

# PI Sheet Enhancement in EhP5: Archiving PI Sheets and Electronic Work Instructions



Suite Solution Management Manufacturing

# Archiving of PI Sheets and Electronic Work Instructions (EWI)



## Objective

- PI Sheets / Electronic Work Instructions offer manufacturing execution capabilities inside ERP.
- Over time a lot of data accumulates in the database which also might reduce the performance.
- Customers which use the Electronic Batch Record (EBR) can archive and delete the PI Sheet data (but no test PI Sheet data)
- Customers using Electronic Work Instructions (PP) or those customers that did not want to use the EBR could not archive and delete this data until now.

## Business Benefits

- Improving/ensuring performance (By reducing database size)
- Accessing archived data for later analysis

## Functions

### **Business Suite i2010 (EhP5)**

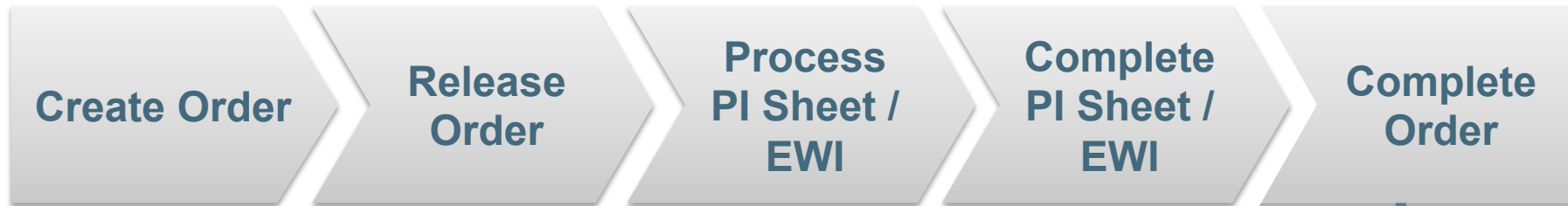
- Archive objects
- Deleting objects
- Display archived objects
- Background processing (Archiving / Deletion)

Downport available for ERP EhP3/4:  
See OSS notes 1300626 and 1317521

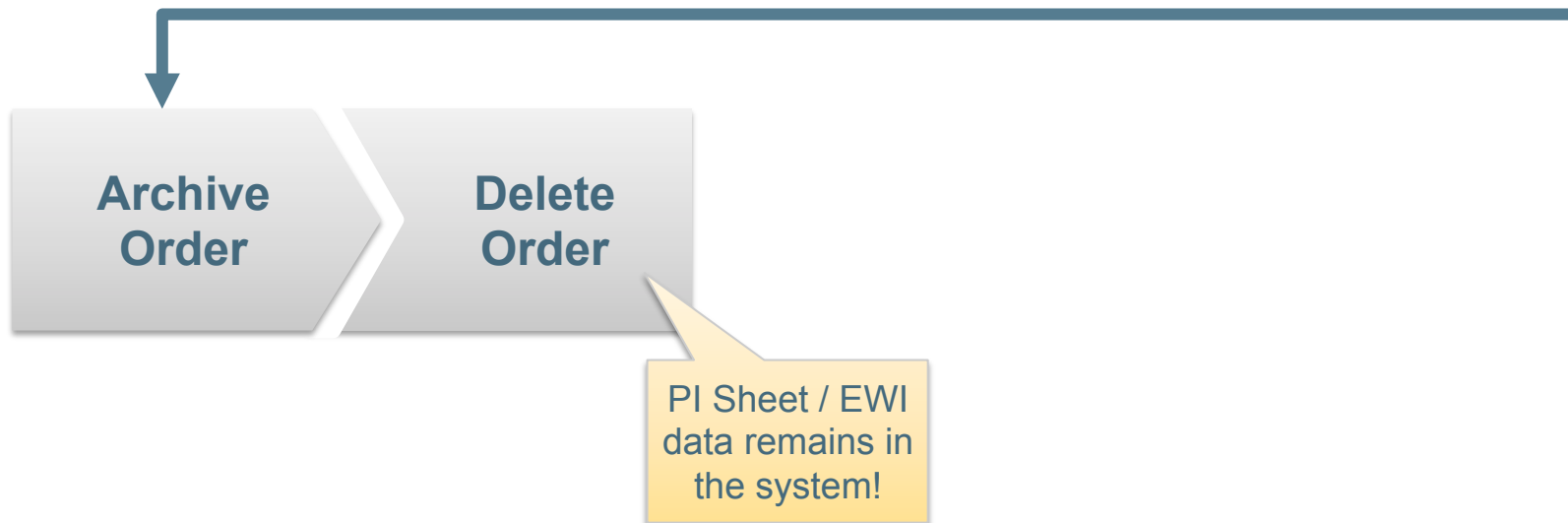
# Archiving of PI Sheets and EWI: Old Process Flow (w/o EBR)



## Regular Order Processing:



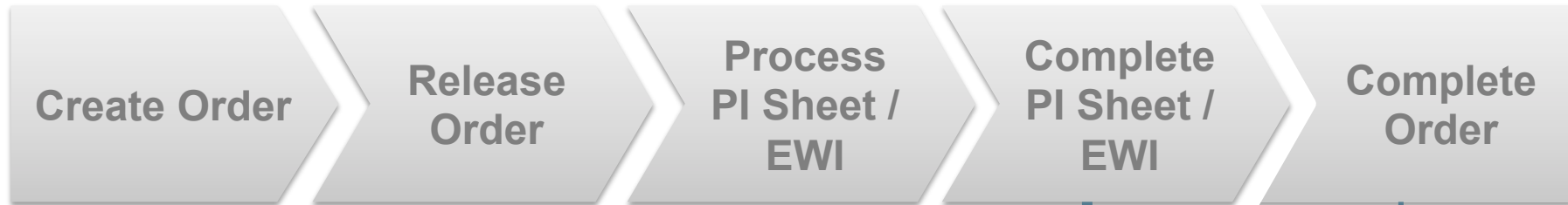
## Archiving / Clean-up:



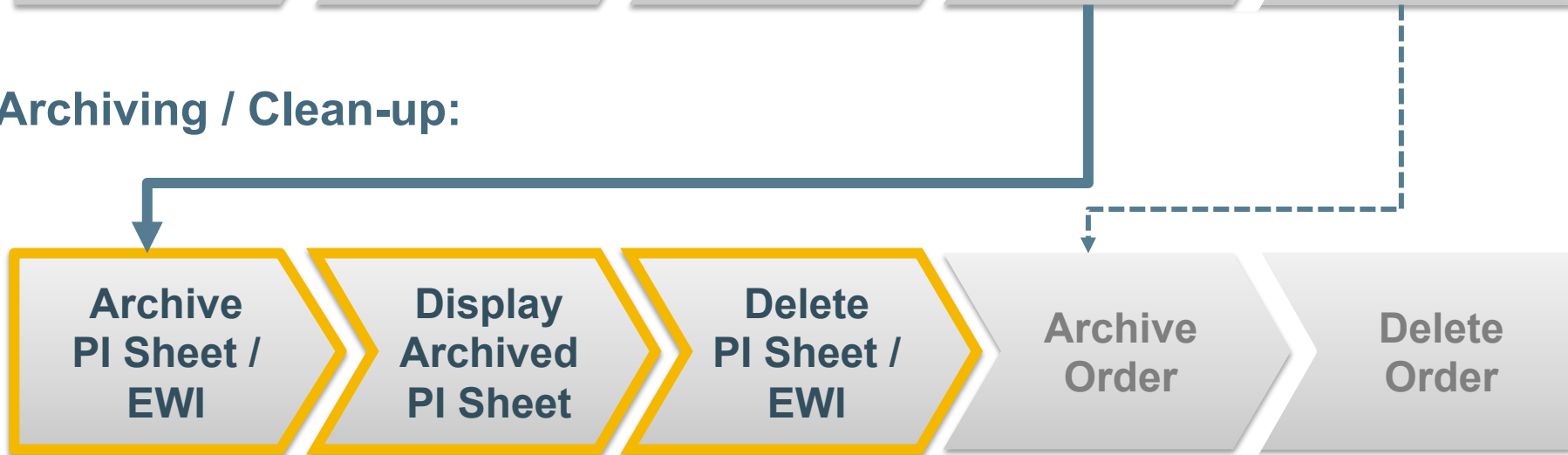
# Archiving of PI Sheets and EWI: New Process Flow



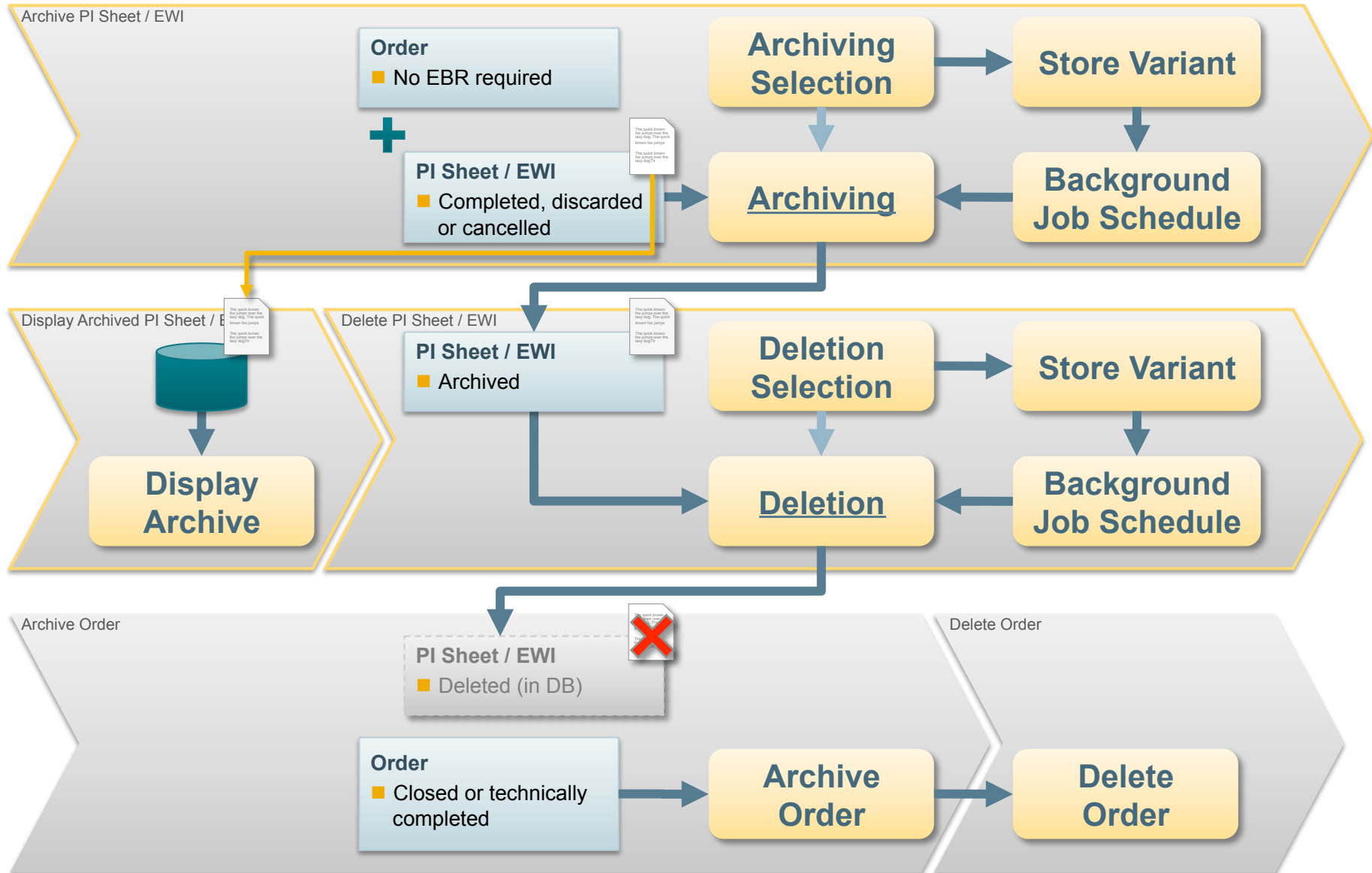
## Regular Order Processing:



## Archiving / Clean-up:



# Archiving of PI Sheets and EWI: Detailed Process Flow



# Archiving of PI Sheets and EWI: (Pre-) Selection



Transaction  
**CO\_ARCH\_PISHEET**

**Archiving of PI Sheets/Work Instructions**

Archiving Options

- Archive Objects
- Display Archived Objects
- Delete Archived Objects
- Archive Objects Using Background Job
- Delete Archived Objects Using Background Job

CO\_ARCH\_PISHEET uxai2q35

**Optical Archiving of PI Sheets/Work Instructions**

PI Sheet/Work Instructions

Plant to  
Control Recipe/Instructions 0 to 0  
Operating group to  
CRec./Clnstr. Destination to

Selection Options Period

Selection Mode DATETIME Entry of Date/Time

Created on to  
Created at 00:00:00 to 00:00:00  
Objects Older Than (Days) 0

Maximum Number of Entries 500

Mode of PI Sheet/Work Instructions (Test/Live)

- No Test
- Test
- All

Status of PI Sheet/Work Instructions

- Canceled
- Discarded
- Completed

Manufacturing Order (Process/Production Order)

Manufacturing Order to  
Status Schema (Order)

Material/Batch Data

Material number to  
Batch to

Archiving Without Preselection

Direct Archiving Without Preselection (ALV Grid Result List)

Display Variant (ALV Grid)

DATETIME Entry of Date/Time

DAYS Entry of Period (Days)

Either select by date/time or age

Also test PI Sheets can be archived/deleted

Status selection schema may be used

# Archiving of PI Sheets and EWI: Selection in Grid / Execution



**Optical Archiving of PI Sheets/Work Instructions**

Archive Selection

PI sheet	Control R...	Plant	Order	Type	C	Description	Order Creat...	C...	Material	Batch
1000000000000000005677	14:47:16	1100	70004883	PI01	40	Cetepharm-N (tablets)	24.04.2009	0E	N-2100	
1000000000000000000000		1100	70004883	PI01	40	Cetepharm-N (tablets)	24.04.2009	0E	N-2100	
1000000000000000000000		1000	60014848	PP01	10		24.04.2009	A2	XS_PROD_01	
1000000000000000000000		1000	60014848	PP01	10		24.04.2009	A3	XS_PROD_01	
1000000000000000005854	12:41:08	1000	60015249	PP01	10		13.05.2009	94	T-XS	
1000000000000000003454	13:21:22	0001	70005082	PI01	40	Fly wheel	14.05.2009	05	TEST3_SP	
1000000000000000003455	06:23:05	0001	70005122	PI01	40	Fly wheel	18.05.2009	05	TEST3_SP	
1000000000000000003663	06:52:12	0001	70005123	PI01	40	Fly wheel	18.05.2009	05	TEST3_SP	
1000000000000000005981	08:53:14	0001	60015388	PP01	10		19.05.2009	05	TEST F1	

Single or multiple selection

Archiving Without Preselection  
 Direct Archiving Without Preselection (ALV Grid Result List)

By-pass of grid selection

Archive Selection

Display logs

Type	Message Text	LTxt
Internal error	Internal error while accessing PI sheet 1000000000000000003663	?
Success	PI sheet/work instructions 1000000000000000003454 archived successfully	
Success	PI sheet/work instructions 1000000000000000003455 archived successfully	
Warning	Processed entries: 2 From 3; Non-Processable Entries: 1	?

Log and Statistics (total, success, failure)

# Archiving of PI Sheets and EWI: Background Processing



**Archiving of PI Sheets/Work Instructions**

Archiving Options

- Archive Objects
- Display Archived Objects
- Delete Archived Objects
- Archive Objects Using Background Job
- Delete Archived Objects Using Background Job

CO\_ARCH\_PISHEET uxai2q35 INS



**Execute Report in Background**

Report Name: RCOPOC\_ARCHIVE\_PROD\_INST  
Variant Name: 6MONTHS

Execute immed. Schedule



Job	Ln	Job CreatedB	Status	Start date	Start time	Duration(sec.)	Delay (sec.)
<input checked="" type="checkbox"/> RCOPOC_ARCHIVE_PROD_INST		MANTHEY	Finished	12.10.2009	17:38:51	42	0



Spool



Spool no.	Type	Date	Time	Status	Pages	Title
<input checked="" type="checkbox"/> 372		12.10.2009	17:39	-	1	LIST1S LP01 RCOPOC_ARCHI



Type	Message text	LTxt
	Internal error while accessing PI sheet 100000000000003663	
	PI sheet/work instructions 100000000000001267 archived successfully	
	PI sheet/work instructions 100000000000001268 archived successfully	
	Processed entries: 2 From 3; Non-Processable Entries: 1	

Log and Statistics (total, success, failure)



# Archiving of PI Sheets and EWI: Post-Archiving Situation (CO60)



### Find PI Sheet

Plant	Material	Material description	Batch	Process order	Control recipe	C...	Operating group	Status	M...	V...	C...
1100	T-FDA99	Wirkstoff SCM344	0000000188	ORDER-99	100000000000001268	0Y	PRODUKTION 99	Archived (EBR)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1100	T-FDA99	Wirkstoff SCM344	0000000188	ORDER-99	100000000000001267	0Y	WIEGESTATION 99	Archived (EBR)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Status: 'Archived (EBR)'  
(The same status is used for EBR archiving and non-EBR archiving)

CO60 uxai2q35 INS

### Process Manufacturing Cockpit MANTHEY

Herstellanweisung - Test  
 Prozeßauftrag: Order-99 >>  
 Print Expand Collapse

Phase0020

Only display functions possible  
(Also no commenting)

Document 100000000000003796 was started successfully

CO60XT uxai2q35 INS

# Display of Archived PI Sheets and EWI: Selection

Archive PI Sheet / EWI    Display Archived PI Sheet    Delete PI Sheet / EWI



## Archiving of PI Sheets/Work Instructions

### Archiving Options

- Archive Objects
- Display Archived Objects
- Delete Archived Objects
- Archive Objects Using Background Job
- Delete Archived Objects Using Background Job



Selection by archiving parameters possible

### Display PI Sheet/Work Instructions from Archive

**Work Instructions/PI Sheet**

Plant: 1100 to [ ]

Control Recipe/Instructions: [ ] to [ ]

Operating group: [ ] to [ ]

CRec./CInstr. Destination: [ ] to [ ]

**Selection Options Period**

Selection Mode: DATETIME Entry of Date/Time

Created on: [ ] to [ ]

Created at: 00:00:00 to 00:00:00

Objects Older Than (Days): 0

**Manufacturing Order (Process/Production Order)**

Order: [ ] to [ ]

Order Type: [ ] to [ ]

Order Category: [ ] to [ ]

Short Text for Order: [ ] to [ ]

Created on: [ ] to [ ]

**Material/Batch Data**

Material number: [ ] to [ ]

Batch: [ ] to [ ]

**Data on Optical Archive File**

Short Text for Archive Link: [ ] to [ ]

Archiver: [ ] to [ ]

Archiver's First Name: [ ] to [ ]

Archiver's Last Name: [ ] to [ ]

Archived on: [ ] to [ ]

Archived at: 00:00:00 to 00:00:00

Display Variant (ALV Grid): /AM01

CO\_ARCH\_PISHEET | uxai2q3

# Display of Archived PI Sheets and EWI: Overview List



**Overview of Archived PI Sheets/Work Instructions**

Display from Archive

In DB	Plant	Material	Description	Batch	Order	Type	C	PI sheet	C...	Operating group
X	1100	T-FDA99	Produktion Wirkstoff SCM	0000000188	ORDER-99	PI02	40	100000000000001267	0X	WIEGESTATION 99
X	1100	T-FDA99	Produktion Wirkstoff SCM	0000000188		PI02	40	100000000000001268	0Y	PRODUKTION 99
X	1100	T-FDA99	Produktion Wirkstoff SCM	0000000188		PI02	40	100000000000001269	0Z	LABOR 99
X	1100	N-2100	Cetepharm-N (tablets)		70006282	PI01	40	100000000000006914	0E	PRODUKTION 00
X	1100	N-2100	Cetepharm-N (tablets)		70005406	PI01	40	100000000000006198	0E	PRODUKTION 00
X	1100	N-2100	Cetepharm-N (tablets)			PI01	40	100000000000006199	0E	PRODUKTION 00
X	1100	N-2100	Cetepharm-N (tablets)		70005342	PI01	40	100000000000006154	0E	PRODUKTION 00
X	1100	N-2100	Cetepharm-N (tablets)		70005203	PI01	40	100000000000006015	0E	PRODUKTION 00
X	1100	N-2100	Cetepharm-N (tablets)		70005182	PI01	40	100000000000005994	0E	PRODUKTION 00
X	1100	N-2100	Cetepharm-N (tablets)		70005102	PI01	40	100000000000005894	0E	PRODUKTION 00
	1100	N-2100	Cetepharm-N (tablets)		70005065	PI01	40	100000000000005841	0E	PRODUKTION 00
			)			PI01	40	100000000000005842	0E	PRODUKTION 00
			)			PI01	40	100000000000005843	0E	PRODUKTION 00
			)		70005064	PI01	40	100000000000005838	0E	PRODUKTION 00
			)			PI01	40	100000000000005839	0E	PRODUKTION 00
			)			PI01	40	100000000000005840	0E	PRODUKTION 00
	1100	N-2100	Cetepharm-N (tablets)		70005063	PI01	40	100000000000005835	0E	PRODUKTION 00
	1100	N-2100	Cetepharm-N (tablets)			PI01	40	100000000000005836	0E	PRODUKTION 00
	1100	N-2100	Cetepharm-N (tablets)			PI01	40	100000000000005837	0E	PRODUKTION 00
X	1100	N-2100	Cetepharm-N (tablets)		70004968	PI01	40	100000000000005776	0E	PRODUKTION 00

Indication whether PI Sheet still exists in the database (not yet deleted)

CO\_ARCH\_PISHEET uxai3q35 INS

# Display of Archived PI Sheets and EWI: Content Example (1)



## Display PI Sheet/Work Instructions from Optical Archive

Similar to EBR

**Overview:**  
 ■ Comments  
 ■ Event Log  
 ■ All Deviations

Order: 900070006282 Material Number: N-2100 >>  
 Expand Collapse Print

### Overview

#### General Comments on PI Sheet

12.10.2009 16:41:51 MANTHEY Header Comment

#### Event Log for Process Steps

12.10.2009 16:43:52 Document completed manually

Details

### Deviations

#### Value Limits Exceeded and Completed Process Steps with Comment

Phase	Short Txt	Default	Char.	Line	Description
0011		0004	0012		Numeric
0011		0004	0034		Signature
0021		0005	0012	2	Numeric
0021		0005	0034	3	Signature

Hyperlink: Jump to the position where the deviation occurred

▶ Phase0011

▶ Phase0021

# Display of Archived PI Sheets and EWI: Content Example (2)

Archive PI Sheet / EWI    Display Archived PI Sheet    Delete PI Sheet / EWI



**All relevant data and events are accessible in one document**

**Expandable details for:**

- Comments
- Event Log
- All Deviations

Phase0011

Event Log for Phase

12.10.2009	16:37:51	Value entered: test	Details
		Terminal WDFN00167423A	
		User MANTHEY	
12.10.2009	16:38:05	Value entered: 43	Details
12.10.2009	16:38:12	Value entered: 50	Details
12.10.2009	16:39:21	Value entered: Interruption	Details

Simple Elements

Simple elements.

Deviation History

Value: 50  
Validation X < PAR\_NUM3;  
Rule: PAR\_NUM3=50  
The value does not comply with the validation rule but was accepted

Arne Manthey

12.10.2009 16:38:38  
Comment on deviation.

MY SIGNER

Text-out DUMMY

Text-in TEST

Numeric 50

Half 25

OK? Yes

List Interruption

Signature

Comment

12.10.2009 16:42:07 MANTHEY  
Comment on simple field

Arne Manthey

12.10.2009 16:39:32  
Comment on signature

# Display of Archived PI Sheets and EWI: Content Example (3)

Archive PI Sheet / EWI    Display Archived PI Sheet    Delete PI Sheet / EWI



Phase0021

Event Log for Phase

Tables

Grouped simple elements.

**Validation rule**

	Text-out	Text-in	Numeric	Half	Set	OK?	Status of Task	Signature
			X < PAR_NUM3					
1	DUMMY	TEST1	42	21	Set	Yes	Start	
2	DUMMY	TEST2	50	25	Set	Yes	Interruption	
3	DUMMY	TEST3	41	21	Set	Yes	Finish	

Table details in separate expandable sections with line and column specified

- Comment(Line1, Status of Task)
- Signature(Line1, Signature)
- Comment(Line2, Text-in)
- Deviation History(Line2, Numeric)
- Comment(Line3, Signature)
- Signature(Line2, Signature)
- Signature(Line3, Signature)

# Deletion of PI Sheets and EWI: (Pre-) Selection



## Archiving of PI Sheets/Work Instructions

**Archiving Options**

- Archive Objects
- Display Archived Objects
- Delete Archived Objects
- Archive Objects Using Background Job
- Delete Archived Objects Using Background Job

CO\_ARCH\_PISHEET | uxai2q35 | IN



Selection by archiving parameters possible

### Worklist of Archived PI Sheets/Work Instructions

**Work Instructions/PI Sheet**

Plant: 1100 to [ ]

Control Recipe/Instructions: 0 to 0

Operating group: [ ] to [ ]

CRec./Clnstr. Destination: [ ] to [ ]

**Selection Options Period**

Selection Mode: DATETIME Entry of Date/Time

Created on: [ ] to [ ]

Created at: 00:00:00 to 00:00:00

Objects Older Than (Days): 0

**Manufacturing Order (Process/Production Order)**

Order: [ ] to [ ]

Order Type: [ ] to [ ]

Order Category: [ ] to [ ]

Short Text for Order: [ ] to [ ]

Created On: [ ] to [ ]

**Material/Batch Data**

Material number: [ ] to [ ]

Batch: [ ] to [ ]

**Data on Optical Archive File**

Short Text for Archive Link: [ ] to [ ]

Archiver: [ ] to [ ]

Archiver's First Name: [ ] to [ ]

Archiver's Last Name: Manthey to [ ]

Archived on: [ ] to [ ]

Archived at: 00:00:00 to 00:00:00

**Deletion of Database Data on Archived PI Sheets/Work Instructions**

Direct Deletion Without Preselection (ALV Result List)

Display Variant (ALV Grid): [ ]

CO\_ARCH\_PISHEET | uxai2q35 | INS

# Deletion of PI Sheets and EWI: Selection in Grid / Execution



**Worklist of Archived PI Sheets/Work Instructions**

In DB	Plant	Material	Description	Batch	Order	Type	C	PI sheet T...	Operating group
X	1100	N-2100	Cetepharm-N (tablets)		70004804	PI01	40	100000000000005583	<input type="checkbox"/> PRODUKTION 00
X	1100	N-2100	Cetepharm-N (tablets)		70004805	PI01	40	100000000000005584	<input type="checkbox"/> PRODUKTION 00
X	1100	N-2100	Cetepharm-N (tablets)		70004805	PI01	40	100000000000005585	<input type="checkbox"/> PRODUKTION 00
X	1100	N-2100	Cetepharm-N (tablets)		70004968	PI01	40	100000000000005776	<input type="checkbox"/> PRODUKTION 00
X	1100	N-2100	Cetepharm-N (tablets)		70005406	PI01	40	100000000000006198	<input checked="" type="checkbox"/> PRODUKTION 00
X	1100	N-2100	Cetepharm-N (tablets)		70005406	PI01	40	100000000000006199	<input checked="" type="checkbox"/> PRODUKTION 00
X	1100	N-2100	Cetepharm-N (tablets)		70006282	PI01	40	100000000000006914	<input checked="" type="checkbox"/> PRODUKTION 00

CO\_ARCH\_PISHEET uxai2q35 INS

Deletion of Database Data on Archived PI Sheets/Work Instructions

Direct Deletion Without Preselection (ALV Result List)

By-pass of grid selection

Display logs

Type	Message Text	LText
■	PI sheet/work instructions 100000000000006198 deleted from database successfully	
■	PI sheet/work instructions 100000000000006199 deleted from database successfully	
■	PI sheet/work instructions 100000000000006914 deleted from database successfully	
■	Processed entries: 3 From 3; Non-Processable Entries: 0	?



# Deletion of PI Sheets and EWI: Background Processing



**Archiving of PI Sheets/Work Instructions**

Archiving Options

- Archive Objects
- Display Archived Objects
- Delete Archived Objects
- Archive Objects Using Background Job
- Delete Archived Objects Using Background Job

CO\_ARCH\_PISHEET uxai2q35 INS



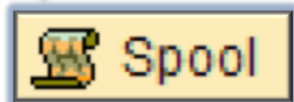
**Execute Report in Background**

Report Name: RCOPOC\_WKLT\_ARC\_PROD\_INS  
Variant Name: 6MONTHS

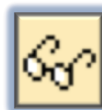
Execute immed. Schedule



Job	Ln	Job CreatedB	Status	Start date	Start time	Duration(sec.)	Delay (sec.)
RCOPOC_WKLT_ARC_PROD_INS		MANTHEY	Finished	16.10.2009	13:55:07	7	0
*Summary						7	0



Spool no.	Type	Date	Time	Status	Pages	Title
2450		16.10.2009	13:55	-	1	LIST1S LP01 RCOPOC_WKLT_



Type	Message text	LTxt
■	PI sheet/work instructions 10000000000006315 deleted from database successfully	
■	PI sheet/work instructions 10000000000006316 deleted from database successfully	
■	PI sheet/work instructions 10000000000006317 deleted from database successfully	
■	PI sheet/work instructions 10000000000006318 deleted from database successfully	
■	PI sheet/work instructions 10000000000006320 deleted from database successfully	
■	PI sheet/work instructions 10000000000006321 deleted from database successfully	
■	PI sheet/work instructions 10000000000006322 deleted from database successfully	
■	PI sheet/work instructions 10000000000006323 deleted from database successfully	
■	Processed entries: 8 From 8; Non-Processable Entries: 0	

Log and Statistics (total, success, failure)

# Deletion of PI Sheets and EWI: Result



**Business Document Navigator**

TA OAER

XML data of PI Sheet / EWI

Identification of application object

Class name	POC_PIDOC
Class type	OT
Object key	10000000000000006914

**Before Deletion**

Description	Created on	File name
POC_PIDOC		
General documents		
	12.10.2009	layout.xml
	12.10.2009	data.xml

**After Deletion**

Description	Created on	File name
POC_PIDOC		

## Data Browser: Table POC\_DB\_VALUE: Selection Screen

Number of Entries

OS\_GUID: 00000000000000000000 to 000

DOCID: 10000000000000006914 to

Width of Output List: 250

Maximum No. of Hits: 200

**Before Deletion**

Display Number of Entries

Number of entries which meet the selection criteria: 263

Close

**After Deletion**

Display Number of Entries

Number of entries which meet the selection criteria: 0

Close

Database data of PI Sheet / EWI (also all other POC\_DB\_\* tables)

**Thank you!**



# Copyright 2007 SAP AG

## All rights reserved



No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP AG. The information contained herein may be changed without prior notice.

Some software products marketed by SAP AG and its distributors contain proprietary software components of other software vendors.

SAP, R/3, mySAP, mySAP.com, xApps, xApp, SAP NetWeaver, Duet, Business ByDesign, ByDesign, PartnerEdge and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP AG in Germany and in several other countries all over the world. All other product and service names mentioned and associated logos displayed are the trademarks of their respective companies. Data contained in this document serves informational purposes only. National product specifications may vary.

The information in this document is proprietary to SAP. This document is a preliminary version and not subject to your license agreement or any other agreement with SAP. This document contains only intended strategies, developments, and functionalities of the SAP® product and is not intended to be binding upon SAP to any particular course of business, product strategy, and/or development. SAP assumes no responsibility for errors or omissions in this document. SAP does not warrant the accuracy or completeness of the information, text, graphics, links, or other items contained within this material. This document is provided without a warranty of any kind, either express or implied, including but not limited to the implied warranties of merchantability, fitness for a particular purpose, or non-infringement.

SAP shall have no liability for damages of any kind including without limitation direct, special, indirect, or consequential damages that may result from the use of these materials. This limitation shall not apply in cases of intent or gross negligence.

The statutory liability for personal injury and defective products is not affected. SAP has no control over the information that you may access through the use of hot links contained in these materials and does not endorse your use of third-party Web pages nor provide any warranty whatsoever relating to third-party Web pages

Weitergabe und Vervielfältigung dieser Publikation oder von Teilen daraus sind, zu welchem Zweck und in welcher Form auch immer, ohne die ausdrückliche schriftliche Genehmigung durch SAP AG nicht gestattet. In dieser Publikation enthaltene Informationen können ohne vorherige Ankündigung geändert werden.

Einige von der SAP AG und deren Vertriebspartnern vertriebene Softwareprodukte können Softwarekomponenten umfassen, die Eigentum anderer Softwarehersteller sind.

SAP, R/3, mySAP, mySAP.com, xApps, xApp, SAP NetWeaver, Duet, Business ByDesign, ByDesign, PartnerEdge und andere in diesem Dokument erwähnte SAP-Produkte und Services sowie die dazugehörigen Logos sind Marken oder eingetragene Marken der SAP AG in Deutschland und in mehreren anderen Ländern weltweit. Alle anderen in diesem Dokument erwähnten Namen von Produkten und Services sowie die damit verbundenen Firmenlogos sind Marken der jeweiligen Unternehmen. Die Angaben im Text sind unverbindlich und dienen lediglich zu Informationszwecken. Produkte können länderspezifische Unterschiede aufweisen.

Die in diesem Dokument enthaltenen Informationen sind Eigentum von SAP. Dieses Dokument ist eine Vorabversion und unterliegt nicht Ihrer Lizenzvereinbarung oder einer anderen Vereinbarung mit SAP. Dieses Dokument enthält nur vorgesehene Strategien, Entwicklungen und Funktionen des SAP®-Produkts und ist für SAP nicht bindend, einen bestimmten Geschäftsweg, eine Produktstrategie bzw. -entwicklung einzuschlagen. SAP übernimmt keine Verantwortung für Fehler oder Auslassungen in diesen Materialien. SAP garantiert nicht die Richtigkeit oder Vollständigkeit der Informationen, Texte, Grafiken, Links oder anderer in diesen Materialien enthaltenen Elemente. Diese Publikation wird ohne jegliche Gewähr, weder ausdrücklich noch stillschweigend, bereitgestellt. Dies gilt u. a., aber nicht ausschließlich, hinsichtlich der Gewährleistung der Marktgängigkeit und der Eignung für einen bestimmten Zweck sowie für die Gewährleistung der Nichtverletzung geltenden Rechts.

SAP übernimmt keine Haftung für Schäden jeglicher Art, einschließlich und ohne Einschränkung für direkte, spezielle, indirekte oder Folgeschäden im Zusammenhang mit der Verwendung dieser Unterlagen. Diese Einschränkung gilt nicht bei Vorsatz oder grober Fahrlässigkeit.

Die gesetzliche Haftung bei Personenschäden oder die Produkthaftung bleibt unberührt. Die Informationen, auf die Sie möglicherweise über die in diesem Material enthaltenen Hotlinks zugreifen, unterliegen nicht dem Einfluss von SAP, und SAP unterstützt nicht die Nutzung von Internetseiten Dritter durch Sie und gibt keinerlei Gewährleistungen oder Zusagen über Internetseiten Dritter ab.

Alle Rechte vorbehalten.