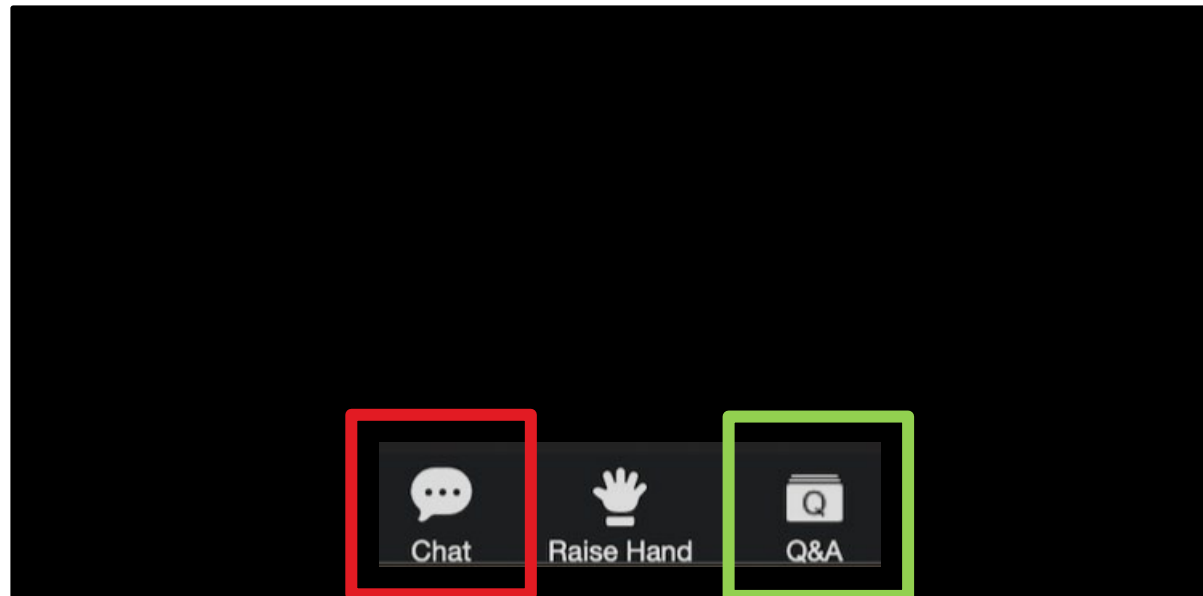


# Complexities of Separating Data in an ERP Environment

# Webinar Mechanics

- ❑ The **Audio Options** menu is in the lower-left portion of the window.
- ❑ Please submit all **presentation-related** questions in the **Q&A** panel. Time-permitting, questions received will be answered at the end of the session. All Q&A will be posted on our LinkedIn page, EBS Answers, after the event.
- ❑ Please submit all **support/other** questions in the **Chat** panel.
- ❑ Polling questions will be presented during the session. Receipt of CPE credit for today's session requires that **all** polling questions be answered.
- ❑ After the event, a follow-up email will be sent including a link to the recording of today's session and Q&A.



# Learning Objectives

After completion of this presentation, you will be able to:

- ❑ Objective 1: Discover the reasons for data separation.
- ❑ Objective 2: Understand data architecture in an Enterprise Resource Planning (ERP) System.
- ❑ Objective 3: Explain how to effectively separate the data.

# Who Is eprentise?

## In 2007 eprentise was founded on its original product, FlexField

- Enables customers to make unprecedented changes to their financial chart of accounts while maintaining transactional history and data integrity.



## In 2009 we introduced our Consolidation, Divestiture, and Reorganization products

- Transformational software which can copy, change, filter, or merge all elements of Oracle EBS financial systems to address ever-changing business needs, such as regulatory compliance and growth opportunities.

Transformation to Optimization

One-time usage to subscription model

## In 2020 we began expanding to new markets with our C Collection analytics suite, and our Audit Automation software

- C Collection analytics provides transparency and identifies potential problem areas with transactional data. This allows users to reduce costs, leverage opportunities across the enterprise, improve business processes, and increase the confidence level of the users in their data, processes, and operations.
- Automated Audit provides finance teams with drill-down data from a balance sheet report into the transaction-level detail. The software covers hundreds of substantive procedures for the entire enterprise domain and builds in consistent audit processes and workflows across the organization.



# Companies Need to Change Their Oracle® E-Business Suite *Without* Reimplementing

## eprentise Can...

- ❑ Consolidate Multiple EBS Instances
- ❑ Change Underlying Structures and Configurations
  - Chart of Accounts, Other Flexfields
  - Merge or Split Ledgers, Operating Units, Legal Entities, Inventory Organizations
  - Calendars, Currency, Costing Methods
  - Asset Revaluation, Inventory Valuation
- ❑ Separate Data for a Divestiture

## ...So Our Customers Can:

Reduce Operating Costs and Increase Efficiencies

Adapt to Change

Avoid a Reimplementation

Reduce Complexity and Control Risk

Improve Business Continuity, Service Quality and Compliance

Streamline Operations with Visibility to All Parts of the Business

Establish Data Quality Standards and a Single Source of Truth

## *Finished But Not Done*®

# Agenda

- ❑ Data – The Most Valuable Business Asset?
- ❑ Reasons for Data Separation
- ❑ ERP Data Architecture
- ❑ Effectively Separating Data
- ❑ Data Separation Case Studies
  - Separating data in different instance – Divestiture
  - Separating data in same instance – Re Organization.
- ❑ Questions

# Objective 1

Discover the reasons for data separation.

# Data – The Most Valuable Business Asset

## ❑ Is Data the New Oil of Data Economy?

- Data and oil have similar properties
- “Data-fication” of information

## ❑ Types of Data

- Structured Data – Tables/ Excel- ERP
- Unstructured Data – Documents, Photographs, Videos, ECG reports

## ❑ Sources of Data

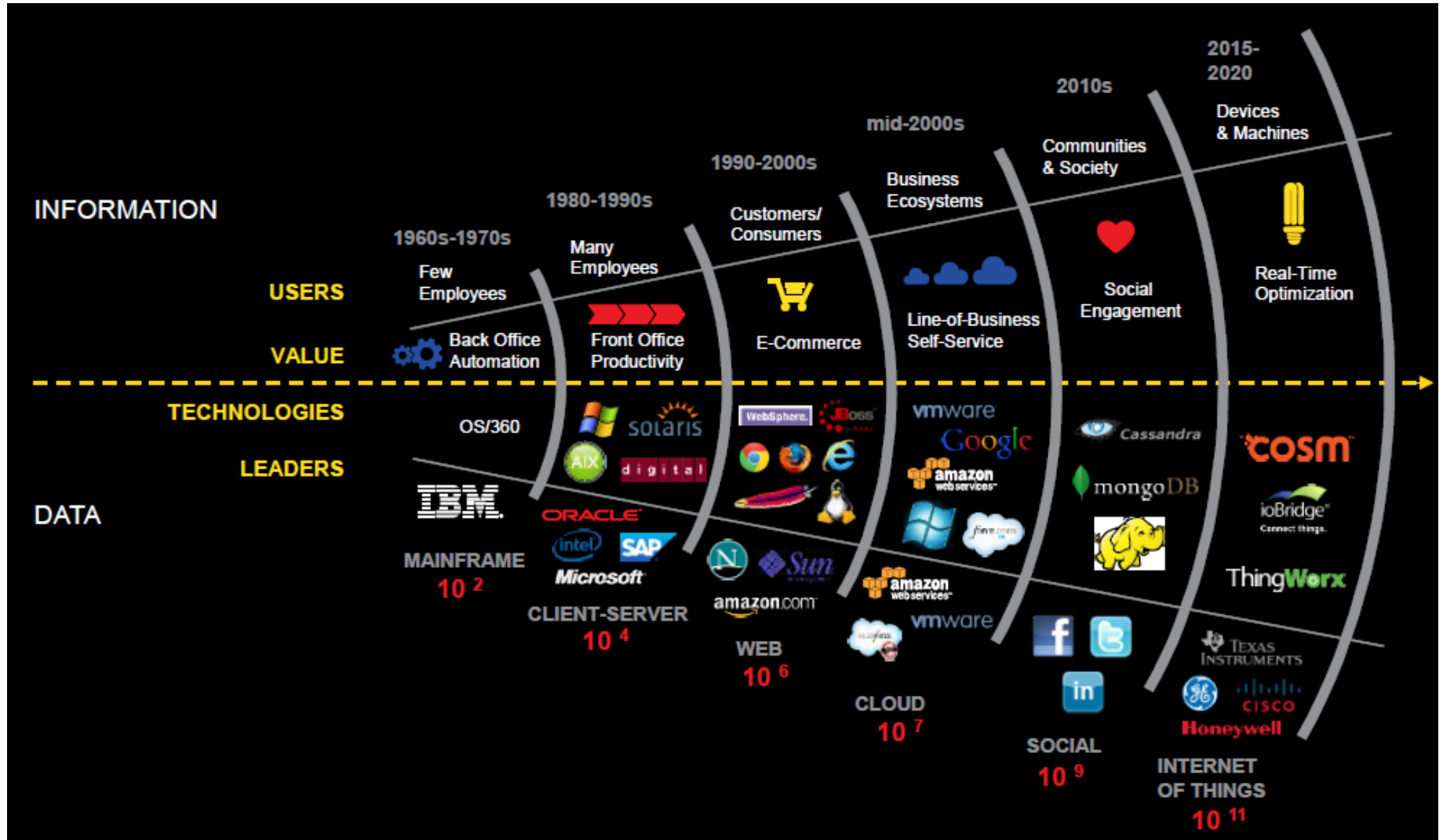
- Human generated data
- Machine generated data aka Internet of things

## ❑ Data Usage

- Business operations –order entry , invoice generation , reporting etc.
- Business analytics – market trends, market-based analysis
- AI and ML – patterns, data mining, build models to predict a future outcome
- Data monetization



# Technology change and growth and usage of data over time



- ❑ Top 5 Key challenges handling huge data
  - Common definitions and usage
  - Lack of proper understanding of massive data
  - Data growth issues
  - Relevance/importance of data points changing over time
  - Integrating data from a variety of sources
  - Data security
    - Data access
    - Data separation

# Data Separation

- ❑ An act of segregating data to produce information that meets a business requirement
  
- ❑ Simple uses – requires none to some knowledge of underlying ERP data model:
  - Specifying report parameters when running a report
  - Specifying a WHERE clause criteria in a query when selecting data from a database table
  
- ❑ Complex uses – requires extensive knowledge of underlying ERP data model:
  - In the case of a divestiture, identify which customers and suppliers will go with the buyer organization
  - When archiving data from an ERP instance, identify which data entities will be impacted
  - Separate business operations for regulatory or statutory requirements
  - Financial auditing

# Why Separate Data?

## ❑ Reporting:

- Specific reporting requirements from a subset of data

## ❑ Business event:

- Buying or selling part of an organization

## ❑ Compliance:

- Different legal requirements for different parts of the organization

## ❑ Governance:

- Different controls or security requirements within the organization

## ❑ Archive/Purge:

- Archive/purge historical data

## ❑ Masking:

- Mask HR and other sensitive data based on regulations such as PCI compliance, etc. – how to identify what to mask?

# Interesting Data Fact

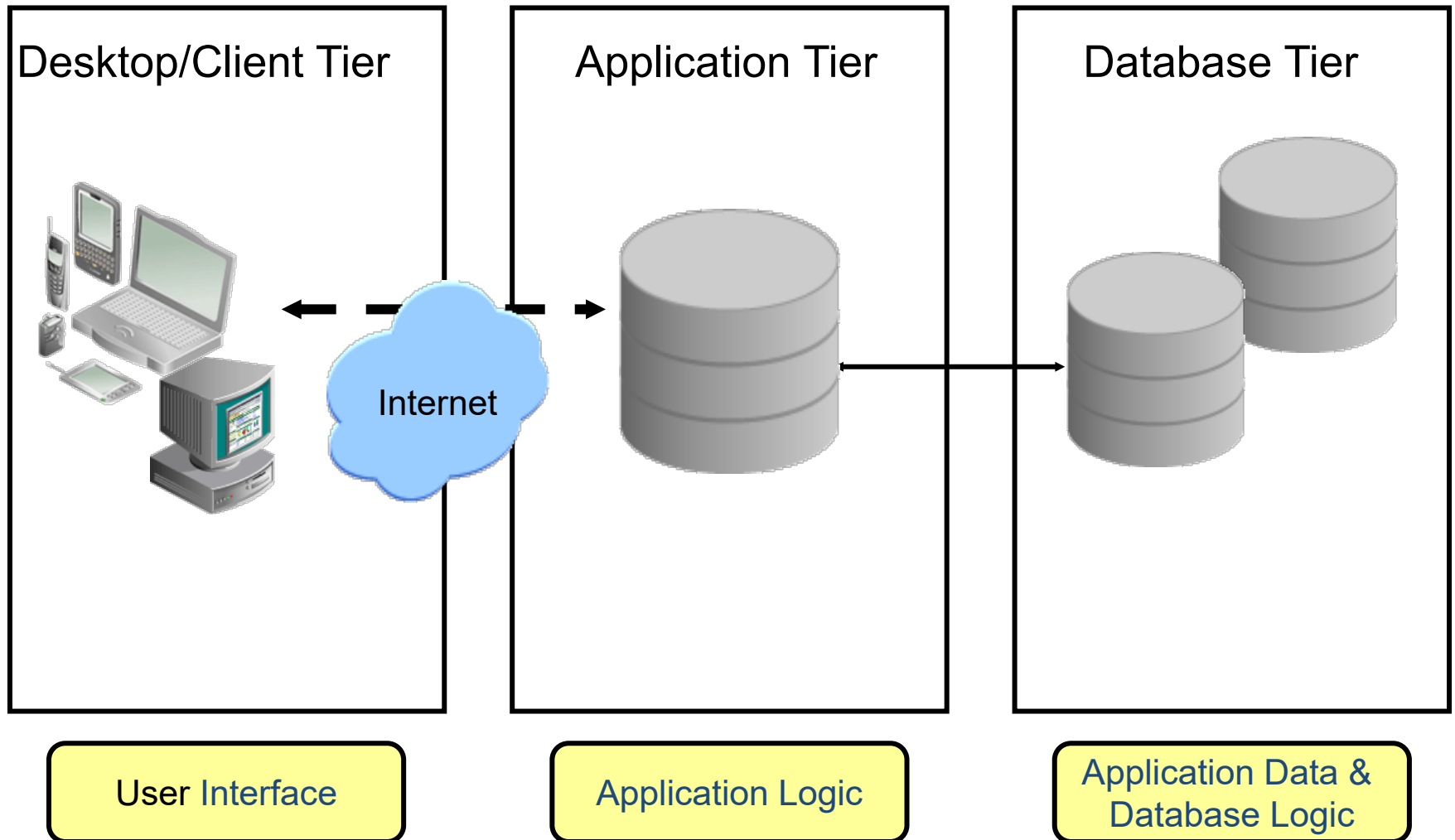
On average, every human created at least 1.7 MB of data per second in 2020. <sup>[1]</sup>

[1] <https://techjury.net/blog/how-much-data-is-created-every-day/#gref>

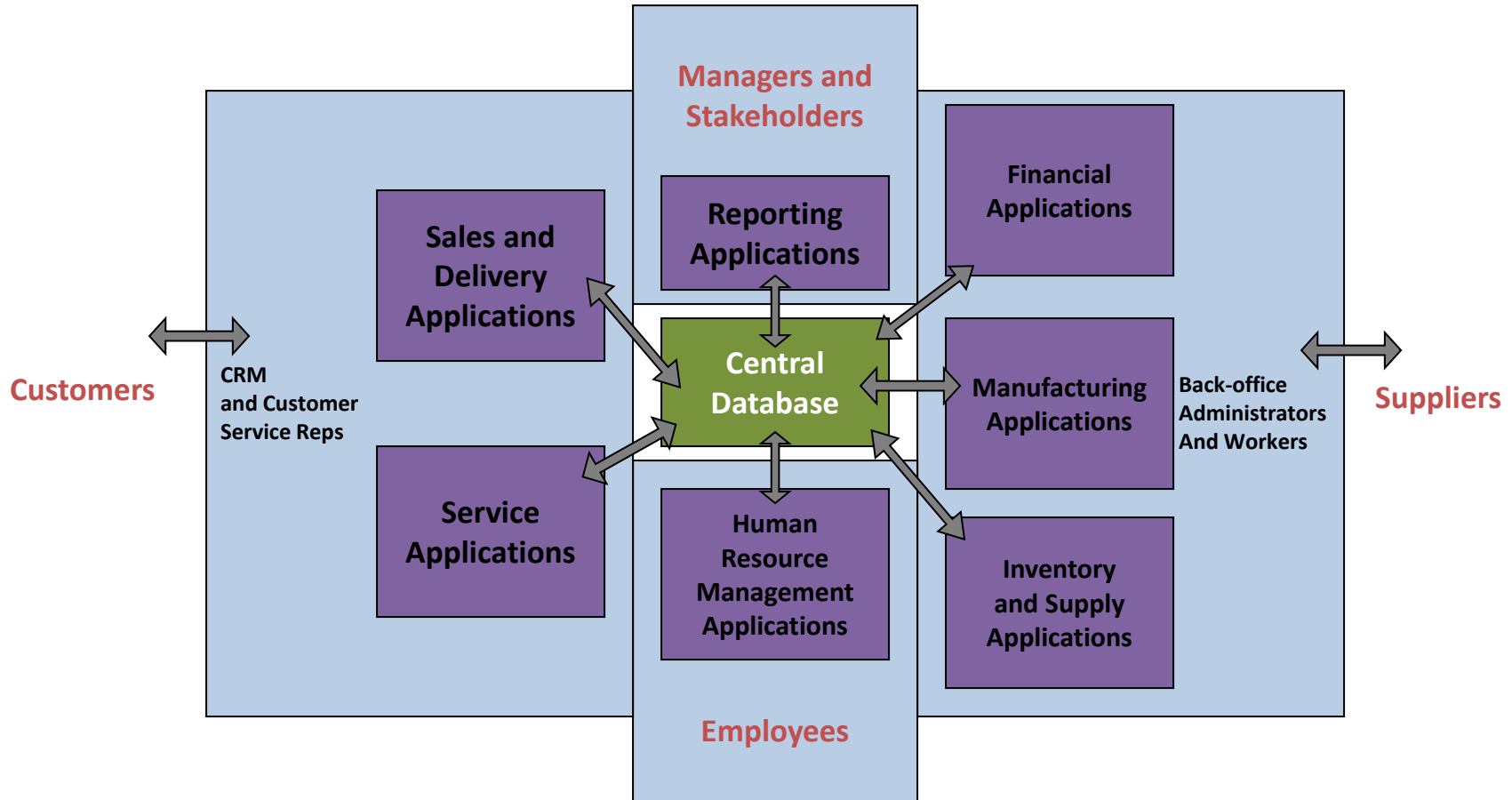
# Objective 2

Understand data architecture in an ERP system

# ERP Technical Architecture



# ERP Functional Structure





# ERP Modules – 4 Main Functional Areas

## ❑ Finance and accounting

- Investment, cost, asset, capital and debt management
- Budgets, profitability analysis and performance reports

## ❑ Sales and delivery

- Handles pricing, availability, orders, shipments and billing

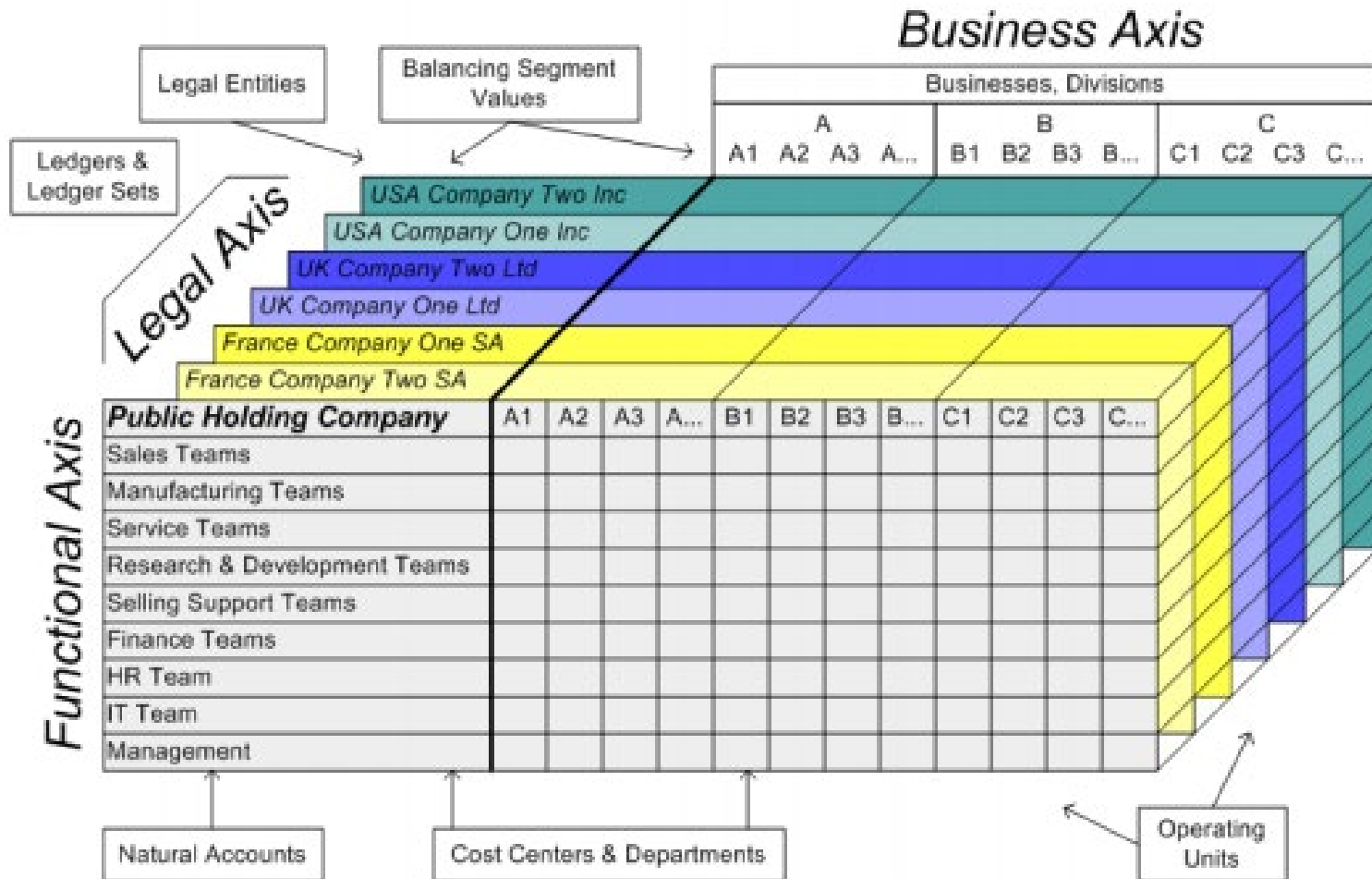
## ❑ Inventory and supply management

- Process planning, BOM, inventory costing, MRP, allocates resources, schedules, Purchase Orders and inventory

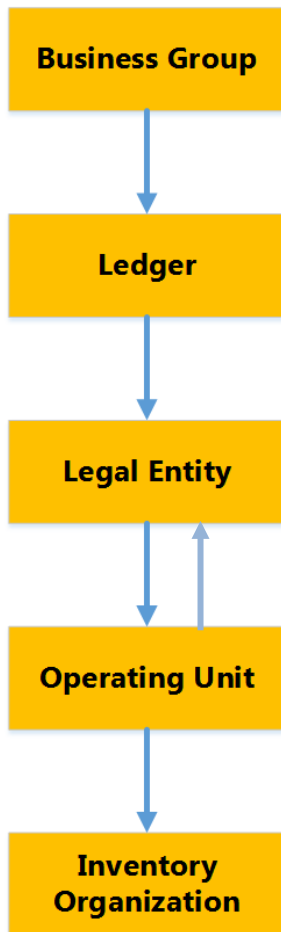
## ❑ Human resources

- Workforce planning, payroll & benefits and organizational charts

# Data stored at Multiple Levels – EBS View



# Organization Components



**Business Group:** The consolidated enterprise, a major division, or an operations company.

**Ledger:** A financial entity comprised of a chart of accounts, calendar, and functional currency. Oracle General Ledger secures information by ledger.

**Legal Entity:** The level at which fiscal or tax reports are prepared. Maintains the legal lines of credit information of the company.

**Operating Unit:** Tied to a legal entity, an operating unit can only reference one ledger and one currency. Most master data such as customers, suppliers, bank and transaction data of AP, PO, AR, OM, CM are secured by operating unit. In R12, a LE can be in many OUs, and an OU may have many legal entities. An OU must have a Default Legal Context (DLC), which will be a particular legal entity. You can assign that DLC legal entity to multiple OUs.

**Inventory Organization:** An organization that tracks inventory transactions by item. Oracle INV, BOM, Engineering, WIP, Master Scheduling/MRP, Capacity, and Purchasing Receiving all secure data by this type of organization. At least one Master Inventory Org needs to be defined to maintain item information.

# Data Segregation in ERP

## ❑ Business Group

- Segregates HR and employee data

## ❑ Ledger

- Segregates financial data

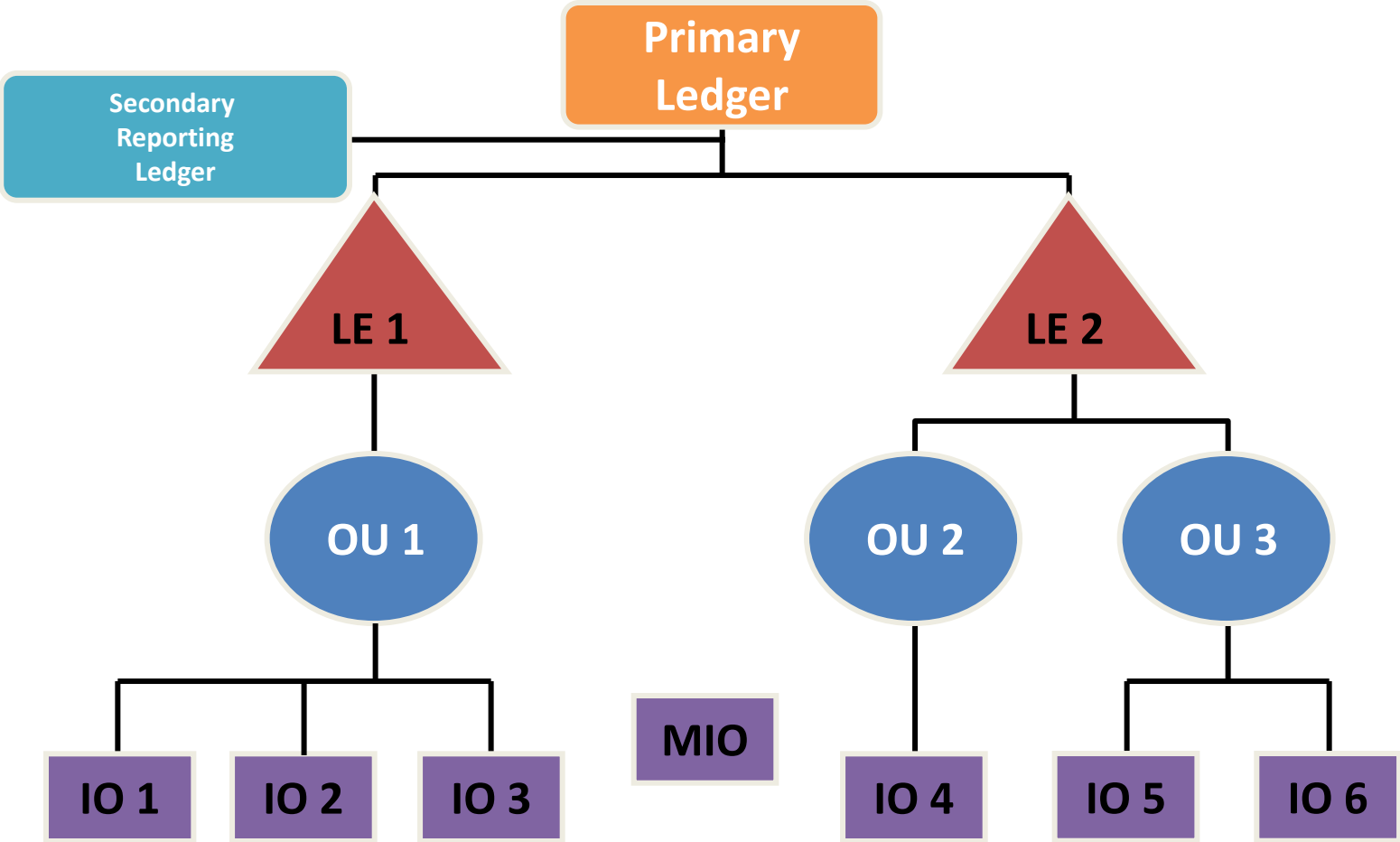
## ❑ Operating Unit

- Segregates master data (customers, suppliers, bank account) and transaction data for modules such as Payables, Receivables, Purchasing, Order Management, etc.

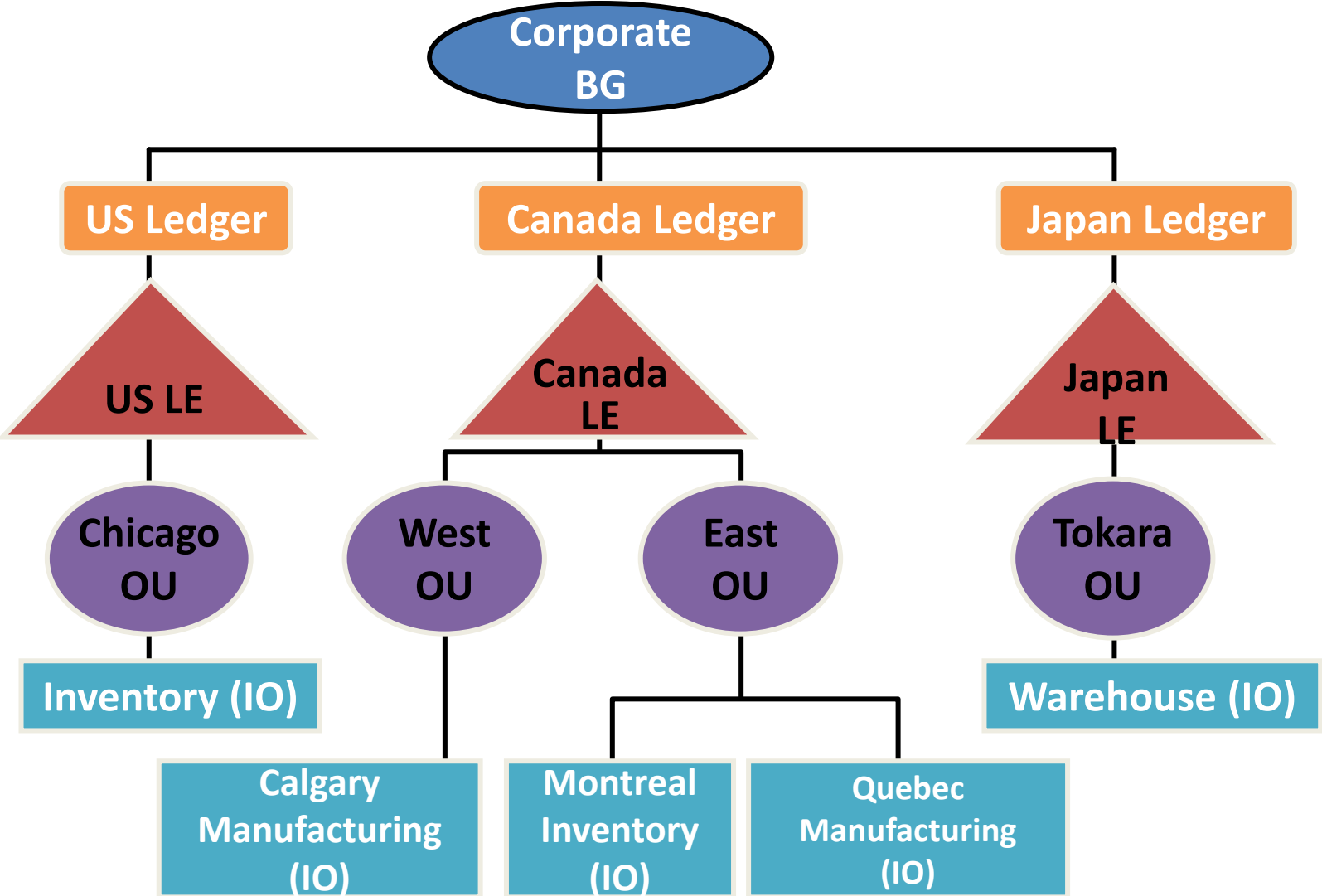
## ❑ Inventory Organization

- Segregates inventory related data for modules such as Inventory, Material Requirements Planning, Bills of Materials, Work in Process, etc.

# Organization Structure – Example 1



# Organization Structure – Example 2



# Is More Flexibility = Low Complexity?

- ❑ The same data structures must hold data to support many business models
- ❑ The data structure might contain data attributes that are context sensitive
- ❑ Highly normalized data in the database
- ❑ Different user experiences requires different data types:
  - Conventional structured data
  - Unstructured data
  - Video files
  - Sound files
  - Image files
  - Other file formats (PDF, Word, EXCEL, etc.)
  - Social media
- ❑ Data or process integrations with other upstream or downstream systems

The majority of the world's data has come about in only the past two years as indicated by data growth statistics.<sup>[1]</sup>

[1] <https://techjury.net/blog/how-much-data-is-created-every-day/#gref>



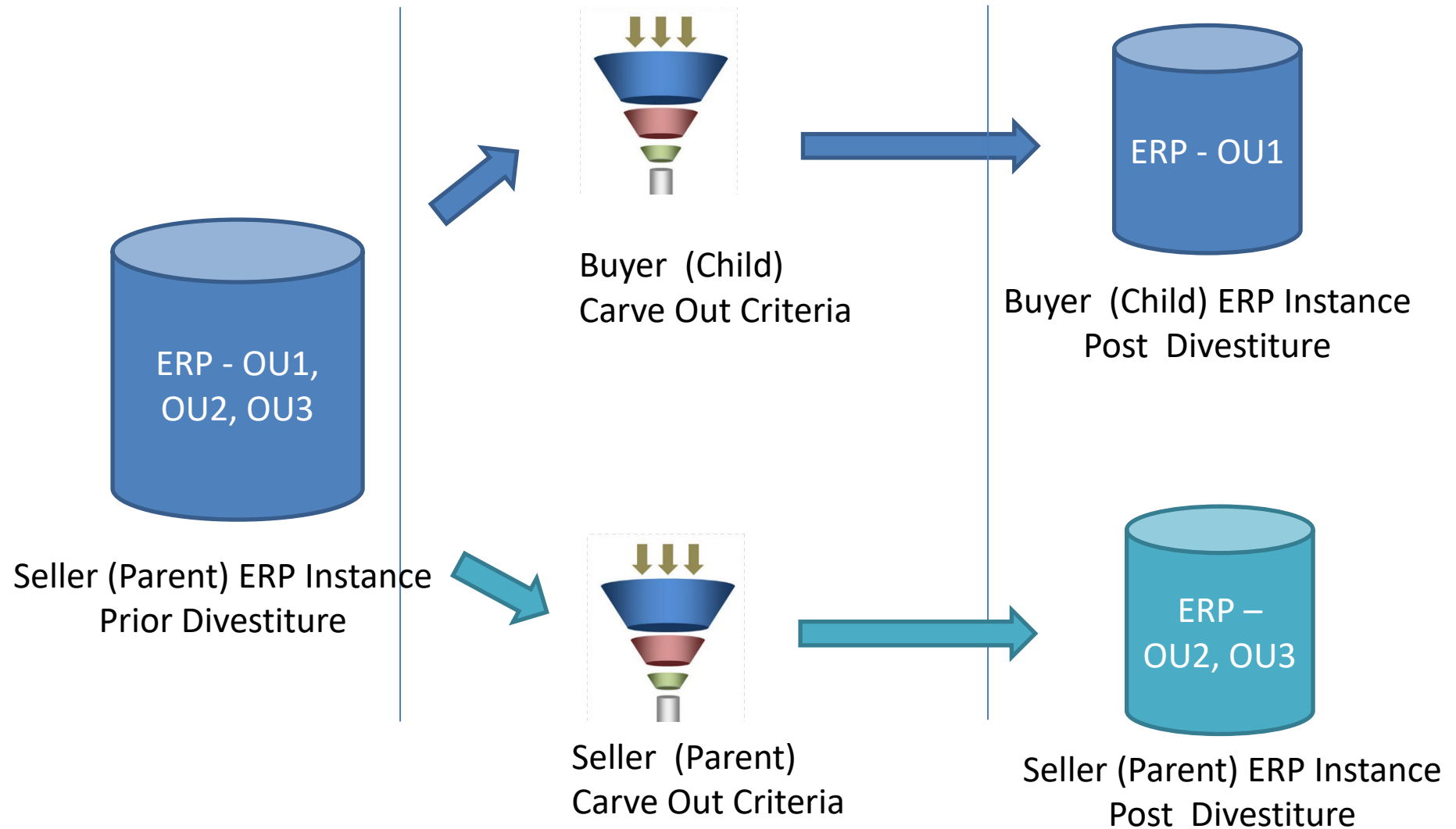
# Objective 3

Explain how to effectively separate the data

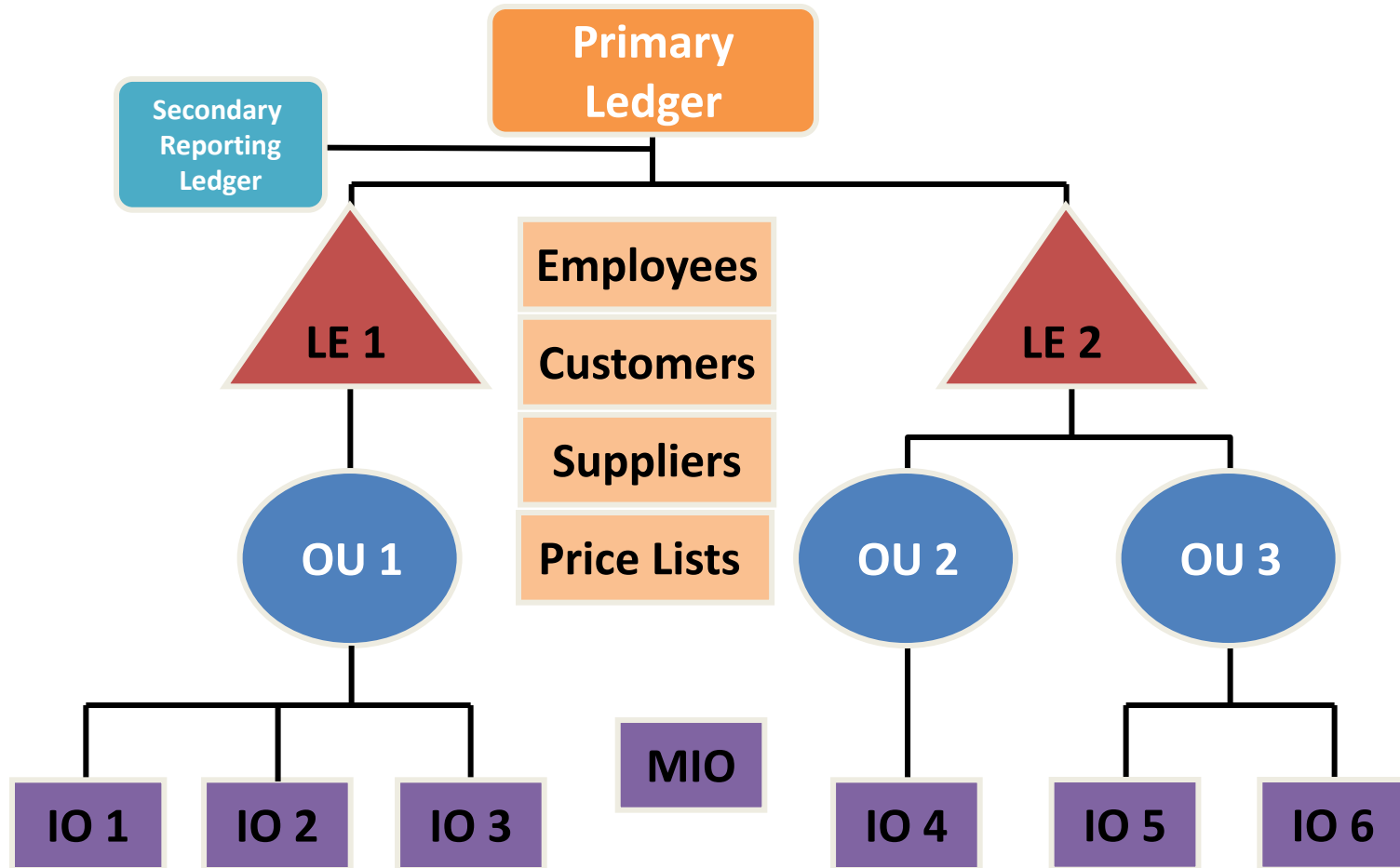
# Data Separation – Divestiture Case Study

- Pre-sale planning is the key to successful divestiture
- Carve-out criteria types
  - By Ledger
  - By OU
  - By Company
  - By Product Line
- According to an executive survey done by Deloitte these are the top 5 priorities for the sellers:
  - Developing carve-out financial statements
  - Performing a detailed valuation analysis
  - Analyzing potential deal structures
  - Considering tax and legal structure
  - Establishing an incentive plan for target management

# Data Separation – Divestiture Case Study



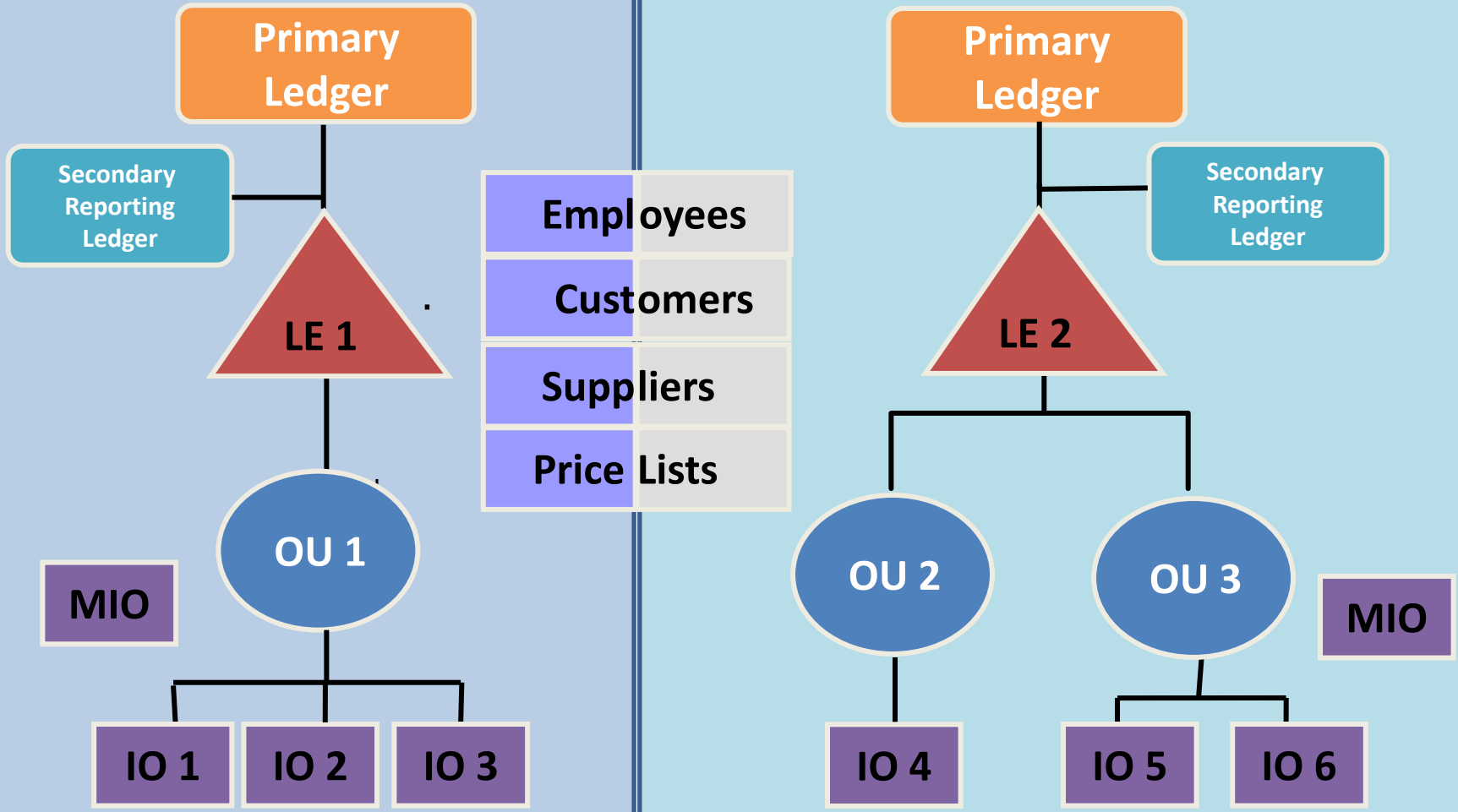
# Divestiture Case Study – Seller Pre-divestiture



# Divestiture Case Study – Post-divestiture

Buyer Instance

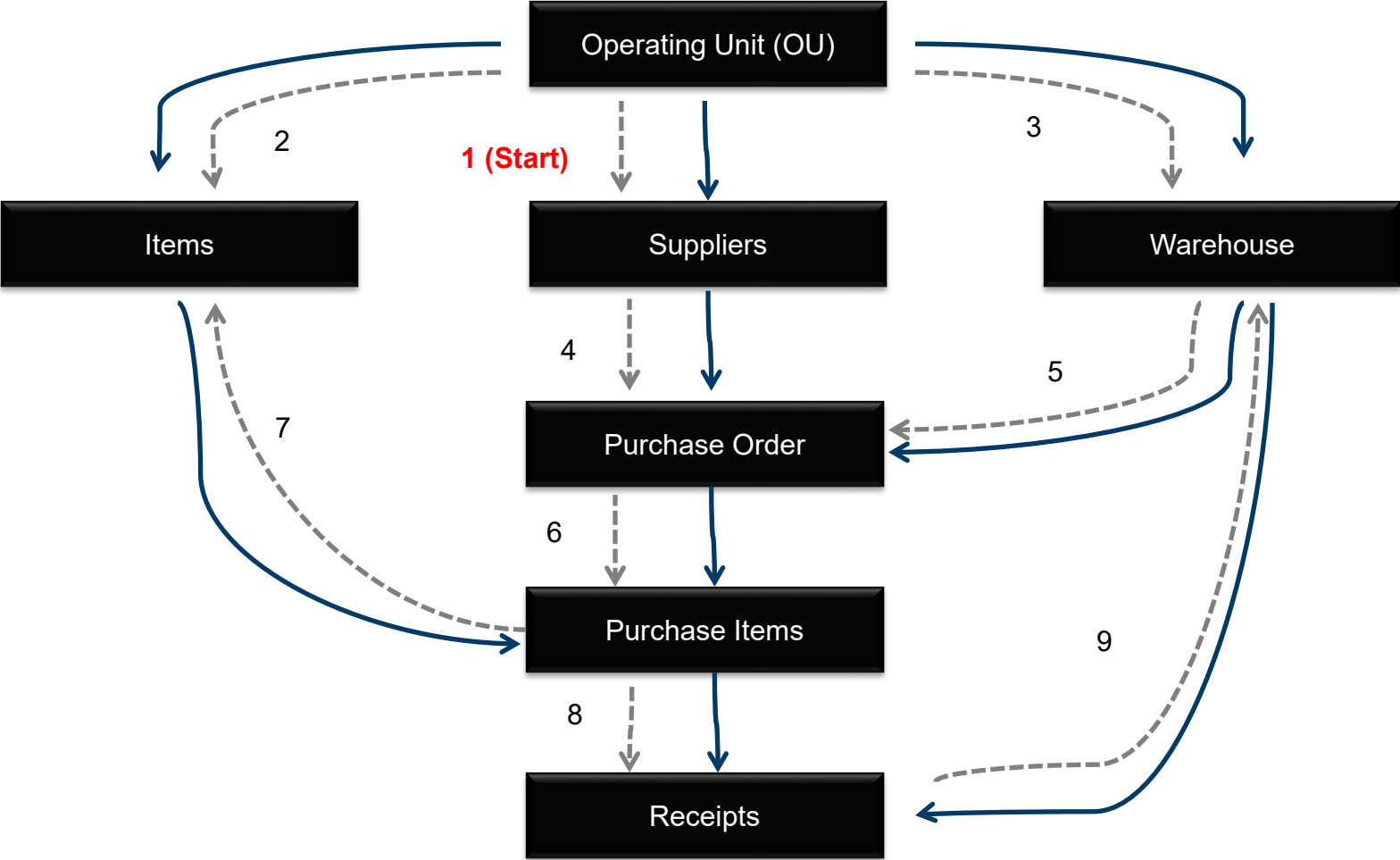
Seller Instance



# Top-down Data Separation

- ❑ Starts at a higher-level data entity such as operating unit or inventory organization and then further drills down to a lower level that meets the business requirements:
  - List of all the outbound shipments from a specific warehouse for a given month
  - List of all customer invoices and related payments for a customer under a specific operating unit
  - List of all the purchase orders created to ship inventory to a specific warehouse
  - List of all the asset account balances for a given financial ledger as of a given period

# Top-down – Separate Data Based on OU

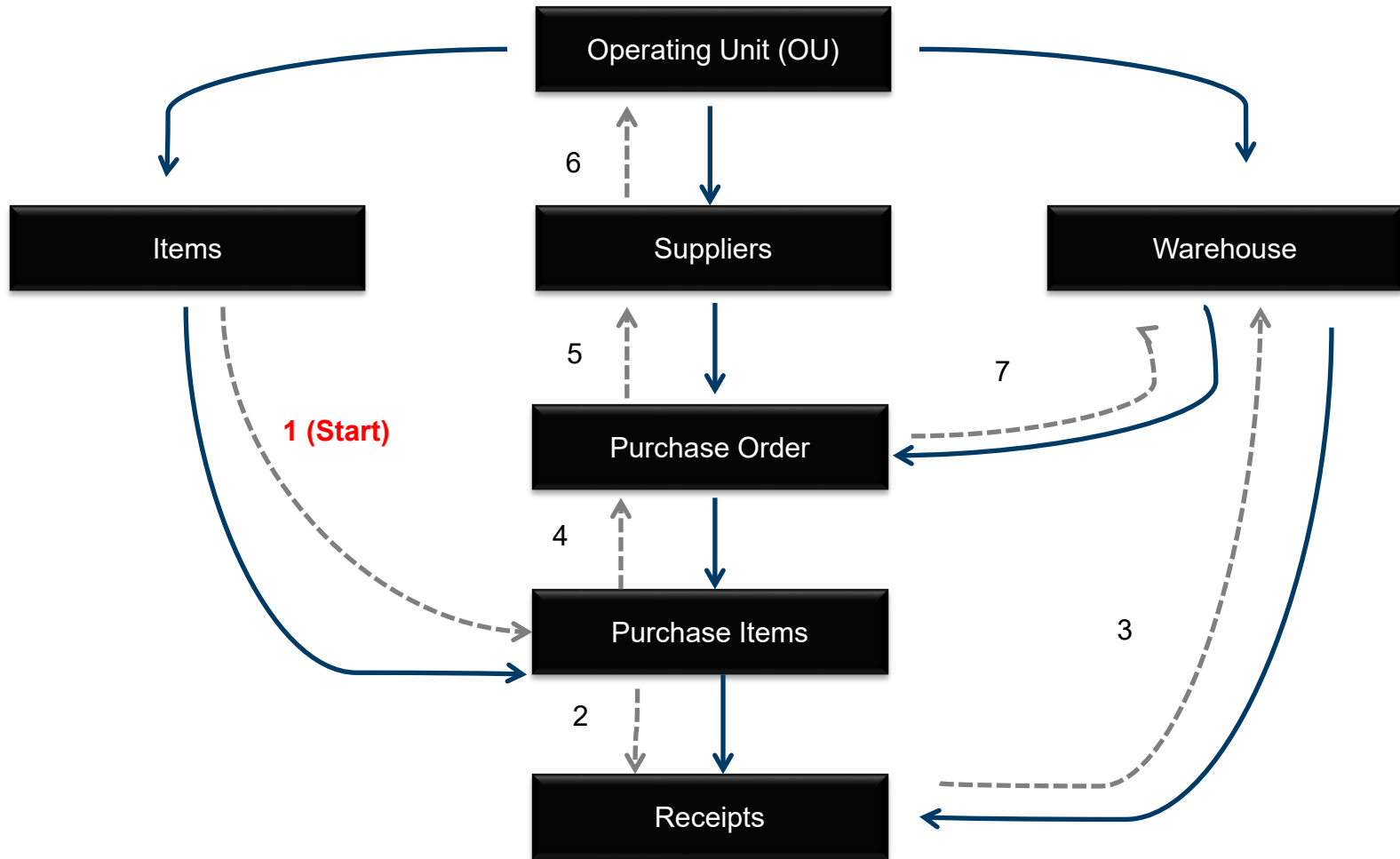


# Bottom-up Data Separation

- ❑ Starts at a lower-level data entity/attribute, such as an item or transaction date, and then further rollup to a higher level that meets requirements:
  - List of all the outbound shipments for a given item
  - List of all the customers whole received a shipment for a given item
  - List of all suppliers who shipped specific items to any warehouse after a specific date
  - List of all customer receivables for a specific transaction date period that uses an accounting code for a specific company



# Bottom-up – Separate Data Based on Item



# Interesting Data Fact

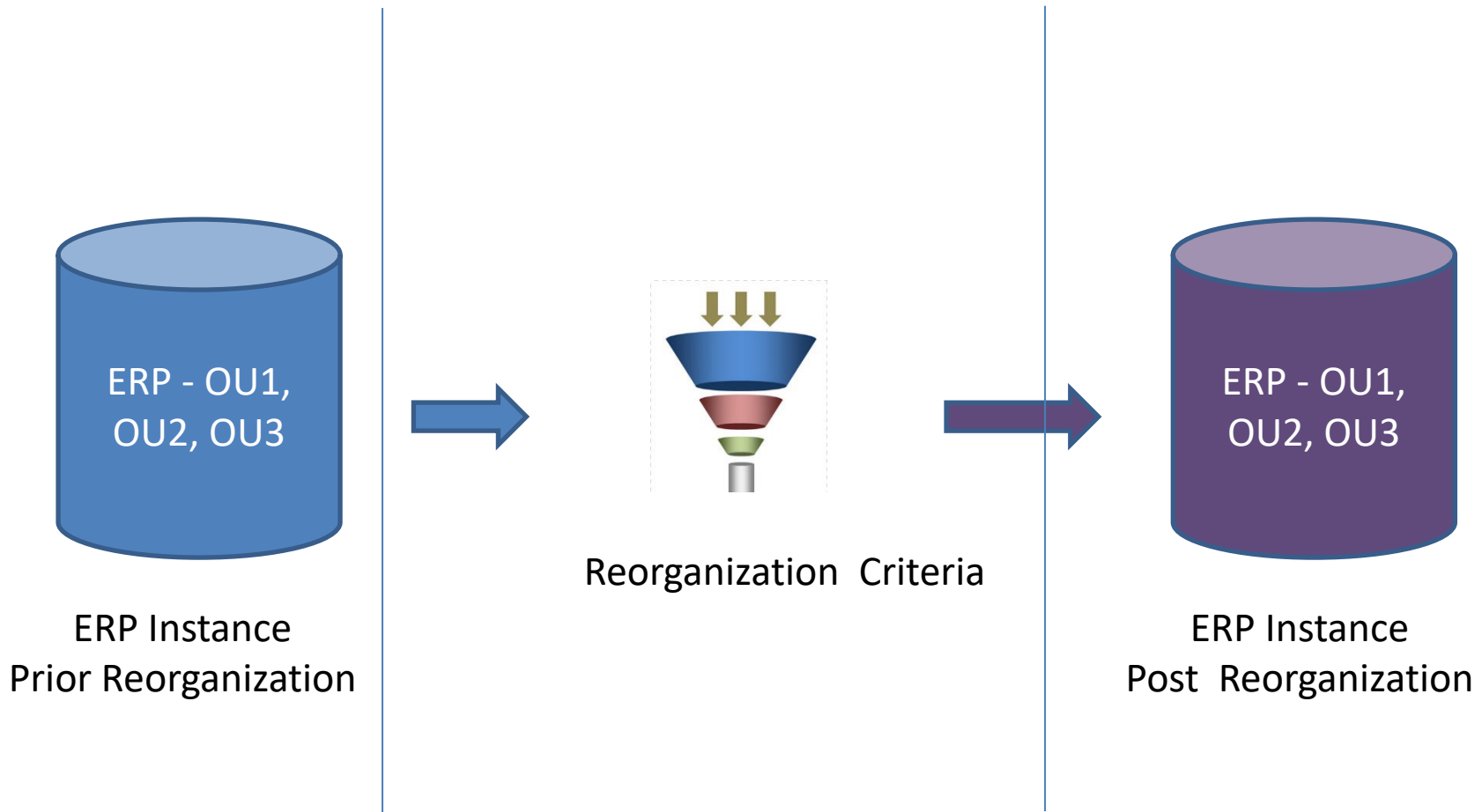
In 2024, the number of emails will be about 361 billion every day.<sup>[1]</sup>

[1] <https://techjury.net/blog/how-much-data-is-created-every-day/#gref>

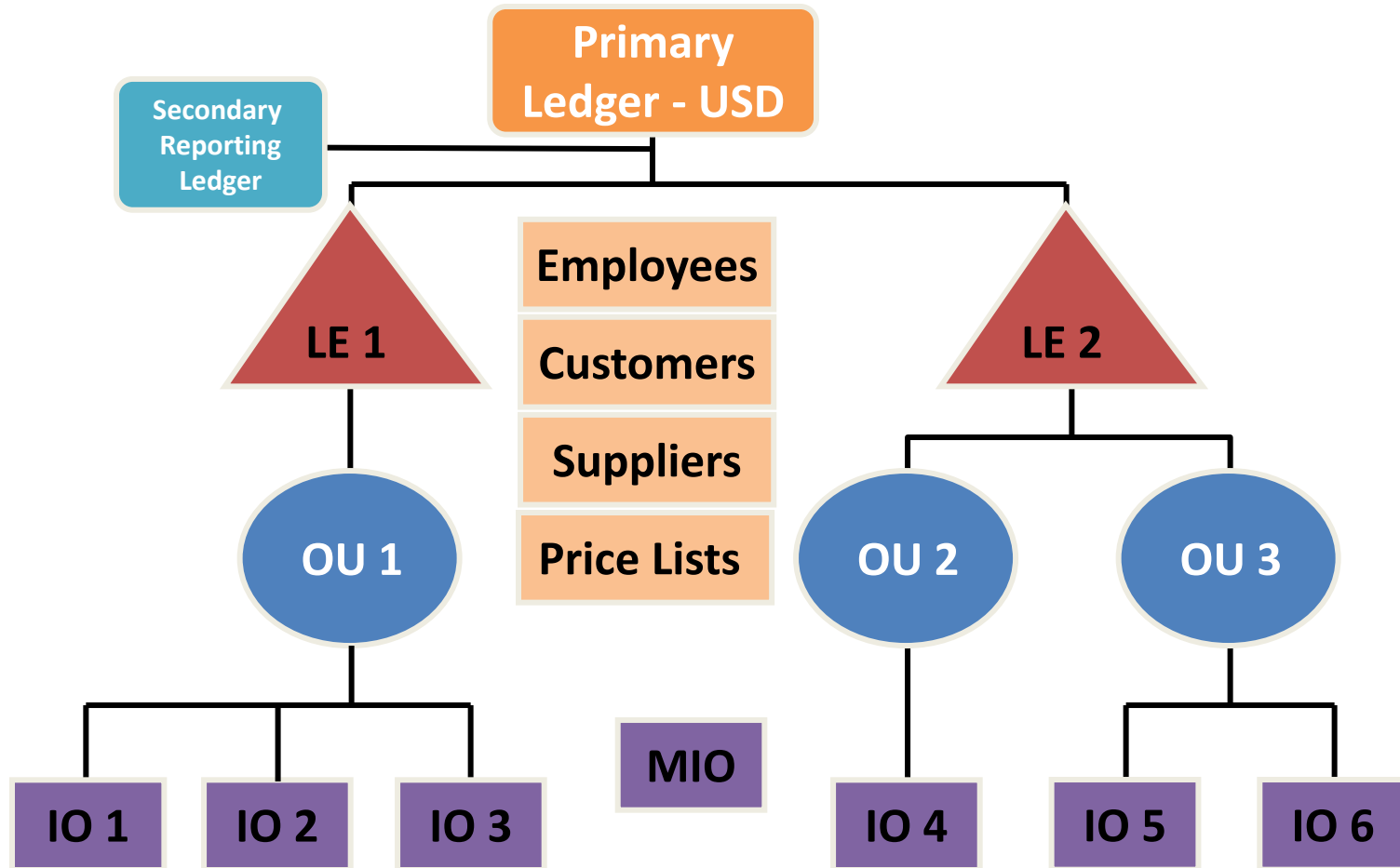
# Pre-requisites for Making Good Decisions with Data Separation

- ❑ Understanding of data entities, using:
  - Published data dictionary
  - ER diagrams
  - Metadata from the database
  - Other available sources such as custom documentation, internal knowledgebase, etc.
  
- ❑ Techno-Functional knowledge of the data - how different business functions relate to the data
  - For example, understand purchasing and its connection with payables and financial accounting
  
- ❑ Understanding of the tools available in the market

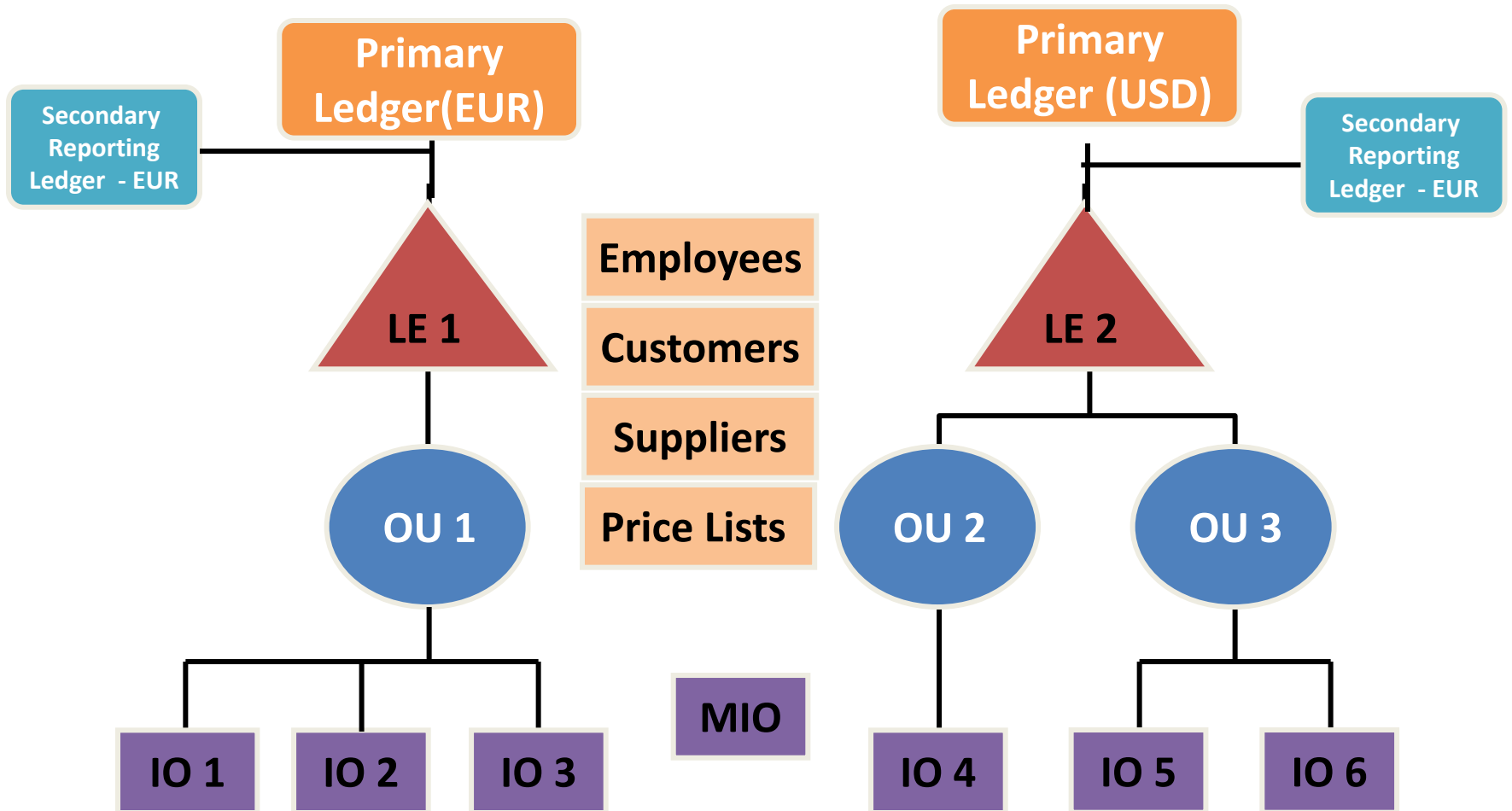
# Data Separation – Reorganization Case Study



# Re-organization Case Study – Pre-reorganization



# Re-organization Case Study – Post -reorganization



# Data Separation in the Cloud

- ❑ Cloud Solutions: SaaS, PaaS, IaaS
- ❑ Single functional domain SaaS tools have been in the market for 10+ years now and are very mature (Salesforce.com)
- ❑ PaaS and IaaS are very mature now
- ❑ Multiple functional domain SaaS tools such as ERP are fairly new to the market and are increasingly being adopted by customers and the product offering is also being constantly enhanced by the customer
- ❑ Customer can utilize APIs to extract data from Cloud ERP but have limited ability to directly access the data using external SQL/data integration tools

# Questions?



# Thank You!

## **Anil Kukreja**

Managing Director, eprentise India  
Chief Technology Officer, eprentise



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