

THIS IS
PROST

AN INTRODUCTION

PRIME WORKSHOP w442



PROST

IS AN ACRONYM FOR

PROduct STructure

THIS IS PROST

PROST

IS THE PDM-SYSTEM WHERE MOST OF
VOLVO CONSTRUCTION EQUIPMENT'S
PRODUCTS ARE DOCUMENTED



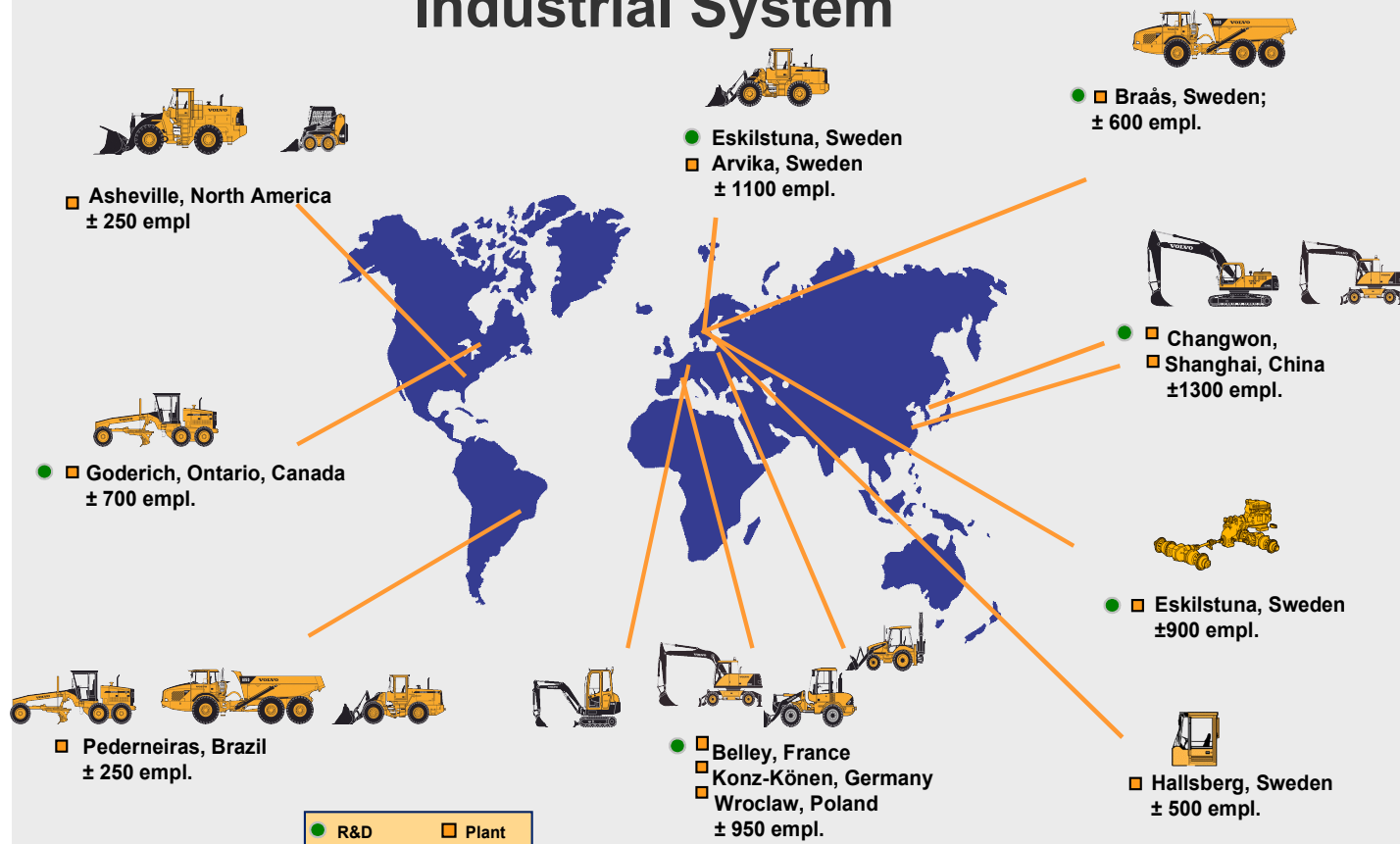
VOLVO CONSTRUCTION EQUIPMENT

Industrial structure

Volvo Construction Equipment

12

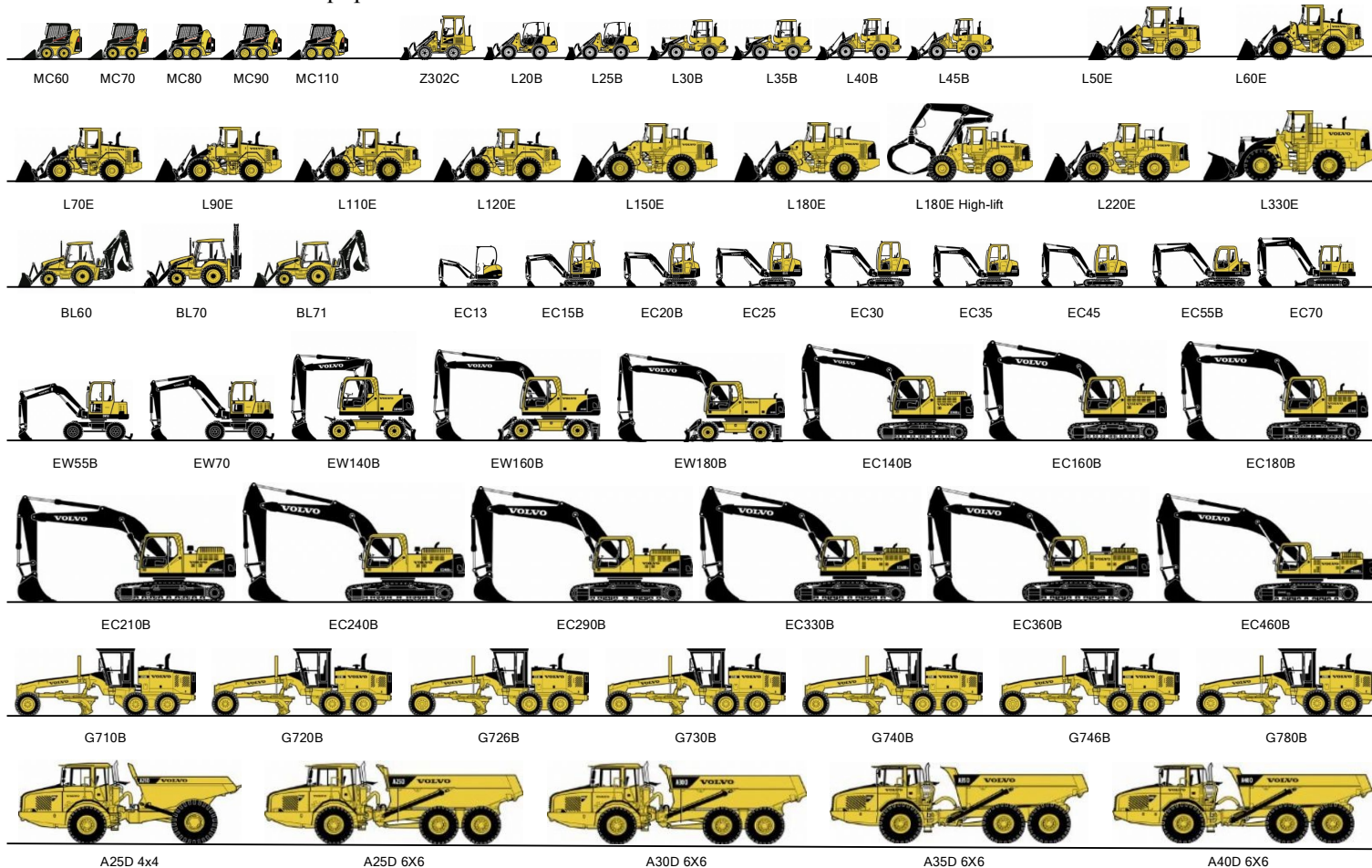
Industrial System



VOLVO CONSTRUCTION EQUIPMENT'S Product program

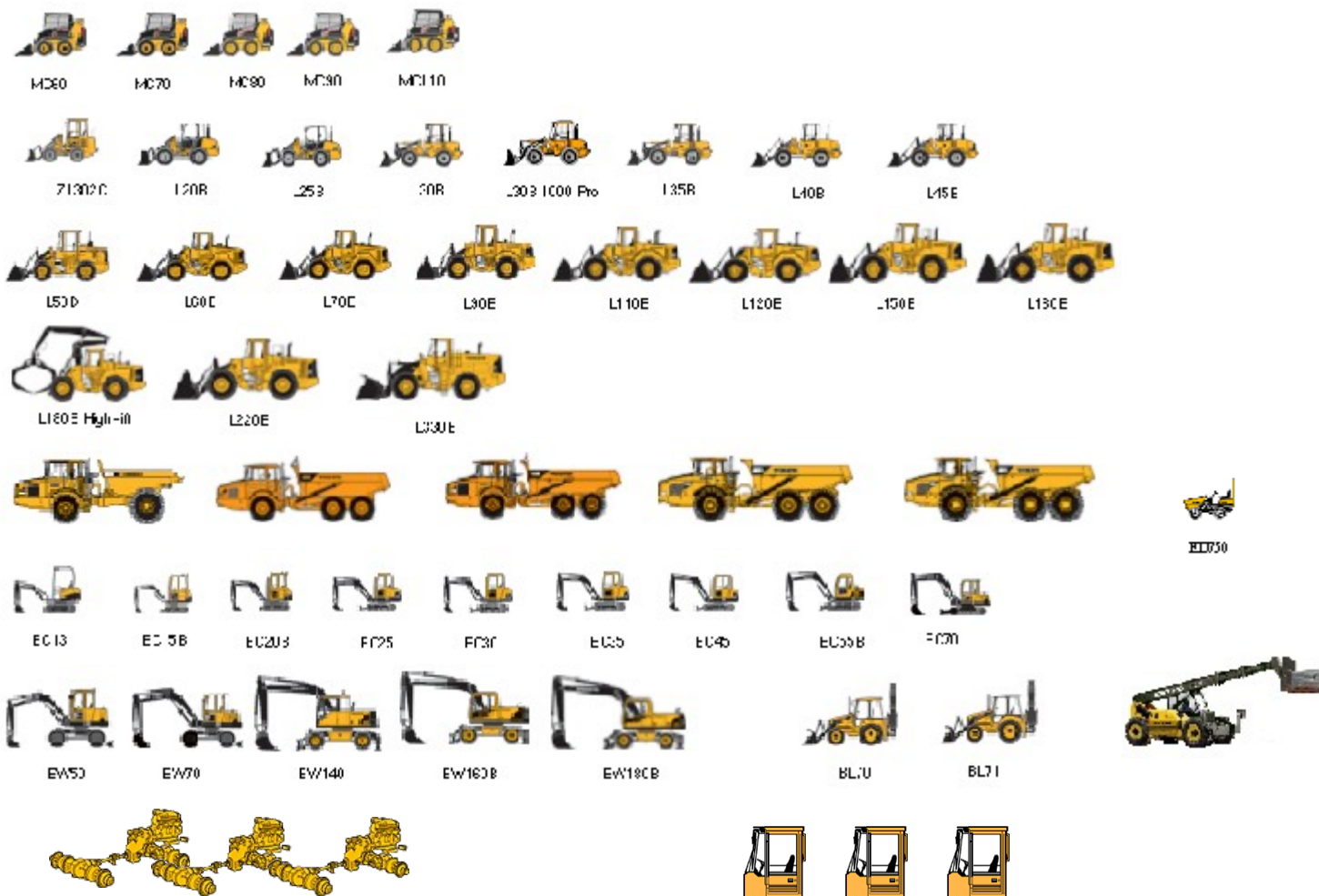
All products are not available in all markets

Volvo Construction Equipment



PRODUCTS IN PROST

(more or less)



PRODUCTS IN OTHER PDM SYSTEMS

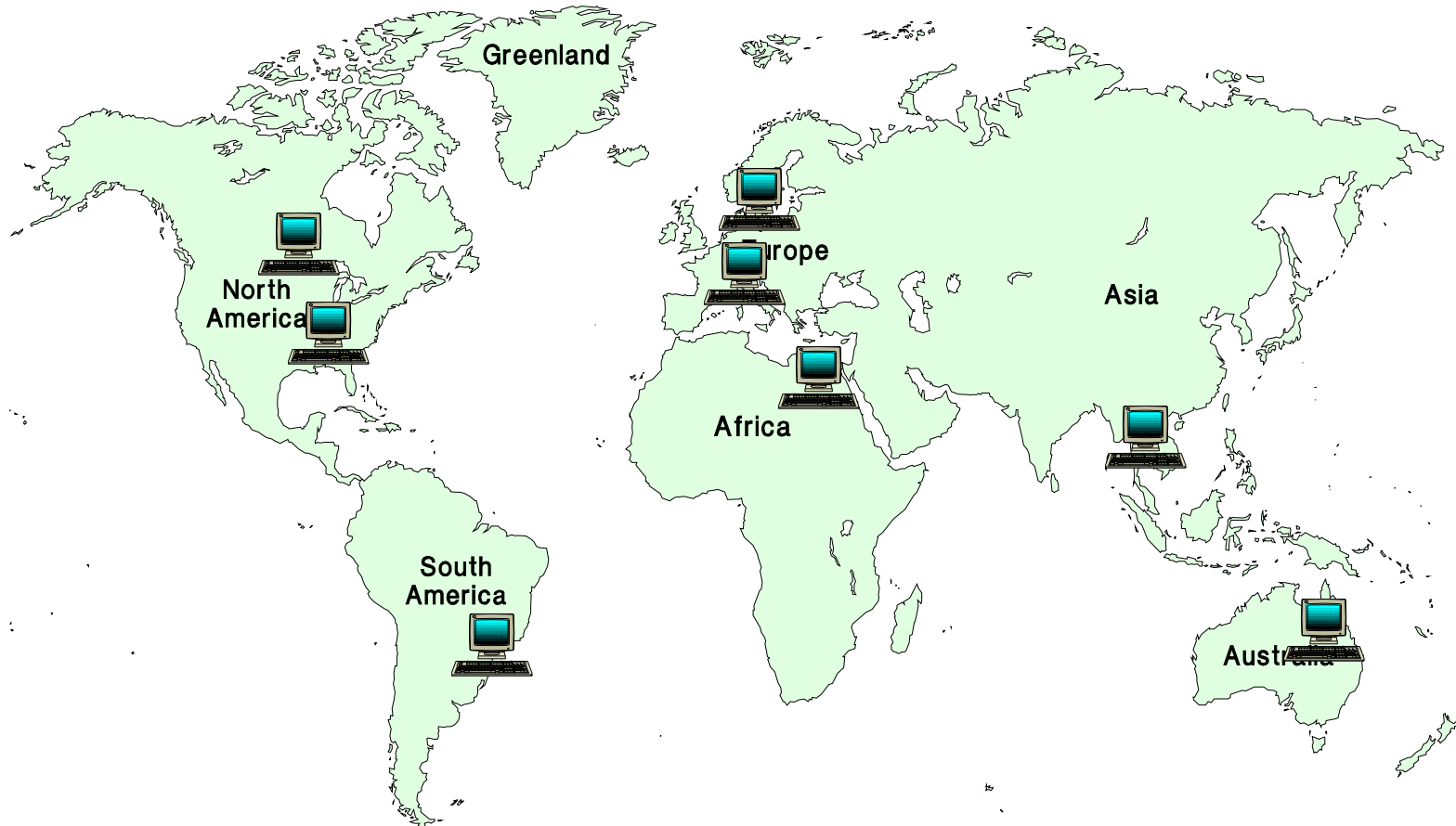
SAP



VPM

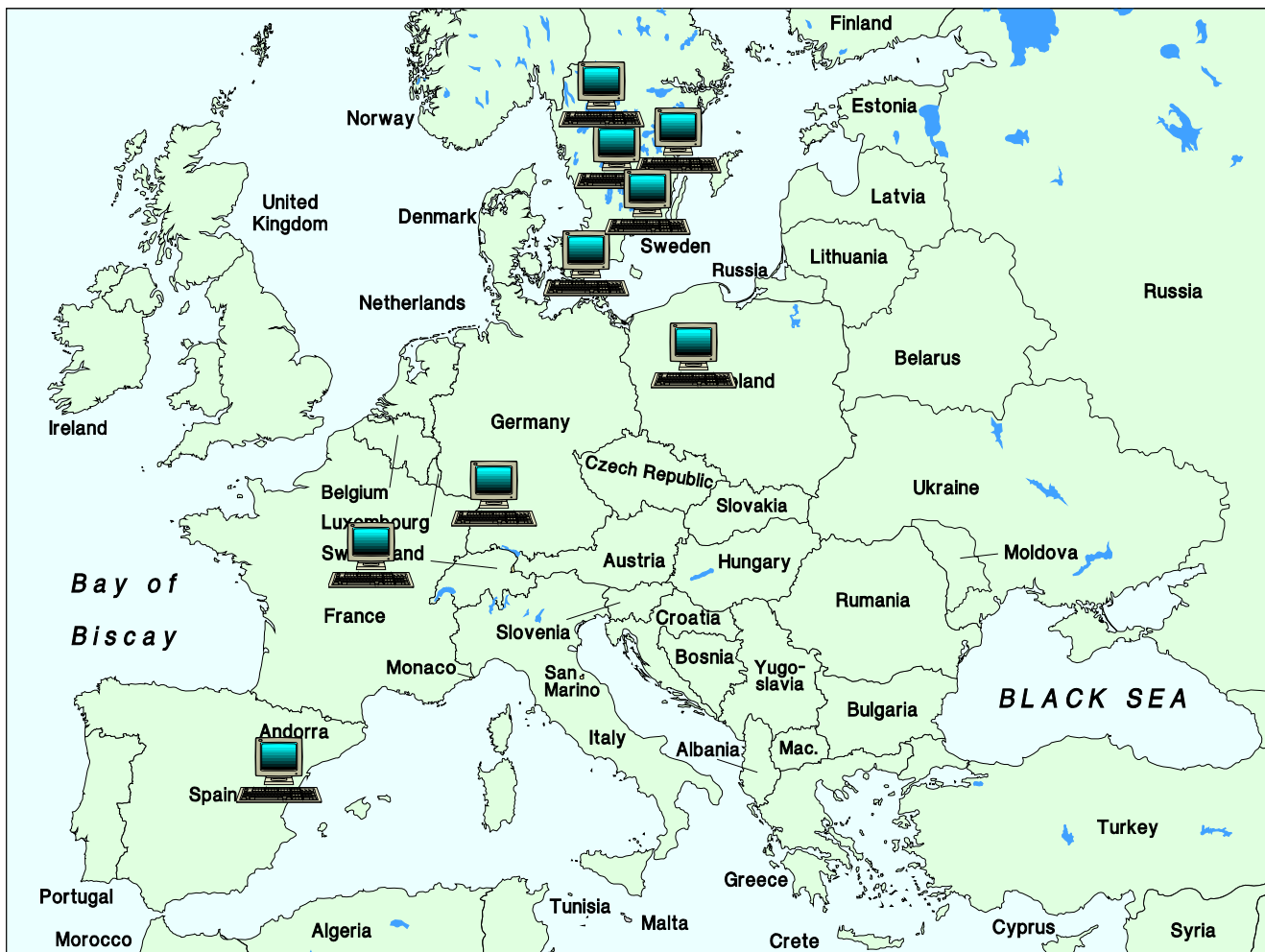


THE PROST WORLD



PROST IN EUROPE

Scaled to Central Europe (Mercator Projection)

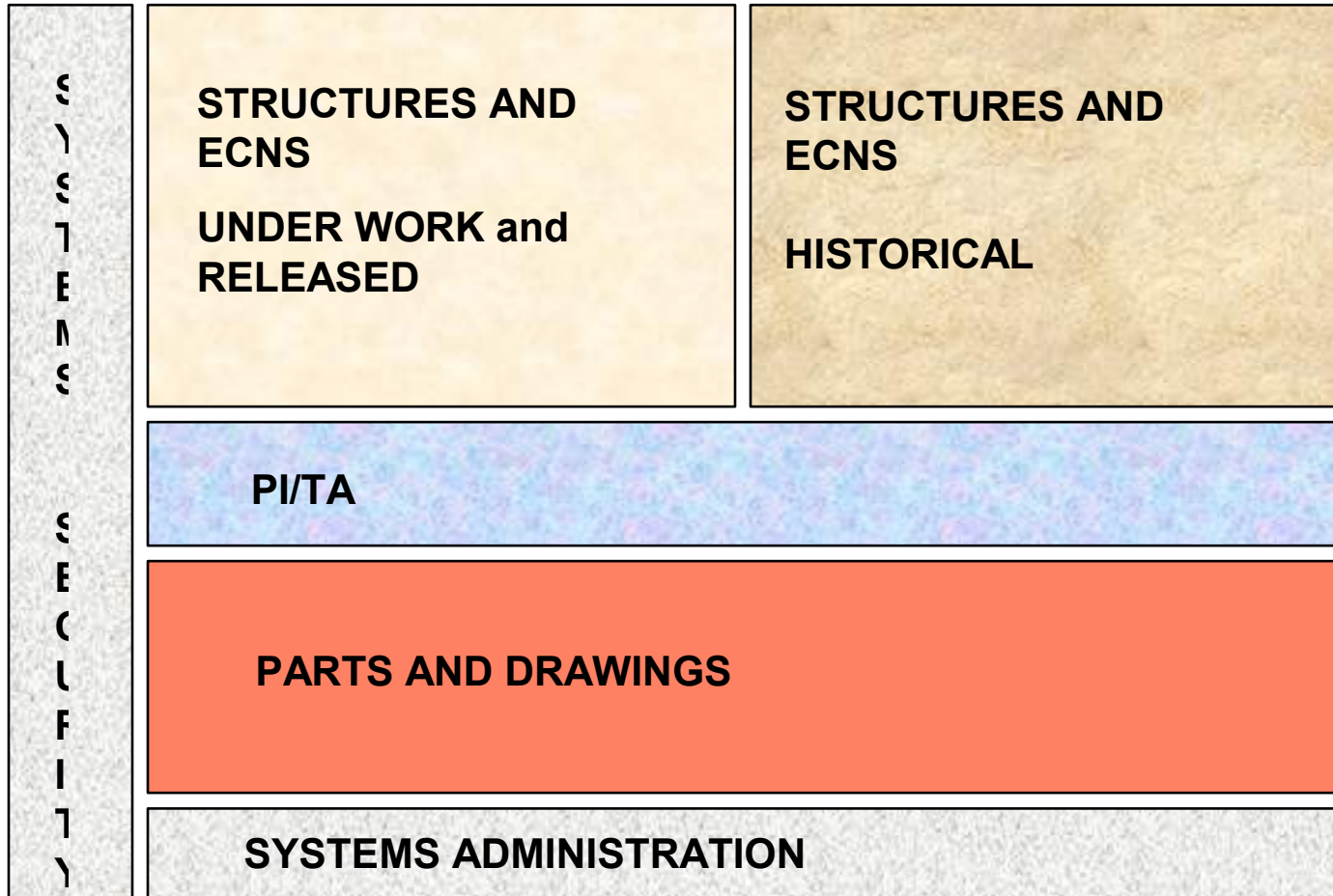


INFORMATION IN PROST

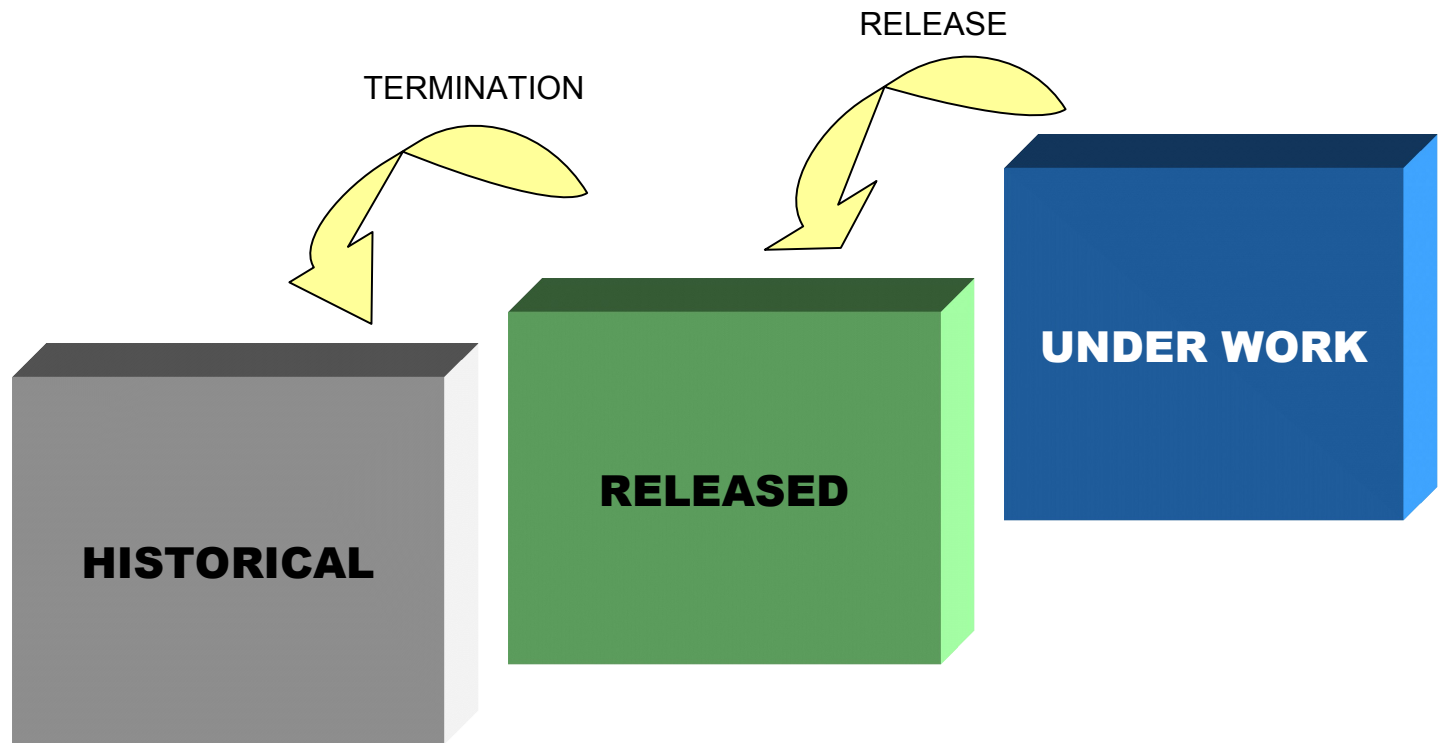
THE FOLLOWING INFORMATION CAN BE FOUND
IN PROST

- **PARTS and DRAWINGS (meta-data)**
- **PRODUCTS and OPTIONS**
- **ARTICLE STRUCTURES (Bill of Material)**
- **ENGINEERING CHANGE NOTICES (ECN's)**

THE CORNER STONES



INFO LIFE CYCLE



SUB-SYSTEMS

- PROST
is divided into a number of sub-systems
- A SUB-SYSTEM
is a collection of transactions or functions which
belong together from a logical point of view

TRANSACTION

TERMINAL - RUMBA Mainframe Display

File Edit View Connection Transfer Options Tools Help

PROST UPSAA PART INFORMATION 04/10/05 15:26:35 PAGE 1

PART NO : 00941907 WASHER, FB 8,4 WASHER, FB 8,4 KILLED:
 ORIGIN : WLO BRICKA FB 8,4 BRICKA FB 8,4 HOM-CODE:

DWNG NO : 04930001 FORMAT : VAL/ISSUE: CHANGED : 930830
 DEPT/RESP : STD DRAWN BY: KEM DATE/REG : 821111 U/M : ST

STD/REG NO: 7214, RECOMMENDATION GRADES EAS : YES
 PART TYPE : S BRS : 2 ART : 1 WLO : 1 LEG RQMT:
 BORR FROM : COLL: 4
 LOAN TO : SEE NEXT PAGE BORN BY :
 SUPERSEDED BY: DIED BY :

DOCUMENT : SEE NEXT PAGE
 MATERIAL : STEEL SURFACE TREATMENT: ELFÖRZINKAD

SPARE PART -CODE: X - ASSEMBLY : NO -REF:

FREE TEXT :

2=ARCHIVEINFO 3=W-USED 6=VSP-INFO 8=FORWARD 10=RTN 11=TERMINATE
 EXISTS IN OFF.WHERE-USED (PF3) CONT

Ready Running APL NUMFLD TV513047 OVR CAP NUM W 3,14 15:31:19

SUB-SYSTEMS in PROST

- PART- and DRAWING INFORMATION
- DICTIONARIES
- ACRIS (Article CRoss Index System)
- COST and MASS INFORMATION

- PI/TA (Product identities and technical authorization)

- STRUCTURES UNDER WORK
- RELEASED STRUCTURES

MORE SUB-SYSTEMS in PROST

- ECN:s UNDER WORK
- DOCUMENT CHANGES
- ECN INFORMATION (released ECN:s)

- RELEASE/TERMINATION

- HISTORICAL STRUCTURES and ECN:s

- REPORT and FILE REQUESTS

- SYSTEMS ADMINISTRATION

TRANSACTION SURVEY

Adobe Acrobat - [English.PDF]

File Edit Document Tools View Window Help

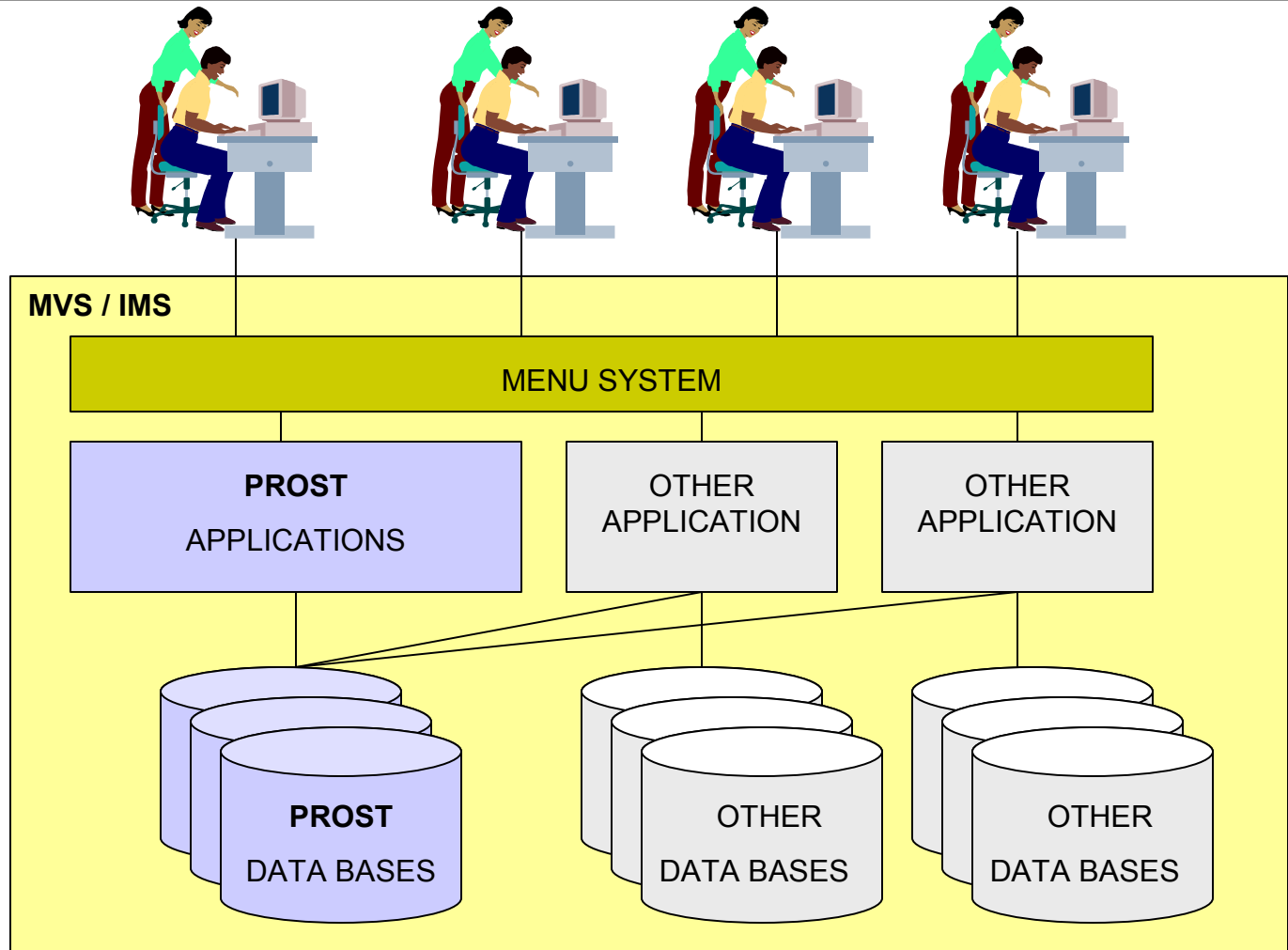
PROST TRANSACTION SURVEY

	UACR --	UPRA --	UPRB --	UPRC --	UPRD --	UPRE --	UPRF --	UPRG --	UPRH --	UPRI --	UPRL --	UPRN --	UPRP --	UPRX --	UPRZ --
A	REPORTING -- EXTERNAL PART NO	PART INFORMATION	WORKPI INFORMATION		ROWS FOR PART NO ADDED/DELETED	WORK EDITING PER DEPARTMENT	ROWS PER DEPARTMENT	RELEASE OF STRUCTURES UNDER WORK	REPORT REQUEST -- SPEC DESCRIPTION OF CONTENT			PART INFORMATION	PRINTING LOG (PART/SWIRL)	ADDDITION PARTNAME	ADMINISTRATION OF WORKING PER GROUP
B	INTERNAL PART -- PART NO	ADDDITION PART DRAWING	ADDDITION PRODUCT NAME	SPONSOR	ROWS FOR MARKET	ARTICLE SPEC FOR WORK IDENTITY		RELEASE/CHANGE LATION OF EDN	WORKING/FORM RECORD CHANGE INFO	PRODUCED TERMINATED MARKET	REPORT DRAWING/DETAILS	ADDDITION COST FOR PART	TRANSLATION OF PART NAME		PRINTING SHOW ADMINISTRATION
C	SEARCH/EXTERNAL COMPANY	ADDDITION PART DRAWING	ADDDITION SUBGROUP NAME	ARTICLE SPEC	ROWS FOR WORKING	ARTICLE SPEC UNDER WORK	CHANGED ARTICLE SPEC	REPORT/CHANGE LATION OF STRUCT PER FACTORY		RELEASE/CHANGE TERMINATED MARKET		ADDDITION ASSEMBLY COST	SEARCH ON PARTNAME		ADMINISTRATION OF COSTS
D	EXTERNAL COMPANY INFO	ADDDITION DRAWING BY ID	ADDDITION PRODUCTS	ARTICLE SPEC WITH MARKET SELECTION	EDN DESCRIPTION BY FABRIKATION	ADDDITION WORK IDENTITY	ADDDITION EDN HEADLINE DESCRIPTION INFO	SEPARATION OF OFFICIAL STRUCT		EDN DESCRIPTION FOR TERMINATED MARKET	ANALYSE NEW PARTS FOR WORKING	RECHIVE AND DRAWING BY ID	COST FOR PART	ADDDITION SPECIFICATION	ADDDITION FUNCTION GROUP
E	ONES FOR EXTERNAL COMPANY	ADDDITION PART DRAWING/VERSION	PRODUCT GROUPS PER PRODUCT GROUPS	RISPEC	EDN SPEC FOR DESCRIPTION INFO	ADDDITION ARTICLE SPEC AND DESCRIPTION	ADDDITION CHANGE SPEC DESCRIPTION				ANALYSE NEW PARTS PER EDN	REPORT FILE CALCULATION REPORT	ADDDITION JOB/HEADLINE AND DESCRIPTION		ADDDITION DEPART. UNIT
F		ADMINISTRATION DRAWING GROUP	EDN SPEC FOR SUBGROUP NAME	WORKING STRUCTURE RECORD		ADDDITION RECORD	ADDDITION RECORD			HISTORICAL EDNS			SEARCH ON JOB/HEADLINE AND DESCRIPTION		ADMINISTRATION OF WORKING
G	ADDDITION EXTERNAL COMPANY INFO	ADDDITION MARKETING CARD SUBGROUPS	SEPARATION OF PRODUCT NAME	RISPEC INFO	EDN SPEC	COPYING OF STRUCTURES/EDN NEW/ARTICLE SPEC	EDN SPEC UNDER WORK			EDN SPEC FOR TERMINATED MARKET			SEARCH ON SPECIFICATION		STRUCTURE PRINT
H	ADDDITION EXTERNAL PART NO	ADDDITION PART DRAWING/VERSION	EDN SPEC INFO PER EQUIPMENT/EDN	EDN SPEC INFO RECORD	ROWS PER FACTORY	ASSIGN WORK ID TO OTHER EDNS	ADDDITION CONTRAST TEST			EDN SPEC TERMINATED MARKET			SHOW FUNCTION GROUPS		
I	ADDDITION EXTERNAL COMPANY RELATIONS	MARKETING CARD DATA (MARKET)		MARKETING ANALYSE	ADDDITION MARKETING INFO	WORKING/EDN STRUCTURES AND CONSUMER WORK	EDN SPEC UNDER WORK			MARKETING HISTORICAL STRUCTURES					
J			HISTORICAL WITH PER PRODUCT NAME			ADDDITION JOB/HEADLINE AND DESCRIPTION				MARKETING CARD INFO INFO					REPORT JOB LEVEL INFO
K	EDN SPEC EXTERNAL COMPANY	PRINTING LOG	TRANSLATION OF DESCRIPTION		CHANGE TRANSLATION OF EDN DESCRIPTION		TRANSLATION OF EDN DESCRIPTION			MARKETING CARD INFO INFO		PART NO LOG			REPORTS FOR CALCULATION
L	EDN SPEC EXTERNAL COMPANY		TRANSLATION OF WORKING INFO		REPORT REQUEST ALL RTI SPEC PER MARKETING WORK		TRANSLATION OF EDN INFO TEST			MARKETING CARD INFO INFO		ADDDITION PROGRAM PART			REPORT MARKETING ART STRUCTURE
M	EDN SPEC EXTERNAL COMPANY	ADDDITION PART DRAWING	REPORT REQUEST EDN SPEC FOR PRODUCT NAME	REPORT REQUEST ARTICLE SPEC WITH MARKET SELECTION		REPORT REQUEST ARTICLE SPEC WITH MARKET SELECTION				MARKETING CARD INFO INFO		REPORT ARTICLE SPEC WITH INFO			
N	EDN SPEC EXTERNAL COMPANY	ADDDITION PART DRAWING/VERSION	KILL A WORK	REPORT REQUEST PER SPEC						MARKETING CARD INFO INFO					
O	EDN SPEC EXTERNAL COMPANY	CHANGE PER SPEC	HISTORICAL PARTS VERSIONS	REPORT REQUEST ALL RTI SPEC FOR WORKING	UPPER/LOWER PARTS REPRESENTATION	ADDDITION PER REFERENCE PER ARTICLE SPEC				MARKETING CARD INFO INFO					
P		ADDDITION SUBGROUPS	HISTORICAL EQUIPMENT VERSIONS		UPPER/LOWER PARTS REPRESENTATION	EDN SPEC REPRESENTATION	EDN SPEC REPRESENTATION			MARKETING CARD INFO INFO		ADDDITION EDN SPEC INFO			ADDDITION OR CHANGE WITH COMMENTS
Q				ARTICLE SPEC WITH PER PART NAME	SEPARATION INFO PER EDN PARTS										CHANGE OF EDN SPEC MARKETING
R															EDN SPEC PER CLASS INFO
S		BILL A PART													EDN SPEC PARTS
T		ADDDITION FACTORY CODE													

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ENVIRONMENT



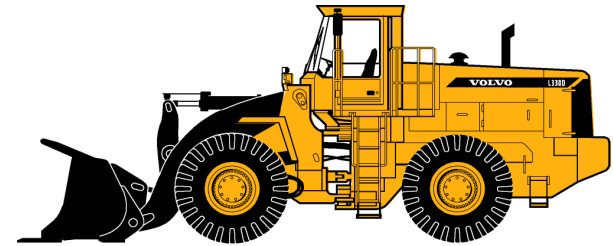
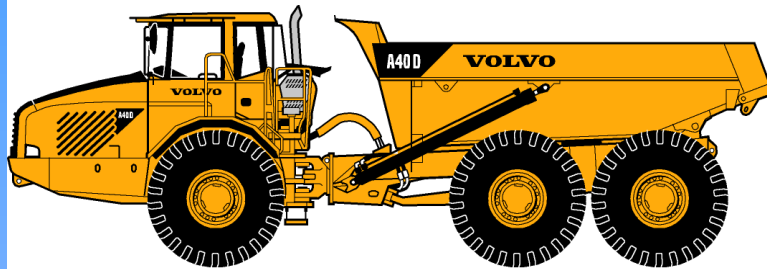
WHAT IS IMS ?

- More than **90 percent** of the **Fortune 1000** companies use **IMS**.

You use it everyday!

- **IMS** serves **200 million end users**
 - managing over **15 billion Gigabytes** of production data
 - processing over **50 billion transactions** every day.
- **IMS** still owns **the high-volume on-line transaction and database management** environment.

HOW A PRODUCT IS DOCUMENTED



END PRODUCTS

A40D 6x6 Serial number 1234

L180E Serial number 10067

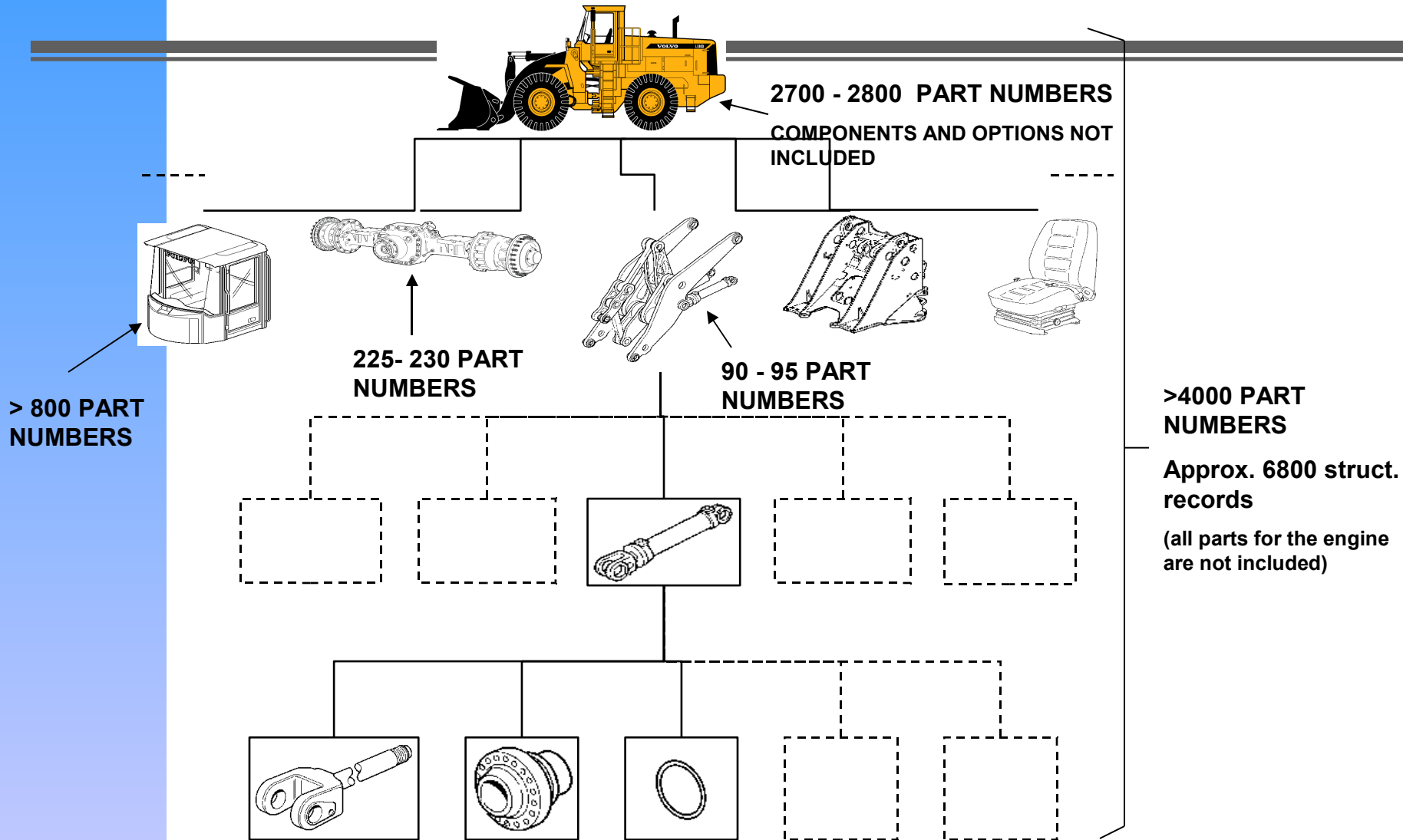
PRODUCT VARIANT

EQUIPMENT VARIANTS or OPTIONS

END PRODUCT = PV +UV+UV+UV+UV....

PRODUCT IDENTITIES ID: = PART NUMBERS

UNIQUE PART NUMBERS IN A WHEEL LOADER



HOW A PRODUCT IS DOCUMENTED

END PRODUCT = PV

+

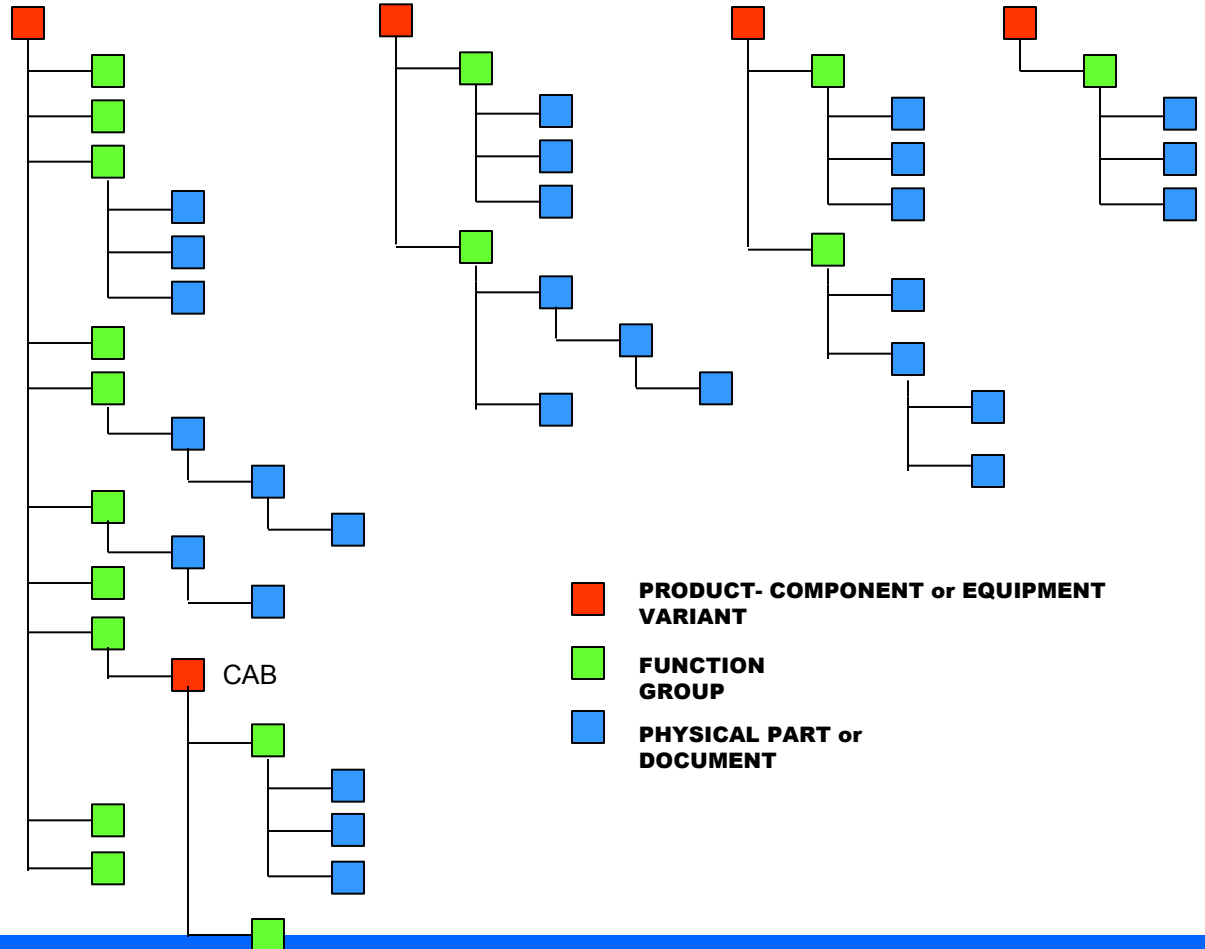
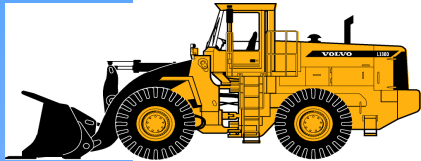
UV

+

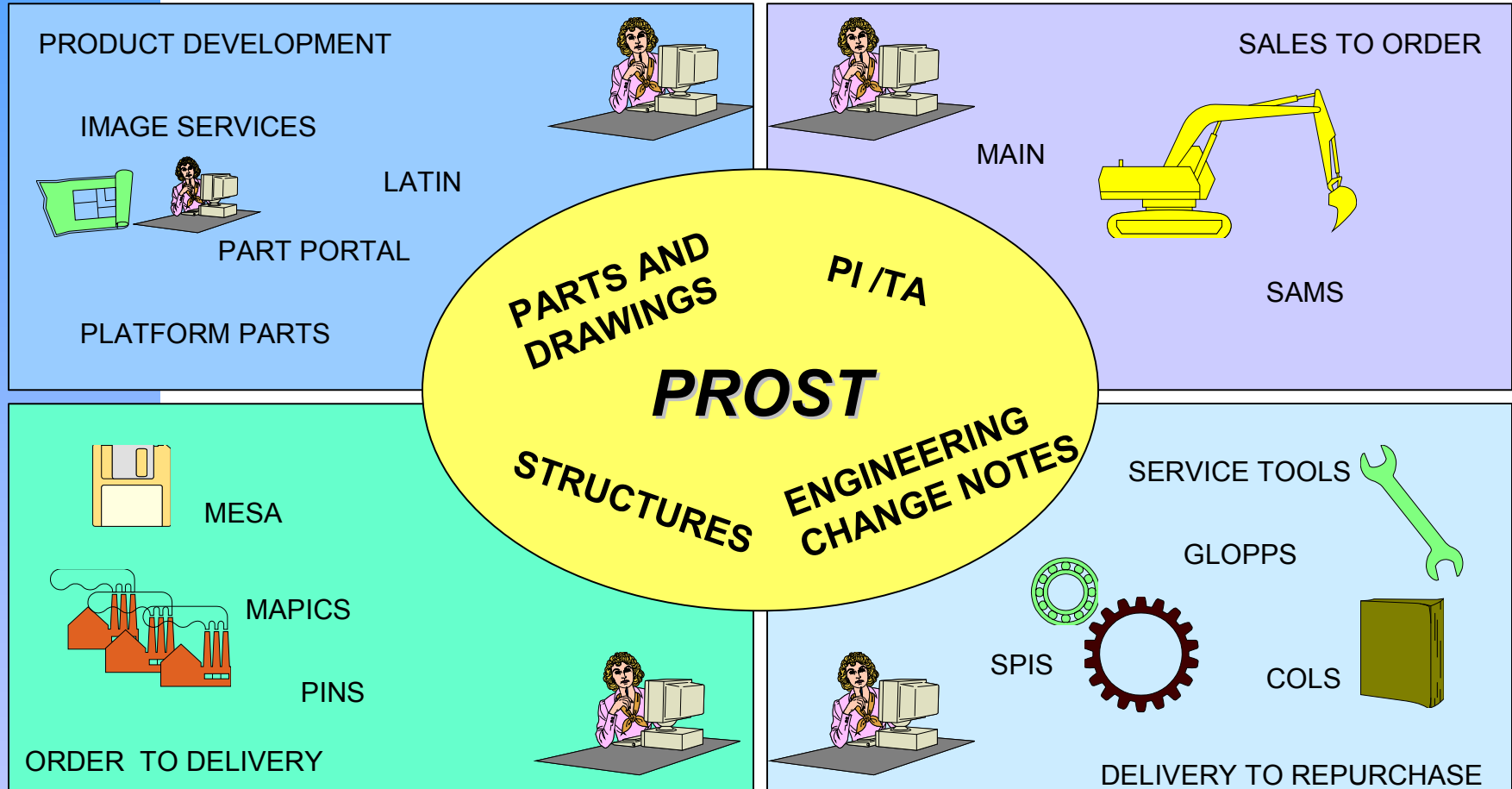
UV

+

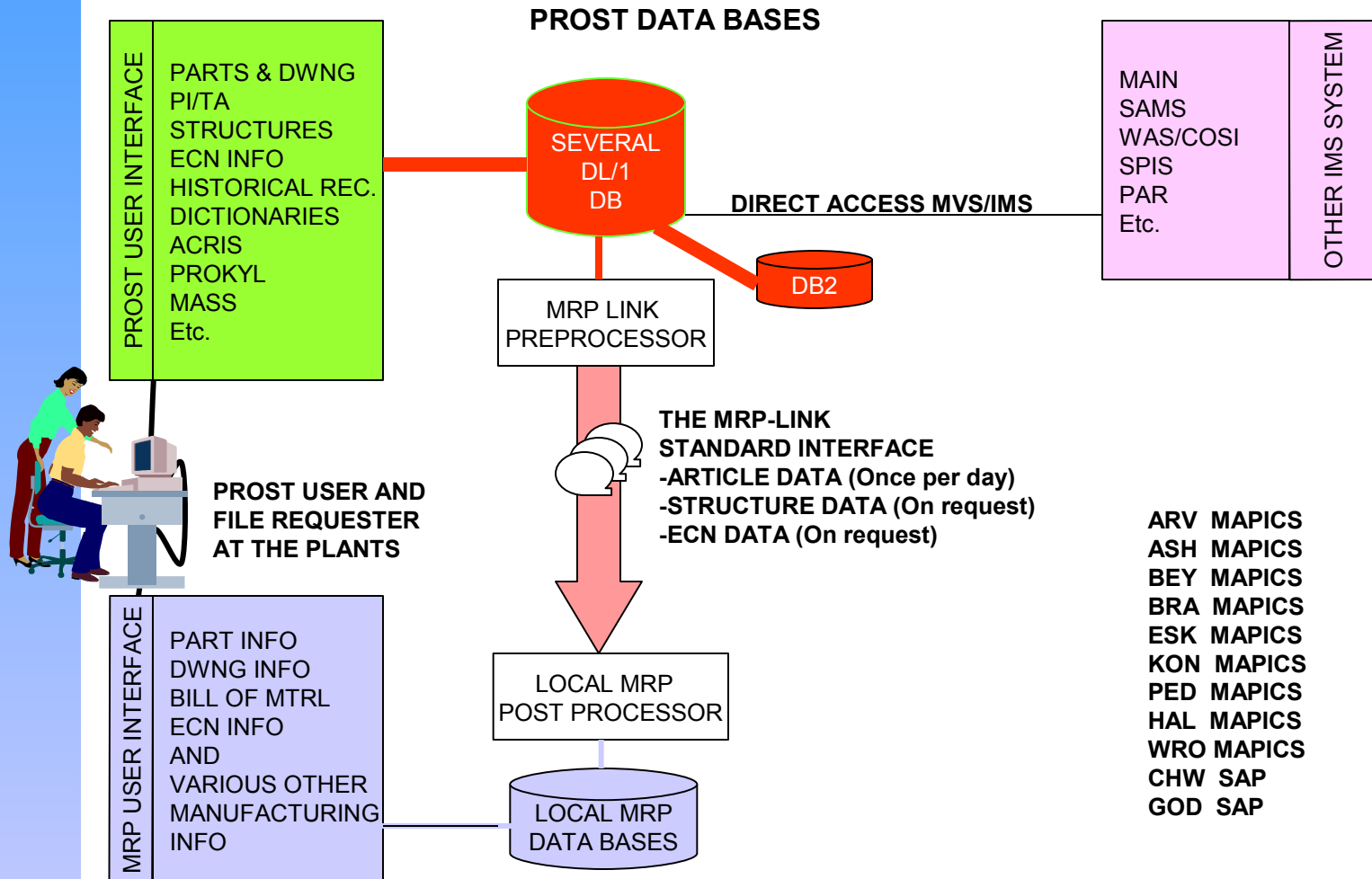
UV....



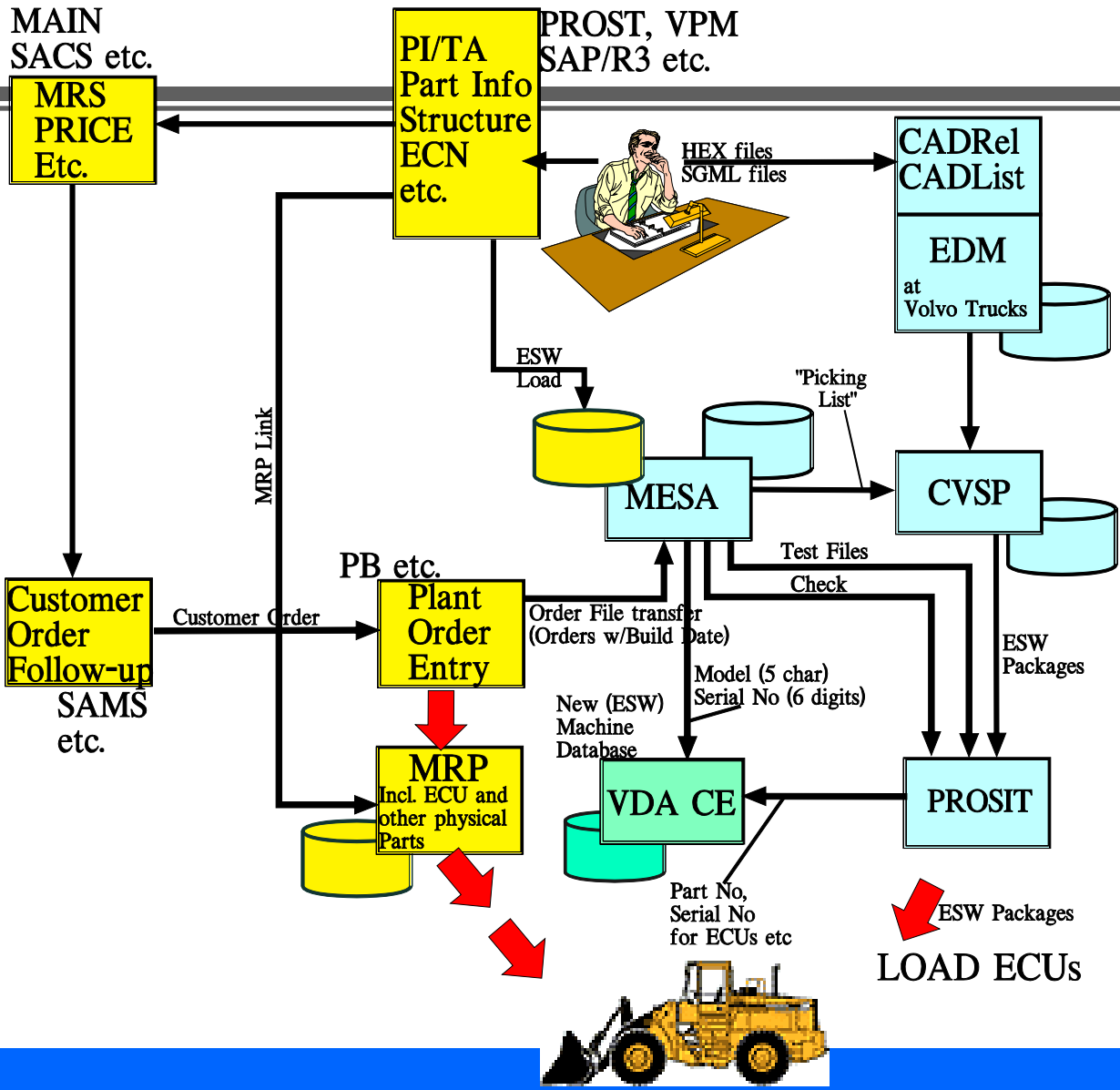
USAGE IN THE MAIN PROCESSES



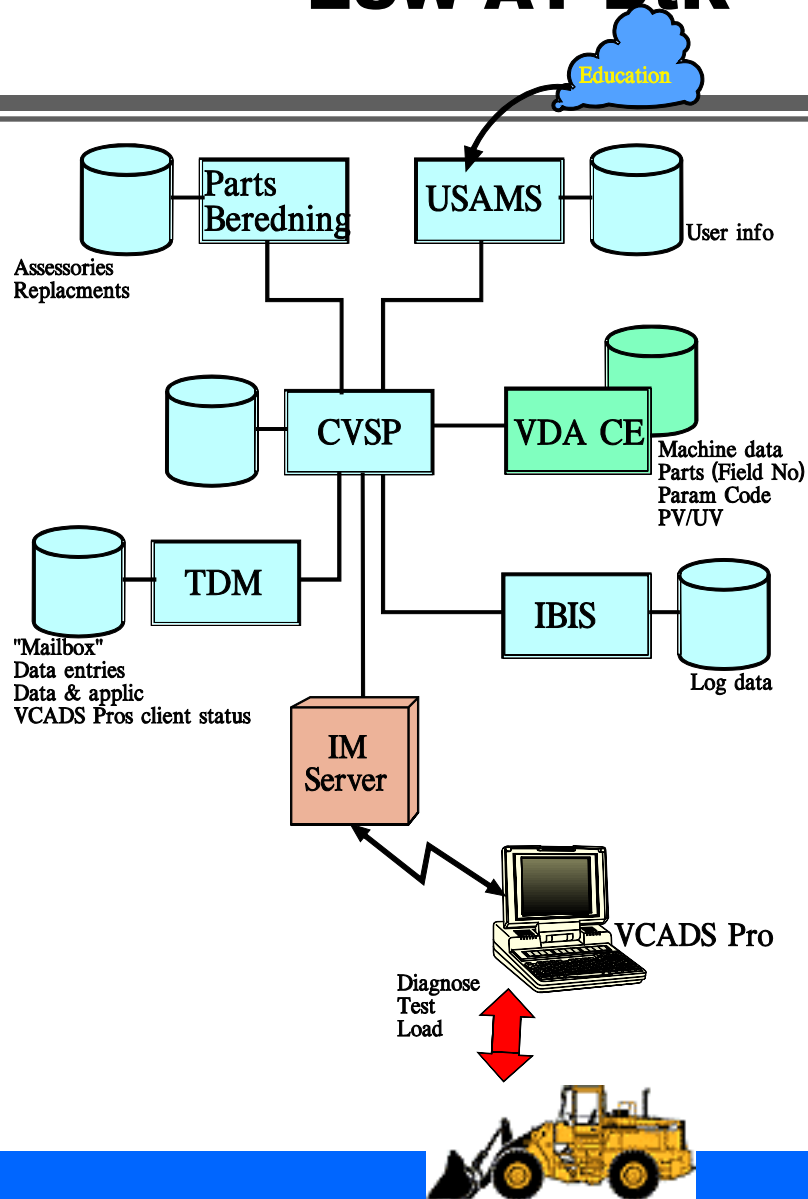
PROST MRP INTERFACE



ESW



ESW AT DtR



USERS and USAGE

USERS

- More than **2350** users have access to PROST transactions
- More than **1100** users have used PROST during the last year
- There are almost **110 650** combinations of user-id / transaction in the user data base
- An average user has access to **46** transactions
- We educated **200 new users** year 2003 (3 – 6 day courses)!



NUMBER OF TRANSACTIONS

- **5 000 000** transactions/year

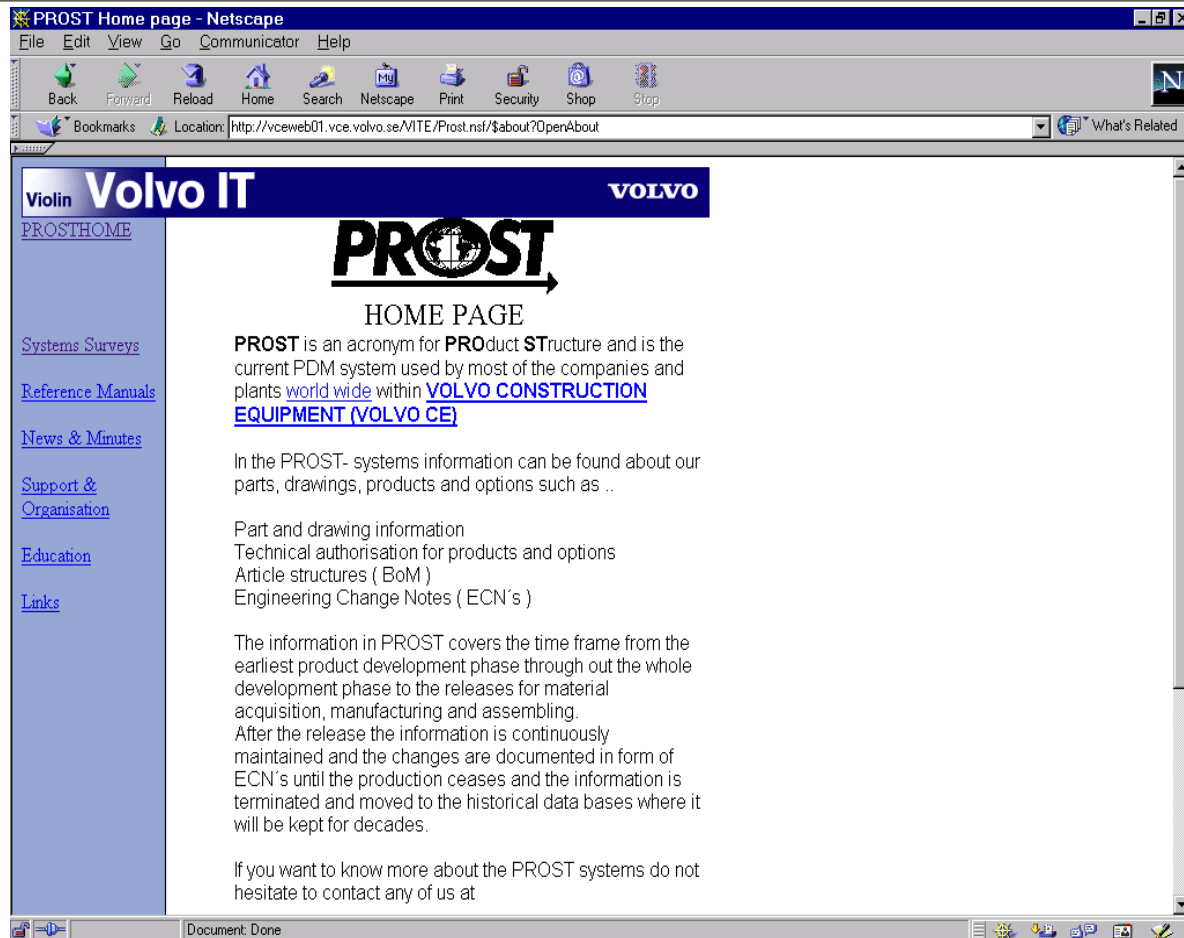
PROST USER SITES

ANNECY
ARCHAMPS
ARVIKA
ASHEVILLE
BARCELONA
BELLEY
BORLÄNGE
BRAÅS
CAIRO
CHANGWON
CHICAGO
CURUTIBA
DUXFORD
ESKILSTUNA
ESLÖV
FLEN

GÖTEBORG
GODERICH
HALLSBERG
BRYSEL
JÖSSEFORS
KÖPING
KONZ
LÖDDEKÖPINGE
PEDENEIRAS
SEOUL
SINGAPORE
SKÖVDE
SYDNEY
VÄXJÖ
WROCLAW



PROST HOME PAGE



<http://vceweb01.vce.volvo.se/MITE/Prost.nsf>

PROST IN CONTEXT

- The **PROST Project** started January 1979 and ended fall 1984 after migration of Product Structures in May: **(2004; 20 year anniversary !)**
First implementation was in March 23, 1982.
- The application programmes consist of: **>500.000 lines** of code in **311 COBOL** and **62 E+ Programs, 327 PSBs** and **222 formats**.
- The **22 DL/1** and **3 DB2 databases** contain more than **3 GB of data**.
Close to **900000 Parts** in the Volvo CE Parts Master database.
- System environment is **IBM IMS**, the largest Transaction and Database Management System in the world. And it is extremely **Cost Effective!**

PROST IN CONTEXT

- We have at least **500.000 Product Structure Records** related to current Products and approx. **1.000.000 Product Structure Records** related to historical Products.
- PROST contains about **20.000 Product IDs** (PV + UV).
- The average user has **46 different transactions** (~equivalent to profile cards in ST).
- The **2140 registered users** run almost **5 000 000 transactions** per year distributed on 149 different transactions and 23 BMP. There are also about 145 batch programs.

PROST IN CONTEXT

The Economy of the PROST Project 1981/84.

- **Actual Investments 1979 -1984** **KSEK 18.558 (1982)**
incl. Line organization efforts **54 Man-Years**
Operational Costs **KSEK 3.000**
including one continuous person for admin/support
- **Discussed Income** **KSEK 6.520 – 9.127**
- **Realization of the Project (Oct 1981 – June 1984):**
On Time and
On Budget !
- **Assumed practical life time was 10 years.**

PROST IN CONTEXT

- **PROST** was initially developed for **the Swedish company Volvo BM.**
- **PROST** has since 1984 been developed for **global use in English** or Swedish with **several new functions.**
- **PROST** launched **new technique** and **provided integration at a higher level** with downstream applications: **MAIN and several other.**
- We developed **Interfaces: “Design Anywhere”** and **“Manufacture Anywhere”**
- We developed the **ESW applications across all the Major Processes.**

- **Compare:**
- 251 terminals 1984 → 2140 PCs 2004 (one per user)
- 0,62 SEK/transaction 1984 → < 0,05 SEK/transaction year 2004
- < 2.000.000 transaction/year 1985 → 5.000.000 transactions/year 2004
- 900 users 1984 → 2140 users year 2004

WHICH FUNCTIONS IN PROST WILL BE ENTIRELY REPLACED BY PRIME 1

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PROST TRANSACTION SURVEY

	UACR	UPRA	UPRB	UPRC	UPRD	UPRE	UPRF	UPRG	UPRH	UPRI	UPLR	UPRN	UPRP	UPRX	UPRZ	
A	REPORTING → EXTERNAL PART NO	PRINT INFORMATION	PRINT INFORMATION		BOOK FOR PART NO (ADDED/DELETED)	WORK IDENTIFY FOR USER/ENGINE	BOOK FOR PART NO (ADDED/DELETED)	RELEASE OF STRUCTURES UNDER WORK	REPORT REQUEST SPEC COMPRESSION IN COMMENT			PRINT INFORMATION	PRINTING LOG (PARTS/WORKMAN)	ADDD/CHANGE PART NAME	RENAME/LOCATION OF ASSIGNED PART/STRUCTURE	
B	EXTERNAL PIN → EXTERNAL PART NO	ADDD/CHANGE PART DRAWING	ADDD/CHANGE PRODUCT UNDER WORK	SPICED/IN	BOOK FOR WORKMAN	ARTICLE/DESC FOR WORK/IDENTITY		RELEASE/RELEASE-LATION OF CON	BOOK/WORK/LOG RECORD (ENGINE SPEC)				ADDD/CHANGE BOOK FOR PART	TRANSLATION OF PART NAME	PRINTING DRAW ADMINISTRATION	
C	SEARCH EXTERNAL COMPANY	ADDD/CHANGE PART DRAWING	ADDD/CHANGE WORKMAN WORKMAN	WORK/LOG/DESC	BOOK FOR WORK/LOG	ARTICLE/DESC UNDER WORK	CHANGED ARTICLE/DESC	RELEASE/RELEASE-LATION OF CON	BOOK/WORK/LOG RECORD (ENGINE SPEC)					ADDD/CHANGE ASSEMBLY COST	SEARCH ON PART NAME	RENAME/LOCATION OF GOODS
D	EXTERNAL COMPANY INFO	ADDD/CHANGE DRAWING INFO	ADDD/CHANGE PRODUCT GROUP	ARTICLE/DESC WITH WORK/LOG/DESC	BOOK DESCRIPTION BY WORKMAN	ADDD/CHANGE WORK/IDENTITY	ADDD/CHANGE CON/HEAD/CON DESCRIPTION INFO	RENAME/LOCATION OF OFFICIAL STRUCT								
E	FILE FOR EXTERNAL COMPANY	ADDD/CHANGE PART DRAWING (GROUP)	PRODUCT UNDER WORK FOR PRODUCT GROUP	R/UPRO	CHANGE FOR EXTERNAL PART NO	ADDD/CHANGE ARTICLE/DESC AND STRUCTURE/DESCRIPTION	ADDD/CHANGE CHANGE SPEC/DESCRIPTION									
F		ADDD/CHANGE PART DRAWING (GROUP)	DESCRIPTION OF WORKMAN WORKMAN	CON/HEAD/CON RECORD		ADDD/CHANGE RECORD	ADDD/CHANGE CON RECORD									
G	ADDD/CHANGE EXTERNAL COMPANY INFO	ADDD/CHANGE ART/DESC CARD	TERMINATION OF PRODUCT UNDER WORK	R/UPRO/DESC	CON SPEC	COPIES OF STRUCTURE/DESC NEW WORK/LOG/DESC	CON SPEC (BOOK/WORK)									
H	ADDD/CHANGE EXTERNAL PART NO	ADDD/CHANGE PART DRAWING (TYPE/CLASS)	GROUP WORKMAN FOR EQUIPMENT/FAMILY	CON/HEAD/CON RECORD	BOOK FOR FACTORY	ADDD/CHANGE WORK/ID TO OTHER USR/ID	ADDD/CHANGE CON SPEC TEST									
I	ADDD/CHANGE EXTERNAL COMPANY INFORMATION	ADDD/CHANGE PART DRAWING (GROUP)	DESCRIPTION OF WORKMAN WORKMAN	CON/HEAD/CON RECORD	ADDD/CHANGE ART/DESC/CON INFO	RENAME/LOCATION OF STRUCTURE AND CON/HEAD/CON WORK	FILE WORK UNDER WORK									
J																
K	BOOK OF EXTERNAL COMPANY	PRINTING LOG	TRANSLATION OF PRODUCT UNDER WORK		CHANGE TRANSLATION OF CON/DESCRIPTION		TRANSLATION OF CON/DESCRIPTION									
L	CON/VEHICLE INSTRUCTION		TRANSLATION OF PRODUCT UNDER WORK		REPORT REQUEST ALL ART SPEC FOR RELATED WORKMAN		REPORT REQUEST ALL ART SPEC FOR RELATED WORKMAN									
M	CON/VEHICLE INSTRUCTION	ADDD/CHANGE PART DRAWING (GROUP)	REPORT REQUEST TRANSLATION OF PRODUCT UNDER WORK		REPORT REQUEST ART/DESC WITH WORKMAN SELECTION		REPORT REQUEST ART/DESC WITH WORKMAN SELECTION									
N	CON/VEHICLE INSTRUCTION	ADDD/CHANGE PART DRAWING (GROUP)	REPORT REQUEST TRANSLATION OF PRODUCT UNDER WORK		REPORT REQUEST ART/DESC WITH WORKMAN SELECTION		REPORT REQUEST ART/DESC WITH WORKMAN SELECTION									
O	CON/VEHICLE INSTRUCTION	ADDD/CHANGE PART DRAWING (GROUP)	REPORT REQUEST TRANSLATION OF PRODUCT UNDER WORK		REPORT REQUEST ART/DESC WITH WORKMAN SELECTION		REPORT REQUEST ART/DESC WITH WORKMAN SELECTION									
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Questions



THE END

