configuration Guide SAP Net Weaver

If you do not want to use *SAP Jam* as part of the health and safety processes, the corresponding dialogs (CHIPs) can be removed from the role-specific home pages and the location/chemical side panel using the customization functionalities of Web Dynpro (see Customizing Web Dynpro Applications)

The following are Web Dynpro application configurations that, by default, use the *SAP Jam* CHIPs:

- Industrial Hygienist home page: EHHSS_HYGIENIST_HOMEPAGE
- Hazardous Substance Manager home page: EHHSS_HAZSUBMGR_HOMEPAGE
- Incident Manager home page: EHHSS_INCMGR_HOMEPAGE
- Sampling Technician home page; EHHSS_SMPLTECH_HOMEPAGE
- Corporate Health and Safety Manager home page: EHHSS_HSMGRCORP_HOMEPAGE
- Location side panel: EHFND_LOC_OIF_SIDE_PANEL_CONFAPP
- Chemical side panel: EHFND_CHM_OVP_SIDE_PANEL_CONFAPP

6.5   Authentication and Single Sign-On

Before implementing your system landscape, plan how to implement authentication and how to integrate different systems into a Single Sign-On landscape. Single Sign-On reduces complexity for end users, saving them valuable time, while also reducing administration effort for resetting passwords, which helps reduce TCO.

Once you have logged on to the portal where authentication takes place, all systems in the landscape, no matter whether they are based (AS ABAP, AS Java, or both), can be accessed.

For more information about authentication and single sign-on IT, see the *SAP NetWeaver* Security Guide for SAP NetWeaver 7.4., Authorizations for Workflow System

SAP EHS Management uses *SAP Business Workflow* to support its processes. The workflow engine follows modeled processes, executes background tasks, and distributes [foreground] tasks to the correct receivers. This functionality is executed in the context of the workflow system user WF-BATCH. For the workflow system to work properly, the correct permissions must be given to the workflow system user.

The basic authorizations for the workflow system are provided by the role SAP_BC_BMT_WFM_SERV_USER. You also need to assign the role SAP_EHSM_FND_WF_PERMISSION to provide basic authorizations required by the components of SAP EHS Management.

We recommend assigning the authorization profiles of the following business roles to the workflow system user (WF-BATCH) to ensure that the workflow contains the required authorizations:

- SAP_EHSM_PRC_COMPL_ENG
- SAP_EHSM_PRC_COMPONENT_ENG
- SAP_EHSM_PRC_BASMAT_SPEC
- SAP_EHSM_ENV_TECHNICIAN

For more information about the front-end roles used in *SAP EHS Management*, see the role documentation on *SAP Help Portal* at http://help.sap.com/ehs-comp. Open the Application Help documentation and go to

▷ *Foundation for EHS Management* ❭ *Roles.* ❭

7 Upgrade Information

7.1 Introduction

You can upgrade from component extension 1.0, 2.0, 3.0, 4.0 or 5.0 for *SAP EHS Management* to component extension 6.0 for *SAP EHS Management*. The following sections provide information about planning and executing the upgrade project.

Note

If you do not start from a component extension of *SAP EHS Management* but from another system, for example, *SAP EHS Management as part of SAP ERP* , all necessary information is available in the Migration guide.

7.2 New Features

For information about new or changed features of the different versions of the component extension for *SAP EHS Management*, see the relevant release notes on *SAP Help Portal* at http://help.sap.com/ehs-comp. Open the Application Help documentation and go to What's New in Component Extension for *SAP EHS Management*.

7.3 Quick Guide for the Upgrade Planning

Perform the following activities:

Table 19: Planning steps for Upgrade

√	Activity
	Identify the changed features that are relevant to your implementation of an earlier version of the component extension. You only need to perform upgrade activities for component extension 6.0 if you used the feature in the earlier version.
	Identify the new features that you want to use in component extension 6.0. You only need to perform upgrade activities for those features that you want to use in 6.0.
	Review the upgrade activities listed below under Upgrade Process and determine the relevant activities.

7.4   Upgrade Process for Incident Management

7.4.1 Incident Management: Upgrade from Component Extension 1.0 for SAP EHS Management

If you upgrade Incident Management directly from component extension 1.0 for *SAP EHS Management*, carry out the following activities:

Table 20: Incident Management: Upgrade from Component Extension 1.0

√	Activity
	Run the report R_EHHSS_INC_ADJUST_LNK_TBL. The database table EHHSSD_INC_LINKI was enhanced with an additional field LINK_CATEGORY that specifies whether a link links to a risk assessment or an incident. The report fills the table with default values (specifying the link as a link to an incident).
	Add Personnel Number field to customer-specific versions of offline forms for initial near miss and safety observation. The forms in the standard system are delivered with the new field for the personnel number. If you copied this form in an earlier release, you may want to add this new field and its logic to the copy.
	Select the attached document, the notice of violation (NOV), in existing incident records. In the previous version, you could indicate that the NOV was attached. Now, you can also choose which of the attached documents the NOV is. It appears linked on the tab for notice of violations in incident management.
	Import all Customizing settings and classes for field control in component extension 4.0. Using old Customizing settings or classes can lead to short dumps.
	Rebuild Enterprise Search index for incident if ESH is used.

√	Activity
	The authorization object EHHSS_INC1 (access to incidents) has an additional activity —C5 (Reopen). If you have already been granted authorizations using this authorization object to your roles/profiles, you may need to check whether it is also necessary to grant this new activity for reopening closed incidents.
	As of component extension 3.0 for *SAP EHS Management*, the following new authorization objects are available:
	EHHSS_INC2
	EHHSS_INC3
	EHHSS_INC5
	You should additionally configure these authorization objects. For more information, see the Security Guide at http://help.sap.com/ehs-comp#section4.
	If authorization objects EHHSS_INC3 and EHHSS_INC5 are not applicable for your use case, you can deactivate the objects by deactivating the corresponding BAdI that you can access in Customizing under ▷ *SAP EHS Management* ▷ *Incident Management* ▷ *Business Add-Ins* ▷ *Business Add-Ins for Authorization* ▷ *BAdI: Extended Authorization Checks* ▷.
	If you plan to use the optional Enterprise service for initially recording incidents, run the report R_EHHSS_FILL_GDT_CODE after upgrading to fill the additional GDT code list key field in the Customizing tables used by the Enterprise service.
	Clear POWL caches according to SAP Note 1916079.
	Execute Customizing activity Perform Automatic Workflow Customizing.
	Refer to SAP Note 1970106 about the changed usage of the fatality flag.
	Refer to SAP Note 1970313 about the deletion of class CL_EHHSS_INC_INV_DET_UI_FRM and component configuration EHHSS_INC_REC_OIF_V3_INVDETA_FRM.
	If you have created customer roles, you need to check if the provided template roles contain new menu entries needed to be integrated into your customer roles. After integration you will need to regenerate the corresponding authorization profiles.
	Run report R_EHFND_LHR_BUILD_PATH after upgrade. The BO and database structure of EHFND_LOCATION_STRUCTURE has been extended. This report will initialize the new path node. If you do not run this report, some CHIPs on the home pages and side panels will not work.

Table 21: Incident Management: Upgrade from Component Extension 1.0: Universal Worklist (UWL)

√	Activity
	Component extension 1.0 and 2.0 for *SAP EHS Management* provide a universal worklist with the configuration name SAP_EHS_Incident. Since there are additional components in the add-on, a new UWL configuration was created that contains the configuration of all *SAP EHS Management* components (for example, incident management, risk assessment, and product compliance).
	If you upgrade from component extension 1.0, you must remove the old UWL configuration of component extension 1.0 for *SAP EHS Management* from the Portal. Perform the following steps in the portal:
	Navigate to work center ▌▶ *System Administration* ❯ *System Administration* ❯ *Universal Worklist and Workflow* ❯ *Universal Worklist Administration* ❯ *Universal Worklist Configuration Content* ❯ and remove configuration SAP_EHS_Incident.

Table 22: Incident Management: Upgrade from Component Extension 1.0: BI Content

√	Activity
	If you are using BW for analytical reporting, you must delete the incident data from BW prior to activating the new BI content. After activating the new BI content, some obsolete objects should be deleted, and the data has to be reloaded. See Upgrade of BI Content under Upgrade Process below for details.

7.4.2 Incident Management: Upgrade from Component Extension 2.0 for SAP EHS Management

If you upgrade Incident Management directly from component extension 2.0 for *SAP EHS Management*, perform the following activities:

Table 23: Incident Management: Upgrade from Component Extension 2.0

√	Activity
	Import all Customizing settings and classes for field control in component extension 4.0.
	Using old Customizing settings or classes can lead to short dumps.
	Rebuild Enterprise Search index for incident if ESH is used.

√	Activity
	The authorization object EHHSS_INC1 (access to incidents) has an additional activity —C5 (Reopen). If you have already been granted authorizations using this authorization object to your roles/profiles, you may need to check whether it is also necessary to grant this new activity for reopening closed incidents.

As of component extension 3.0 for *SAP EHS Management*, the following new authorization objects are available:

- EHHSS_INC2
- EHHSS_INC3
- EHHSS_INC5

This means that you should additionally configure these authorization objects. For more information, see the Security Guide at <LINK>.

If authorization objects EHHSS_INC3 and EHHSS_INC5 are not applicable for your business case, you can deactivate the objects by deactivating the corresponding BAdI. |
	Clear POWL caches according to SAP Note 1916079.
	Execute Customizing activity Perform Automatic Workflow Customizing.
	Refer to SAP Note 1970106 about the changed usage of the fatality flag.
	Refer to SAP Note 1970313 about the deletion of class CL_EHHSS_INC_INV_DET_UI_FRM and component configuration EHHSS_INC_REC_OIF_V3_INVDETA_FRM.
	If you have created customer roles, you need to check if the provided template roles contain new menu entries needed to be integrated into your customer roles. After integration, you will need to regenerate the corresponding authorization profiles.
	Run report R_EHFND_LHR_BUILD_PATH after upgrade.

The BO and database structure of EHFND_LOCATION_STRUCTURE has been extended. This report will initialize the new path node.

If you do not run this report, some CHIPs on the home pages and side panels will not work. |

Table 24: Incident Management: Upgrade from Component Extension 2.0: Universal Worklist (UWL)

√	Activity
	Component extension 1.0 and 2.0 for *SAP EHS Management* provide a Universal Worklist with the configuration name SAP_EHS_Incident. Since there are additional components in the add-on, a new UWL configuration was created that contains the configuration of all *SAP EHS Management* components (for example, incident management, risk assessment, and product compliance).

If you upgrade from component extension 2.0, you must remove the old UWL configuration of component extension 2.0 for *SAP EHS Management* from the Portal. Perform the following steps in the portal:

Navigate to work center ▶ *System Administration* ❯ *System Administration* ❯ *Universal Worklist and Workflow* ❯ *Universal Worklist Administration* ❯ *Universal Worklist Configuration Content* ❯ and remove configuration SAP_EHS_Incident. |

Table 25: Incident Management: Upgrade from Component Extension 2.0: BI Content

√	Activity
	If you are using BW for analytical reporting, you must delete the incident data from BW prior to activating the new BI content. After activating the new BI content, the data has to be reloaded. See Upgrade of BI Content under Upgrade Process below for details.

7.4.3 Incident Management: Upgrade from Component Extension 3.0 for SAP EHS Management

If you upgrade Incident Management from component extension 3.0 for *SAP EHS Management*, perform the following activities:

Table 26: Incident Management: Upgrade from Component Extension 3.0

√	Activity
	Import all Customizing settings and classes for field control in component extension 4.0. Using old Customizing settings or classes can lead to short dumps.
	Rebuild Enterprise Search index for incident if ESH is used.
	Clear POWL caches according to SAP Note 1916079 .
	Execute customizing activity Perform Automatic Workflow Customizing.
	If you have created customer roles, you need to check if the provided template roles contain new menu entries needed to be integrated into your customer roles. After integration you will need to regenerate the corresponding authorization profiles.
	Run report R_EHFND_LHR_BUILD_PATH after upgrade. The BO and database structure of EHFND_LOCATION_STRUCTURE has been extended. This report will initialize the new path node. If you do not run this report, some CHIPs on the home pages and side panels will not work.

Table 27: Incident Management: Upgrade from Component Extension 3.0: BI Content

√	Activity
	Nothing to do because the BI content for incident management was not changed

7.4.4 Incident Management: Upgrade from Component Extension 4.0 for SAP EHS Management

If you upgrade Incident Management from component extension 4.0 for *SAP EHS Management*, perform the following activities:

Table 28: Incident Management: Upgrade from Component Extension 4.0

√	Activity
	Execute Customizing activity 'Perform Automatic Workflow Customizing'.
	If you have created customer roles, you need to check if the provided template roles contain new menu entries needed to be integrated into your customer roles. After integration you will need to regenerate the corresponding authorization profiles.
	Run report R_EHFND_LHR_BUILD_PATH after upgrade. The BO and database structure of EHFND_LOCATION_STRUCTURE has been extended. This report will initialize the new path node. If you do not run this report, some CHIPs on the home pages and side panels will not work.

7.5 Upgrade Process for Risk Assessment

As of Feature Package 01, the data structure of job-based risk assessments has changed: The location and operational status are maintained directly on the risk assessment and are no longer derived from the risks. Furthermore, it is no longer possible to have multiple job-based risk assessments in process with the same risk assessment type, job, location, and operational status.

If you upgrade from release 6.0 SP00 or lower, implement SAP Note 2217251 and run report R_EHHSS_UPGRADE_JHA_CONS_CHECK in you system before the upgrade. This report secures data consistency by checking if there are job-based risk assessments and provides a list of risk assessments that are violate the restriction.

For more information, see SAP Note 2217251 .

Note

Solve all inconsistencies before the upgrade. It is not possible to correct any inconsistencies afterwards. To solve an inconsistency, open the affected risk assessment and set the status to "Closed".

7.5.1 Risk Assessment: Upgrade from Component Extension 2.0 for SAP EHS Management

If you upgrade Risk Assessment from component extension 2.0 for *SAP EHS Management*, perform the following activities.

Table 29: Risk Assessment: Upgrade from Component Extension 2.0

√	Activity
	If you have used agents for risk assessment in component extension 2.0 for *SAP EHS Management* to store rudimentary data for chemicals you may need to manually move the data into the new chemical object.
	Clear POWL caches according to SAP Note 1916079 .
	Execute Customizing activity *Perform Automatic Workflow Customizing*.
	If you have created customer roles you need to check if the provided template roles contain new menu entries needed to be integrated into your customer roles. After integration you will need to regenerate the corresponding authorization profiles.
	Run report R_EHFND_LHR_BUILD_PATH after upgrade. The BO and database structure of EHFND_LOCATION_STRUCTURE has been extended. This report will initialize the new path node. If you do not run this report, some CHIPs on the home pages and side panels will not work.
	With Feature Package 01 of component extension for *SAP EHS Management*, a new workplace sampling process has been introduced. This process supports the gathering of workplace sampling data that replaces the amounts of data series. For more information, see SAP Note 2065178 . With the new workplace sampling data, the menu item Amounts and the corresponding service *Create Data Series* is no longer required. For this reason, remove the menu items for *Amounts* and *Data Series* from your PFCG roles and replace them with the corresponding menu entries for workplace sampling. Note that the delivered PFCG roles (for example SAP_EHSM_MASTER) contain the corresponding menu entries and services for workplace sampling under ▶ *Health and Safety* ❭ *Overview* ❭ *Workplace Sampling* ❭.
	With the introduction of the workplace sampling, the feature to request amounts as a separate step in the risk assessment has been replaced. Therefore, the Customizing activity *Specify Assessment Steps and Analysis Methods* under ▶ *SAP EHS Management* ❭ *Risk Assessment* ❭ *Risks Analysis* ❭ does not contain step EHHSS_RAS_STEP15 anymore. In case you included this step in your Customizing, remove this step for each risk assessment type in the Customizing view *Assign Assessment Steps*.
	Run report R_EHHSS_UPGRADE_JHA to upgrade job-based risk assessments after the upgrade. This report initializes the location and the operational status by copying them from the risks that are assigned to the risk assessment.
	Run report R_EHHSS_RAS_CASE_INSENS_SEARCH after the upgrade. The report fills a new column that contains the normalized text of the risk assessment title. This new column is used for searching risk assessment title case-insensitively. For more information see SAP Note 2224524 . If you do not run this report, the search for risk assessment titles will not work for risk assessments created before the upgrade.

> **i Note**
>
> As of release 6.0 of component extension for *SAP EHS Management*, no new BI content is delivered. However, you can use the BI Content that is delivered with release 5.0. For upgrade information, see the Master Guide for component extension 5.0 for *SAP EHS Management* at http://help.sap.com/ehs-comp50.

7.5.2 Risk Assessment: Upgrade from Component Extension 3.0 for SAP EHS Management

If you upgrade Risk Assessment from component extension 3.0 for *SAP EHS Management*, perform the following activities.

Table 30: Risk Assessment: Upgrade from Component Extension 3.0

√	Activity
	If you have used chemical agents for risk assessment, run the report R_EHFND_MIGRATE_CHM after upgrade.
	The BO and database structure of EHFND_CHEMICAL has been changed. This report will update existing chemicals from the old structure to the new structure.
	If you have extended the Customizing for hazard classification or hazard statements, you will need to make some further adjustments (see report documentation for more details).
	The Customizing activity ▶ *EHS Management* ❯ *Risk Assessment* ❯ *Master Data Configuration* ❯ *Agents* ❯ *Configure Report to Transfer Listed Substances and OELs* ❯ is obsolete now. You can check your entries using transaction sm30: View EHFNDV_REGL_FILL.
	For the new report R_EHFND_FILL_REGL_BY_EHS_SUBST you have to use the BAdI under ▶ *EHS Management* ❯ *Risk Assessment* ❯ *Master Data Configuration* ❯ *Chemicals* ❯ *Data Transfer from EHS Specification Database* ❯ *BAdI: Transfer of Listed Substances and OELs* ❯ to specify data sources for transferring substance data from *SAP EHS Management as part of SAP ERP* to component extension 6.0 for *SAP EHS Management* (*SAP EHS Management* add-on).
	Clear POWL caches according to SAP Note 1916079 .
	Execute Customizing activity Perform Automatic Workflow Customizing.
	If you have created customer roles, you need to check if the provided template roles contain new menu entries needed to be integrated into your customer roles. After integration you will need to regenerate the corresponding authorization profiles.
	Run report R_EHFND_LHR_BUILD_PATH after upgrade.
	The BO and database structure of EHFND_LOCATION_STRUCTURE has been extended. This report will initialize the new path node.
	If you do not run this report, some CHIPs on the home pages and side panels will not work.
	With Feature Package 01 of component extension 5.0 for *SAP EHS Management*, a new workplace sampling process has been introduced. This process supports the gathering of workplace sampling data that replaces the amounts of data series. For more information, see SAP Note 2065178 .
	With the new workplace sampling data, the menu item Amounts and the corresponding service *Create Data Series* is no longer required. For this reason, remove the menu items for *Amounts* and *Data Series* from your PFCG roles and replace them with the corresponding menu entries for workplace sampling.
	Note that the delivered PFCG roles (for example SAP_EHSM_MASTER) contain the corresponding menu entries and services for workplace sampling under ▶ *Health and Safety* ❯ *Overview* ❯ *Workplace Sampling* ❯ .

√	*Activity*
	With the introduction of the workplace sampling, the feature to request amounts as a separate step in the risk assessment has been replaced. Therefore, the Customizing activity *Specify Assessment Steps and Analysis Methods* under *SAP EHS ManagementRisk AssessmentRisks Analysis* does not contain step EHHSS_RAS_STEP15 anymore. In case you included this step in your Customizing, remove this step for each risk assessment type in the Customizing view Assign Assessment Steps.
	Run report R_EHHSS_UPGRADE_JHA to upgrade job-based risk assessments after the upgrade. This report initializes the location and the operational status by copying them from the risks that are assigned to the risk assessment.
	Run report R_EHHSS_RAS_CASE_INSENS_SEARCH after the upgrade. The report fills a new column that contains the normalized text of the risk assessment title. This new column is used for searching risk assessment title case-insensitively. For more information see SAP Note 2224524 . If you do not run this report, the search for risk assessment titles will not work for risk assessments created before the upgrade.

> **i Note**
>
> As of release 6.0 of component extension for *SAP EHS Management*, no new BI content is delivered. However, you can use the BI Content that is delivered with release 5.0. For upgrade information, see the Master Guide for component extension 5.0 for *SAP EHS Management* at http://help.sap.com/ehs-comp50.

7.5.3 Risk Assessment: Upgrade from Component Extension 4.0 for SAP EHS Management

If you upgrade Risk Assessment from component extension 4.0 for *SAP EHS Management*, perform the following activities.

Table 31: Risk Assessment: Upgrade from Component Extension 4.0

√	**Activity**
	Clear POWL caches according to SAP Note 1916079 .
	Execute Customizing activity Perform Automatic Workflow Customizing.
	If you have created customer roles, you need to check if the provided template roles contain new menu entries needed to be integrated into your customer roles. After integration you will need to regenerate the corresponding authorization profiles.
	Run report R_EHFND_LHR_BUILD_PATH after upgrade. The BO and database structure of EHFND_LOCATION_STRUCTURE has been extended. This report will initialize the new path node. If you do not run this report, some CHIPs on the home pages and side panels will not work.

√	Activity
	Run report R_EHHSS_RAS_FIX_CHM_KEY_REF after upgrade.
	The report corrects keys for chemical revisions (CHM_REV_KEY) in table EHHSSD_RSK_REV. If you do not run this report, you may have inconsistent data.
	For more information, see SAP Note 2076880.
	Run report R_EHFND_CHM_UPGRADE_WPCP after the upgrade.
	The BO and database structure of EHFND_CHEMICAL has been changed. This report will remove duplicate entries in the list of workplace control parameters.
	If you do not run this report, existing chemicals can show duplicate entries.
	With Feature Package 01 of component extension 5.0 for *SAP EHS Management*, a new workplace sampling process has been introduced. This process supports the gathering of workplace sampling data that replaces the amounts of data series. For more information, see SAP Note 2065178.
	With the new workplace sampling data, the menu item Amounts and the corresponding service Create Data Series is no longer required. For this reason, remove the menu items for Amounts and Data Series from your PFCG roles and replace them with the corresponding menu entries for workplace sampling.
	Note that the delivered PFCG roles (for example SAP_EHSM_MASTER) contain the corresponding menu entries and services for workplace sampling under ▶ *Health and Safety* ▶ *Overview* ▶ *Workplace Sampling* ▶.
	With the introduction of the workplace sampling, the feature to request amounts as a separate step in the risk assessment has been replaced. Therefore, the Customizing activity Specify Assessment Steps and Analysis Methods under ▶ *SAP EHS Management* ▶ *Risk Assessment* ▶ *Risks Analysis* ▶ does not contain step EHHSS_RAS_STEP15 anymore.
	In case you included this step in your Customizing, remove this step for each risk assessment type in the Customizing view Assign Assessment Steps.
	The changes in the data model for the new quantitative exposure assessment also affected the triggering criteria of health surveillance protocols (HSP). Due to the change, some triggering criteria that were created before Feature Package 01 of component extension 5.0 and that contain exposure ratings could now be inconsistent.
	For more information, see SAP Note 2095991
	Run report R_EHHSS_UPGRADE_JHA to upgrade job-based risk assessments after the upgrade. This report initializes the location and the operational status by copying them from the risks that are assigned to the risk assessment.
	Run report R_EHHSS_RAS_CASE_INSENS_SEARCH after the upgrade.
	The report fills a new column that contains the normalized text of the risk assessment title. This new column is used for searching risk assessment title case-insensitively.
	For more information see SAP Note 2224524. If you do not run this report, the search for risk assessment titles will not work for risk assessments created before the upgrade.

√	Activity

With Feature Package 02 of component extension 6.0 for *SAP EHS Management*, a new data table for listed substances is introduced. It serves to eliminate duplications between customer-created entries and content-delivered entries of listed substances. After the upgrade, you need to migrate your listed substances to the new table by running the following reports:

Run report R_EHFND_LISU_MIGRATION after the upgrade. The report transfers listed substances from table EHFNDD_LISU_ROOT to the updated root table EHFNDD_LISU_RT. After the transfer is complete, the report removes redundant data.

Run report R_EHFND_LISU_SUBSTITUTE after the upgrade. This report ensures data consistency of the transferred listed substances by redirecting matching references between customer-created entries and content-delivered entries in the updated root table EHFNDD_LISU_RT. The mapping is done by CAS number.

7.5.4 Risk Assessment: Upgrade from Component Extension 5.0 for SAP EHS Management

If you upgrade Risk Assessment from component extension 5.0 for *SAP EHS Management*, perform the following activities.

Table 32: Risk Assessment: Upgrade from Component Extension 5.0 SP00

√	Activity

With Feature Package 01 of component extension 5.0 for *SAP EHS Management*, a new workplace sampling process has been introduced. This process supports the gathering of workplace sampling data that replaces the amounts of data series. For more information, see SAP Note 2065178 .

With the new workplace sampling data, the menu item Amounts and the corresponding service Create Data Series is no longer required. For this reason, remove the menu items for Amounts and Data Series from your PFCG roles and replace them with the corresponding menu entries for workplace sampling.

Note that the delivered PFCG roles (for example SAP_EHSM_MASTER) contain the corresponding menu entries and services for workplace sampling under *Health and Safety* *Overview* *Workplace Sampling* .

With the introduction of the workplace sampling, the feature to request amounts as a separate step in the risk assessment has been replaced. For this reason, the Customizing activity Specify Assessment Steps and Analysis Methods under *SAP EHS Management* *Risk Assessment* *Risks Analysis* no longer contains step EHHSS_RAS_STEP15.

In case you included this step in Customizing, remove this step for each risk assessment type in the Customizing view Assign Assessment Steps.

The changes in the data model for the new quantitative exposure assessment also affected the triggering criteria of health surveillance protocols (HSP). As a result of the change, some triggering criteria that were created before Feature Package 01 of component extension 5.0 and that contain exposure ratings could now be inconsistent.

For more information, see SAP Note 2095991

√	Activity
	Run report R_EHHSS_RAS_FIX_CHM_KEY_REF after the upgrade. The report corrects keys for chemical revisions (CHM_REV_KEY) in table EHHSSD_RSK_REV. If you do not run this report, you may have inconsistent data. For more information, see SAP Note 2076880
	Run report R_EHFND_CHM_UPGRADE_WPCP after the upgrade. The BO and database structure of EHFND_CHEMICAL has been changed. This report will remove duplicate entries in the list of workplace control parameters. If you do not run this report, existing chemicals can show duplicate entries.
	Run report R_EHHSS_UPGRADE_JHA to upgrade job-based risk assessments after the upgrade. This report initializes the location and the operational status by copying them from the risks that are assigned to the risk assessment.
	Run report R_EHHSS_RAS_CASE_INSENS_SEARCH after the upgrade. The report fills a new column that contains the normalized text of the risk assessment title. This new column is used for searching risk assessment title case-insensitively. For more information see SAP Note 2224524. If you do not run this report, the search for risk assessment titles will not work for risk assessments created before the upgrade.
	With Feature Package 02 of component extension 6.0 for *SAP EHS Management*, a new data table for listed substances is introduced. It serves to eliminate duplications between customer-created entries and content-delivered entries of listed substances. After the upgrade, you need to migrate your listed substances to the new table by running the following reports: Run report R_EHFND_LISU_MIGRATION after the upgrade. The report transfers listed substances from table EHFNDD_LISU_ROOT to the updated root table EHFNDD_LISU_RT. After the transfer is complete, the report removes redundant data. Run report R_EHFND_LISU_SUBSTITUTE after the upgrade. This report ensures data consistency of the transferred listed substances by redirecting matching references between customer-created entries and content-delivered entries in the updated root table EHFNDD_LISU_RT. The mapping is done by CAS number.

Table 33: Risk Assessment: Upgrade from Component Extension 5.0 FP01

√	Activity
	Run report R_EHFND_SPLMT_UPGRADE_TYPE after the upgrade. The configuration table EHFNDC_SPLMT has been extended. This report will initialize the new field EHSM_COMPONENT. If you do not run this report, some previously created sampling methods will not be visible.
	Run report R_EHHSS_SPLCP_INITIALIZE_ATF after the upgrade. The sampling campaign business object has been extended. This report will initialize the attachment folders for existing sampling campaigns.

√	Activity
	Run report R_EHHSS_RAS_FIX_CHM_KEY_REF after the upgrade. The report corrects keys for chemical revisions (CHM_REV_KEY) in table EHHSSD_RSK_REV. If you do not run this report, you may have inconsistent data. For more information, see SAP Note 2076880
	Run report R_EHHSS_RAS_FIX_ABAGT_KEY_REF after the upgrade. The report corrects keys for airborne agent revisions (ABAGT_REV_KEY) in table EHHSSD_RSK_REV. If you do not run this report, you may have inconsistent data. For more information, see SAP Note 2077301
	Run report R_EHFND_CHM_UPGRADE_WPCP after the upgrade. The BO and database structure of EHFND_CHEMICAL has been changed. This report will remove duplicate entries in the list of workplace control parameters. If you do not run this report, existing chemicals can show duplicate entries.
	Run report R_EHHSS_UPGRADE_JHA to upgrade job-based risk assessments after the upgrade. This report initializes the location and the operational status by copying them from the risks that are assigned to the risk assessment.
	Run report R_EHHSS_RAS_CASE_INSENS_SEARCH after the upgrade. The report fills a new column that contains the normalized text of the risk assessment title. This new column is used for searching risk assessment title case-insensitively. For more information see SAP Note 2224524. If you do not run this report, the search for risk assessment titles will not work for risk assessments created before the upgrade.
	With Feature Package 02 of component extension 6.0 for *SAP EHS Management*, a new data table for listed substances is introduced. It serves to eliminate duplications between customer-created entries and content-delivered entries of listed substances. After the upgrade, you need to migrate your listed substances to the new table by running the following reports: Run report R_EHFND_LISU_MIGRATION after the upgrade. The report transfers listed substances from table EHFNDD_LISU_ROOT to the updated root table EHFNDD_LISU_RT. After the transfer is complete, the report removes redundant data. Run report R_EHFND_LISU_SUBSTITUTE after the upgrade. This report ensures data consistency of the transferred listed substances by redirecting matching references between customer-created entries and content-delivered entries in the updated root table EHFNDD_LISU_RT. The mapping is done by CAS number.

7.5.5 Risk Assessment: Upgrade from Component Extension 6.0 for SAP EHS Management

If you upgrade Risk Assessment from component extension 6.0 for *SAP EHS Management*, perform the following activities.

Table 34: Risk Assessment: Upgrade from Component Extension 6.0 SP00

√	Activity
	Run report R_EHHSS_UPGRADE_JHA to upgrade job-based risk assessments after the upgrade. This report initial-izes the location and the operational status by copying them from the risks that are assigned to the risk assessment.
	If you have not applied SAP Note 2224524 , run report R_EHHSS_RAS_CASE_INSENS_SEARCH after the upgrade.
	The report fills a new column that contains the normalized text of the risk assessment title. This new column is used for searching risk assessment title case-insensitively.
	For more information see SAP Note 2224524 .
	If you do not run this report, the search for risk assessment titles will not work for risk assessments created before the upgrade.
	With Feature Package 02 of component extension 6.0 for *SAP EHS Management*, a new data table for listed substan-ces is introduced. This table serves to eliminate duplicates between the listed substances that are created by custom-ers and the ones that are delivered as content. After the upgrade, you need to transfer your listed substances to this new table and eliminate duplicate entries by running the following reports:
	Run report R_EHFND_LISU_MIGRATION after the upgrade. This report transfers listed substances from table EHFNDD_LISU_ROOT to the updated root table EHFNDD_LISU_RT. After the transfer is complete, the report removes redundant data.
	Run report R_EHFND_LISU_SUBSTITUTE after the upgrade. This report ensures data consistency of the transferred listed substances by redirecting matching references between customer-created entries and content-delivered en-tries in the updated root table EHFNDD_LISU_RT. The mapping is done by CAS number.

If you upgrade Risk Assessment from Feature Package 01 of component extension 6.0 for *SAP EHS Management*, perform the following activities.

Table 35: Risk Assessment: Upgrade from Component Extension 6.0 FP01

√	Activity
	With Feature Package 02 of component extension 6.0 for *SAP EHS Management*, a new data table for listed substan-ces is introduced. This table serves to eliminate duplicates between the listed substances that are created by custom-ers and the ones that are delivered as content. After the upgrade, you need to transfer your listed substances to this new table and eliminate duplicate entries by running the following reports:
	Run report R_EHFND_LISU_MIGRATION after the upgrade. This report transfers listed substances from table EHFNDD_LISU_ROOT to the updated root table EHFNDD_LISU_RT. After the transfer is complete, the report removes redundant data.
	Run report R_EHFND_LISU_SUBSTITUTE after the upgrade. This report ensures data consistency of the transferred listed substances by redirecting matching references between customer-created entries and content-delivered en-tries in the updated root table EHFNDD_LISU_RT. The mapping is done by CAS number.

If you upgrade Risk Assessment from Feature Package 02 of component extension 6.0 for *SAP EHS Management*, no further activities are required.

## 7.6	Upgrade Process for Environment Management

7.6.1 Environment Management: Upgrade from Feature Package 01 of Component Extension 6.0 for SAP EHS Management

As of release 6.0 feature package 01 of component extension for *SAP EHS Management*, SAP recommends you run the migration reports for listed substances after installation of Feature Package 02 for environment management.

As of feature package 02, the component extension 6.0 for *SAP EHS Management* contains the new automatic data collection, task management, deletion of compliance scenario, deletion of calculations and aggregations.

If you upgrade Environment Management from feature package 01 of component extension 6.0 for *SAP EHS Management*, a new data table for listed substances is introduced. It serves to eliminate duplications between customer-created entries and content-delivered entries of listed substances. To migrate listed substances data to the updated table, carry out the following activities.

Table 36: Environment Management: Upgrade from feature package 01 of component extension 6.0

√	Activity
	Run report R_EHFND_LISU_MIGRATION after the upgrade.
	The report transfers listed substances from table EHFNDD_LISU_ROOT to the updated root table EHFNDD_LISU_RT. After the transfer is complete, the report removes redundant data.
	Run report R_EHFND_LISU_SUBSTITUTE after the upgrade.
	This report ensures data consistency of the transferred listed substances by redirecting matching references between customer-created entries and content-delivered entries in the updated root table EHFNDD_LISU_RT. The mapping is done by CAS number.

If you upgrade Environment Management from Feature Package 02 of component extension 6.0 for *SAP EHS Management*, no further activities are required.

## 7.7	Upgrade Process for Product Compliance

7.7.1 Product Compliance: Upgrade from Component Extension 3.0 for SAP EHS Management

Process the configuration of the *SAP Solution Manager* and the BC sets.

Table 37: Product Compliance: Upgrade from Component Extension 3.0

√	Activity
	Run the report R_EHPRC_REV_PROC_STATUS_INIT after upgrade.
	A new field processing status has been introduced in the ROOT node of the business object EHPRC_COMPLI-ANCE_DATA: This report will update existing compliance data objects and fill the correct processing status value.
	Since the migration is client-dependent, you must execute the report in all clients that contain compliance data.
	Make sure that the user account that is used for executing the report has sufficient authorizations to modify compliance data.
	As the report can run into errors (for example, locking errors), we recommend that you run the report at a time when the system is not used by end users. The report can be re-executed any number of times and will try to migrate only these records which have not been migrated yet.
	Clear POWL caches according to SAP Note 1916079 .
	Execute Customizing activity Perform Automatic Workflow Customizing.
	If you have created customer roles you need to check if the provided template roles contain new menu entries needed to be integrated into your customer roles. After integration you will need to regenerate the corresponding authorization profiles.

The component extension 6.0 for *SAP EHS Management* contains a new simplified Import of Material Declarations. With this new import, you can import the IPC 1752-A Class C XML files in an alternative way. If you want to use the new simplified Import of Material Declarations as the default import for IPC XML files, you have to remove the old Template and Documents Customizing for the template IPC_XML_C and replace them with the new Template and Documents Customizing for the new template IPC_XML that is covered by the BC sets.

Table 38: Product Compliance: Upgrade from Component Extension 3.0: Simplified Import of Material Declarations

√	Activity
	Carry out Customizing activity Specify Outgoing and Incoming Templates.
	The old template ID IPC_XML_C is no longer used, but you should not delete the template definition because the template name is still used for existing documents. As an option, you can change the name of the template.
	The new template IPC_XML from the BC set must be available.
	Carry out Customizing activity Specify Incoming Templates.
	To replace the old IPC 1752-A Class C import with the new simplified Import of Material Declarations, you have to remove the old IPC_XML_C template from the incoming templates, including all entries in the sub structure.
	The new template IPC_XML from the BC set must be available
	Carry out Customizing activity Specify Outgoing Templates.

∨	Activity
	New generated IPC XML files should also use the new template IPC_XML. Therefore you have to remove the old template IPC_XML_C from the outgoing templates.
	The new template IPC_XML from the BC set must be available and all values must be identical between the two templates before you remove the old template.
	Carry out Customizing activity *Define Templates for the Compliance Object*.
	To import the compliance documents in the Compliance Workbench with the simplified Import for Material Declarations, you have to remove the old document settings based on the template IPC_XML_C in the sub dialog structures Define Incoming Documents and Define Outgoing Documents.
	The new document settings based on the new template IPC_XML from the BC set must be available and all values must be identical between the two documents before you remove the old document settings.
	Carry out Customizing activity *Specify Checks for Compliance Requirement and Check Criteria*.
	To import the compliance requirement revision documents in the Compliance Workbench with the simplified Import for Material Declarations, copy the settings for the old document settings based on the template IPC_XML_C in the sub dialog structures Define Incoming Documents and Define Outgoing Documents to the new document settings of the template IPC_XML for all relevant compliance requirements.
	When the new document settings of the template IPC_XML exist, remove the old document settings based on the template IPC_XML_C.
	The new document settings based on the new template IPC_XML from the BC set or depending on manual entries must be available and all values must be identical between the two documents before you remove the old document settings.
	Only the document settings for the compliance requirements ROHS, CHINA-ROHS, JIG and REACH_SVHC are available in the BC set. For all other compliance requirements, you have to create the settings manually.

The Feature Pack 01 for product compliance of component extension 6.0 for *SAP EHS Management* contains the adoption of IMDS 10.0 including a different handling of weight tolerances

Table 39: Product Compliance: Upgrade from Component Extension 3.0: Weight tolerance and IMDS 10.0

√	Activity
	If you upgrade to EHSM 6.0 with Support Package 01 or higher, make sure that you have carried out all relevant steps to adapt existing weight tolerance values to the new standardized tolerance ranges, as introduced with the following two SAP Notes:
	SAP Note 2219639 ↳ Add Support for Weight Tolerance Ranges.
	SAP Note 2207037 ↳ Support for IMDS 10.0 Requirements
	Carry out the following steps:
	1. Specify the weight tolerance values in the new Customizing activity *Specify Tolerance Values for Weight* (EHPRCV_TOLERANCE) under ▌ *Product Compliance* ❯ *General Configuration* ❯ *Compliance Object* ❯
	2. Adapt existing tolerance values in the Compliance Data Object by carrying out the report R_EHPRC_MI-GRATE_TOLERANCES. Read the documentation carefully and first carry out the report in test mode.
	3. If you want to carry out the checks again for all existing compliance requirements based upon the new weight tolerance values, carry out the report R_EHPRC_RECHECK_TOLERANCES. This report creates the necessary ACP entries for the affected parts. The ACP entries will be processed by the standard run of the automated change processing.

As of Feature Package 02 of component extension 6.0 for *SAP EHS Management*, the listed substances have been connected to a namespace. Listed substances within the SAP Namespace are now shipped with a GUID to uniquely identify the object. This however requires a data conversion as described in the table below.

Table 40: Product Compliance: Upgrade to Component Extension 6.0 FP02 or higher

√	Activity
	If you upgrade to EHSM 6.0 with Support Package 02 or higher, carry out following steps:
	1. Run the report R_EHFND_LISU_MIGRATION after the upgrade. The report transfers listed substances from table EHFNDD_LISU_ROOT to the updated root table EHFNDD_LISU_RT. After the transfer is complete, the report removes redundant data. Note that this report has to be executed after each support package of software component EHSMREGC.
	2. Run the report R_EHFND_LISU_SUBSTITUTE after the upgrade. This report ensures data consistency of the transferred listed substances by redirecting matching references between customer-created entries and content-delivered entries in the updated root table EHFNDD_LISU_RT. The mapping is done by CAS number.
	3. If you are using BI, execute an initial BI load for the data source 0EHSM_PRC_02 (Compliance Data). This in turn will trigger the generic extraction 0EH_DECLSUB_TEXT that is defined within the BI process chain. The latter is a generic text data source that is used to pull the names of the relevant listed substances into BI.

7.7.2 Product Compliance: Upgrade from Component Extension 4.0 for SAP EHS Management

Process the configuration of the *SAP Solution Manager* and the BC sets.

The component extension 6.0 for *SAP EHS Management* contains a new simplified Import of Material Declarations. With this new import, you can import the IPC 1752-A Class C XML files in an alternative way. 'If you want to use the new simplified Import of Material Declarations as the default import for IPC XML files, you have to remove the old Template and Documents Customizing for the template IPC_XML_C and replace them

with the new Template and Documents Customizing for the new template IPC_XML that is covered by the BC sets.

Table 41: Product Compliance: Upgrade from Component Extension 4.0

√	Activity
	Carry out Customizing activity **Specify Outgoing and Incoming Templates**.
	The old template ID IPC_XML_C is no longer used, but you should not delete the template definition because the template name is still used for existing documents. As an option, you can change the name of the template.
	The new template IPC_XML from the BC set must be available.
	Carry out *Customizing activity Specify Incoming Templates*.
	To replace the old IPC 1752-A Class C import with the new simplified Import of Material Declarations, you have to remove the old IPC_XML_C template from the incoming templates, including all entries in the sub structure.
	The new template IPC_XML from the BC set must be available
	Carry out Customizing activity *Specify Outgoing Templates*.
	New generated IPC XML files should also use the new template IPC_XML. Therefore you have to remove the old template IPC_XML_C from the outgoing templates.
	The new template IPC_XML from the BC set must be available and all values must be identical between the two templates before you remove the old template.
	Carry out *Customizing activity Define Templates for the Compliance Object*.
	To import the compliance documents in the Compliance Workbench with the simplified Import for Material Declarations, you have to remove the old document settings based on the template IPC_XML_C in the sub dialog structures Define Incoming Documents and Define Outgoing Documents.
	The new document settings based on the new template IPC_XML from the BC set must be available and all values must be identical between the two documents before you remove the old document settings.
	Carry out Customizing activity *Specify Checks for Compliance Requirement and Check Criteria*.
	To import the compliance requirement revision documents in the Compliance Workbench with the simplified Import for Material Declarations, copy the settings for the old document settings based on the template IPC_XML_C in the sub dialog structures Define Incoming Documents and Define Outgoing Documents to the new document settings of the template IPC_XML for all relevant compliance requirements.
	When the new document settings of the template IPC_XML exist, remove the old document settings based on the template IPC_XML_C.
	The new document settings based on the new template IPC_XML from the BC set or depending on manual entries must be available and all values must be identical between the two documents before you remove the old document settings.
	Only the document settings for the compliance requirements ROHS, CHINA-ROHS, JIG and REACH_SVHC are available in the BC set. For all other compliance requirements, you have to create the settings manually.

The Feature Pack 01 for product compliance of component extension 6.0 for *SAP EHS Management* contains the adoption of IMDS 10.0 including a different handling of weight tolerances

Table 42: Product Compliance: Upgrade from Component Extension 4.0: Weight tolerance and IMDS 10.0

√	Activity
	If you upgrade to EHSM 6.0 with Support Package 01 or higher, make sure that you have carried out all relevant steps to adapt existing weight tolerance values to the new standardized tolerance ranges, as introduced with the following two SAP Notes:
	SAP Note 2219639 ➦ Add Support for Weight Tolerance Ranges.
	SAP Note 2207037 ➦ Support for IMDS 10.0 Requirements
	Carry out the following steps:
	1. Specify the weight tolerance values in the new Customizing activity Specify Tolerance Values for Weight (EHPRCV_TOLERANCE) under Product Compliance →General Configuration →Compliance Object
	2. Adapt existing tolerance values in the Compliance Data Object by carrying out the report R_EHPRC_MIGRATE_TOLERANCES. Read the documentation carefully and first carry out the report in test mode.
	3. If you want to carry out the checks again for all existing compliance requirements based upon the new weight tolerance values, carry out the report R_EHPRC_RECHECK_TOLERANCES. This report creates the necessary ACP entries for the affected parts. The ACP entries will be processed by the standard run of the automated change processing.

As of Feature Package 02 of component extension 6.0 for SAP EHS Management, the listed substances have been connected to a namespace. Listed substances within the SAP Namespace are now shipped with a GUID to uniquely identify the object. This however requires a data conversion as described in the table below.

Table 43: Product Compliance: Upgrade to Component Extension 6.0 FP02 or higher

√	Activity
	If you upgrade to EHSM 6.0 with Support Package 02 or higher, carry out the following steps:
	1. Run the report R_EHFND_LISU_MIGRATION after the upgrade. The report transfers listed substances from table EHFNDD_LISU_ROOT to the updated root table EHFNDD_LISU_RT. After the transfer is complete, the report removes redundant data. Note that this report has to be executed after each support package of software component EHSMREGC.
	2. Run the report R_EHFND_LISU_SUBSTITUTE after the upgrade. This report ensures data consistency of the transferred listed substances by redirecting matching references between customer-created entries and content-delivered entries in the updated root table EHFNDD_LISU_RT. The mapping is done by CAS number.
	3. If you are using BI, carry out an initial BI load for the data source 0EHSM_PRC_02 (Compliance Data). This in turn will trigger the generic extraction 0EH_DECLSUB_TEXT that is defined within the BI process chain. The latter is a generic text data source that is used to pull the names of the relevant listed substances into BI.

7.7.3 Product Compliance: Upgrade from Component Extension 5.0 for SAP EHS Management

The component extension 6.0 for *SAP EHS Management* contains a new simplified Import of Material Declarations. With this new import, you can import the IPC 1752-A Class C XML files in an alternative way. 'If you want to use the new simplified Import of Material Declarations as the default import for IPC XML files, you have to remove the old Template and Documents Customizing for the template IPC_XML_C and replace them with the new Template and Documents Customizing for the new template IPC_XML that is covered by the BC sets.

Table 44: Product Compliance: Upgrade from Component Extension 5.0

√	Activity
	Carry out Customizing activity *Specify Outgoing and Incoming Templates*.
	The old template ID IPC_XML_C is no longer used, but you should not delete the template definition because the template name is still used for existing documents. As an option, you can change the name of the template.
	The new template IPC_XML from the BC set must be available.
	Carry out Customizing activity *Specify Incoming Templates*.
	To replace the old IPC 1752-A Class C import with the new simplified Import of Material Declarations, you have to remove the old IPC_XML_C template from the incoming templates, including all entries in the sub structure.
	The new template IPC_XML from the BC set must be available
	Carry out Customizing activity *Specify Outgoing Templates*.
	New generated IPC XML files should also use the new template IPC_XML. Therefore you have to remove the old template IPC_XML_C from the outgoing templates.
	The new template IPC_XML from the BC set must be available and all values must be identical between the two templates before you remove the old template.
	Carry out Customizing activity *Define Templates for the Compliance Object*.
	To import the compliance documents in the Compliance Workbench with the simplified Import for Material Declarations, you have to remove the old document settings based on the template IPC_XML_C in the sub dialog structures Define Incoming Documents and Define Outgoing Documents.
	The new document settings based on the new template IPC_XML from the BC set must be available and all values must be identical between the two documents before you remove the old document settings.
	Carry out Customizing activity *Specify Checks for Compliance Requirement and Check Criteria*.
	To import the compliance requirement revision documents in the Compliance Workbench with the simplified Import for Material Declarations, copy the settings for the old document settings based on the template IPC_XML_C in the sub dialog structures Define Incoming Documents and Define Outgoing Documents to the new document settings of the template IPC_XML for all relevant compliance requirements.
	When the new document settings of the template IPC_XML exist, remove the old document settings based on the template IPC_XML_C.
	The new document settings based on the new template IPC_XML from the BC set or depending on manual entries must be available and all values must be identical between the two documents before you remove the old document settings.
	Only the document settings for the compliance requirements ROHS, CHINA-ROHS, JIG and REACH_SVHC are available in the BC set. For all other compliance requirements, you have to create the settings manually.

∨	Activity

If you upgrade to EHSM 6.0 with Support Package 01 or higher, make sure that you have carried out all relevant steps to adapt existing weight tolerance values to the new standardized tolerance ranges, as introduced with the following two SAP Notes:

SAP Note 2219639 Add Support for Weight Tolerance Ranges.

SAP Note 2207037 Support for IMDS 10.0 Requirements

Carry out the following steps:

1. Specify the weight tolerance values in the new Customizing activity *Specify Tolerance Values for Weight* (EHPRCV_TOLERANCE) under ▮ *Product Compliance* ❯ *General Configuration* ❯ *Compliance Object* ❯
2. Adapt existing tolerance values in the Compliance Data Object by carrying out the report R_EHPRC_MI-GRATE_TOLERANCES. Read the documentation carefully and first carry out the report in test mode.
3. If you want to carry out the checks again for all existing compliance requirements based upon the new weight tolerance values, carry out the report R_EHPRC_RECHECK_TOLERANCES. This report creates the necessary ACP entries for the affected parts. The ACP entries will be processed by the standard run of the automated change processing.

The Feature Pack 01 for product compliance of component extension 6.0 for *SAP EHS Management* contains the adoption of IMDS 10.0 including a different handling of weight tolerances

Table 45: Product Compliance: Upgrade from Component Extension 5.0: Weight tolerance and IMDS 10.0

∨	Activity

If you upgrade to EHSM 6.0 with Support Package 01 or higher, make sure that you have carried out all relevant steps to adapt existing weight tolerance values to the new standardized tolerance ranges, as introduced with the following two SAP Notes:

SAP Note 2219639 Add Support for Weight Tolerance Ranges.

SAP Note 2207037 Support for IMDS 10.0 Requirements

Carry out the following steps:

1. Specify the weight tolerance values in the new Customizing activity *Specify Tolerance Values for Weight* (EHPRCV_TOLERANCE) under▮ *Product Compliance* ❯ *General Configuration* ❯ *Compliance Object* ❯
2. Adapt existing tolerance values in the Compliance Data Object by carrying out the report R_EHPRC_MI-GRATE_TOLERANCES. Read the documentation carefully and first carry out the report in test mode.
3. If you want to carry out the checks again for all existing compliance requirements based upon the new weight tolerance values, carry out the report R_EHPRC_RECHECK_TOLERANCES. This report creates the necessary ACP entries for the affected parts. The ACP entries will be processed by the standard run of the automated change processing.

As of Feature Package 02 of component extension 6.0 for *SAP EHS Management*, the listed substances have been connected to a namespace. Listed substances within the SAP Namespace are now shipped with a GUID to uniquely identify the object. This however requires a data conversion as described in the table below.

Table 46: Product Compliance: Upgrade to Component Extension 6.0 FP02 or higher

√	Activity
	If you upgrade to EHSM 6.0 with Support Package 02 or higher, carry out the following steps:
	1. Run the report R_EHFND_LISU_MIGRATION after the upgrade. The report transfers listed substances from table EHFNDD_LISU_ROOT to the updated root table EHFNDD_LISU_RT. After the transfer is complete, the report removes redundant data. Note that this report has to be executed after each support package of software component EHSMREGC.
	2. Run the report R_EHFND_LISU_SUBSTITUTE after the upgrade. This report ensures data consistency of the transferred listed substances by redirecting matching references between customer-created entries and content-delivered entries in the updated root table EHFNDD_LISU_RT. The mapping is done by CAS number.
	3. If you are using BI, carry out an initial BI load for the data source 0EHSM_PRC_02 (Compliance Data). This in turn will trigger the generic extraction 0EH_DECLSUB_TEXT that is defined within the BI process chain. The latter is a generic text data source that is used to pull the names of the relevant listed substances into BI.

7.7.4 Product Compliance: Upgrade from Component Extension 6.0 for SAP EHS Management

This chapter describes the necessary steps for *SAP EHS Management* that have to be executed when upgrading from Component Extension 6.0 to either of the Feature Packs 01 or 02.

Relevant changes with Feature Package 01

The Feature Pack 01 for product compliance of component extension 6.0 for *SAP EHS Management* contains the adoption of IMDS 10.0 including a different handling of weight tolerances

Table 47: Product Compliance: Upgrade to Component Extension 6.0 SP01

√	Activity
	If you upgrade to EHSM 6.0 with Support Package 01 or higher, make sure that you have carried out all relevant steps to adapt existing weight tolerance values to the new standardized tolerance ranges, as introduced with the following two SAP Notes:
	SAP Note 2219639 Add Support for Weight Tolerance Ranges.
	SAP Note 2207037 Support for IMDS 10.0 Requirements
	Carry out the following steps:
	1. Specify the weight tolerance values in the new Customizing activity *Specify Tolerance Values for Weight* (EHPRCV_TOLERANCE) under Product Compliance →General Configuration →Compliance Object
	2. Adapt existing tolerance values in the Compliance Data Object by carrying out the report R_EHPRC_MIGRATE_TOLERANCES. Read the documentation carefully and first carry out the report in test mode.
	3. If you want to carry out the checks again for all existing compliance requirements based upon the new weight tolerance values, carry out the report R_EHPRC_RECHECK_TOLERANCES. This report creates the necessary ACP entries for the affected parts. The ACP entries will be processed by the standard run of the automated change processing.

Relevant Changes with Feature Package 02

As of Feature Package 02 of component extension 6.0 for *SAP EHS Management*, the listed substances have been connected to a namespace. Listed substances within the SAP Namespace are now shipped with a GUID to uniquely identify the object. This however requires a data conversion as described in the table below.

Table 48: Product Compliance: Upgrade to Component Extension 6.0 SP02

√	Activity
	If you upgrade to EHSM 6.0 with Support Package 02 or higher, carry out the following steps: 1. Run the report R_EHFND_LISU_MIGRATION after the upgrade. The report transfers listed substances from table EHFNDD_LISU_ROOT to the updated root table EHFNDD_LISU_RT. After the transfer is complete, the report removes redundant data. Note that this report has to be executed after each support package of software component EHSMREGC. 2. Run the report R_EHFND_LISU_SUBSTITUTE after the upgrade. This report ensures data consistency of the transferred listed substances by redirecting matching references between customer-created entries and content-delivered entries in the updated root table EHFNDD_LISU_RT. The mapping is done by CAS number. 3. If you are using BI, carry out an initial BI load for the data source 0EHSM_PRC_02 (Compliance Data). This in turn will trigger the generic extraction 0EH_DECLSUB_TEXT that is defined within the BI process chain. The latter is a generic text data source that is used to pull the names of the relevant listed substances into BI.

8 Upgrade Information

8.1 List of Documents

Table 49: List of Used Documents and Sources in the Master Guide

Documentation	Where to Find
Guides and general information for *SAP EHS Management*	See Planning Information [page 10]
Documentation for *SAP EHS Management*	See Further Useful Links [page 10]
SAP Notes that are important to the implementation of *SAP EHS Management*	See Important SAP Notes [page 11]
Generate Forms for Offline Recording	See the Customizing under ⫽ *SAP EHS Management* ⟩ *Incident Management* ⟩ *Print Forms and Interactive Forms* ⟩ *Generate Forms for Offline Recording* ⫽.
Specify Destination for Integration	See Customizing under ⫽ *SAP EHS Management* ⟩ *Foundation for EHS Management* ⟩ *Integration* ⟩ *Specify Destination for Integration* ⫽.
Configure Integration of Map	See Customizing under ⫽ *SAP EHS Management* ⟩ *Foundation for EHS Management* ⟩ *Locations* ⟩ *Configure Integration of Map* ⫽.
Installation information for *SAP NetWeaver Business Warehouse* / BI Content	See the *SAP Help Portal* at http://help.sap.com/nw under *SAP Business Warehouse*.
Installation information for Enterprise Search services (TREX)	See the *SAP Help Portal* at http://help.sap.com/nwunder *SAP NetWeaver Enterprise Search*.
Enterprise service for initial recording of incidents	http://esworkplace.sap.com → *(processing component) EHS Incident Processing*
Installation information for *SAP NetWeaver* (optional components)	See the *SAP Help Portal* at http://help.sap.com/nw74 under *Installation and Upgrade*.
SAPconnect information	See the *SAP Help Portal* at (http://help.sap.com/nw74.
Application help (SAP Library) documentation downloads	http://support.sap.com/swdc under ⫽ *Installations and Upgrades* ⟩ *A-Z Index* ⫽. Use `EHS MGMT. EXTENSION` as search criteria and select your installation product.

> **i Note**
>
> The following SAP Library documentation is relevant for *SAP EHS Management*:
>
> - *SAP Enhancement Package 8 for SAP ERP 6.0* (EHP7 FOR SAP ERP 6.0)

- *SAP NetWeaver 7.4* (SAP NETWEAVER 7.4)
- Component extension 6.0 for *SAP EHS Management* (EHS MGMT. EXTENSION)

You can download the documentation on the *SAP Support Portal* at http://support.sap.com/swdc. Go to
▌ *Installations and Upgrades* ❯ *A-Z Index* ▐ . Search for the product and select the corresponding
installation product.

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