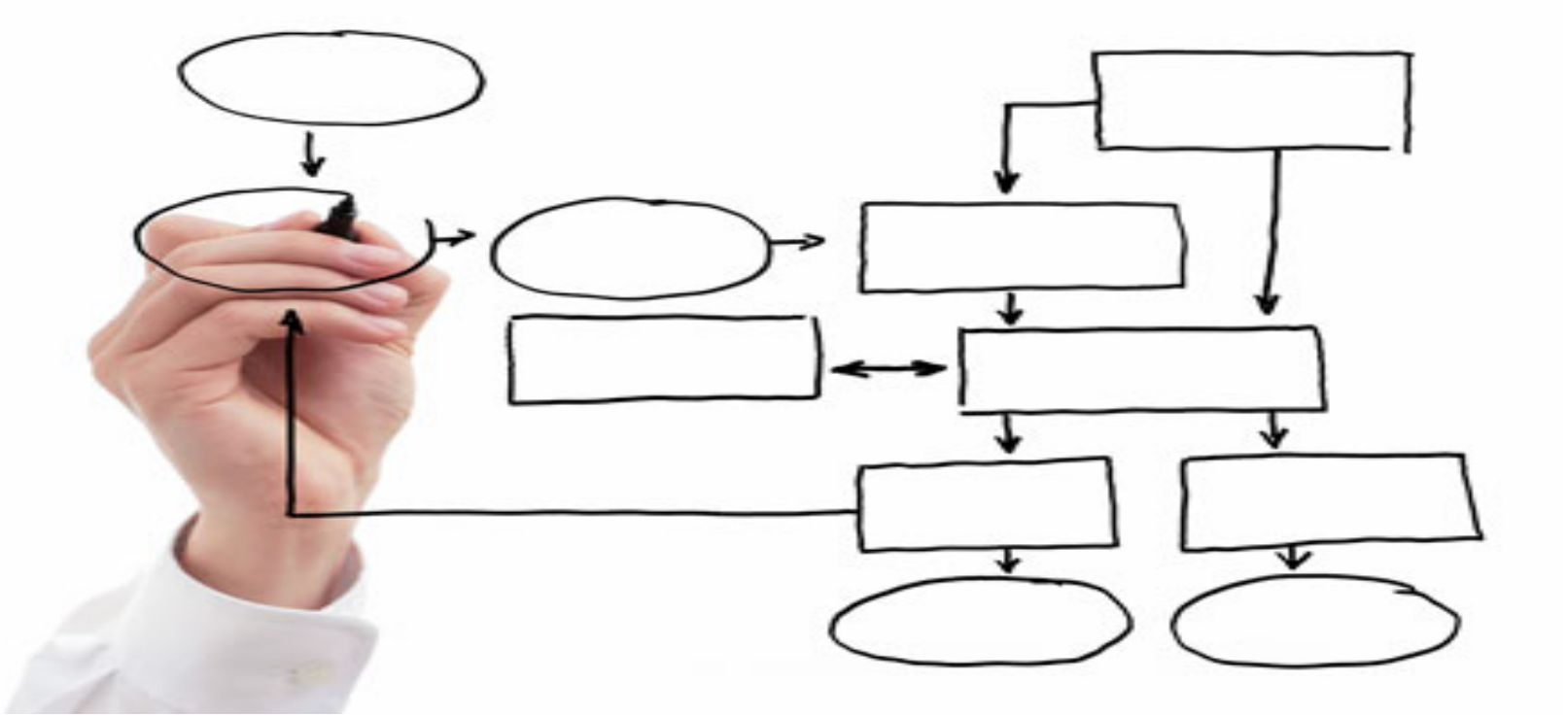
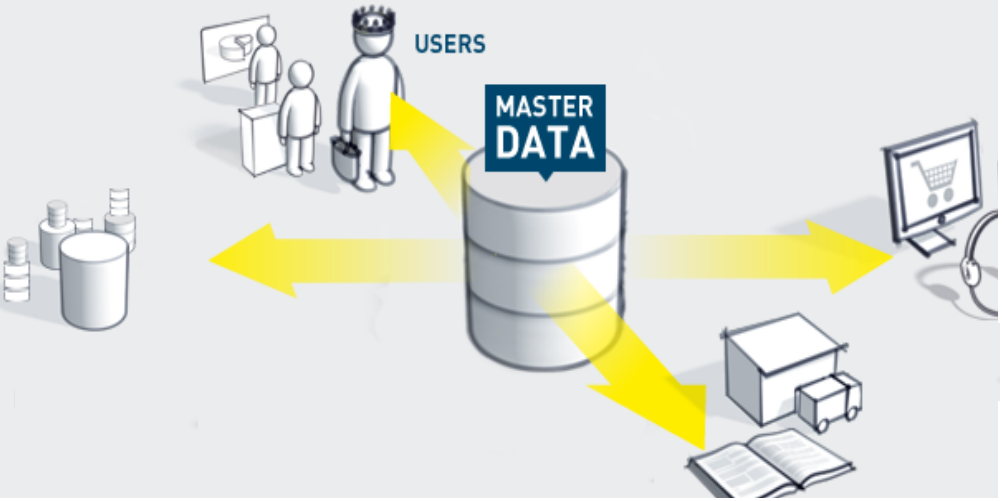


MIS 5121: Business Processes, ERP Systems & Controls

Week 10: *Master Data & Migration*

FOX | MIS
Management Information Systems

Edward Beaver
Edward.Beaver@temple.edu
ff


USERS
MASTER
DATA

Master Data


THAT DATA IS ALSO WRONG.
CAN YOU AVERAGE THEM?
SURE. I CAN MULTIPLY THEM TOO.

Table (Data) Types

Master Data

Nouns

Configuration

Control

Transaction Data

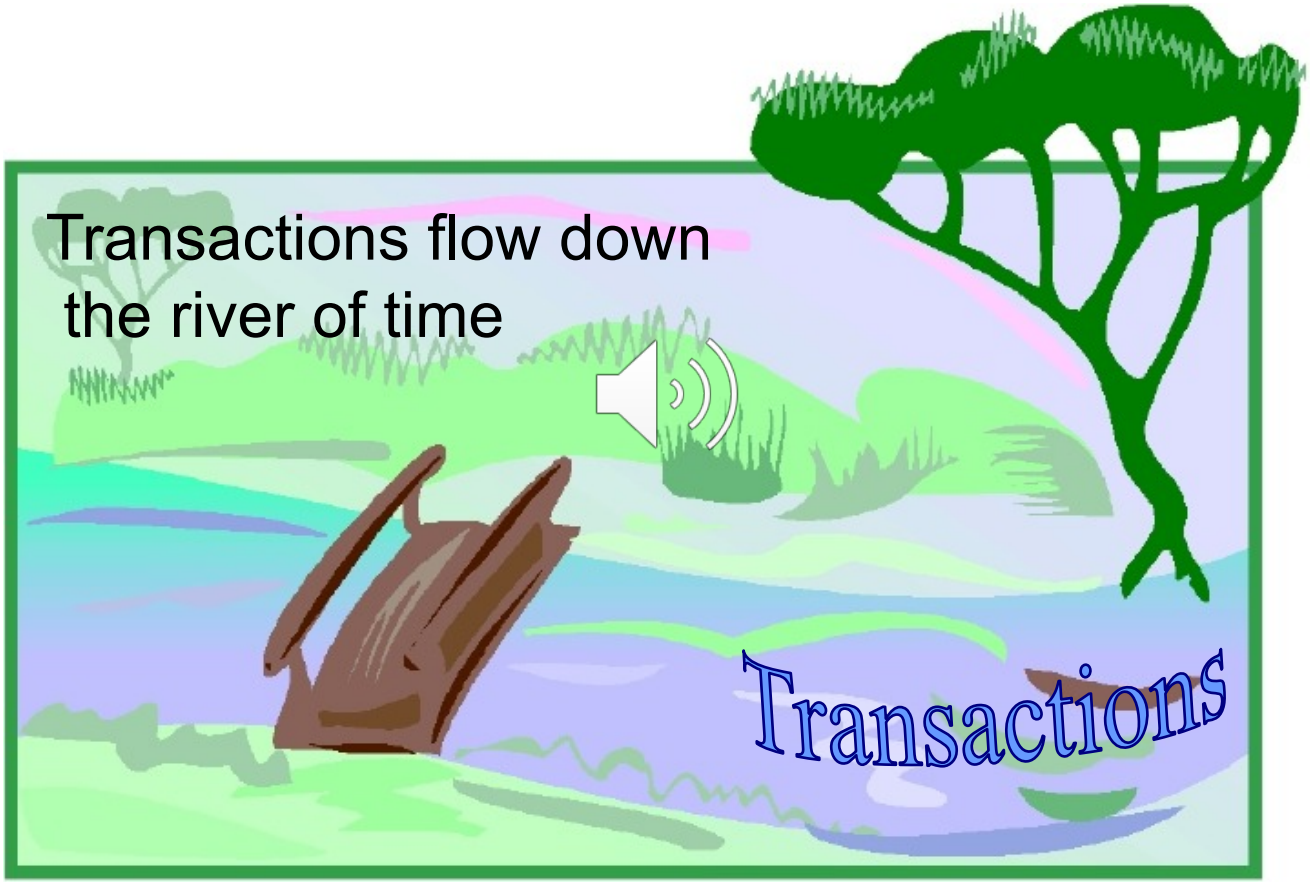
Verbs

Data Types

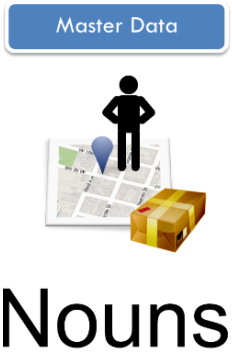
- Transaction Data
  - Data associated with single process 'event'
    - Evidence of an event / activity
    - Logically Stored in process '**Documents**' (vs. outputs)
    - Repetitive transactions (events) but data stored associated with each event / document
    - Has a Time dimension
  - Stored at various stages of a business process
    - e.g. Customer orders, purchase orders, production orders, customer payments

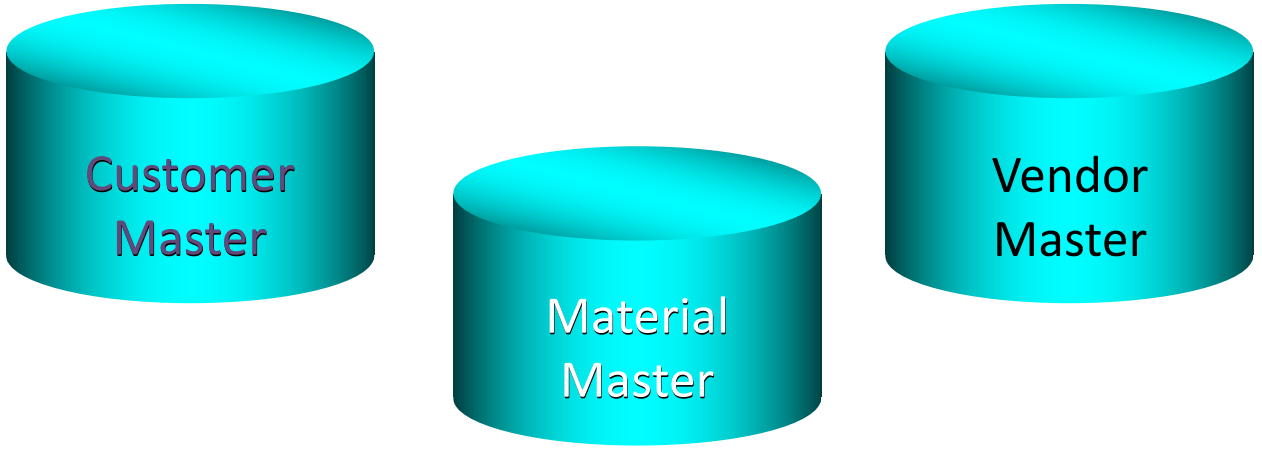
- Master Data
  - e.g. Materials, Customers, Vendors
  - Relatively stable
  - Used repeatedly in same way
    - Many transactions (see below)

Transaction Data



Master Data





- Master Data is centrally stored (shared across application modules) and is processed to eliminate data redundancy.
- When creating business transactions (like a sales order) the system copies information from master data.
- Three kinds of master data are critical to order processing:
  - Customer: Defined by SD, shared with FI/CO
  - Material: Defined by MM, shared with SD, PP, FI/CO
  - Vendor Master: Defined by MM, shared with SD, PP, FI/CO

Master Data Internal Controls

What Internal Controls would you recommend exist for Master Data?

-
-
-
-
-
-

Master Data Internal Controls

Recommended Controls

- Process to define the ‘true’ data - leveraging external data, business policies where possible
- Trained ‘maker-checker’ enters / maintains the data including independent verification of source data
- Routine (quarterly?) review of critical field values changes (changes correct, authorized)
- Segregate ‘maker-checker’ / maintainer access from those performing the process (transactions)

‘Good to Have’ Controls

- Periodic (annual?) review of critical field values
- Validate data externally where possible (call phone #’s, Dunn & Bradstreet review, …)
- Assure 1-time records only used 1-time (not routine)

Key Information Technology Risks

- System Security
- Information Security Administration
- **Data Migration**
- Data Interface
- Instance Profile Security
- Change Management
- Transport Security
- Table Security
- Data Dictionary, Program and Development Security
- Logs and Traces
- Firefighter access
- Powerful User ID’s and Profiles
- Background Processing (Batch vs. foreground: real-time)

Data Migration: Control Concerns

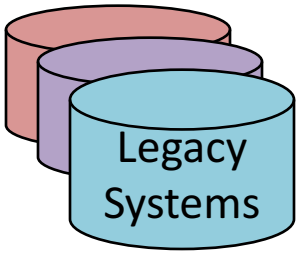
Data Migration (Conversion)

Migration Magic

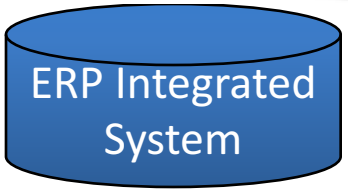
Legacy Systems

‘New’ ERP System

Data Migration: Flow

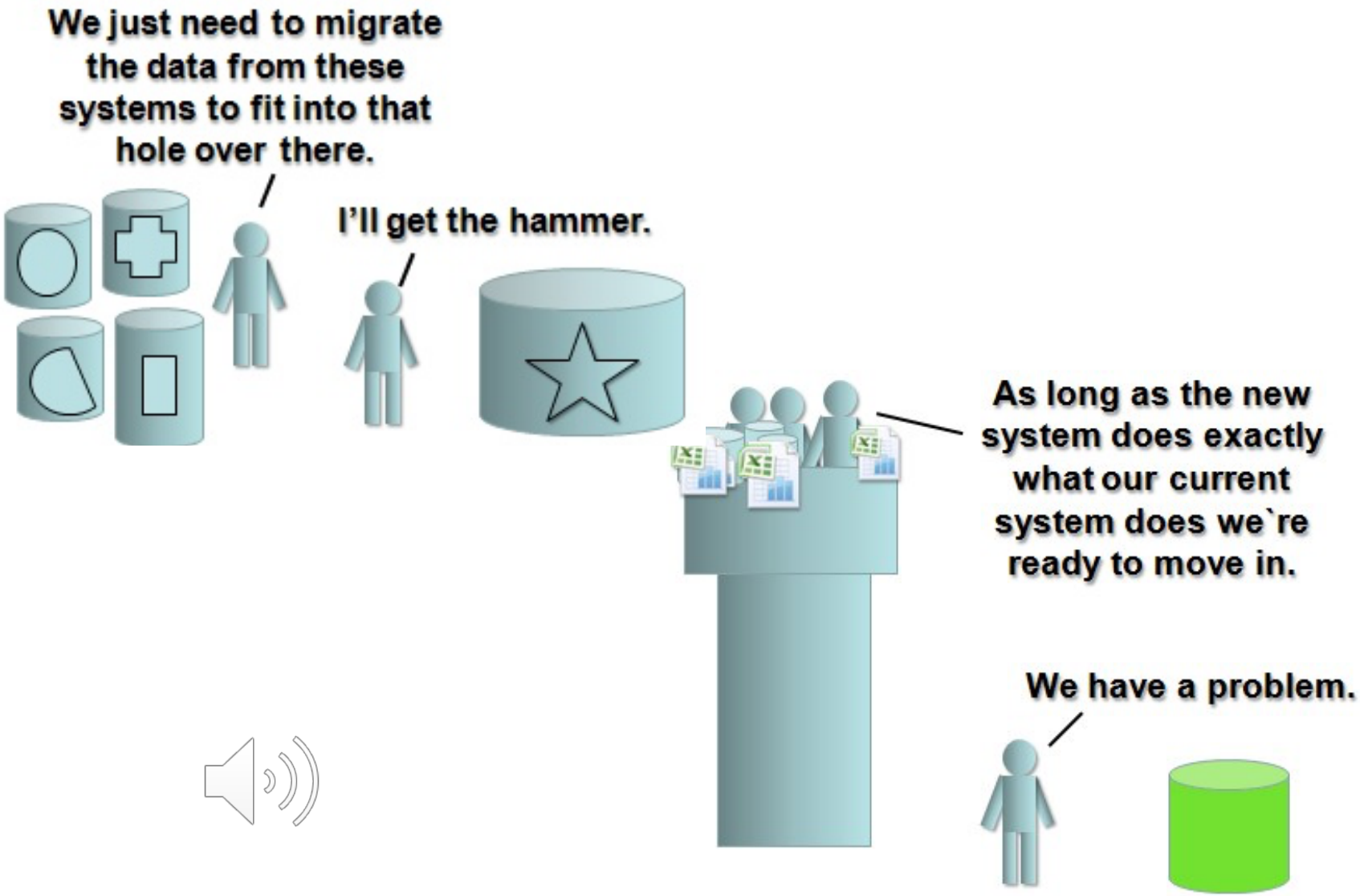


Data Migration



- Extract
- Clean
- Augment
- Transform
- Validate
- Load
- Reconcile

Data Migration – How??



Data Migration: Process

Analysis

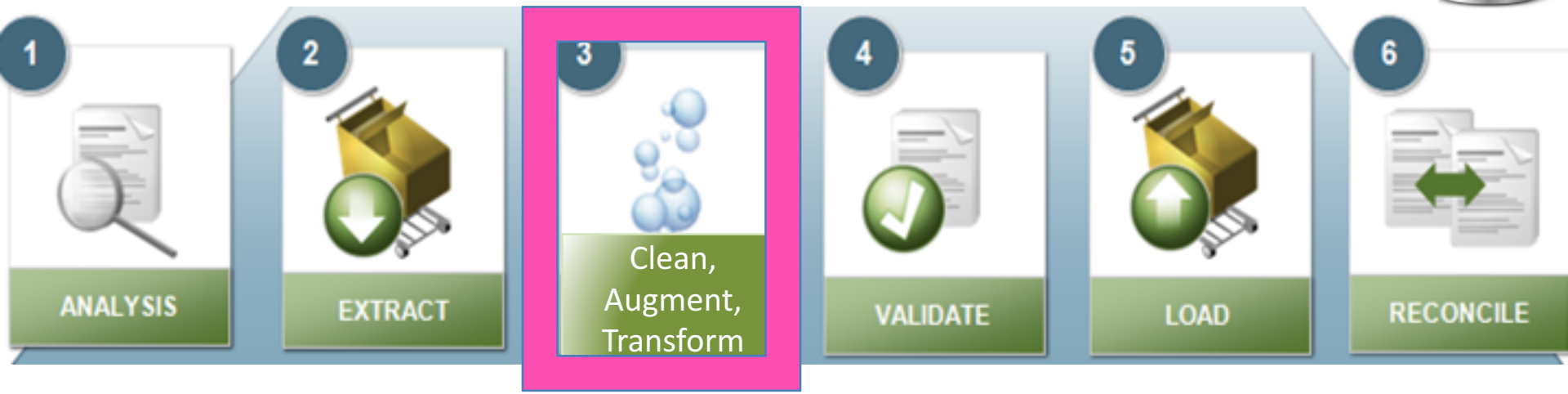
- Solid understanding of both source and destination systems (data structure, how used)
- Differences in data layout, use between systems
- Differences in data definitions

Data Migration: Process

Data Mapping

- Source data fields to fields, format required by new system
- Scope: what data will be migrated vs. not (history, activity level, relevance, etc.)
  - Master and 'open' transactions
  - History?
- Often involves logic (mapping rules)
  - From / to transformations
  - Transformation 'rules'

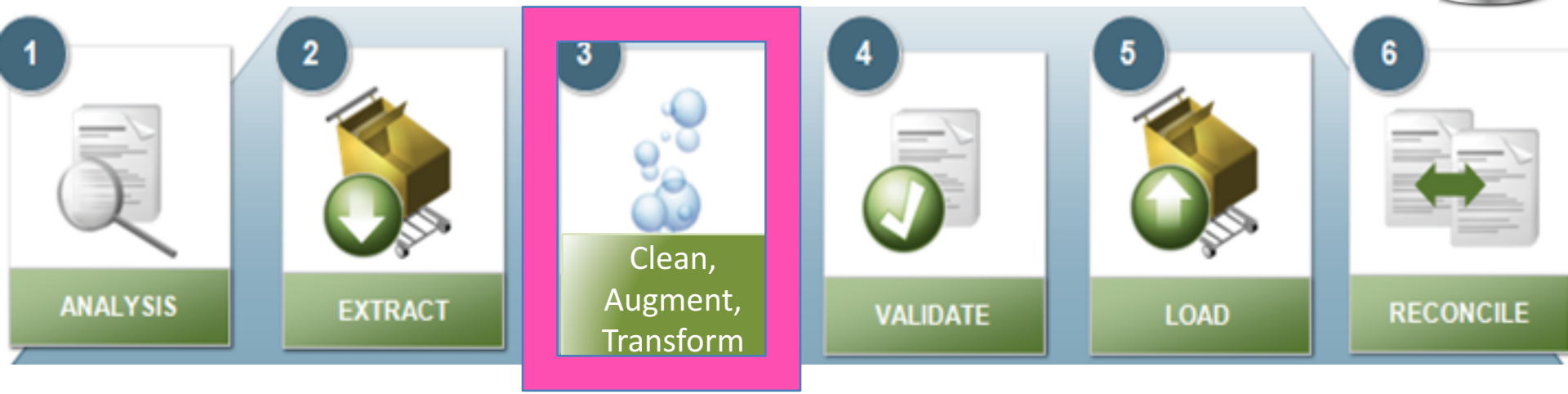
Data Migration: Process



Data Clean-up

- Critical for successful migration (can move any data -> moving quality data that is business ready)
- Cleanse outdated, incorrect information from legacy systems
- Requires solid understanding of source data and destination requirements
- Define ‘rules’, requirements of high quality, business ready data

Data Migration: Process



Data Conversion (Complex)

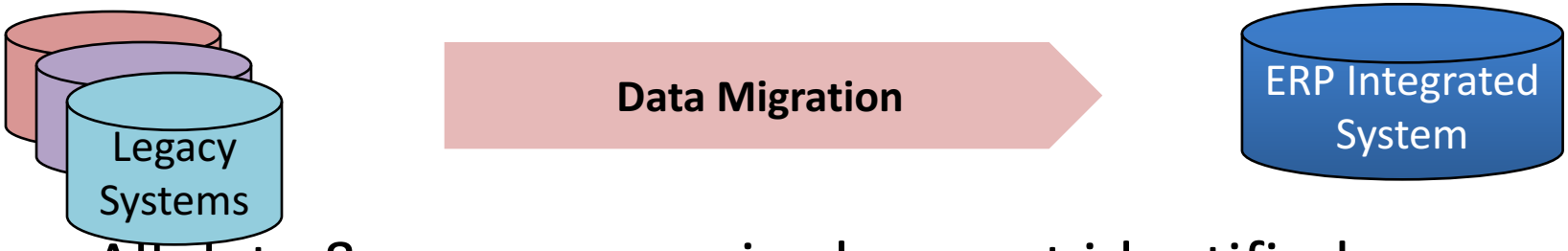
- Transform programs
- Augment (as needed)
- Leverage a tool (e.g. BackOffice)

Data Migration: Process

Data Load and Reconciliation

- Meticulous planning and focused project management
- Dependencies (sequencing) (load and reconcile before proceed)
- Must be reconciled to legacy system (assure accurate, complete)
  - Records, field values
  - Quantities and $$ value
- Standard / custom reports – not difficult but critical

Data Migration: Risks



- All data & sources required are not identified
- Data dependencies not understood (load sequence)
- Data gaps exist
- Translation rules not fully understood to migrate data
- Legacy data is not complete or inaccurate
- Data relationships in legacy data compromised during migration
- Data transfer data errors not discovered timely and resolved

Data Migration: Control Objectives

- Data migrated from legacy systems is Accurate
- All data migrated to target system is Complete
- Synchronize data between legacy and target systems
  - Scope / Data ‘Freeze’
  - Dual Maintenance
- Data migrated to target system is recoverable and auditable

Data Migration / Interfaces Overview

Master Data

- Examples of
- Master data vs. Transaction data
- Controls (Few)

Data Migration (typically Project oriented)

- Risks (Few)
- Controls (Few)

Extra Slides

Config: Organization Structure