



# Information Lifecycle Management

## ILM

Thor-Arne Iversen

Affecto



**Affecto**

# Affecto



- **Hovedfokus: Business Intelligence**
- 900 ansatte i Norge, Sverige, Danmark, Finland, Estland, Latvia, Litauen og Polen
- **135** ansatte i Norge
- Etablert i Norge i **1997**
- Finansielt sterkt rustet med gode resultater
- Sterke **partnerskap** med **SAP**, Oracle, Microsoft, IBM og Informatica

INFORMATICA  
NOW YOU KNOW™

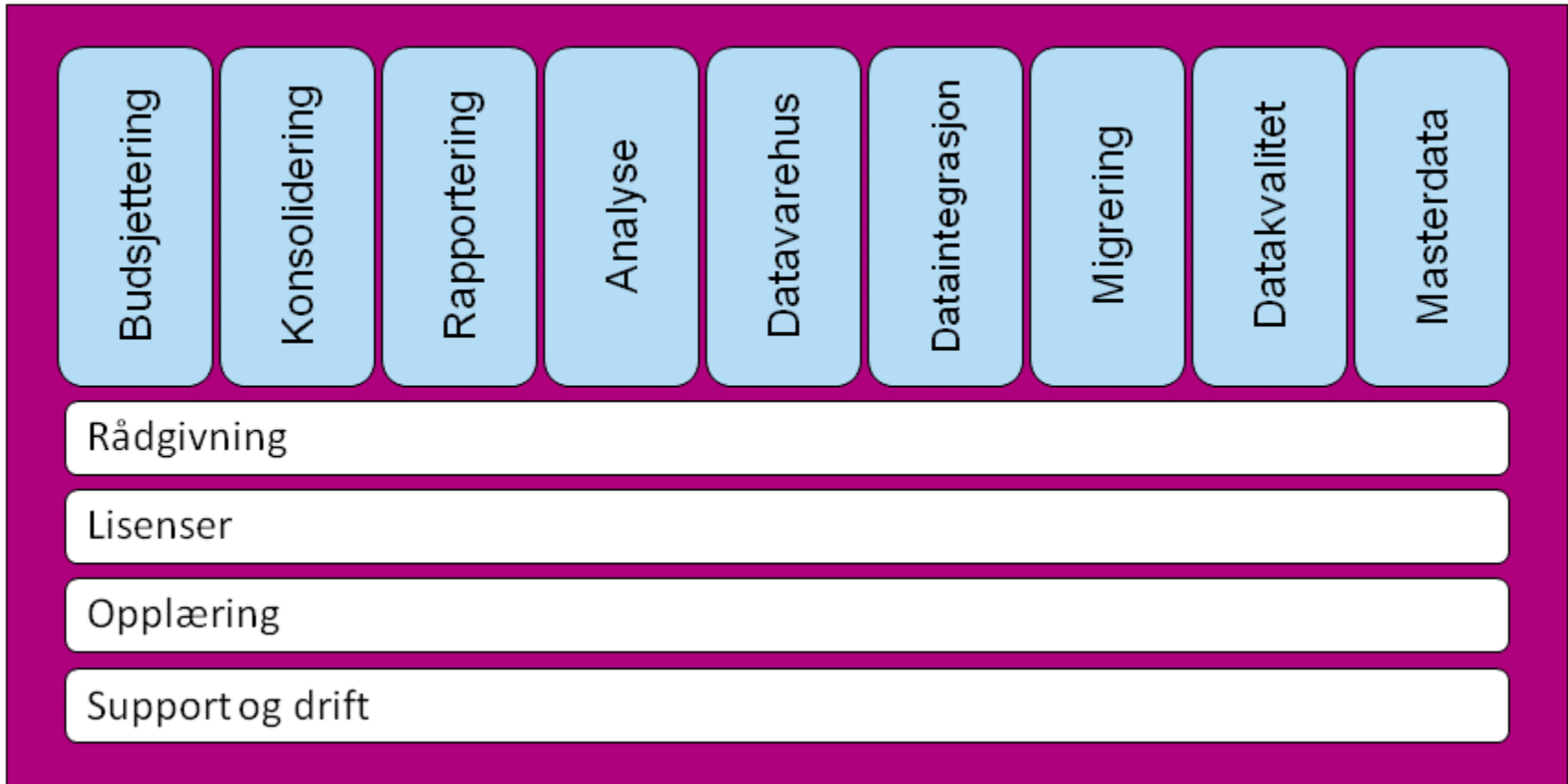
ORACLE®

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Affecto

# Totalleverandør av Business Intelligence



# Agenda

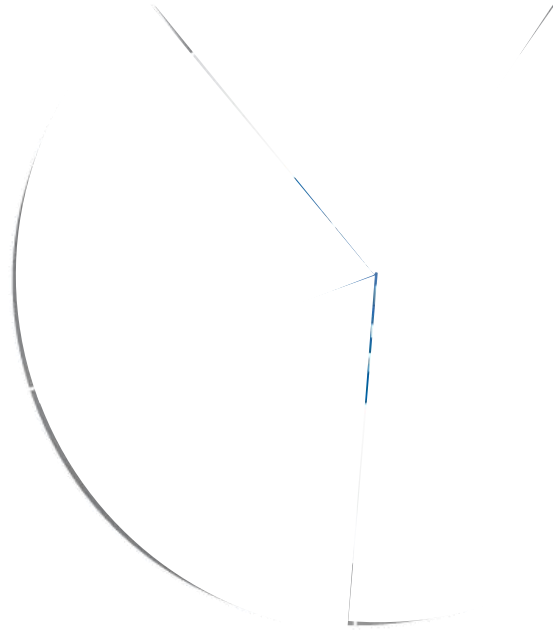


- Introduksjon
- Informatica Data Archiving – Overblikk
- Informatica Data Subset – Overblikk
- Informatica Data Privacy – Overblikk

# Informatica Application ILM



- **Application ILM gir muligheter for:**
  - **Data Archive** – Flytt gamle/inaktive data ut av produksjonsmiljøet for bedre ytelse, utfasing av systemer og compliance
  - **Data Subset** – Lag og oppdater mindre kopier av produksjonsdatabasen for test- og utvikling
  - **Data Privacy** – Beskytt sensitiv informasjon i utvikling- og test miljøer
- **ILM Verdibudskap:**
  - Lavere lagrings- og server- kostnad
  - Bedre ytelse på applikasjonen
  - Mindre tid og kostnad ved backup og batch prosesser
  - Eliminere kostnad og kompleksitet når man “pensjonerer” gamle systemer
  - Reduserer kostnader rundt compliance
  - Forhindrer at sensitive data kommer på avveie



INTEGRATED WITH  
**ORACLE**  
E-BUSINESS SUITE

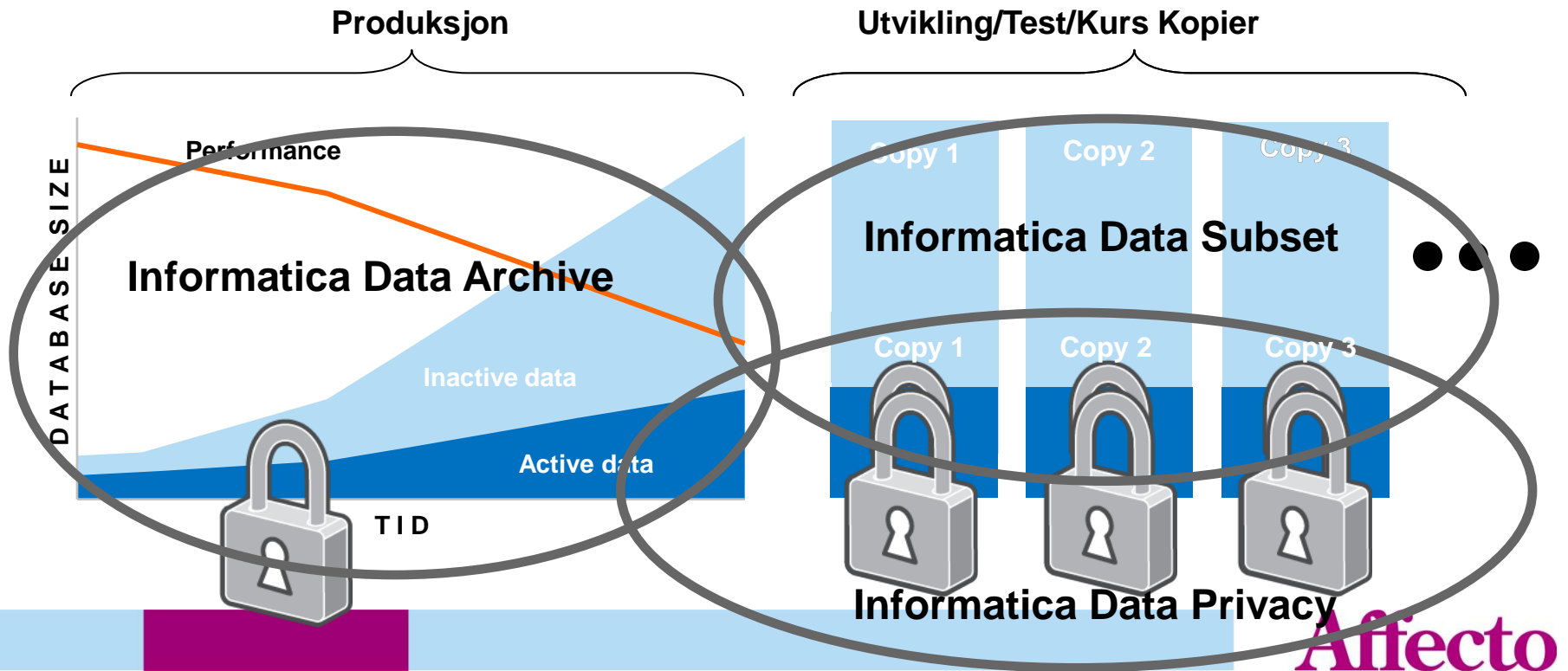
**SAP**® Certified  
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**Affecto**

# Application ILM Produkter

## *Bedre operasjonell effektivitet*

- Reduser lagring, RDBMS lisenser, personell kostnader
- Forbedre ytelse
- Reduser tid som brukes på vedlikehold & compliance
- Reduser risiko for data på avveie



# Agenda



- Introduksjon
- Informatica Data Archiving – Overblikk
  - utfordringer
  - typer arkivering
  - konsepter  
(Accelerators, Reallokering av data, tilgang til arkiverte data)
- Informatica Data Subset – Overblikk
- Informatica Data Privacy – Overblikk

# Utfordringer ved økende data volum



## Før

Økte lagringskostnader

Dårligere ytelse

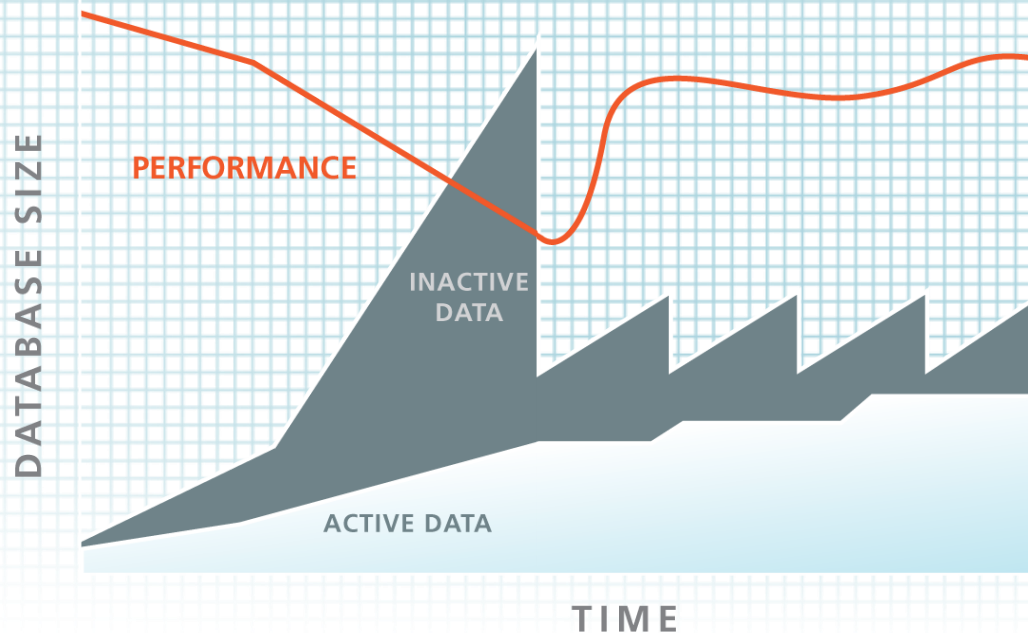
Vanskeligere vedlikehold & Compliance

## Etter

Bedre kontroll på økningen av data

Bedre og mer stabil ytelse

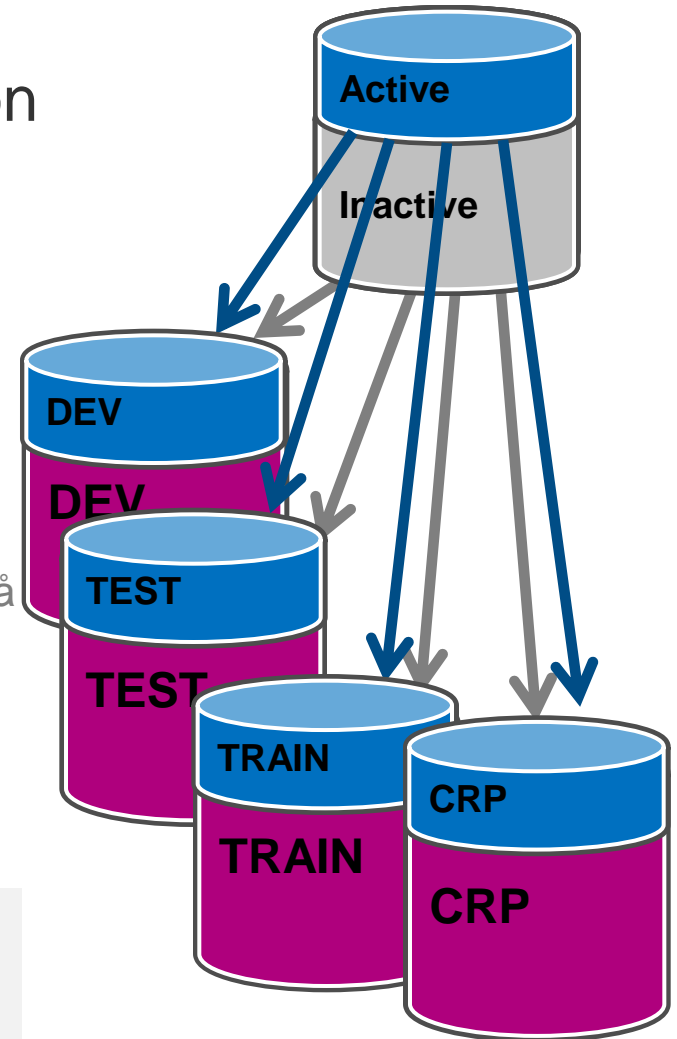
Redusert vedlikeholdskostnad & compliance



# Hvorfor skal man være opptatt av veksten ?

- Finnes mange kopier av produksjon
  - Prosjektene krever separate utvikling- og test- miljøer
  - Hvor mye diskplass tar dette?
- Overhead øker
  - Tar lenger tid å kopiere Prod
    - Størrelsen på produksjon gjør det vanskelig å lage fornuftige utvikling og testmiljøer
  - Hardware kostnader øker
    - FlereCPU / Mer Disk / Mer Minne

Se på arkivering som første steg til å få mindre kopier



# Archive for Performance: Bedre ytelse



## DATABASE METHOD



Current Data

Production Database



Seamless Access Layer



Archived Transactional Data

Online Archive Database

Access archived data through production interface

Keep data in database format

## FILE METHOD



Current Data

Production Database



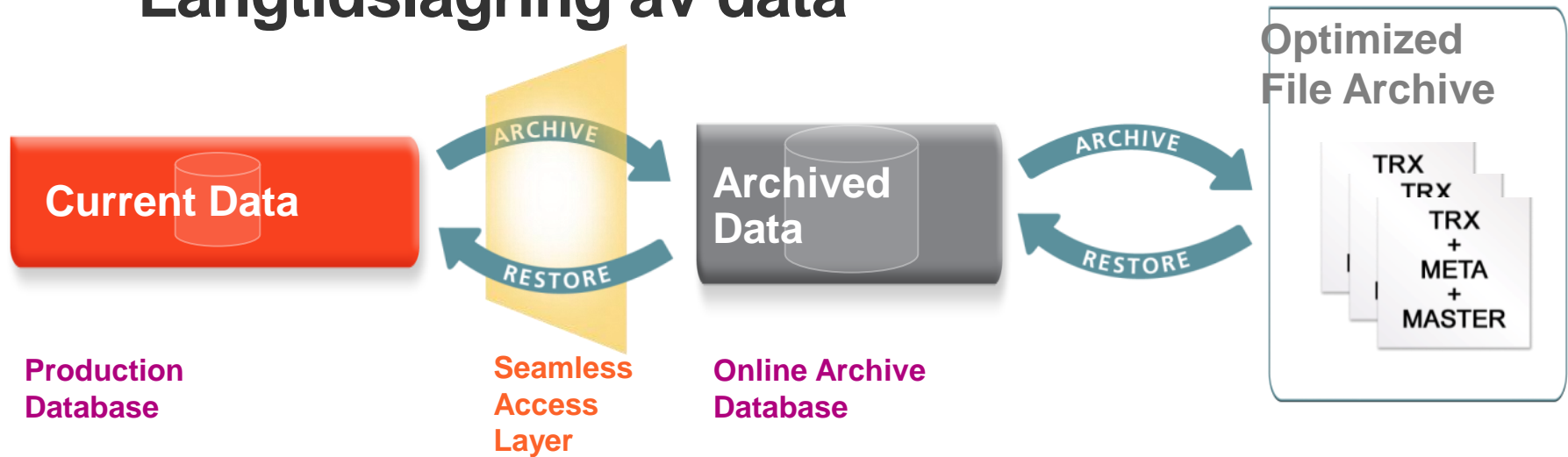
Optimized File Archive



Archive data to optimized file format for storage reduction

- Compressed
- Immutable
- Accessible

# Archive for Compliance – Langtidslagring av data



Construct multiple tiers of archives for different categories of data

Combine the Database Archive with the Optimized File Archive to meet specific retention and access requirements

# Archive for Retirement – Legacy Applications

Search  Go

Interim Table	Operating Unit	Purgeable	NonPurgeable	Total
XA_4104_AR_CUST_TRX_INTERIM	Arima	102116	6799606	872022

Exception(s) Count

Adjustment to a non-purgeable transaction not approved or rejected 0

Adjustment(s) to not posted approved/rejected 3533

Adjustment(s) updated after parameter date 57390

Auto-rule Reporting 0

Credit Memo imported 0

**DataDiscovery Portal**



## Optimized File Archive

TRX  
TRX  
TRX  
+  
META  
+  
MASTER

- Compressed
- Immutable
- Accessible

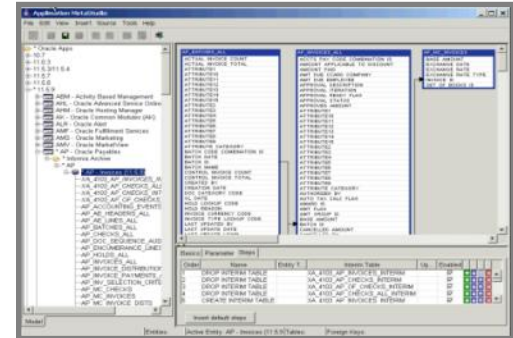


ARCHIVE ENGINE

Legacy Applications



Data Adapters



**ENTERPRISE DATA  
MANAGER**

# Hva er arkivering ?



Arkivering er direkte knyttet mot en **applikasjon**. Muliggjør å flytte data ut av en produksjons database.

Arkivering er IKKE:

- **Backup**
- **Disaster recovery**
- **Mirroring**
- **Reporting instance**
- **Data warehouse**
- **Partitioning**

# Data Archive Accelerators



## Komplette out-of-the-box regler for standard applikasjoner

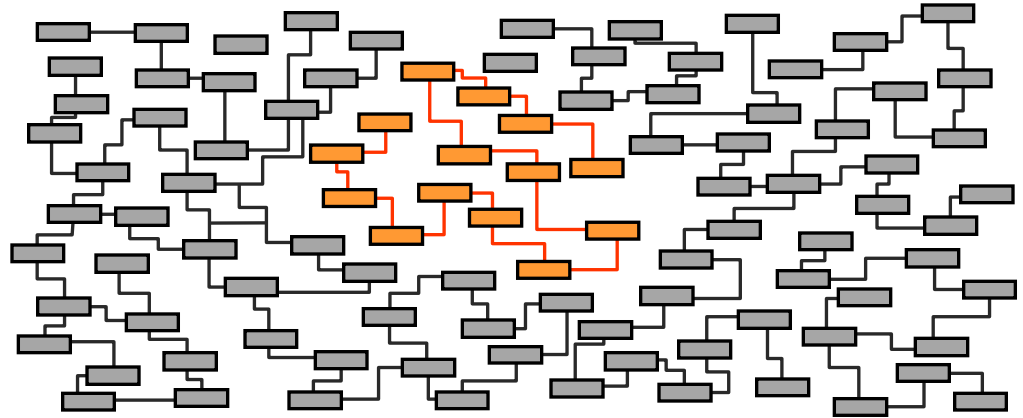
- 
- ✓ Functional entity definitions
  - ✓ Business rule validation
  - ✓ Seamless access to archived data
  - ✓ Future version support
  - ✓ History upgrade when upgrading production
  - ✓ Application specific functionality
-

# To viktige Accelerator Komponenter



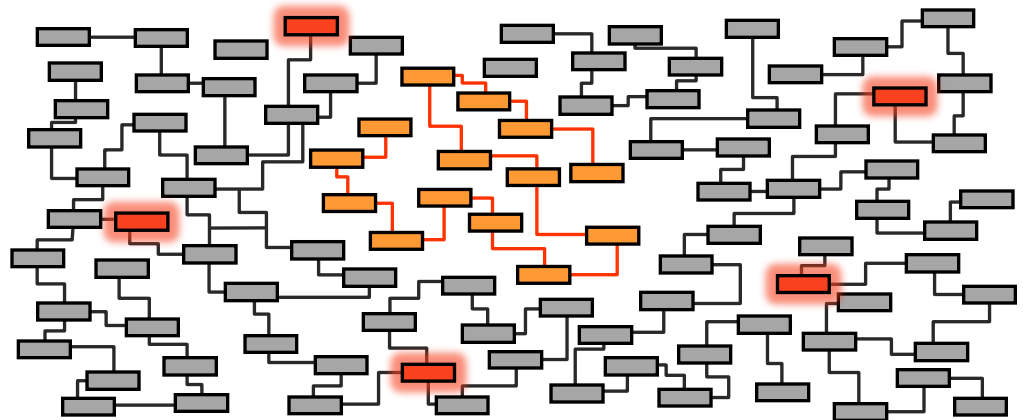
## Entity Definition

- Logical unit to archive
- Database and application level relationships



## Business Rules

- Transaction chaining
  - Within an entity
  - To other applications
- Testing of Fields, Flags & Codes



# Business Rule Validation – Oracle Applications



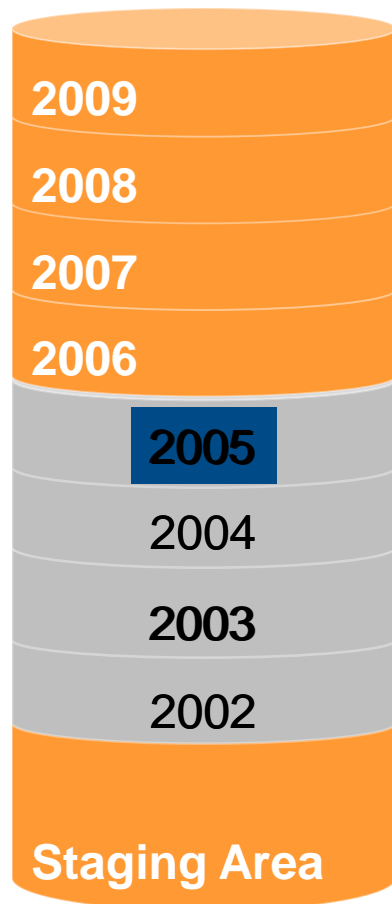
		Purgeable	NonPurgeable	Total
Interim Table	Operativ	192116	679906	872022
XA_4104_AR_CUST_TRX_INTERIM	Aet			
Exception(s)			Count	
Adjustment to a non-postable transaction	Antallet som kan arkiveres basert på forretningsreglene	Antallet som ikke kan arkiveres – kategorisert under.		Totale antallet kandidater I dette scopet
Adjustment(s) not posted or approved				
Adjustment(s) updated after parameter date				
Auto-rule line(s) not complete				
Credit Memo unposted			0	
Dependent Receivable Application(s) not purgeable			679906	Exception pr forretningsregel
Distribution line(s) not posted			0	
Distribution(s) updated after parameter date			2414	
Has to remove the CMS ID			0	
Open return lines exist in OM			0	
Payment schedule open			3255	
There is an open amount against a 'DEP' or 'GUAR' TRX			0	
Transaction Not Complete			0	
Transaction Type is not postable			0	

Relevante forretningsregler for denne enheten

# Online Arkiveringsprosess – Detaljert



## Produksjon



Transaction Table			Biz Rule # 1	Biz Rule # 2	Biz Rule # n	Archive Flag
Txn ID	Date	Status				
1	01-JAN-2001	Closed	✓	✓	✓	Y
2	01-JAN-2002	Closed	✓	✓	✗	N
3	01-FEB-2003	Open	✓	✗	✗	N
4	01-MAR-2003	Closed	✓	✓	✓	Y
5	01-OCT-2004	Open	✓	✗	✓	N

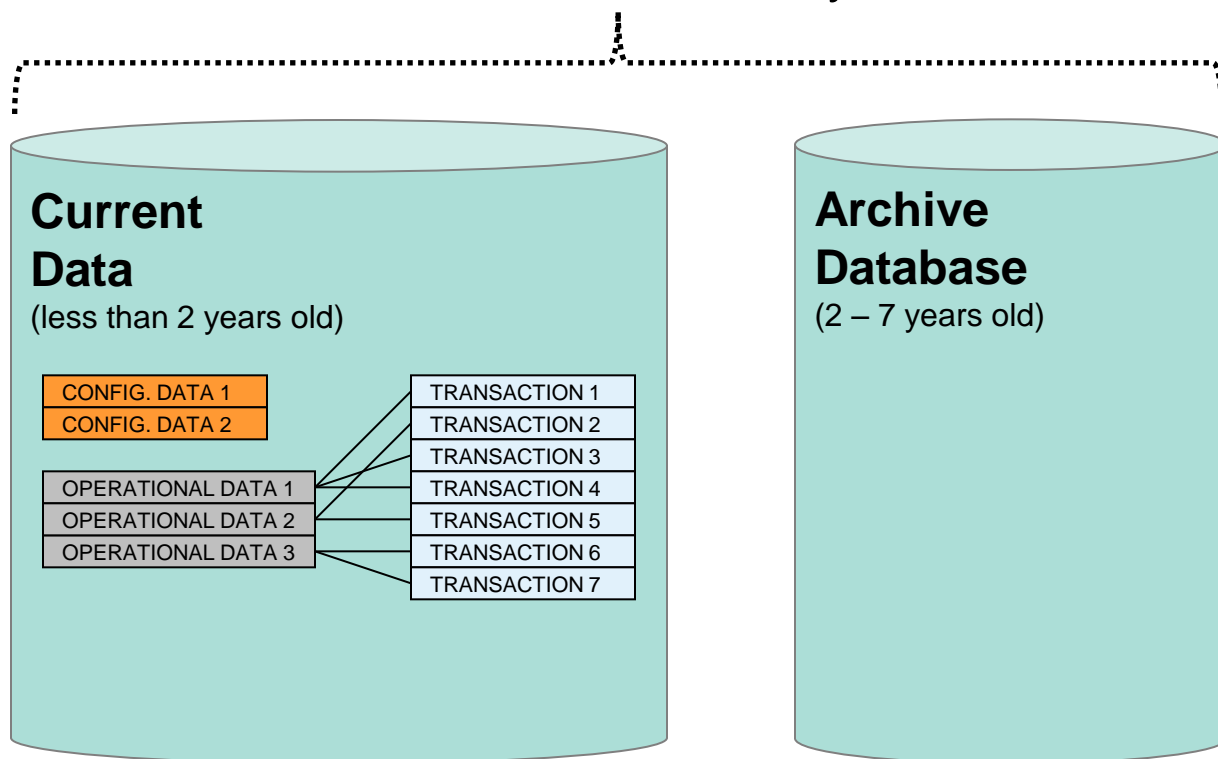
1. Lag Staging tabeller og test mot forretningsreglene
2. Flytt KUN inn i Stage 2001 - 2004 transaksjoner som støtter reglene
3. Purge 2001 - 2004 transaksjoner fra produksjon
4. Merge 2001 - 2004 transaksjoner til History location
5. Drop Staging



# Database arkivering



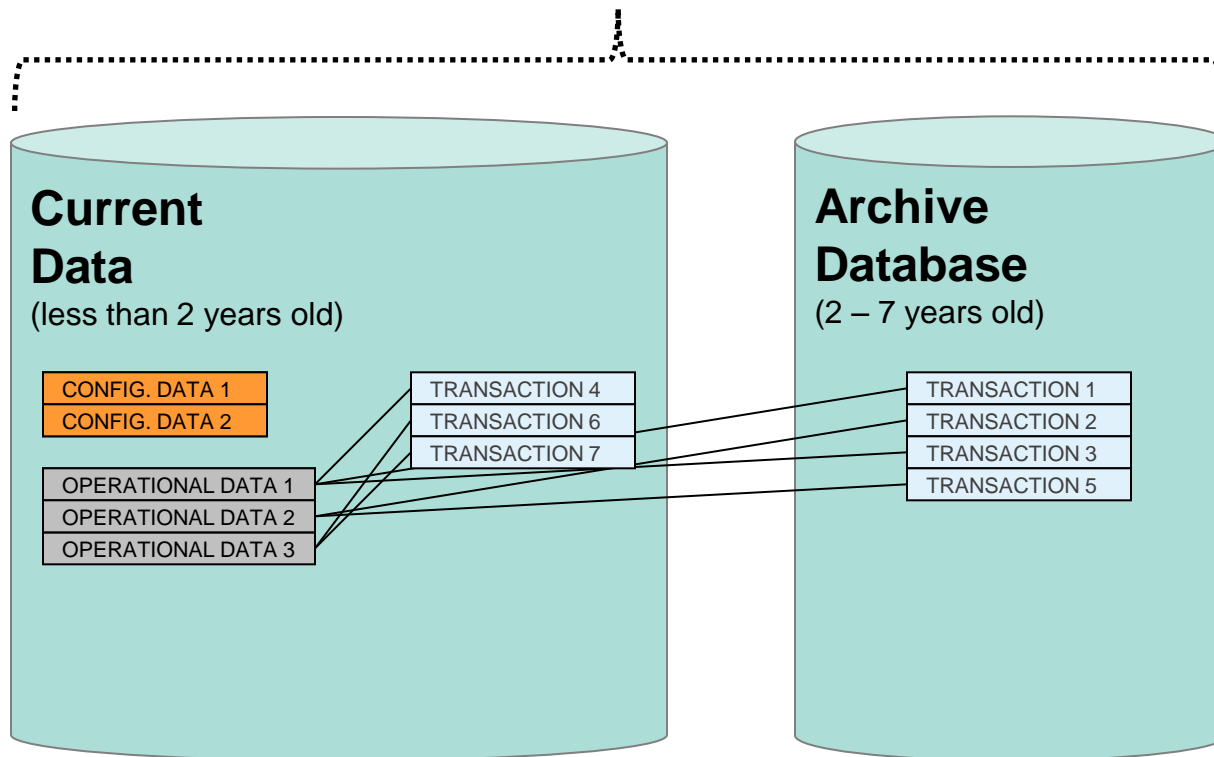
## Seamless Access Layer



# Database arkivering



## Seamless Access Layer

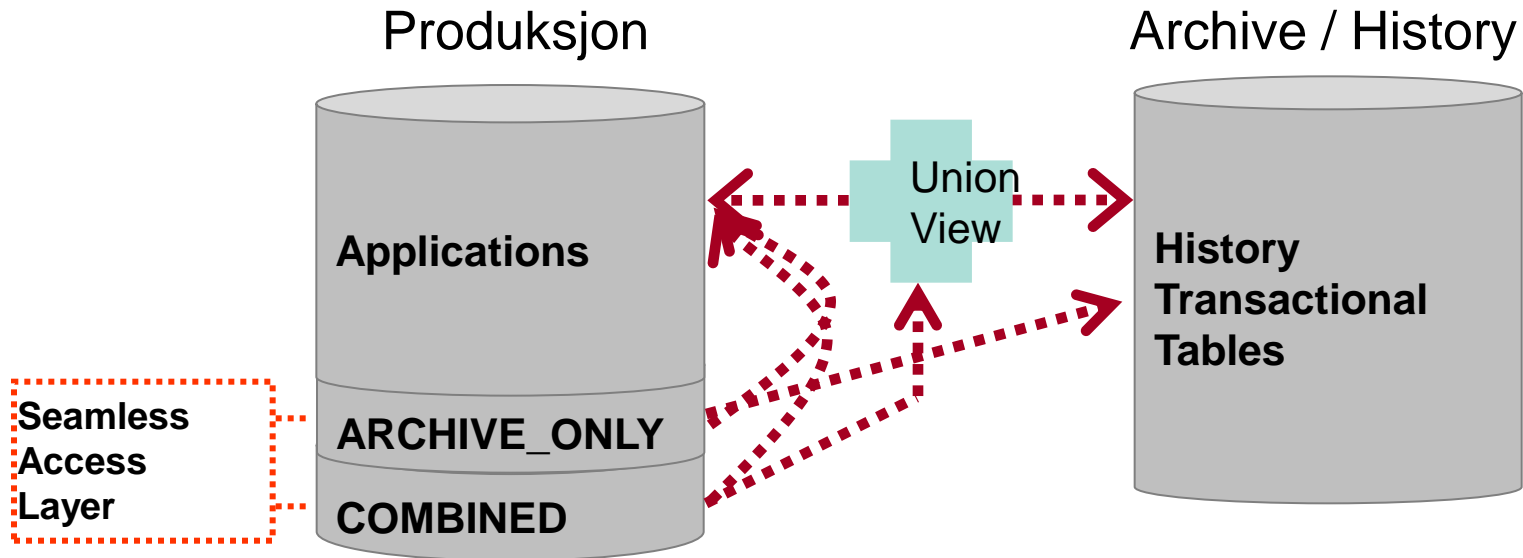


# Seamless Access - Arkitektur



- To lag
- Database
  - En rekke pekere til data strukturer
- Applikasjon
  - Redirect user login eller rolle til arkiverte data
  - I Oracle Applications bruker vi Responsibilities og eksisterende sikkerhetsmodell

# Seamless Data Access – Database Lag



Data  
Access  
Options

**Current Only** – De aller fleste brukere

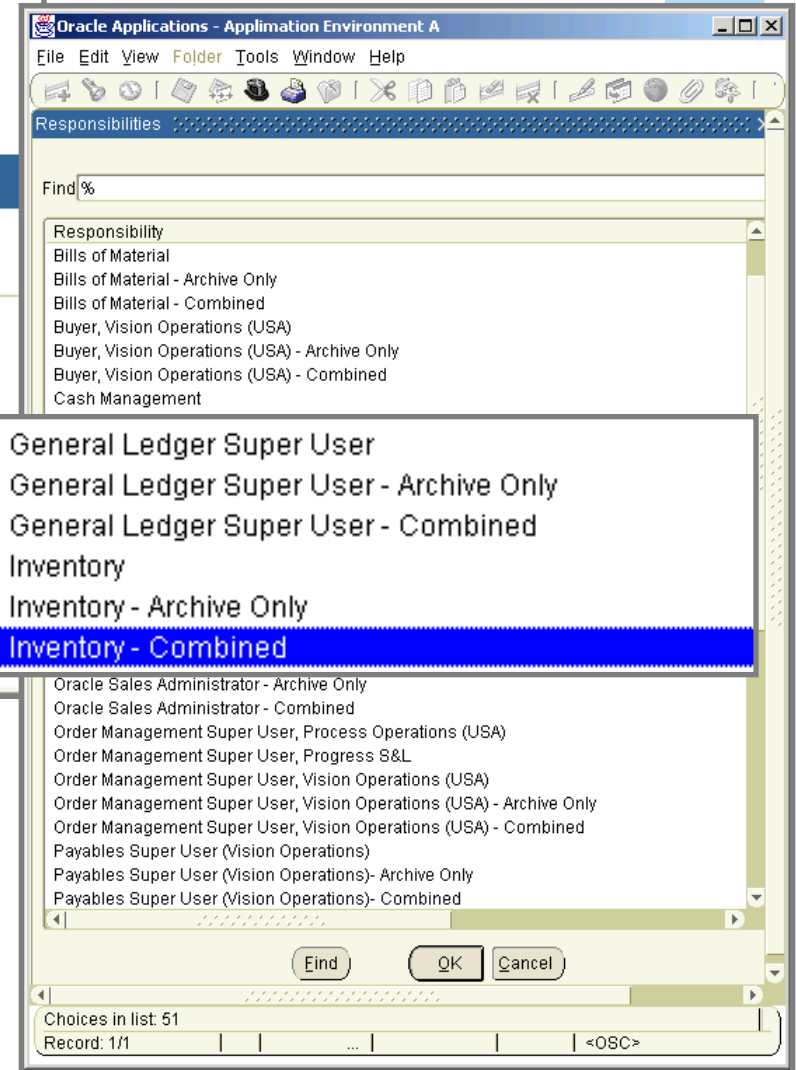
**Archive Only** – Tilgang til arkiverte data og masterdata

**Combined** – Dagens+ arkiverte transaksjonsdata

# Seamless Access – Applikasjonslag



The image shows the Oracle E-Business Suite login interface. At the top, the Oracle logo and 'Oracle E-Business Suite' are displayed. Below this is a 'Login' header. A welcome message reads 'Welcome to Oracle E-Business Suite' followed by the instruction 'Enter your username and password to login'. A note indicates that an asterisk (\*) denotes a required field. There are two input fields: 'Username' with the value 'demo' and 'Password' with masked characters. A 'Login' button is located at the bottom right of the form area.



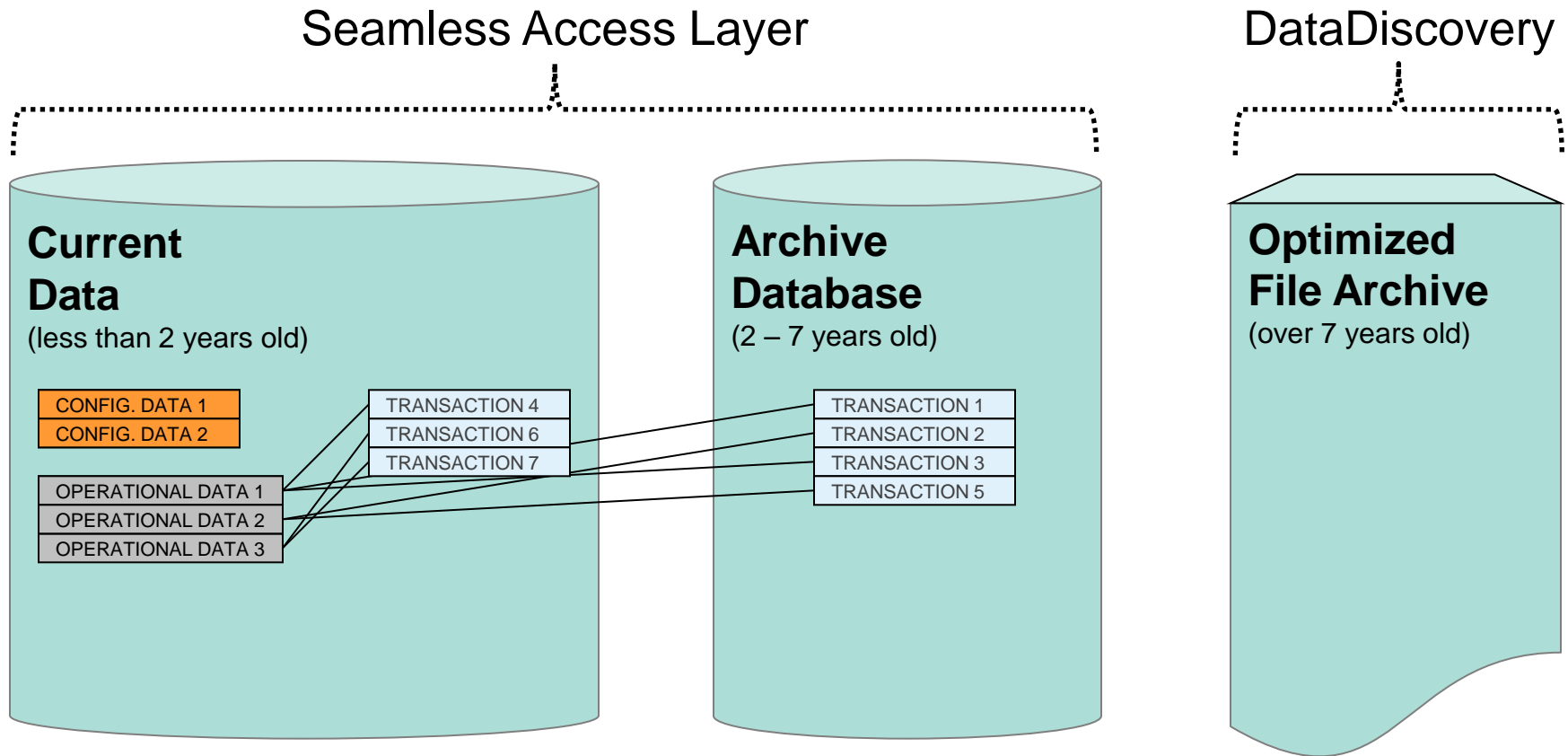
The image shows a screenshot of the 'Oracle Applications - Application Environment A' window. The 'Responsibilities' dialog box is open, displaying a list of responsibilities. The 'Find %' field is empty. The list includes:

- Bills of Material
- Bills of Material - Archive Only
- Bills of Material - Combined
- Buyer, Vision Operations (USA)
- Buyer, Vision Operations (USA) - Archive Only
- Buyer, Vision Operations (USA) - Combined
- Cash Management

The 'Inventory - Combined' responsibility is highlighted in blue. Below the list, there are buttons for 'Find', 'OK', and 'Cancel'. At the bottom, it shows 'Choices in list: 51' and 'Record: 1/1'.

- Benytter Responsibilities for å gi tilgang
- Ingen endringer på applikasjonskode
- Ingen ny applikasjonsserver
- Ingen nye brukere
- Brukere trenger ikke opplæring

# Optimalisert fil arkivering



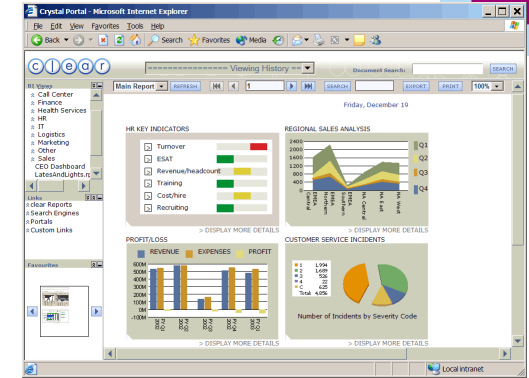
# Forskjellige måter å aksessere File Archive

**INFORMATICA Information Lifecycle Management**

Search Results

CUSTOMER ID	MEMBERSHIP STATUS	MEMBER SINCE DATE	LAST ACTIVITY DATE	RELEASE BALANCE	LAST NAME	FIRST NAME
423	SLUER	23-Aug-1997 00:00:00	14-Mar-2003 00:00:00	19500	Quaranta	John
425	SLUER	03-Jan-1997 00:00:00	13-Sep-2000 00:00:00	19500	Mohamed	Shim
46	SLUER	03-Jan-1996 00:00:00	18-Sep-2000 00:00:00	19500	Farquhar	Howard
794	SLUER	17-Sep-1994 00:00:00	03-Oct-2000 00:00:00	19500	McCluskey	Stephan
813	SLUER	15-Aug-1993 00:00:00	02-Oct-2000 00:00:00	14500	Truly	Mark
812	SLUER	18-Mar-1993 00:00:00	02-Jan-2004 00:00:00	12500	Piert	Frank
567	SLUER	16-Mar-1994 00:00:00	26-Nov-2000 00:00:00	19500	Toussie	Fabrice
494	SLUER	04-Nov-1994 00:00:00	14-Oct-2000 00:00:00	14500	Langstaff	John
488	SLUER	07-Oct-1993 00:00:00	02-Oct-2000 00:00:00	14500	Reuter	Arnold
1715	SLUER	09-Jan-1996 00:00:00	13-Mar-2000 00:00:00	14500	Sarason	Jack
1197	SLUER	03-Jan-1990 00:00:00	02-Oct-2000 00:00:00	19500	Nevadski	Lorella

Informatica  
DataDiscovery



3<sup>RD</sup> part  
rapporteringsverktøy  
(eks SAP BO)

SQL Tools

SQL Tools

```

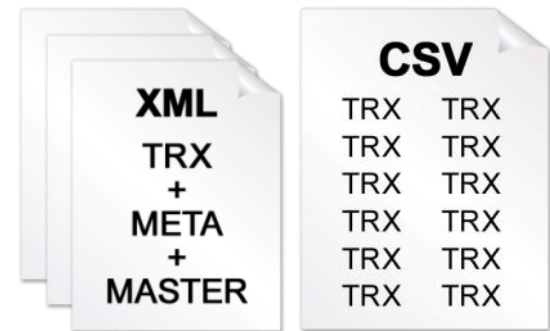
select * from customers where membership_status = 'SLUER'
    
```

ID	MEMBER SINCE DATE	LAST ACTIVITY DATE	RELEASE BALANCE	LAST NAME	FIRST NAME
1	11/01/1997	11/14/2003	12000.00	AMERSON	John
2	11/01/1997	11/13/2003	12000.00	REYNOLD	Eric
3	11/01/1997	11/20/2003	12000.00	DEGENA	Russell
4	11/01/1997	11/17/2003	12000.00	MCCLUSKEY	Stephan
5	11/01/1997	11/17/2003	12000.00	PHILLY	Mark
6	11/01/1997	11/17/2003	12000.00	TRULY	Mark
7	11/01/1997	11/17/2003	12000.00	TOUSSIE	Fabrice
8	11/01/1997	11/17/2003	12000.00	WHITALE	Arnold
9	11/01/1997	11/17/2003	12000.00	LACROIX	John
10	11/01/1997	11/17/2003	12000.00	BORGESINI	Stefano
11	11/01/1997	11/17/2003	12000.00	REUTER	Arnold
12	11/01/1997	11/17/2003	12000.00	REYNOLD	Eric
13	11/01/1997	11/17/2003	12000.00	DEGENA	Russell
14	11/01/1997	11/17/2003	12000.00	PHILLY	Mark
15	11/01/1997	11/17/2003	12000.00	TRULY	Mark
16	11/01/1997	11/17/2003	12000.00	TOUSSIE	Fabrice
17	11/01/1997	11/17/2003	12000.00	WHITALE	Arnold
18	11/01/1997	11/17/2003	12000.00	LACROIX	John
19	11/01/1997	11/17/2003	12000.00	BORGESINI	Stefano
20	11/01/1997	11/17/2003	12000.00	REUTER	Arnold
21	11/01/1997	11/17/2003	12000.00	REYNOLD	Eric
22	11/01/1997	11/17/2003	12000.00	DEGENA	Russell

File Archive  
Repository

TRX  
TRX  
TRX  
+  
META  
+  
MASTER

Extract to XML, CSV, etc.



# Eksempler på Style Sheets

Sales Order

\* Order #: 1-3542257      \* Order Type: Sales Order      Due Date: 08-Dec-2001 02:23:15

Application Search Portal    Compliance Archive Object    Compliance Archive Object

Standard PO: 450000426    Vendor: 450000426    Doc Date: 20000724

Compliance Archive Obj...

PO, Rev: 4336    Type: BLANKET    Created: 12-Feb-1998 12:23:44

Supplier: 147    Site: 529    Contact: 529

Ship-To: 413    Bill-To: 412    Currency: ANY

Buyer: 298    Status: APPROVED    Total: 1500000

Description: \_\_\_\_\_  
P-Card: \_\_\_\_\_

Lines    Price Reference    Reference Documents    More    Agreement

Num	Type	Item	Rev	Category	Description
7	1	1244		1	Adapter Ring
8	1	1232		1	Pin R6x4
10	1	1290		1	Piston Valve
11	1	1222		1	Electromotor

# Agenda



- Introduksjon
- Informatica Data Archiving – Overblikk
- **Informatica Data Subset – Overblikk**
- Informatica Data Privacy – Overblikk

# Informatica Data Subset Product



Bakgrunn

**Mindre kopier**

Metode

**Ta med \*kun\* dataene man trenger**

Utfordring

**Enhetlig måte å administrere utvikling og test miljøer**

Løsning

**Informatica ILM Data Subset**

# Fordeler med Subsetting



## Hva?

## Hvordan?

Redusere dagens  
Kostnader

- Mindre labmiljøer
- Kortere tid å lage produksjons kopier

Unngå fremtidige  
kostnader

- Unngå å bruke penger på tilleggskapasitet

Øke utviklingshastighet

- Minimer test og utviklingstid
- Øk hastigheten på test og utviklingsoppgaver
- Tilrettelegger flere sykluser innenfor tidsrammene

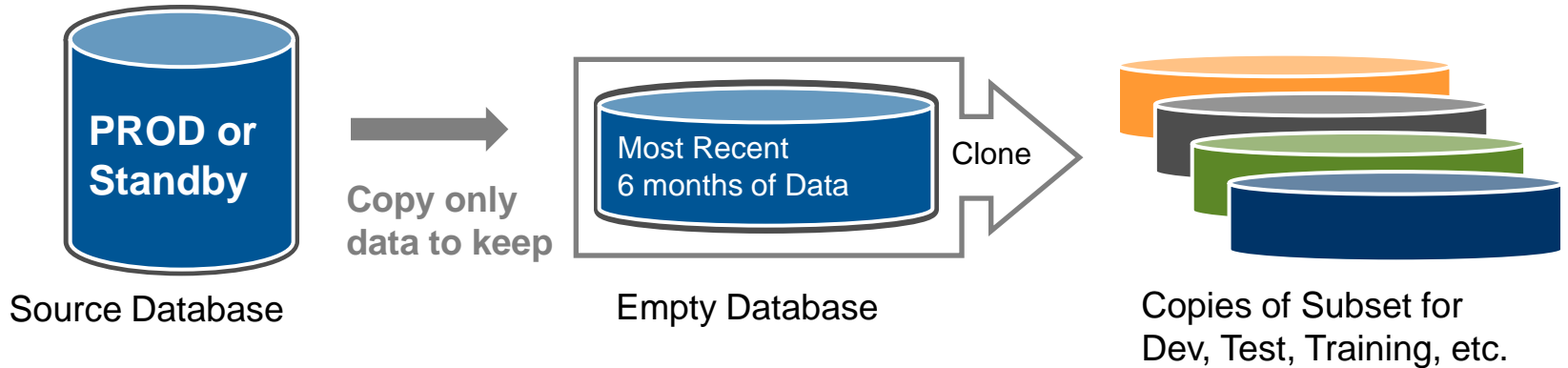
Bedre effektivitet

- Hvert team kan få sine egne utv og testmiljøer
- Reduser tiden det tar å opprette nye miljøer

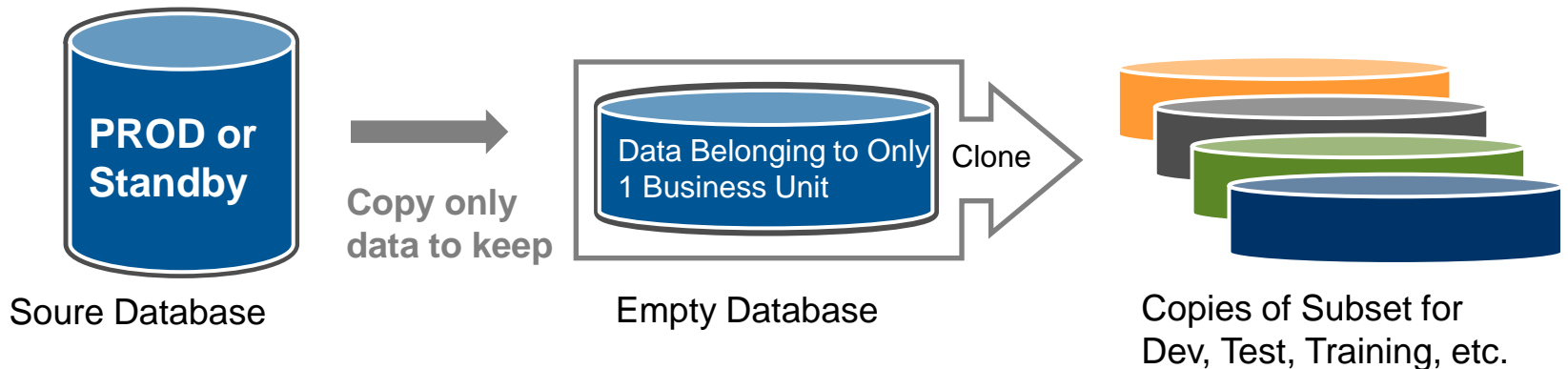
# Informatica Data Subset – 2 hovedmåter



*Basert på tid*



*Basert på funksjonalitet*



# Agenda



- Introduksjon
- Informatica Data Archiving – Overblikk
- Informatica Data Subset – Overblikk
- Informatica Data Privacy – Overblikk

# Informatica Data Privacy



Bakgrunn

**Beskytt sensitiv informasjon utenfor produksjonsmiljøet**

Metode

**Data masking**

Utfordring

**Lage meningsfulle, men ikke-identifiserbare data**

Løsning

**Informatica ILM Data Privacy**

# Hvorfor er Data Privacy viktig?



Produksjonsmiljøet

→ Sikkerhetsmodell kontrollerer tilganger

Ikke-produksjonsmiljøer

→ Sikkerheten er ofte fjernet slik at man kan utvikle og teste

Forretningsdrivere for å ha flere miljøer

Utvikling

Testing

Support

Outsourcing

# Eksempel– Prod vs Non-Prod

## Produksjon

## Utvikling



ORACLE®  
E-Business Suite Home

Worklist

From  
There are no notifications in this view.

Applications

GL Inquiry

- Account
- Average
- Budget
- Journals

ORACLE®  
E-Business Suite Home

Oracle SQL\*Plus

```
File Edit Search Options Help
1 select
2     substr(national_identifier,0,11) SSN,
3     substr(full_name,0,50) NAME
4 from hr.per_all_people_f
5* where rownum <= 50
SQL> /
```

SSN	NAME
230-12-1212	Chang, Julie Ann
230-12-1219	Chou, Ms. Mary
167-32-1112	De Salvo, Mr. Gary
210-34-4367	Shah, Dinesh
	Shah, Mrs. Ramana

General Ledger, Vision  
Communications (USA)

GL Inquiry

GL Testing

MRC, USD General Ledger Reporting

Public Sector General Ledger CENTRA

Subsidiary Super User

Singaporean General Ledger

Run

Correct

Delete

Journals : Define

Allocation

Recurring

Journals : Generate

Reversal

# Informatica Data Privacy - Introduksjon



Tilbyr sikker data privacy ved å ha robust **data masking** funksjonalitet

Hva er Data Masking?

Beskytter sensitiv informasjon ved å gjemme eller endre slik at originale verdien er ukjent

Blir også kalt:

- De-identifying
- Protecting
- Camouflaging
- Data masking
- Data scrubbing

# Data Masking Metoder

- ✓ Character
- ✓ Custom SQL
- ✓ Encrypt
- ✓ Nullify
- ✓ Randomize
- ✓ Sequential
- ✓ Shuffle
- ✓ Skew
- ✓ Substitute

The screenshot displays the 'Applimotion Enterprise Data Manager' interface. On the left, a tree view shows the 'HR' ruleset with 'Randomize\_National\_Identifier' selected. The main window shows the configuration for this rule, including a dropdown menu with options: Character Mask, Custom SQL, Encrypt, Nullify, Randomize (highlighted), Sequential, Shuffle, Skew, and Substitute. The configuration details include:

- Rule Name: Randomize\_National\_Identifier
- Rule Description: Randomize National\_Identifier(Per\_all\_people\_f) with Random Integer
- Column: NATIONAL\_IDENTIFIER
- Data Length: 30
- Precision: (empty)
- Mask Options: Random Integer
- Mask Option Params table:

Parameter Name	Parameter Value
Begin Range	100000000
End Range	999999999
Value Formatter	

Additional text in the interface includes: 'The begin range and end range for random integer should be less than 19 digits.' and buttons for 'Trial Pane' and '?'. A 'Secure' indicator is visible at the bottom left of the window.

# Substitute – Ferdige Data Sett



Tilbyr ferdige datasett som gjør at man kan endre originalen og beholde formatet

- ✓ Mann og Kvinne navn
- ✓ Etternavn
- ✓ Kredittkortnummer – Visa, MasterCard, Amex
- ✓ Land og steder
- ✓ Postnummer
- ✓ Personnummer
- ✓ Telefonnummer
- ✓ Email addresser

# Informatica Data Privacy– Enkel GUI

The screenshot displays the Informatica Enterprise Data Manager interface. The main window is titled "Applimation Enterprise Data Manager" and has a menu bar with "File", "View", "Insert", and "Help". The left sidebar shows a tree view with folders for "GMF Process Manufacturing Financials" and "GMI Process Manufacturing Inventory". The main area is divided into "Basic" and "Cascades" tabs. The "Basic" tab is active and contains the following configuration fields:

- Rule Name: Skew\_Original\_Date\_Of\_Hire
- Rule Description: Skew Original\_Date\_Of\_Hire(Per\_all\_people\_f) with Skew Date
- Table: PER\_ALL\_PEOPLE\_F
- Column: ORIGINAL\_DATE\_OF\_HIRE
- Data Type: DATE
- Data Length: 7
- Precision: (empty)
- Mask Types: Skew
- Mask Options: Skew Date

A "Help" dialog box is open in the foreground, providing details for the "Skew" mask type:

Generates dates based on the original date. The generated dates are skewed by a random +/- amount limited by the SkewRange. The parameters are as follows:

Date Format:  
The data must be entered EXACTLY as specified below.  
In the case that the field is a character field, then this field specifies the format in which the data is stored.

- 14.03.06
- Tuesday, March 14, 2006
- 03.14
- 03.14.06
- ...

At the bottom of the main window, there are buttons for "Trial Pane" and "?".

# Audit rapport



- Alltid oppdatert
- Hvilke regler ble kjørt
- Hvem kjørte regelsettet

<b>Informia Secure</b>		Generated :	06/08/2009	
Audit Report		PFV :	11.5.10	
		Target :	OEBS01	
<b>Definition Details :</b> 11.5.10 HR				
User Name	Creation Date	Last Updated Date	Status	
Applimation Administrator	7/16/09 1:12 PM	7/16/09 1:12 PM	Active	
<b>Job Details :</b> 11.5.10 HR				
Job ID	Start Date	End Date	Status	Scheduled By
18	7/16/09 1:13 PM	7/16/09 1:15 PM	COMPLETED	Applimation Administrator
<b>Job Step Details :</b>				
Job Step Name	Start Date	End Date	Status	
SIMULATE	7/16/09 1:14 PM	7/16/09 1:15 PM	COMPLETED	
GENERATE SCRIPT	7/16/09 1:13 PM	7/16/09 1:14 PM	COMPLETED	

# Informatica Data Privacy - Oppsummert



- ✓ Enterprise løsning
- ✓ Accelerators for Oracle Applications og PeopleSoft
- ✓ Innebygd en rekke forskjellige maskeringsmetoder
- ✓ OOTB datasett for sensitive data
- ✓ Holder data konsistente
- ✓ Kan simulere kjøring og ta ut audit rapporter
- ✓ Enkelt brukergrensesnitt

# Arrangementer fremover



## Affecto events:

- ILM seminar 10.mars
- DVH/BI 2.0 seminar 23.mars
- SAP tech-brief i mars
- INFA tech-brief i april
- ABC-seminar 5. mai

## Affecto kurs:

- BI Fundamentals
- Kravspesifikasjon for BI
- Dimensjonsmodellering
- SAP BO-kurs
- Informatica-kurs
- MS-kurs