

The SKF logo is centered on a white background. It consists of the letters 'SKF' in a bold, blue, sans-serif font. To the right of the 'F' is a registered trademark symbol (®). The logo is framed by two red lines: a top line with rounded ends and a bottom line with a rounded left end and a straight right end.

**SKF**®

# Windchill in product engineering at SKF

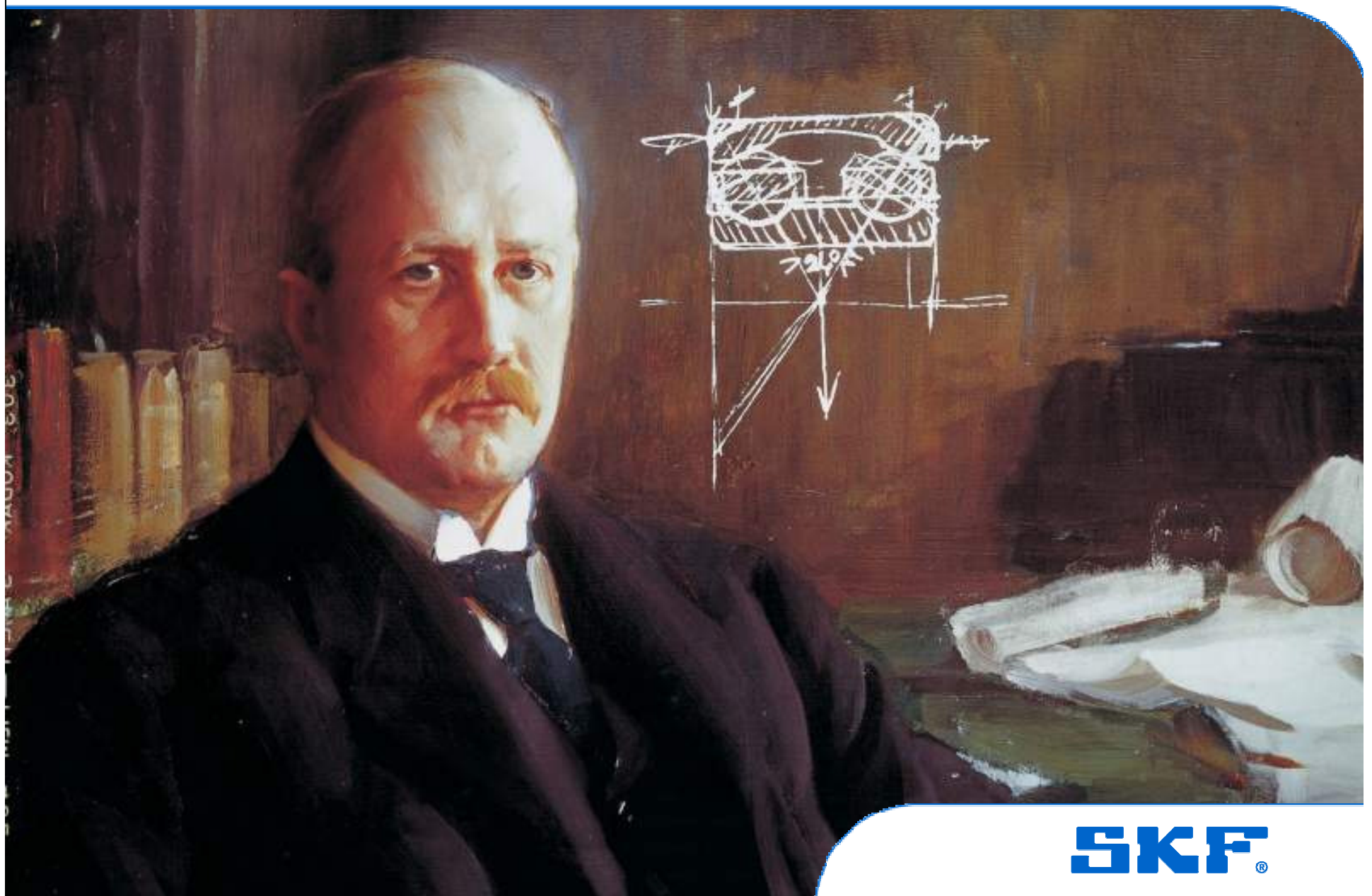
Presented to PTC World Conference Copenhagen

Presented by Fredrik Widengren

2007-11-12

**SKF**<sup>®</sup>

# SKF Group - Innovating since 1907



**SKF**®

# SKF - a truly global company



Established:

1907

Sales 2006:

53 101 MSEK (5 800 MEuro)

Employees:

41 090

Production sites:

120 in 24 countries

SKF presence:

more than 140 countries

First three quarters 2007

Sales:

43 489 MSEK (39 206 MSEK)

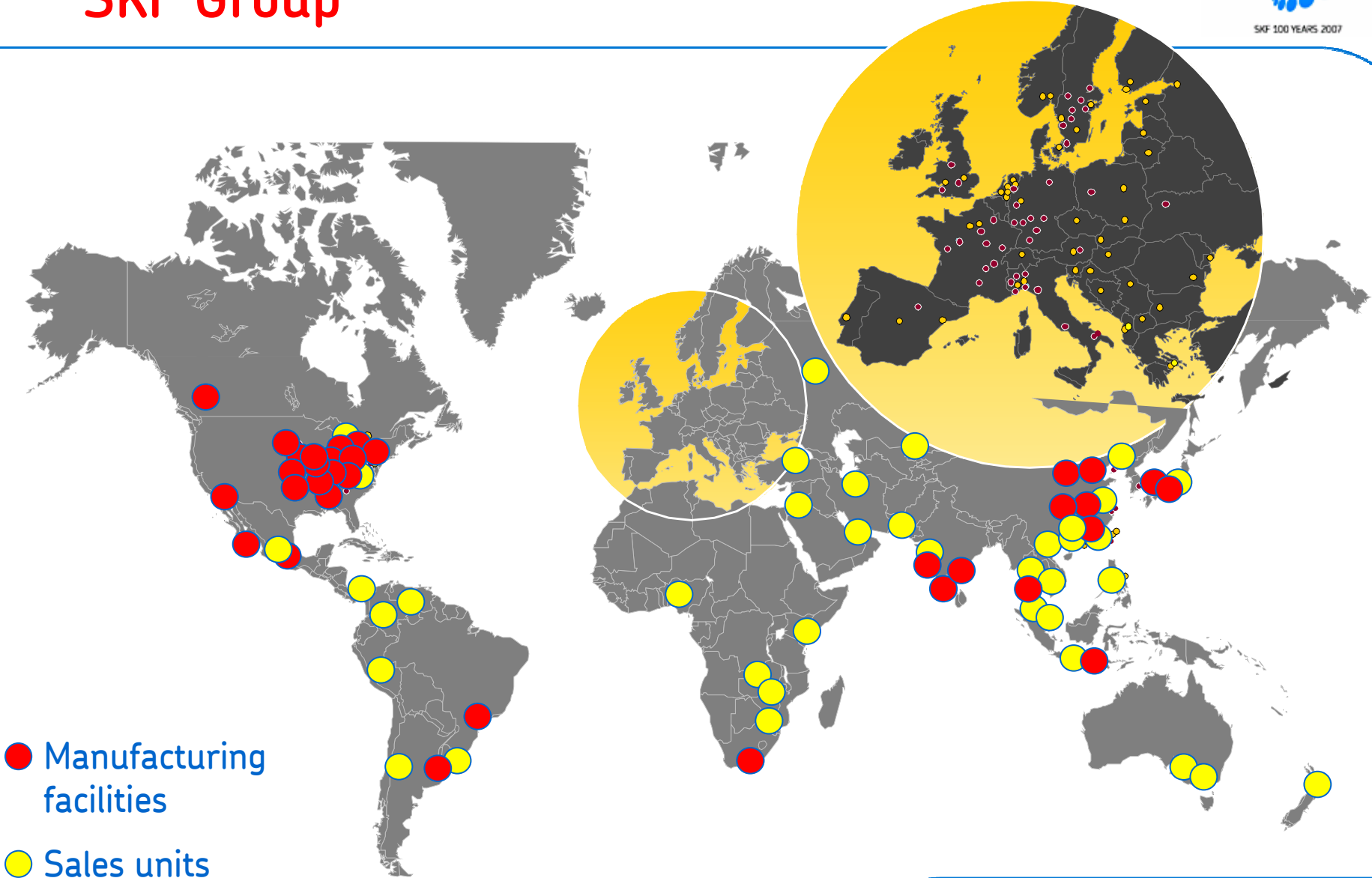
Operating margin:

13.1 % (12.4%)

# SKF Group



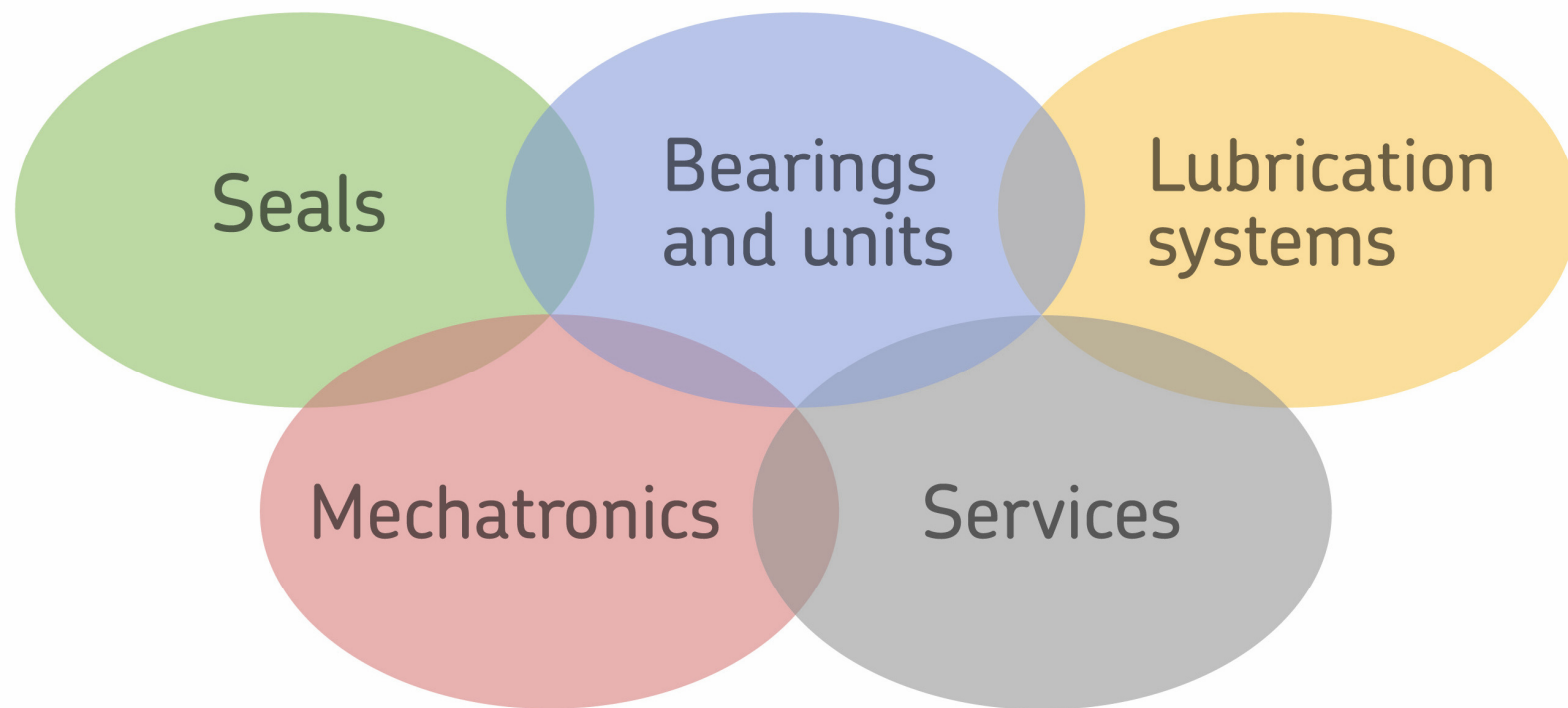
SKF 100 YEARS 2007



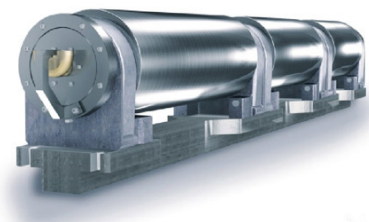
- Manufacturing facilities
- Sales units



# SKF Platforms



# SKF Platforms

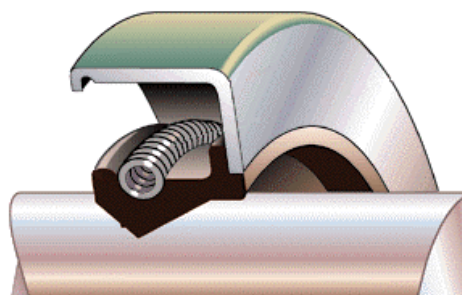
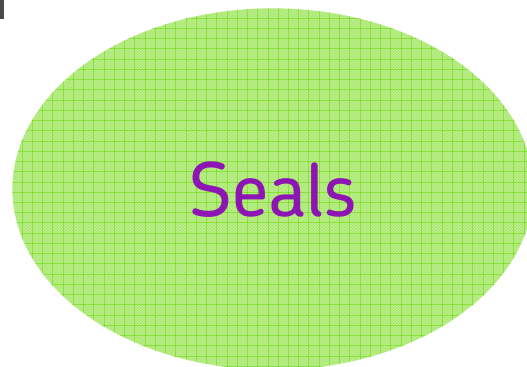
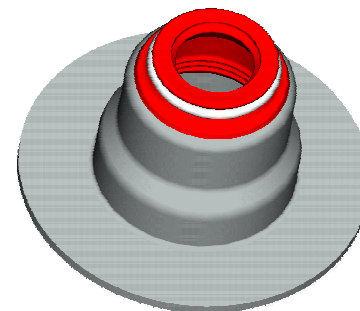
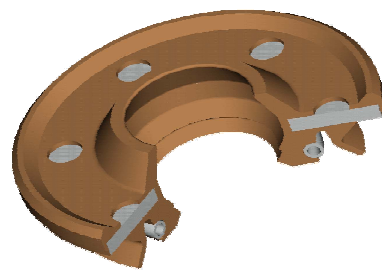


Bearings  
and units



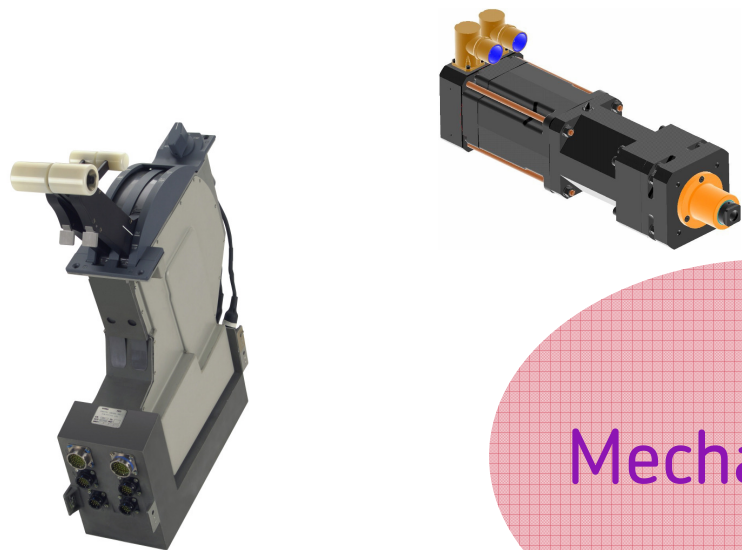
**SKF**®

# SKF Platforms

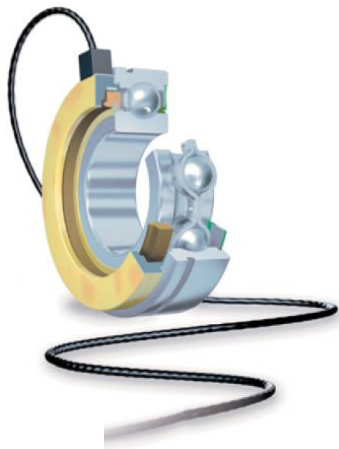




# SKF Platforms



Mechatronics

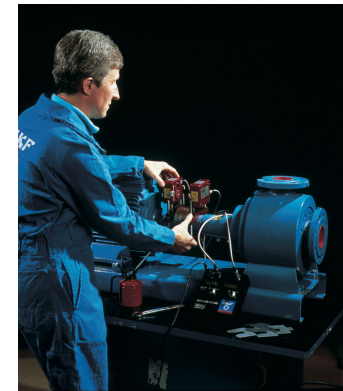
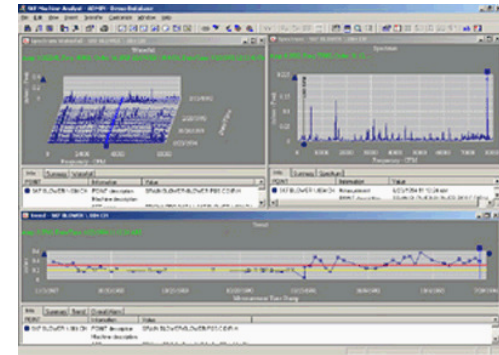


**SKF**®

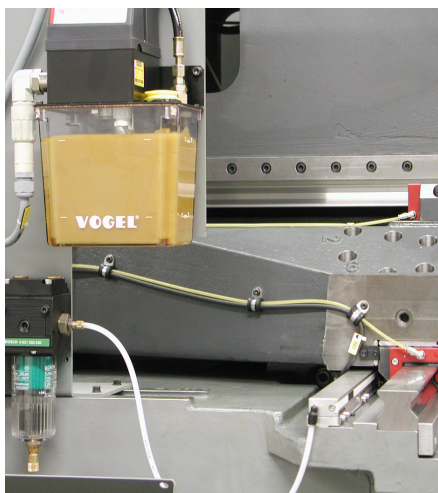
# SKF Platforms



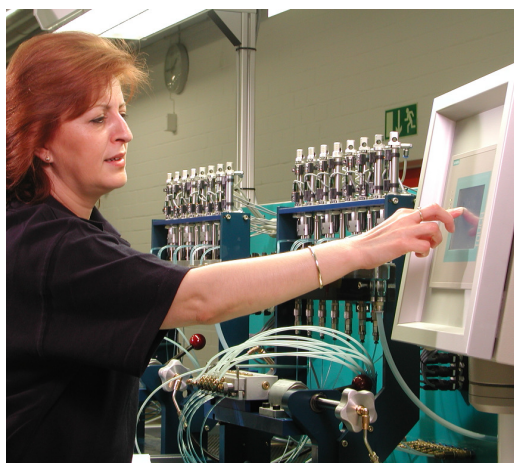
Services



# SKF Platforms



Lubrication systems



# 1

Windchill supporting product design at SKF

# Main product definitions



## Scalable catalogue products

- Fully described by parameters => large number of attributes
- BOM with template drawings

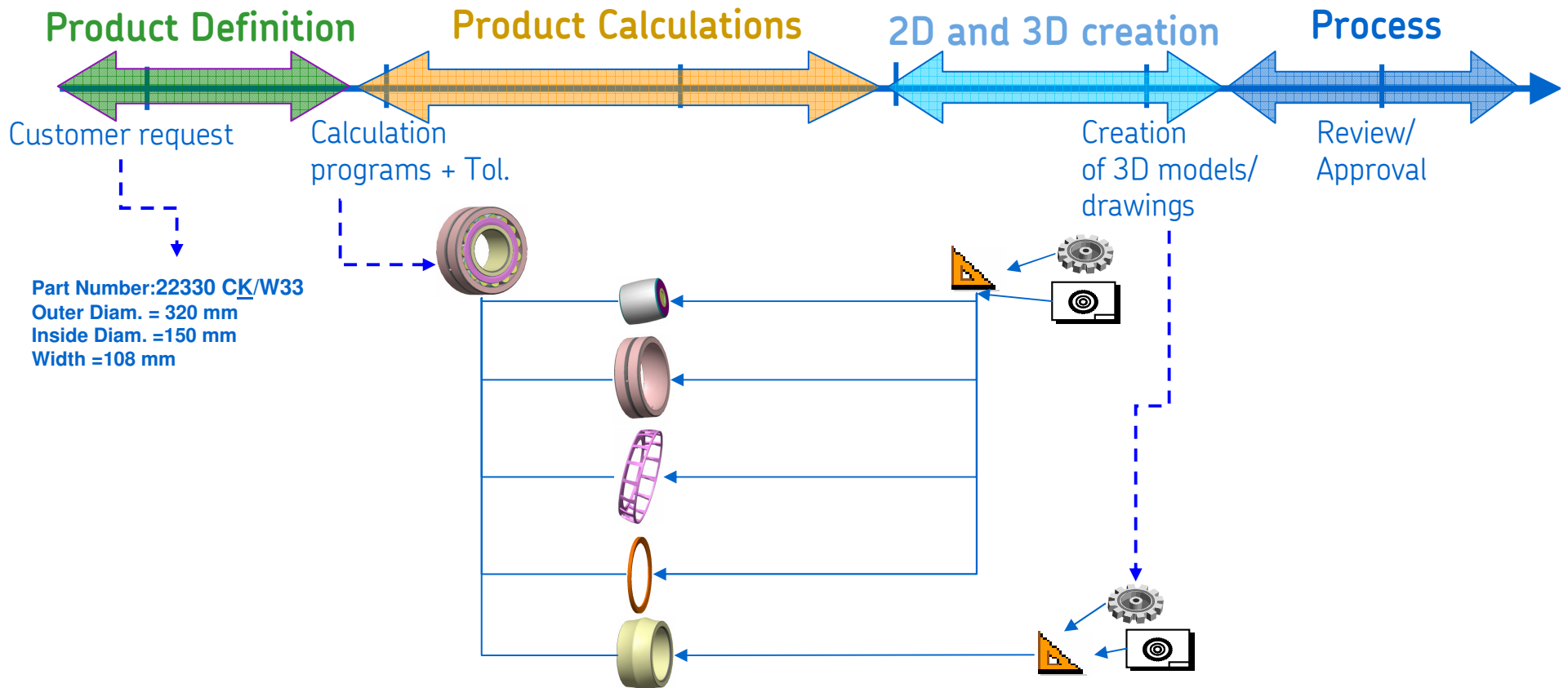


## Customized products and applications

- BOM with Pro/ENGINEER model
- Some key dimensions/factors as attributes



# Scalable catalogue products design process



# Product definition



- ☐ [21309 EK/VE260](#)
- ...+ [IR-21309 EK](#)
- ...+ [OR-21309 E](#)
- ...+ [CP-22211 EJ](#)
- ...+ [RG-22211 E/VX201](#)
- ...+ [RS-22211 E](#)

- Parts are created and classified
- Save-as also used often
- Boundary dimensions entered

SKF Part Manager - Microsoft Internet Explorer

Address: http://windchill.skf.net/Windchill/infoengine/jsp/skf/partmgr/frame.jsp?command=setActiveByObid&theObid=VR:wt.part.WTPart:10575053

Group Intranet

Clipboard

Remove from clipboard | Add as component

General | Attributes and Classification | Document Links | Product Structure

21309 EK/VE260

**General Attributes:**

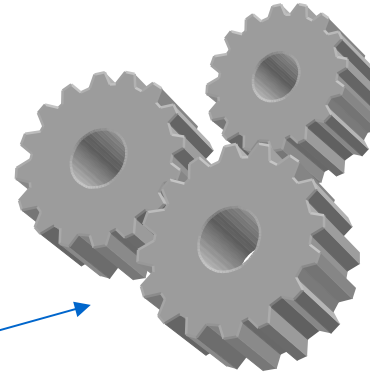
<b>Number:</b> 21309 EK/VE260 <input type="button" value="Get"/>	<b>Type:</b> Separable
<b>Name:</b> 21309 EK/VE260 <input checked="" type="checkbox"/> Same As Number	<b>Source:</b> Make
<b>Location:</b> /DC Gothenburg/Bearings/BS2 (SRB)/Desig <input <="" td="" type="button" value="Browse..."/> <td><b>Default Unit:</b> each</td>	<b>Default Unit:</b> each
<b>Lifecycle:</b> BS2 11G00 category II and III	
<b>Team:</b> BS2 11G Product design	<b>View:</b> As designed

# Product Calculation



The **Design Calculation document** is based on Excel and is capable to interact with Windchill.

- 21309 EK/VE260
- IR-21309 EK
- OR-21309 E
- CP-22211 EJ
- RG-22211 E/VX201
- RS-22211 E



Design rules implemented  
In fortran programs

1) Open up WEX-Excel tool bar (right click in the grey area)  
2) Push the Retrieve button  
3) Enter INNER RING designation

[Back to Index](#)

**Calculation Program Setup**

Title: Calculation of a Spherical Roller Bearing (C-design)  
 Program Description: [Link to document with program description](#)  
 Responsible: Leif Lundvall  
 Last Update Date: 15-aug-03

System data  
 Calculation Program: GT68YZ05\_2\_0\_EXE  
 Version: 2.0  
 URL Local path: [http://4265.com.skf.net/TCS](#)  
 Input Layout: Horizontal

INPUT Attributes:	CPspafnumber	IRpartnumber	ORpartnumber	CPpartnumber	RSpartnumber	IRDD1	ORDD10	BCW30	ORR21	IRN30	BCZ36	ITYP
						150	225	56	3,5	User		
												2

Tool bar: WEPI Setup, Retrieve, Retrieve Document, Calculate, Save, WEX Copy, WEX Paste, WEX Split Sheet in Components, MUPU Help, About





# 2D and 3D creation



Product definition stored In Windchill

- 21309 EK/VE260
  - IR-21309 EK
  - OR-21309 E
  - CP-22211 EJ
  - RG-22211 E/VX201
  - RS-22211 E

Parameters downloaded from Windchill to the model

Wepi Toolkit v1.1 - Part Retrieve

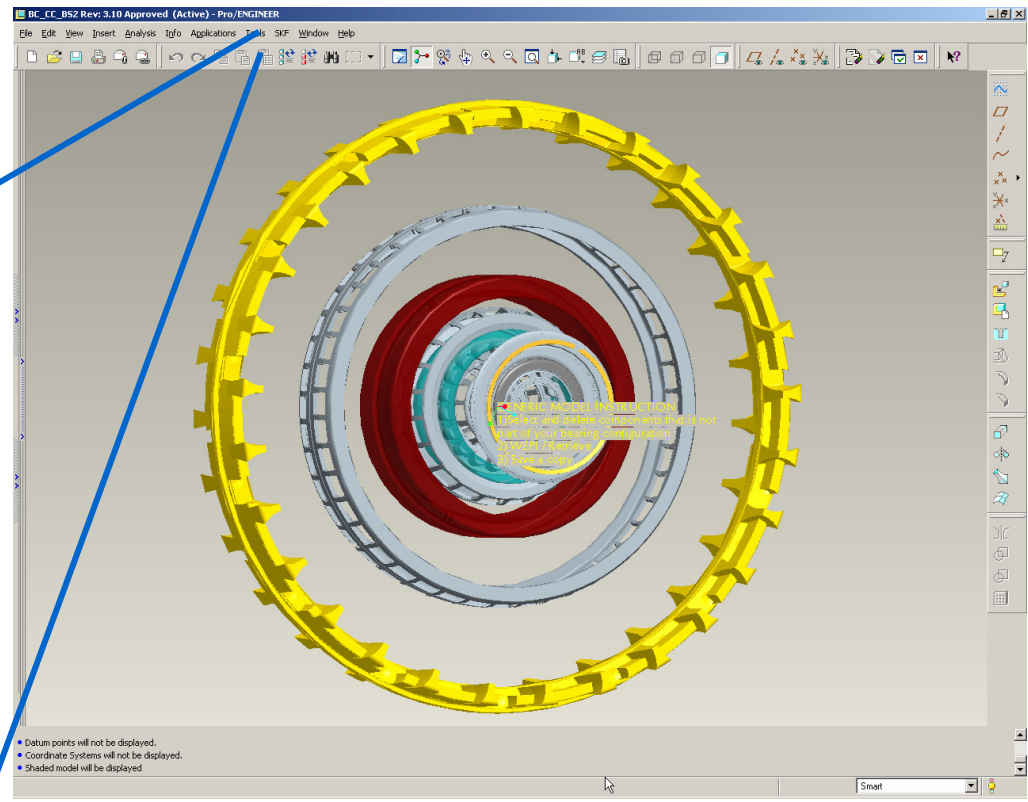
PartNumber: 21309 EK/VE260

Product/Component Search Setup

- Product code: part versions (latest as designed)
- Lifecycle State
- View
- Cabinet
- Version
- View
- Cabinet

Full Structure  Regenerate

OK Cancel



# 2D and 3D creation



## Non-scaled drawings used for communicating product information internally

- ☐ [21309 EK/VE260](#) 21309 EK/VE260 1 (As designed)
- .... Referenced: [BS2-BC-KEW33\\_DWG](#) BS2-BC-KEW33\_DWG 1
- .... Referenced: [DIM LIST-BS2-BC-KEW33](#) Dim list-BS2-BC-KEW33 1
- .... Describing: [GT02H5064](#) GT02H5064 1

Marking according to Non Scaled Report: Marking Parameters

Marking side

Taper  $\alpha$   $\$ \$ \$ R 03 \$ \$$

$\$ \$ B C W 30 \$ \$$

$\alpha$   $\$ \$ R 010 \$ \$$

$\alpha$   $\$ \$ R 020 \$ \$$

$\$ \$ B C Z 97 E \$ \$$   
 $\$ \$ B C Z 97 D \$ \$$   
 $\$ \$ B C Z 97 C \$ \$$   
 $\$ \$ B C Z 97 B \$ \$$   
 $\$ \$ B C Z 97 A \$ \$$

QTY	Description	Designation
$\$ \$ B C Z 97 A \$ \$$	Ring	$\$ \$ B C Z 97 A \$ \$$
$\$ \$ B C Z 97 B \$ \$$	Ring	$\$ \$ B C Z 97 B \$ \$$
$\$ \$ B C Z 97 C \$ \$$	Ring	$\$ \$ B C Z 97 C \$ \$$
$\$ \$ B C Z 97 D \$ \$$	Ring	$\$ \$ B C Z 97 D \$ \$$
$\$ \$ B C Z 97 E \$ \$$	Ring	$\$ \$ B C Z 97 E \$ \$$

Technical below are to SKF's external specifications.

Material Acc. to D33	Surface treatment $\$ \$ B C Z 17 \$ \$$	Heat treatment Acc. to D32	Marking procedure Acc. to D70
Additional processes EHD	Tolerances Acc. to D11 and EHD	Mass $\$ \$ B C H 01 \$ \$$ kg	Draw $\$ \$ B C F 01 \$ \$$ State
Extract from EHD original	Proved date $\$ \$ B C X T H A L T 0 A Y E \$ \$$	Revised date $\$ \$ M o d i f y T i m e s t a m p \$ \$$	Page 1/1

NOT IN SCALE

**SKF** Spherical roller bearing  
 $\$ \$ B C Z 30 \$ \$$

Version:  $\$ \$ v e r s i o n i d e n . \$ \$$



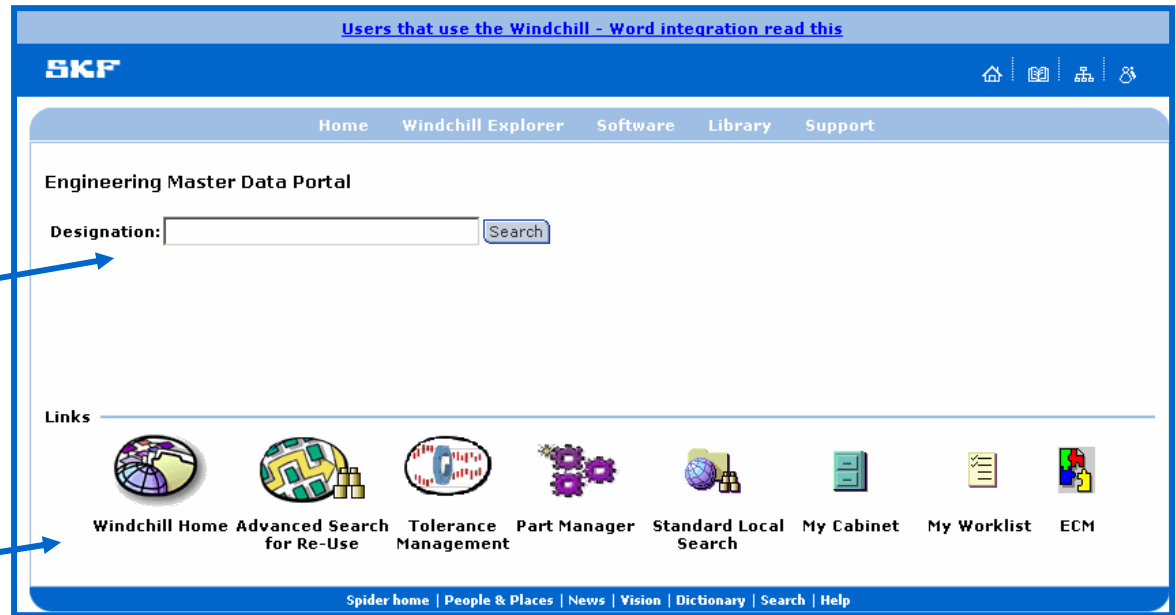
# Viewing product data



SKF solution based on Windchill which delivers product data to end users for viewing. For example the shop floor.

Search engine for product and component search.

Collection of links to other functionalities, example Part Manager.



# Viewing product data



Users that use the Windchill - Word integration read this

**SKF**

Home Windchill Explorer Software Library

**Engineering Master Data Portal**  
 Designation: 21309 EK/VE260 [\(Edit in PartManager\)](#)

**Attribute Reports:**  
[Navigate on Properties](#)  
[Navigate on Parameters](#)

**Non Scaled Reports:**  
[Assembly Basic E design](#)

**Scaled Drawing:**  
[Drawing Portal](#)

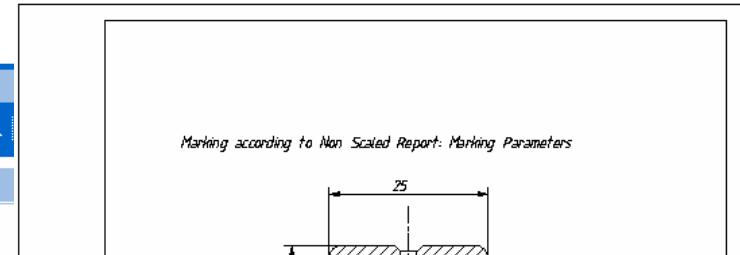
**Sub Components:**

<a href="#">CP-22211 E (CP-22211 E)</a>	2.0
<a href="#">IR-21309 EK (IR-21309 EK)</a>	1.0
<a href="#">OR-21309 E (OR-21309 E)</a>	1.0
<a href="#">RG-22211 E/VX201 (RG-22211 E/VX201)</a>	1.0
<a href="#">RS-22211 E (RS-22211 E)</a>	38.0

**Related Documents:**  
**References:**  
[DIM LIST-BS2-BC-KEW33](#)

**Described by:**  
[GT02H5064](#)

Spider home | People & Places | News |



**SKF** **PLM World**

## Drawing Distribution Portal

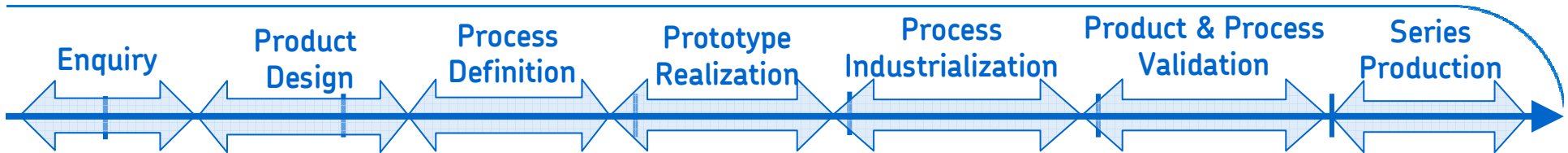
**SKF** **PLM World**

[Windchill Search](#)

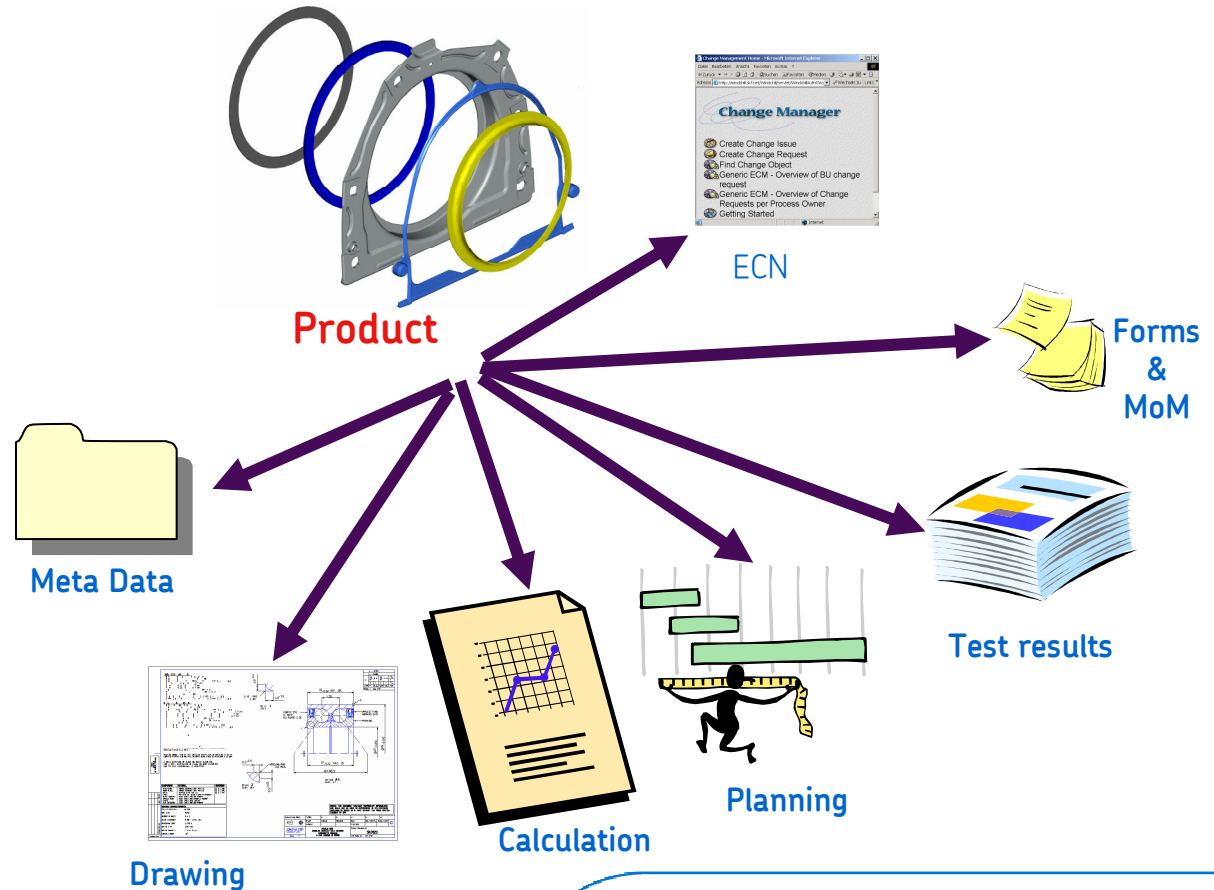
Number	Name	State	Drawing	Type	State
21309 EK/VE260	<a href="#">21309 EK/VE260</a>	RELEASEDFORMANUFACTURING	<a href="#">VE260 (1.1)</a>	Drawing	RELEASED
....IR-21309 EK	<a href="#">IR-21309 EK</a>	RELEASEDFORMANUFACTURING	No Drawing Exists		
....OR-21309 E	<a href="#">OR-21309 E</a>	RELEASEDFORMANUFACTURING	No Drawing Exists		
....CP-22211 EJ1	<a href="#">CP-22211 EJ1</a>	RELEASEDFORMANUFACTURING	<a href="#">cp_22211_ej1_11q00.dwg(1.1)</a>	CADDRAWING	INWORK
			<a href="#">254349_11q00 (1.1)</a>	Drawing	INWORK
			<a href="#">255108_11q00 (1.1)</a>	Drawing	INWORK
			<a href="#">254471_11q00 (1.2)</a>	Drawing	INWORK
			<a href="#">253084_11q00 (1.1)</a>	Drawing	INWORK
			<a href="#">254341_11q00 (1.1)</a>	Drawing	INWORK
			<a href="#">253228_11q00 (1.1)</a>	Drawing	INWORK
			<a href="#">255091_11q00 (1.1)</a>	Drawing	INWORK
			<a href="#">255106_11q00 (1.4)</a>	Drawing	RELEASEDFORMANUFACTURING
			<a href="#">254473_11q00 (1.1)</a>	Drawing	INWORK
....RG-22211 E/VX201	<a href="#">RG-22211 E/VX201</a>	RELEASEDFORMANUFACTURING	<a href="#">rg_22211_e_vx201_11q00.dwg(1.1)</a>	CADDRAWING	INWORK
....RS-22211 E	<a href="#">RS-22211 E</a>	RELEASEDFORMANUFACTURING	No Drawing Exists		



# Customized products engineering process

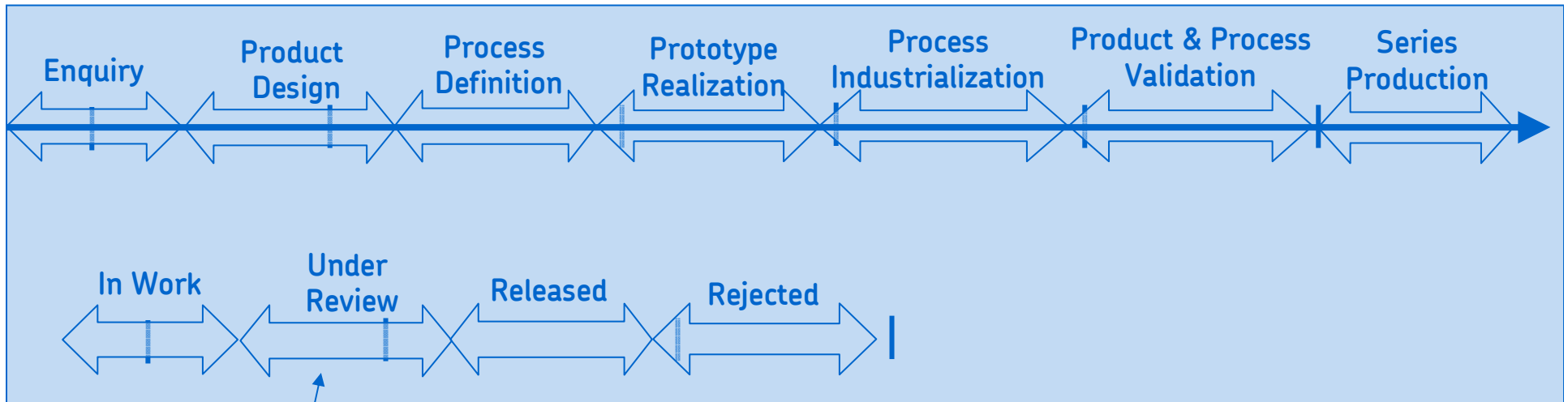


- Process driven engineering process to support APQP
- Windchill part created which acts like a binder for all related information
- BOM driven from Pro/INTRALINK via the Pro/INTRALINK gateway





SKF 100 YEARS 2007

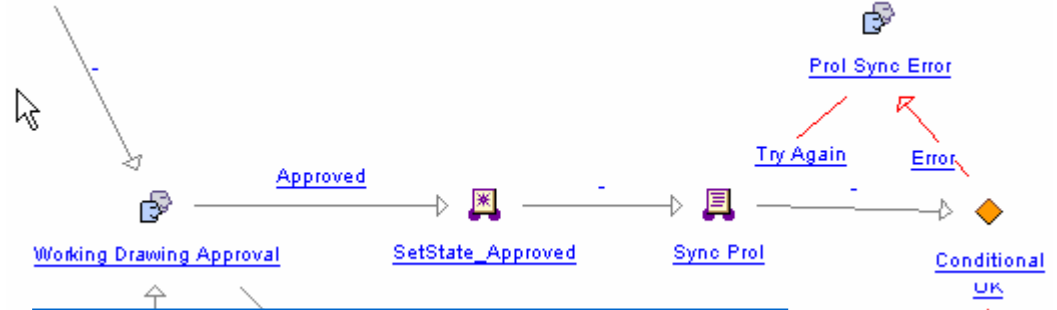


**Pro/I**

# Customized products – approval & distribution



- Pro/E Drawing approval in Windchill
  - Including CAD structure (ASM, PRT)
  - Release level in Pro/I changed by the workflow
  - The engineering process waits to continue until drawings are approved
- Drawing distribution



New Drawing is available for 33024/Q Task - Lotus Notes

File Edit View Create Actions Help

Address

Workspace Joerg Bongard - Inbox X New Drawing is available for... X

Neues Memo Antwort Weiterleiten Löschen Ordner Kopieren in Wei

Thilo.Beck@skf.com An: Joerg.Bongard@skf.com, Martin.Goessmann-Schr

20.03.2006 09:50 Kopie: Thema: New Drawing is available for 33024/Q Task

**Process Notification**

Process: AD\_TBU\_TRB\_CSDP\_WTPART\_33024/Q (33024/Q) 1

Process description: Zeichnungsverteilung

Activity name: Department2\_ & Department3

Activity description:

Subject object: [33024/Q \(33024/Q\) 1 \(As designed\)](#)

New drawings is now available.  
To launch the drawing, please click at this [link](#)

[Drawing Portal](#)

Number	Name	State	Drawing	Type	State
21309 EK/VE200	<a href="#">21309 EK/VE200</a>	RELEASEDFORMANUFACTURING	<a href="#">VE200 (1.1)</a>	Drawing	RELEASED
...IR-21309 EK	<a href="#">IR-21309 EK</a>	RELEASEDFORMANUFACTURING	No Drawing Exists		
...OR-21309 E	<a href="#">OR-21309 E</a>	RELEASEDFORMANUFACTURING	No Drawing Exists		
...CP-22211 EJ1	<a href="#">CP-22211 EJ1</a>	RELEASEDFORMANUFACTURING	<a href="#">cp_22211_ej1_11g00.dnu (1.1)</a>	CADDRAWING	INWORK
			<a href="#">254349_11g00 (1.1)</a>	Drawing	INWORK
			<a href="#">255109_11g00 (1.1)</a>	Drawing	INWORK
			<a href="#">254471_11g00 (1.2)</a>	Drawing	INWORK
			<a href="#">253084_11g00 (1.1)</a>	Drawing	INWORK
			<a href="#">254341_11g00 (1.1)</a>	Drawing	INWORK
			<a href="#">253328_11g00 (1.1)</a>	Drawing	INWORK
			<a href="#">255021_11g00 (1.1)</a>	Drawing	INWORK
			<a href="#">255108_11g00 (1.6)</a>	Drawing	RELEASEDFORMANUFACTURING
			<a href="#">254473_11g00 (1.1)</a>	Drawing	INWORK
...R0-22211 EV/201	<a href="#">R0-22211 EV/201</a>	RELEASEDFORMANUFACTURING	<a href="#">ra_22211_e_v201_11g00.dnu (1.1)</a>	CADDRAWING	INWORK
...RS-22211 E	<a href="#">RS-22211 E</a>	RELEASEDFORMANUFACTURING	No Drawing Exists		



# Customized products – document creation



▼ Wenn der Speicherung des **Template Dokumentes** beim Downloaden bzw. 'Speichern' nicht verändert wurde, schlägt WT das geänderte **Template Dokument** im Feld **Update Primary File** zum einchecken vor.

- Bestätigen Sie mit dem untenstehenden OK-Knopf das aufladen des geänderten **Template Dokumentes** nach WT
- Gehen Sie zurück zu der dieser Task (Klicken Sie auf den Worklist Link im unteren Menü auf der linken Seite).
- Füllen Sie Kommentar/Zusammenfassungsfeld im unteren Bereich der Task (Aufgaben) -Seite aus.
- Beenden der Aufgabe durch Anklicken von **Task Complete**.

<b>Role:</b>	Project manager
<b>Assignee:</b>	<a href="#">Joerg Bongard</a>

[Part 180\\_WFTE01 \(180\\_wfte01\) 1 \(As designed\)](#)

**Feasibility\_Risk\_Summary:** Feasibility Summary....., Joerg Bongard

, Joerg Bongard

**P\_FMEA:** [Document 180\\_WFTE01 P-FMEA \(180\\_WFTE01 P-FMEA\) 1](#)

**Flow\_Chart:** [Document 180\\_WFTE01 FLOW\\_CHART \(180\\_WFTE01 FLOW\\_CHART\) 1](#)

**Control\_Plan:** [Document 180\\_WFTE01 CONTROL\\_PLAN \(180\\_WFTE01 CONTROL\\_PLAN\) 1](#)

**Critical\_Characteristics:** [Document 180\\_WFTE01 CRITICAL\\_CHAR \(180\\_WFTE01 CRITICAL\\_CHAR\) 1](#)

**D\_FMEA:** [Document 180\\_WFTE01 D-FMEA \(180\\_WFTE01 D-FMEA\) 1](#)

**Summary:**

**Task Complete**

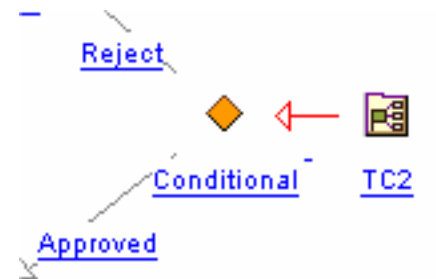
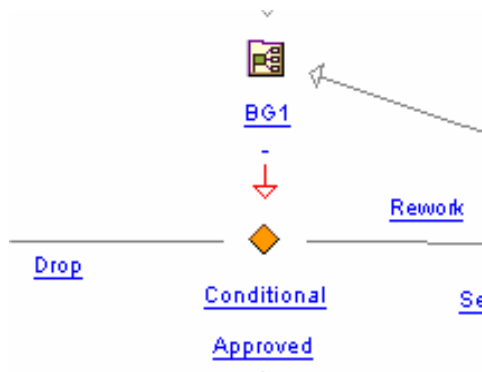
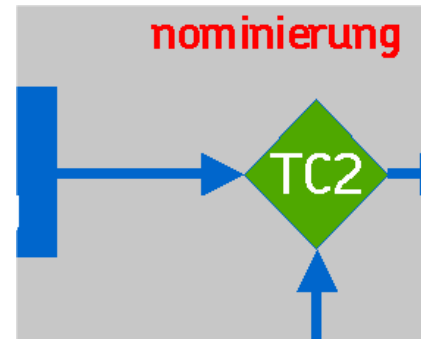
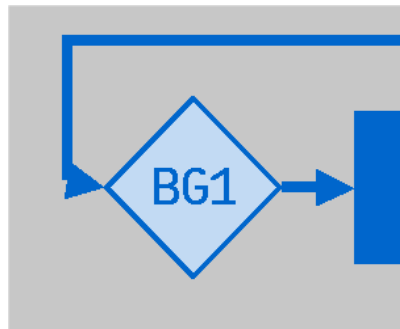


# Customized products – business gates



## Decision gates in the workflow

- BG's for management and TC's for project teams



# Customized products – team setup



Instructions:  
Bitte bestimmen Sie Team Zusammensetzung zeichnungs freigabeprozess

- Klicken Sie auf den untenstehenden Link [Upd](#) 'Update Team' Fenster zu öffnen
- Wählen Sie im [Update Team](#) Fenster für jede mindestens einen 3SE Mitarbeiter aus.

- **Design Manager**, 3SE Verantwortlicher für Freigabe der Kunden- bzw. Fertigungszeit
- **Sales Rep.**, 3SE Verantwortlicher Kunder

- Wenn alle gewünschten Personen in die Auswahl aufgenommen worden, Auswahlliste mit 'Done' schließen
- 'Update Team' Fenster mit 'OK' schließen
- Beenden der Aufgabe durch Anklicken von **Task Complete**

[Drawing 180\\_ apteam.drw \(180](#)

Update\_Team: [Update\\_Team](#)

Task Complete

## Workflow based team setup

- Plausibility check if all roles have been assigned to a minimum of one participant

SKF Windchill Team Instance update - Microsoft Internet Explorer

Group Intranet Home

### Update team

Team roles

Role	Members
Design Manager	
Sales Rep	

Search Search OK Cancel

SKF Windchill Team Instance update - Microsoft Internet Explorer

Group Intranet Home

Edit team role members

#### Members in role: Design Manager

Enter a name and press search

bong Search

Search for:  Users  Groups

Ldap selector: LDAP02

Bongard, Joerg (s813106)

Add >> << Remove

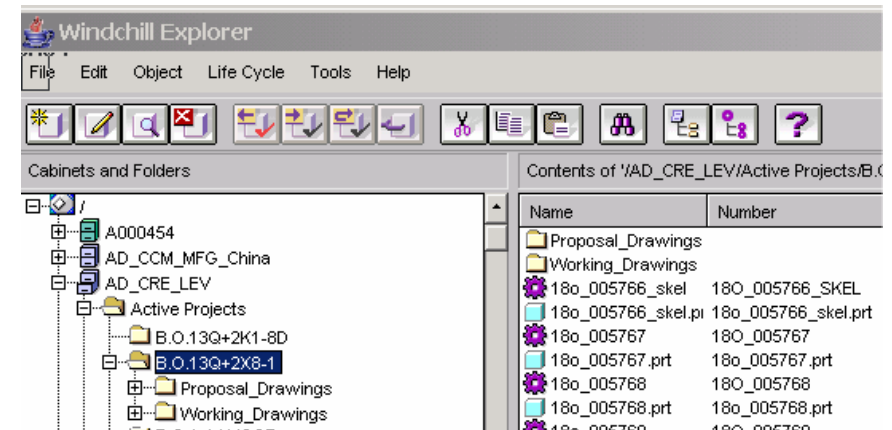
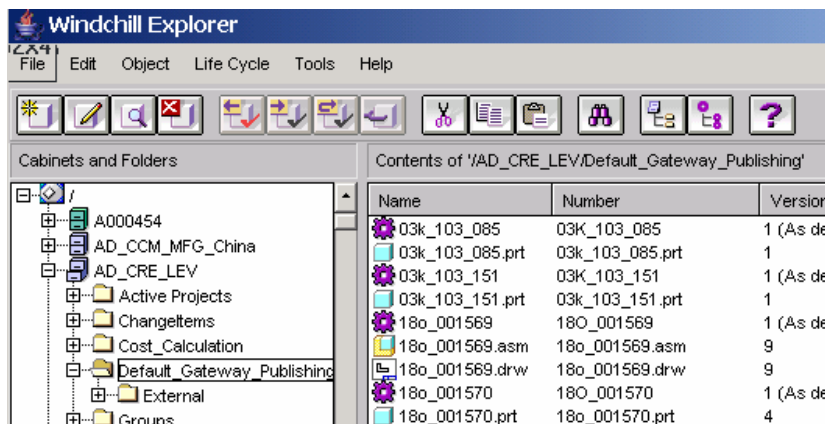
Done

# Customized products – organisation & access



Authorization based on Folder & Domain controls, move of the objects into the correct folders is workflow controlled

- All objects are created (PartManager & Intralink Gateway) in one folder
- Robots in the workflow taking care of the correct subfolder creation and domain settings based on attributes on the Windchill part



# Integration to Siebel



## The Siebel Drawing Portal

- Access to latest Proposal Drawing for a product or business opportunity.

The screenshot displays a web browser window titled "Production - HTIM - Microsoft Internet Explorer" showing the Siebel Drawing Portal. The browser address bar shows a URL starting with "http://163.157.2.157/htim\_om3/start.swe75WECmd=Login&SWEPL=1&SWETS=1194037929902". The Siebel interface includes a navigation menu with options like Home, Account Contact Search, Accounts, Contacts, Activities, Calendar, Opportunities, Business Opportunities, Service Requests, Agreements, Category, and Products. The main content area shows a "Product" form with fields for Product Line Desc., Sub-Product Line Desc., Description, Part #, Unit of Measure, SKF AM Designation, and Organization. Below the form, there are tabs for "Overview" and "Drawing Portal". The "Drawing Portal" tab is active, displaying a technical drawing of a spherical roller bearing. The drawing includes a 3D perspective view and a 2D cross-section view with dimensions. A table of technical specifications is visible in the top right corner of the drawing area.

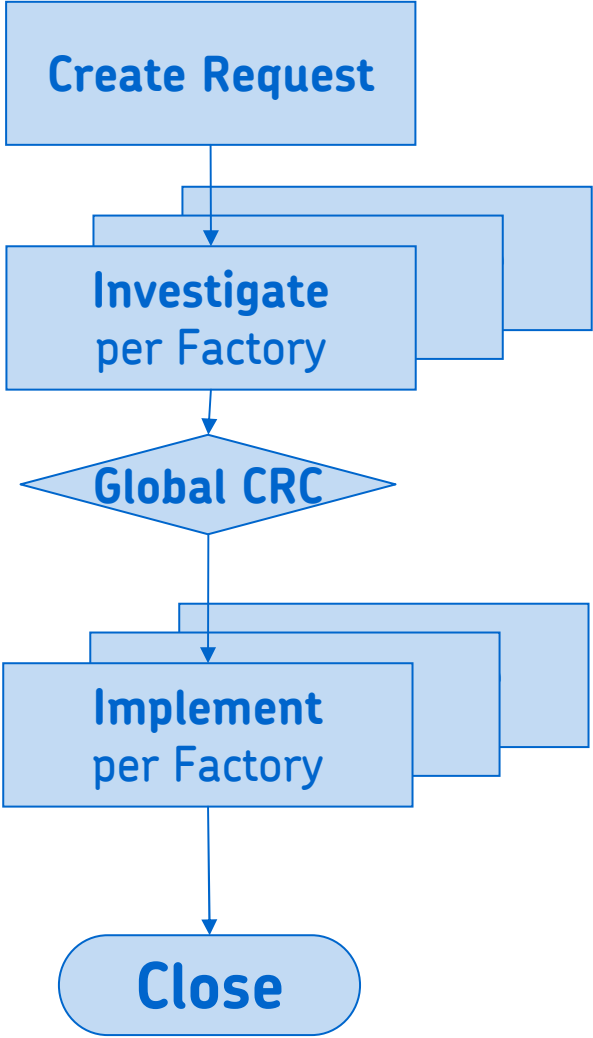
C	=	98500	N		
C <sub>10</sub>	=	90000	N		
P <sub>10</sub>	=	9800	N		
e					
f <sub>s</sub>					
f <sub>r</sub>					
X	Y	X	Y		
0,28	1	2,4	0,67	3,6	2,5
Mass = 0,52 kg					

# Customized products – other capabilities



- Classification robots for WTParts based for on WTParts IBA's, e.g. for gateway generated WTParts etc.
- Team inherit robots for inheriting the team from the Top Level WTPart to all newly created WTParts and EPMDoc's coming from a gateway publishing process that are in the structure of the Top Level WTPart
- Workflow controlled promoting of the whole WTPart structure from a current state to a following/another state based on gate/individual decisions
- Several Re-loop possibilities based on decisions made in the BG's and TC's or initiated from other approval processes as the drawing approval process and document approval process, e.g. the cost calculation
- Workflow checks if certain attributes are filled out/changed form their default values and in case they are missing generates a task to update them
- Sub workflows to synchronize the Top Level WTPart workflow with Drawing Approval workflows initiated for the CAD DRW level,
  - Main workflow needs to wait until all drawings loaded via the Gateway are approved

# Engineering Change Management



**Analysis Activity: 827 NSP 11,5-22-5/6,8 P FP 01776 (Completed)**

Chemical Laboratory		
Name	Decision:	Comments
Juergen Roos	Yes	
<b>Question</b>	<b>Answer:</b>	<b>Comment</b>
Are physical/chemical characteristics and analytics correct?	Not Applicable	
Which department(s) would you like to involve in the Implementation?	No	None

ECR Author		
Name	Decision:	Comments
Helmut Benedix	Yes	
<b>Question</b>	<b>Answer:</b>	<b>Comment</b>
01 Part Name/Title/Material:	Yes	RLS 827 NSP 11,5-22-5/6,8 PFP FP7205
02 Drawing Ident No.:	Yes	30861-9
03 Part Number:	Not Applicable	
04 Customer/Plant:	Not Applicable	LUK
05 Customer Drawing No.:	Not Applicable	
06 What is the reason for the change? (detailed description)	Yes	Die Formtrennung funktioniert nicht Flusenfrei. Dosierschwankungen können nicht aufgefangen werden. Hoher Ersatzteilbedarf

SKF Group Intranet

**Answer Questions**

**Change of bearing designation / suffix required?**

Answer:  **Yes / No /N/A**

Comments:

**Change of part designation / suffix required?**

Answer:

Comments:

**Change drawing immediately?**

Answer:

Comments:

**Change drawing with new order?**

Answer:

Comments:

**Questionnaire based on Department**



# Change management – create request



- Team selected depending on organisation and product line

### CHANGE MANAGER

Request

**Title:** Current material causes reduced life time ?

**Organization:** EDS Test Location

**Product Line:** EDS Test Product Line AD

**Customer:** Not Applicable - Update of configuration file needed?!?

**Reason Code:** Design Change  
Corrective Action  
Process Change  
Cost Reduction  
Supplier Change  
**Material Change**  
Internal Proposal  
Others

**Inventory Class:** Use old material until new arrives - requires CRC meeting

**Change Classification:** A- Customer approval required; CRC meeting required

**PPAP Required:** External level 1

**Need Date:** (MM/DD/YYYY)

**Description:** The current material is a problem due to that the life time is reduced when temperature is exceeding 140 deg. ?

File Attachment: Browse...  
File Attachment: Browse...  
File Attachment: Browse...  
File Attachment: Browse...

OK



# Change management – setup request



- Comments can be added which are attached as a file to the change request

The screenshot shows a Microsoft Internet Explorer browser window titled "Add Comment to the Change Request". The address bar shows a URL from SKF's internal system. The page content includes a left-hand navigation menu with links like Home, Personal Cabinet, Checked Out Folder, Search, Worklist, Create Document, Visualization Clipboard, and Preferences. The main content area has a header "Add Comment to the Change Request" and a "Help" link. Below the header, there are instructions for adding comments, a "Process" field with a dropdown menu, and a "Task Complete" button. A modal dialog box is open, titled "SKF Generic ECM - Microsoft Internet Explorer", with the SKF logo and "Group Intranet Home" text. The dialog contains a text area with the comment "Customer informs that the problem started in August 07." and "OK" and "Cancel" buttons. Below the dialog, there is a "Previous comments:" section.



# Change management – setup request



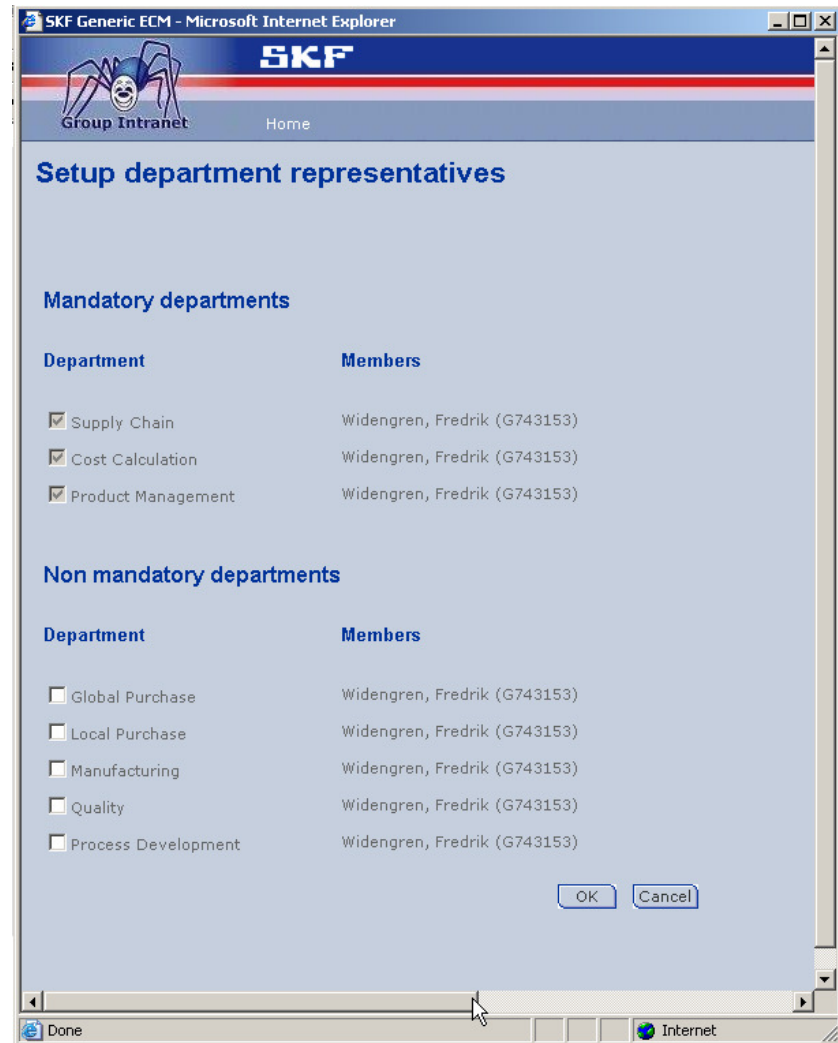
- Select routing
  - Ask expert
  - Change ECO
  - Accept / Reject
- PPAP expert determines PPAP requirements if necessary
- Change classification resp. determines if a CRC meeting is needed or not



# Change management - investigation



- The change owner can select which departments are needed to participate in the change
- Questions in the investigation are based on department.



# Change management - investigation



- Each department answers the questions needed
- Questions can be added
- Every department can propose other departments needed in the process

Cost Calculation - Review Questions Help ?

**Instructions:** To Review the Questions, Take a Decision on the Investigation and to propose other departments to participate in the Investigation, do the following:

**Process:** [ECMAnalysisActivity\\_AD\\_02913 \(Current material causes reduced life time\)](#)

- Answer the Questions:
  - Click on the Link [Go to Questions](#). This will have to answer.
  - Answer **all** the questions. If you forget to answer, the questions will be send back to you
  - At any given time you can save the questionnaire by clicking the **OK** button in the window.
  - Specify the reason of your decision in the comments field.
- Propose the participation of other Departments in the process:
  - Review the departments that are selected in the [Review Departments](#).
  - Specify the Departments that should also participate in the process in the **Additional Departments** field.

**Additional Departments:**

**Info:** Specify additional Departments

**URL:** [View Questions and Answers](#)

Object is ready for promotion

Approve  
 Reject

**SKF Generic ECM - Department questionnaire (Cost Calculation) - Microsoft Internet Explorer**

**SKF**  
Group Intranet

### Answer Questions

**Are customer information necessary?**

Answer:

Comments:

**Are there any department(s) which you want to involve in the implementation of the change? Please insert below.**

Answer:

Comments:

Completed	Reviews	Role	Approve	Comments
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# Change management - investigation



- Invitation to the CRC is initiated from the workflow process
- Attendees can view a summary of the questions and answers from the investigation

**Initiate CRC Board Meeting**

**Instructions:**  
Select **Initiate CRC Meeting** to initiate a CRC Board meeting. Select "Answers" and Select Initiate CRC

**Info:** Please Add a Message to the CRC Board when you are ready to start the meeting.

**Message:**

**URL:** [View Questions and Answers](#)

Object is ready for promotion

Wait  
 Initiate CRC Meeting

**Task Complete**

Completed	Review
2007-11-05 08:24:26 CET	Fredrik V
2007-11-05 08:28:05 CET	Fredrik V
2007-11-05 08:26:07 CET	Fredrik V
2007-11-05 08:28:27 CET	Fredrik V

---

**SKF Generic ECM - Microsoft Internet Explorer**

**SKF Group Intranet**

**Title:** Revise manufacturing method  
**Created by:** Fredrik Widengren  
**Created:** 2007-11-05  
**Organization:** EDS Test Location  
**Product Line:** EDS Test Product Line ID  
**Customer:** Not Applicable - Update of configuration file needed?!  
**Reason Code:** Part status change  
**Inventory Class:** All parts must conform - requires CRC meetings  
**Change Classification:** A- Customer approval required;CRC meeting required  
**PPAP Required:** External level 2  
**Number:** 03762  
**State:** Investigation  
**Need date:**  
**Location:** /EDS/ChangeItems  
**Description:** There has been some problems in the process ...

**Departments in the Study**

- Cost Calculation
- Process Development
- Product Management
- Supply Chain

**Departments NOT in the Study**

- Global Purchase
- Local Purchase
- Manufacturing
- Quality

**Cost\_Calculation**

Name	Vote	Comments
Fredrik Widengren	Yes	Added a new comment.

**Question**

Question	Answer	Comment
Are there any department(s) which you want to involve in the implementation of the change? Please insert below.	Yes	adasdasdasd
Have you reviewed other similar changes?	Yes	asdasdasd

**Process\_Development**

# Change management - implementation



**Investigate** Help ?

[Change Home](#)
[Request](#)
[Investigate](#)
[Propose](#)
[Implement](#)
[Email page](#)

**Change Investigation 03159 (Current material causes reduced life time)** [Update](#)

Change Owner: [Fredrik Widengren](#)

State: [Completed](#)

Results: See attached document for investigation summary

Description: Change Investigation for SkfChangeRequest - 037

**Change Investigation Attachment(s)**

File Name	Format	File Size
<a href="#">03763_Study_Questionnaire_Final.xls</a>	Microsoft Excel	4.8
<a href="#">Customer_Questionnaire.xls</a>	Microsoft Excel	13.3

[Skf Analysis Activity 02913 \(Current material causes reduced life time\)](#)

	A	B	C	D	E	F
1						
2		<b>Title:</b> Current material causes reduced life time				
3		<b>Created by:</b> Fredrik Widengren				
4		<b>Created:</b> 2007-11-05				
5		<b>Organization:</b> EDS Test Location				
6		<b>Product Line:</b> EDS Test Product Line AD				
7		<b>Customer:</b> Not Applicable - Update of configuration file needed!?				
8		<b>Reason Code:</b> Material Change				
9		<b>Inventory Class:</b> Use old material until new arrives - requires CRC meeting				
10		<b>Change Classification:</b> A- Customer approval required;CRC meeting required				
11		<b>PPAP Required:</b> External level 1				
12		<b>Number:</b> 03763				
13		<b>State:</b> Investigation				
14		<b>Need date:</b>				
15		<b>Location:</b> /EDS/Changeltems				
16		<b>Description:</b> The current material is a problem due to that the life time is reduced when temperature is exceeding 140 deg.				
17						
18		<b>Analysis Activity: Current material causes reduced life time 02913 (Completed)</b>				
19		<b>Supply Chain</b>				
20		<b>Name</b>		<b>Decision:</b>	<b>Comments</b>	
21						
22		Fredrik Widengren		Yes		
23		<b>Question</b>		<b>Answer:</b>	<b>Comment</b>	
24		Há a necessidade de: abrir, alterar ou cancelar IAEs?		No		
25		This is test question from ruesv44		No		
26		A alteração impacta o cadastro de IMDS?		Yes		
27		Are there any department(s) which you want to involve in the implementation of the change? Please insert below.		Yes		
28						
29		<b>Cost Calculation</b>				
30		<b>Name</b>		<b>Decision:</b>	<b>Comments</b>	
31						
32		Fredrik Widengren		Yes		
33		<b>Question</b>		<b>Answer:</b>	<b>Comment</b>	
34		Are customer information necessary?		Yes	Yes more field data is needed.	
35		Are there any department(s) which you want to involve in the implementation of the change? Please insert below.		No		
36						
37		<b>Product Management</b>				
38		<b>Name</b>		<b>Decision:</b>	<b>Comments</b>	

- A report of the questions and answers is added to the change investigation



# Change management - implementation



- Change owner can delegate responsibility of the implementation
- Handle within ECM
- Handle outside ECM

### Define Implementation

<p><b>Instructions:</b> To Define the Implementation Select one of the 3 main options and follow the instructions:</p> <ul style="list-style-type: none"> <li>• <b>Delegate:</b> Delegate the responsibility of the Implementation to an Implementation Responsible.                             <ul style="list-style-type: none"> <li>○ Click on the Link: <a href="#">Select the Local Implementation Responsi</a>. A new window pops up.</li> <li>○ In the new window specify the person who will be the Local Implementation Responsible. Close and save the Window by hitting the <b>OK</b> button.</li> <li>○ Select the <b>Delegate</b> choice.</li> </ul> </li> <li>• <b>Manage within ECM:</b> Execute the Implementation of the Change Request yourself within the Change Process.                             <ul style="list-style-type: none"> <li>○ Review the list of involved products.</li> <li>○ Create Plan based on "MasterPlan" and attach this plan to the Change Request</li> <li>○ Click on the Link: <a href="#">Select Departments</a> to select the departments who will participate in the Implementation.</li> <li>○ Select the <b>Manage within ECM</b> choice</li> </ul> </li> <li>• <b>Manage outside ECM:</b> Execute the Implementation in a project management system and only track the completion of the Implementation in the Change Management System.                             <ul style="list-style-type: none"> <li>○ Select the <b>Manage Outside ECM</b> choice.</li> </ul> </li> </ul> <p>When Done hit the <b>Task Complete</b> button.</p> <p>◆ <a href="#">Change Activity 02504 (Current material causes reduced life time)</a></p> <p><b>URL1:</b> <a href="#">Select the Local Implementation Responsible</a></p> <p><b>URL2:</b> <a href="#">Select Departments</a></p> <p><b>Info:</b></p> <p><b>Info2:</b></p> <p><input checked="" type="radio"/> Delegate</p> <p><input type="radio"/> Manage within ECM</p> <p><input type="radio"/> Manage outside ECM</p>	<p><b>Process:</b> <a href="#">ECMChangeActivity_AD_02 causes reduced life time</a></p> <hr/> <p><b>Process Initiator:</b> <a href="#">Administrator</a></p> <hr/> <p><b>Due Date:</b></p> <hr/> <p><b>Role:</b> Change Owner</p> <hr/> <p><b>Assignee:</b> <a href="#">Fredrik Widengren</a></p>
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# Change management - closing



## Change Request to be Completed ? Help

**Instructions:** The Change Request has now been finished by the concerned departments. To complete the task you can either:

- Select **Expert** to delegate the selection of Customer Contacts to a Customer Contact Expert specify the Expert to whom the task will be delegated by Clicking on the Link: [Select an Expert](#)
- Select **Complete** if you select the Customer Contact(s) your self. Specify the Customer Contact(s) by Clicking on the Link: [Select Customer Contact](#)
- Select **End (with informing customer)** when the Customer does not need to be informed (Customer Classification B and C change).

**NOTE!**  
When this task is completed and when the customers have been notified by the Customer Contacts, the Change Request will be completed

<b>Process:</b>	<a href="#">ECMChangeOrder_02522 (Current material causes reduced life time)</a>
<b>Process Initiator:</b>	<a href="#">Fredrik Widengren</a>
<b>Due Date:</b>	
<b>Role:</b>	Change Owner
<b>Assignee:</b>	<a href="#">Fredrik Widengren</a>

## Request ? Help

[Change Home](#)   [Request](#)   [Investigate](#)   [Propose](#)   [Implement](#)   [Email page](#)

**Title:** Current material causes reduced life time  
**Created By:** [Fredrik Widengren](#)      **Created:** 2007-11-05 09:02:37 CET  
**Team:** [\(Current material causes reduced life time\)718895](#)

**Organization:** EDS Test Location  
**Product Line:** EDS Test Product Line AD  
**Customer:** Not Applicable - Update of configuration file needed?!?  
**Reason Code:** Material Change  
**Inventory Class:** Use old material until new arrives - requires CRC meeting  
**Change Classification:** A- Customer approval required,CRC meeting required  
**PPAP Required:** External level 1  
**Number:** 03763  
**State:** [Implementation](#)      **Need Date:**  
**Location:** [/EDS/Changeltems](#)

**Description:** The current material is a problem due to that the life time is reduced when temperature is exceeding 140 deg.

### Change Request Attachment(s)

File Name	Format	File Size	Last Updated	Updated By
<a href="#">comments.txt</a>	Text File	0.06 KB	2007-11-05 09:06:22 CET	<a href="#">Fredrik Widengren</a>



2

IT environment

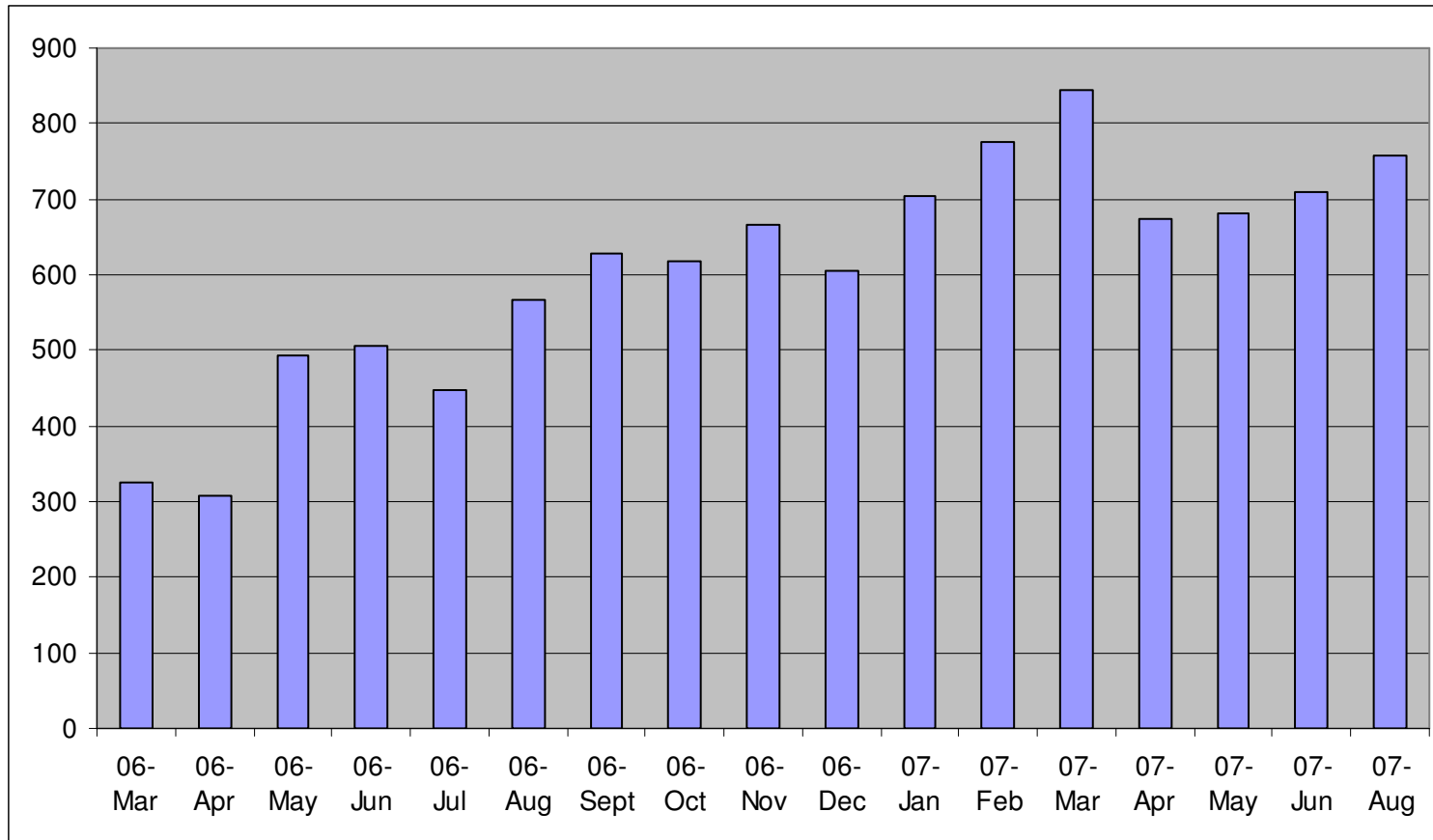
**SKF**<sup>®</sup>



# Windchill Users



## Unique users accessing Windchill / month

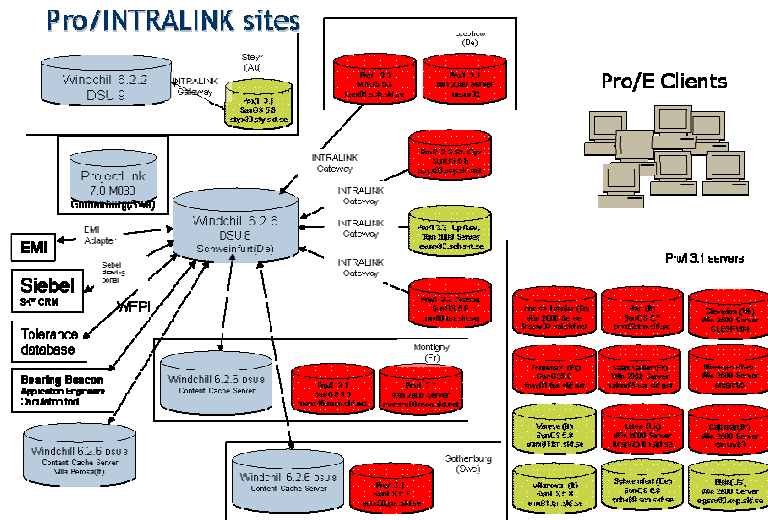


Total number of users: ~1800

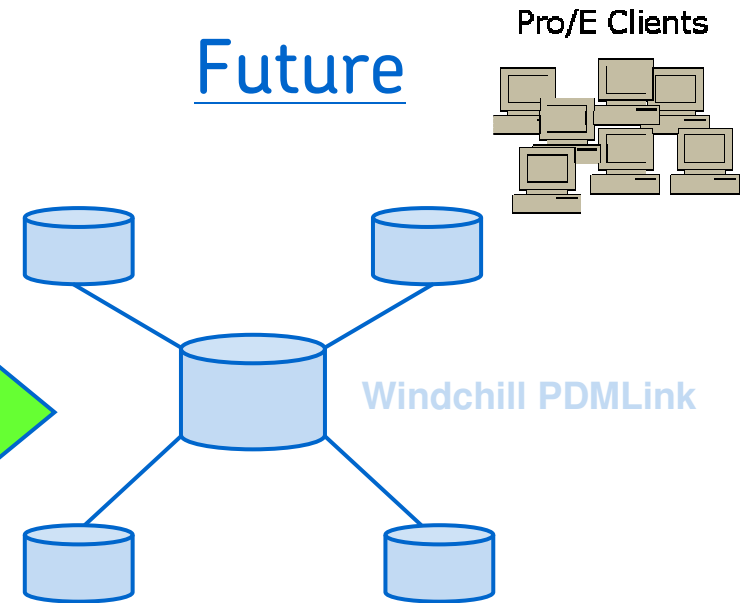
# IT Structure Roadmap



## Today



## Future



- Common Access to Product Data
- Increased End-user Productivity
- Increased Adoption of Tools & Processes
- Reduced Customization Costs
- Reduced Maintenance Costs



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