Defining E-Government for the Next Millennium

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Director – OLAP Solutions

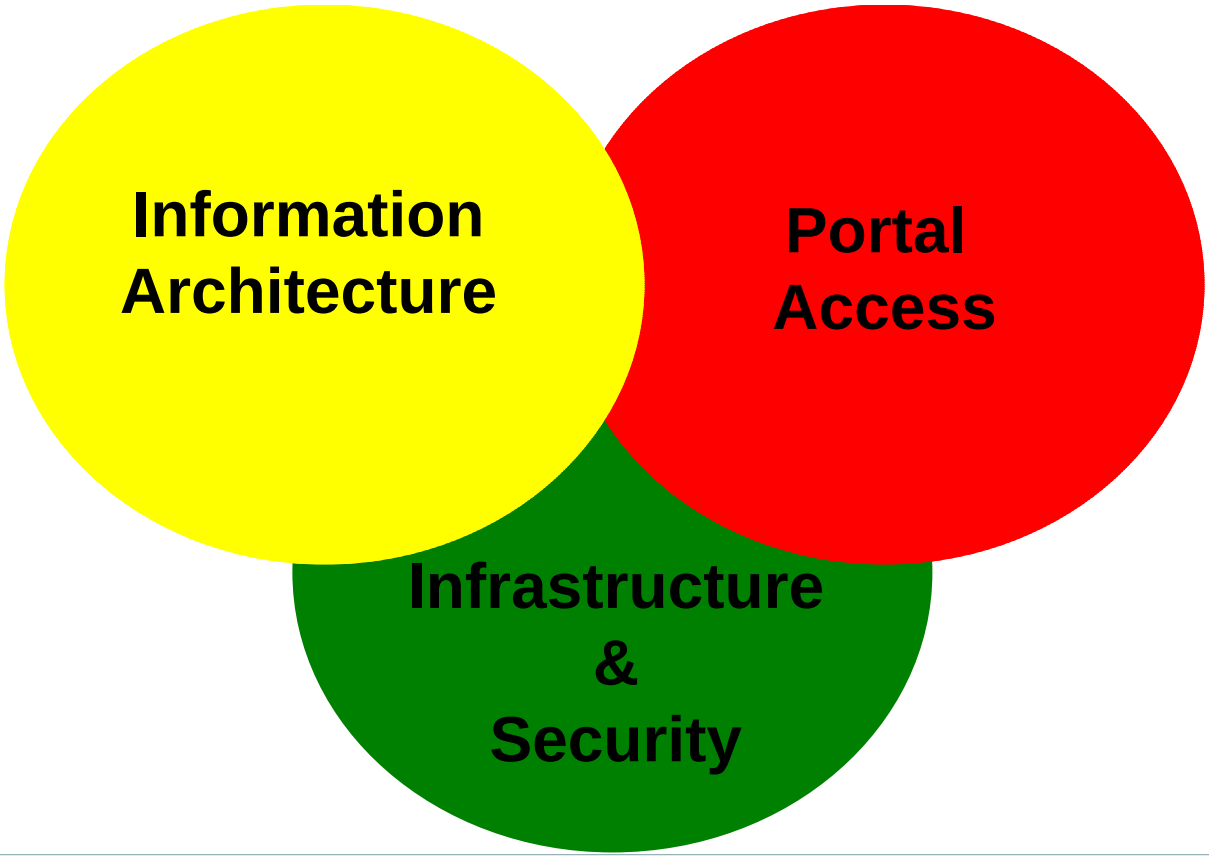
Daman Consulting

February 27, 2002

Agenda

9:00 - 9:15am	Seminar Theme – Norman Comstock
9:15 - 10:30am	Daman Presentation - Norman Comstock
10:30 - 10:45am	Break
10:45 – 11-30am	Brio Presentation – Laura Durkin
11:30-11:45am	Break
11:45 – 12:30pm	Sprint Presentation – Andrew Hargett
12:30 - 1:00pm	Q&A – Norman, Laura, Andrew

Defining E-Government for the Next Millennium



What is eGovernment?

"The continuous optimization of service delivery, constituency participation and governance by transforming internal and external relationships through technology, the internet and new media."

--Gartner Group

Four Types of eGovernment

G2C – Government to Citizen
Voting, Paying Bills, Requesting information

G2E – Government to Employee
Self service benefits, Reports via laptop or PDA, IVR for reporting time and attendance

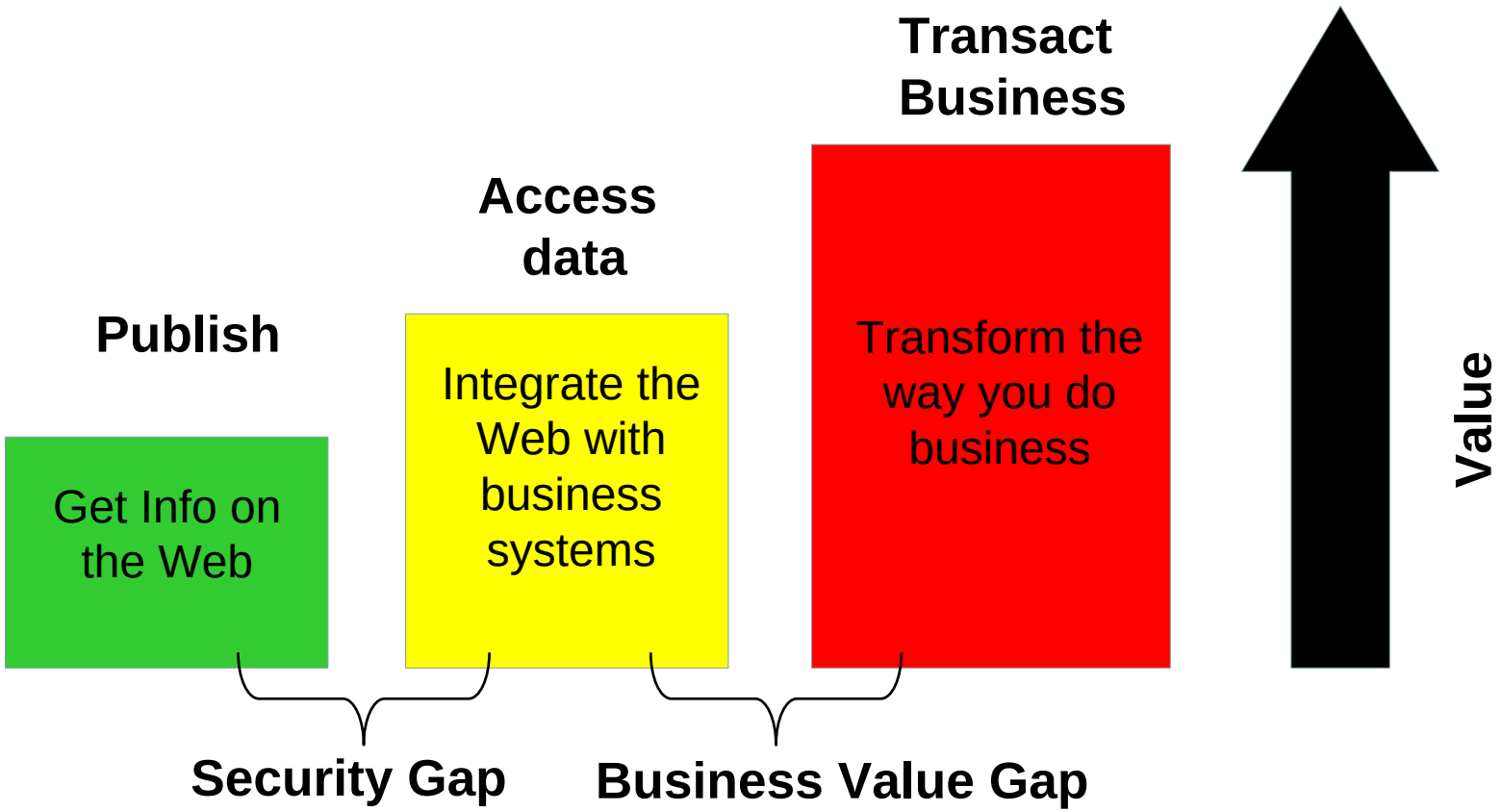
G2B – Government to Business
Procurement, Inspection, Land Development Information

G2G – Government to Government
Juvenile justice, Grant requests, Transportation intelligence

Public Sector Benefits of eGovernment

- Saves time
- Reduces costs
- Improves effectiveness
- Increases citizen satisfaction
- Facilitates economic development
- Encourages community involvement

eGovernment Evolution



Key eGovernment Trends

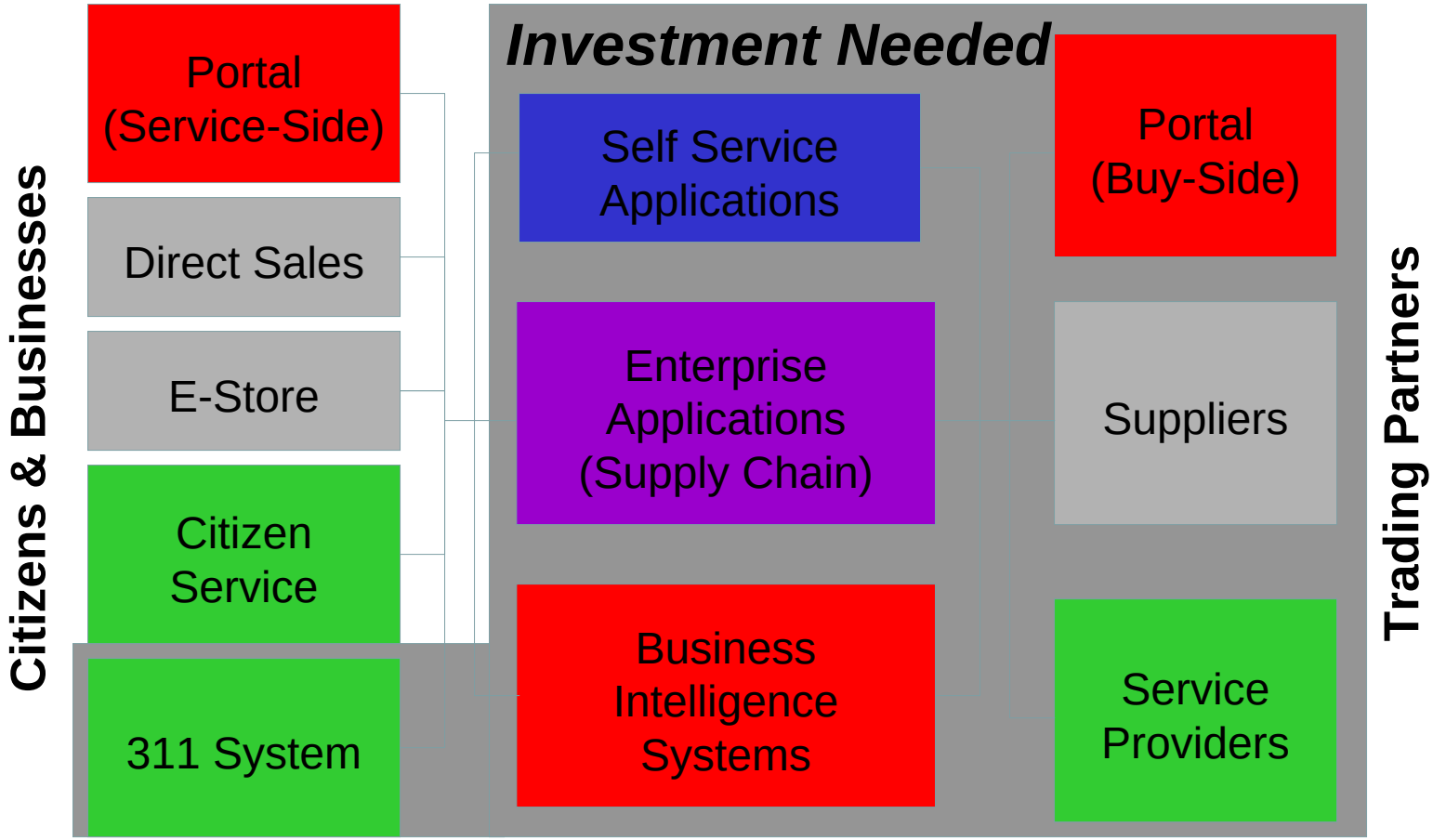
- **Reality is catching up with rhetoric**
- **Government online is moving up the maturity curve**
- **Portals are taking root as the new single point of access for citizens and businesses**
- ***The eGovernment landscape will be unrecognizable in two to three years time***

Source: Accenture eGovernment Leadership Research, Rhetoric vs Reality-Closing the Gap

Core Components of Comprehensive eGovernment Solutions

- **Applications and services**
  - CRM, SCM
  - “Applications” make things happen, “Workflow” is electronic process routing, Integration to “back office” is key
- **Enterprise portal management**
  - Portal: a window to array of web-based content, usually the main website
  - Organized by service not by department
  - Interactive
  - Often Outsourced
- **Back office integration**
  - Have a plan
  - Implement in phases, typically 90 days
  - Use ERP and DW as foundations
  - Revamp the processes – self service, enter data once

Government tomorrow



eGovernment: Results

Improve citizen service

Empower connected citizen

Leverage new delivery channels

Deliver innovative services

Customize response reduce costs

Access
- Universal access
- High security
- Browser based

Transactional capability
- eService
- eBenefits
- eRevenues

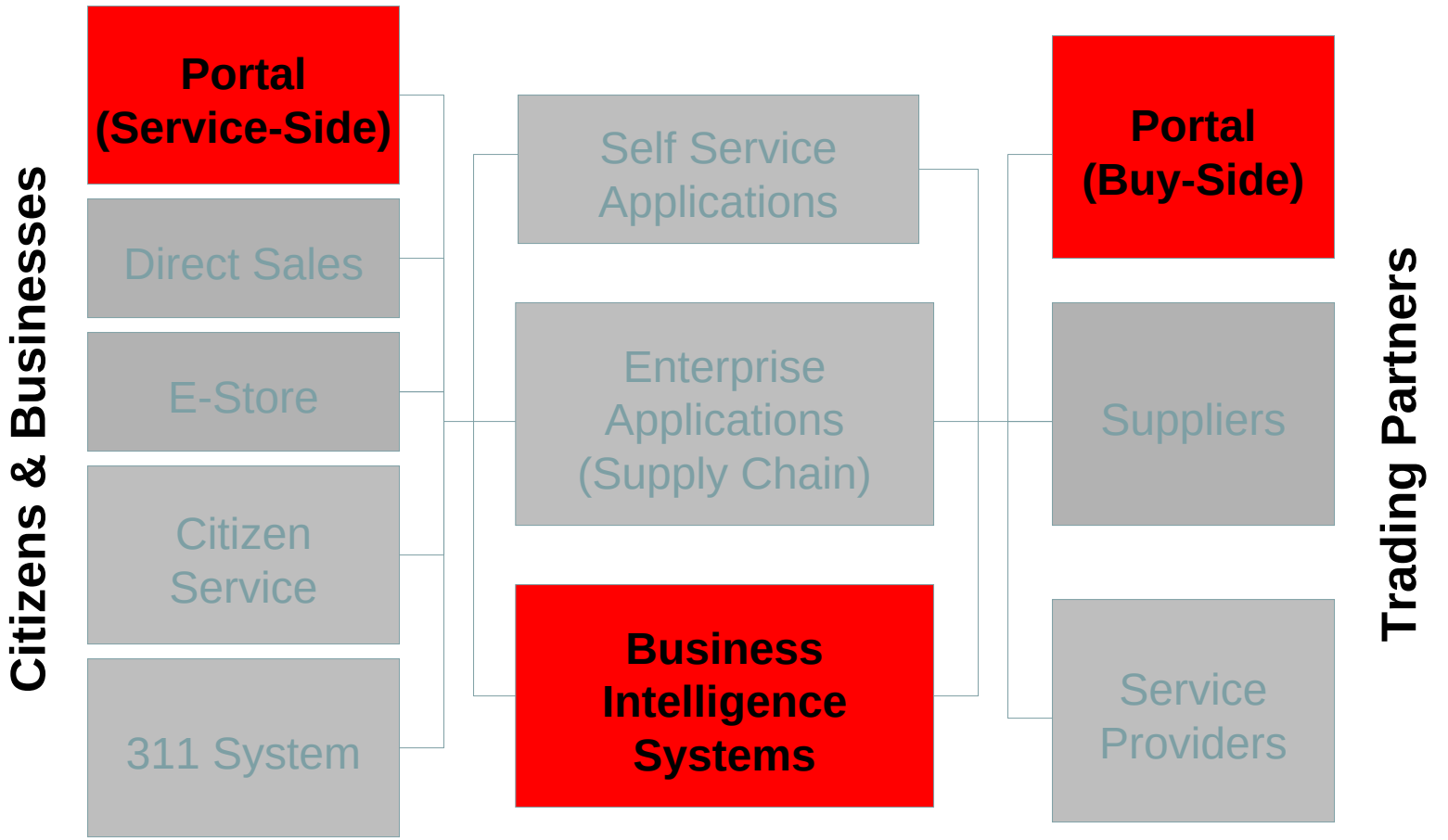
Citizen self service
- Enterprise portals
- Smart cards
- Kiosks

Public-private partnership
- Reliable
- 24X7 access
- Collaborative

"The important thing is that we are not limiting ourselves to simply automate the existing systems, and that we are integrating and removing friction. Every single step of every single process needs to be questioned."

-- Mike Leavitt, Governor of Utah

BI Focus


Citizens & Businesses
Portal (Service-Side)
Direct Sales
E-Store
Citizen Service
311 System
Self Service Applications
Enterprise Applications (Supply Chain)
Business Intelligence Systems
Portal (Buy-Side)
Suppliers
Service Providers
Trading Partners

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What Is Business Intelligence?

A broad category of ***applications*** and ***technologies*** for ***gathering***, ***storing***, ***analyzing***, and providing access to data to help ***enterprise users*** make better ***business decisions***.

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Business Intelligence Includes:

Query and Reporting

Decision Support Systems (DSS)

Executive Information Systems (EIS)

On-Line Analytical Processing (OLAP)

Statistical Analysis

Forecasting

Data Mining

Enterprise Information Portals (EIP)

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BI Architectural Goals

- **Provide platform to deliver a great user-analyst experience**
  - With data that is consistent, centralized and easily accessible
  - Without getting in the way of OLTP systems
- **Ability to incorporate data from internal or external sources - regardless of format or platform**
- **Agile so that it can adapt to changes in the business**

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BI User Requirements

Support decision making – about managing & planning

- Who/what/when/where/why/how of a business
- Facilitate queries without hindering operational systems performance or having to change the design
- Provide centralized repository of consistent data
- Answer complex queries quickly
- Enable data mining to discover new relationships in data

Provide different levels of analysis

- View data from many perspectives
- Easily navigate from summary to detail

End user acceptance and usage is the true measure of success

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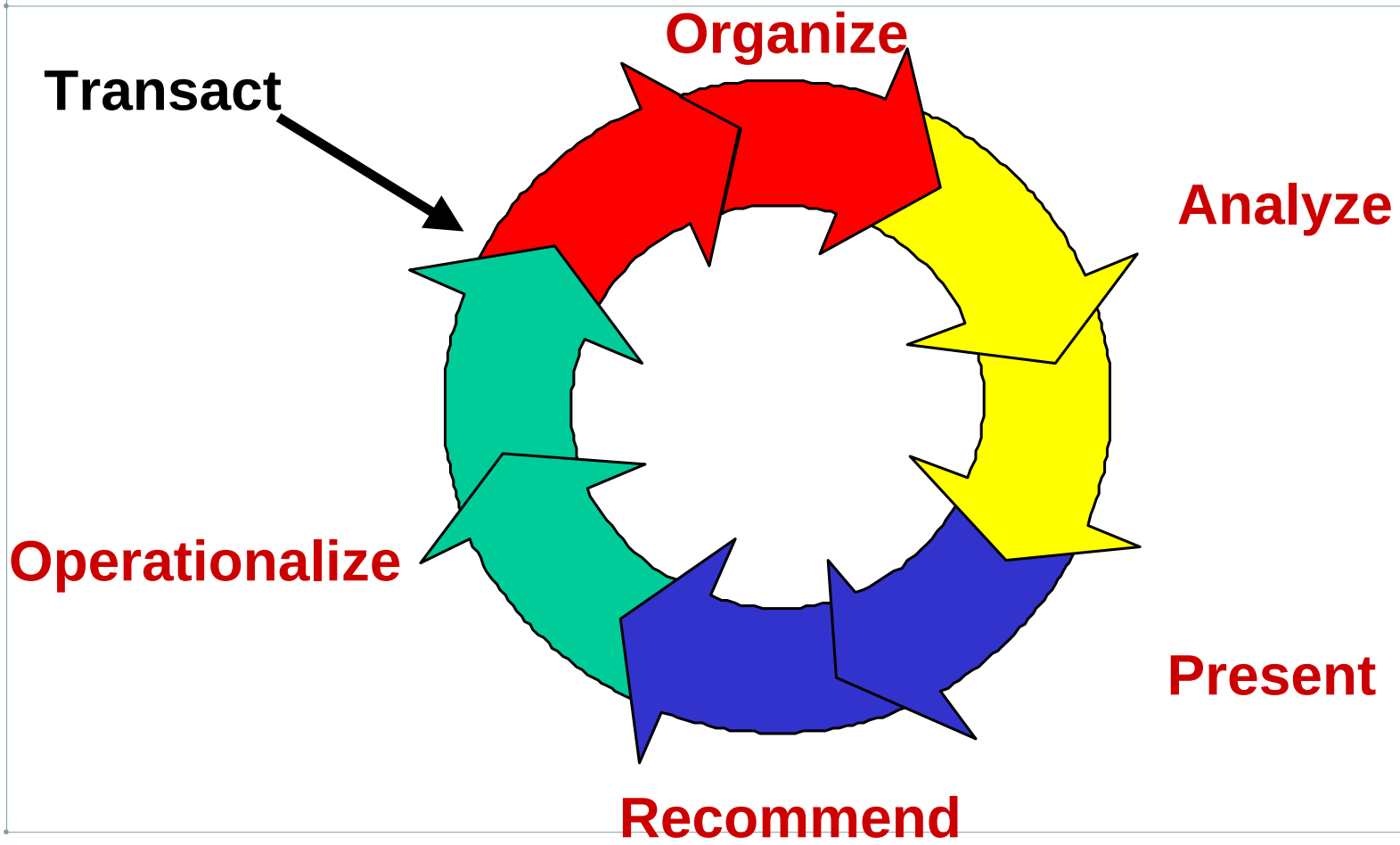
The BI Lifecycle - Simplified



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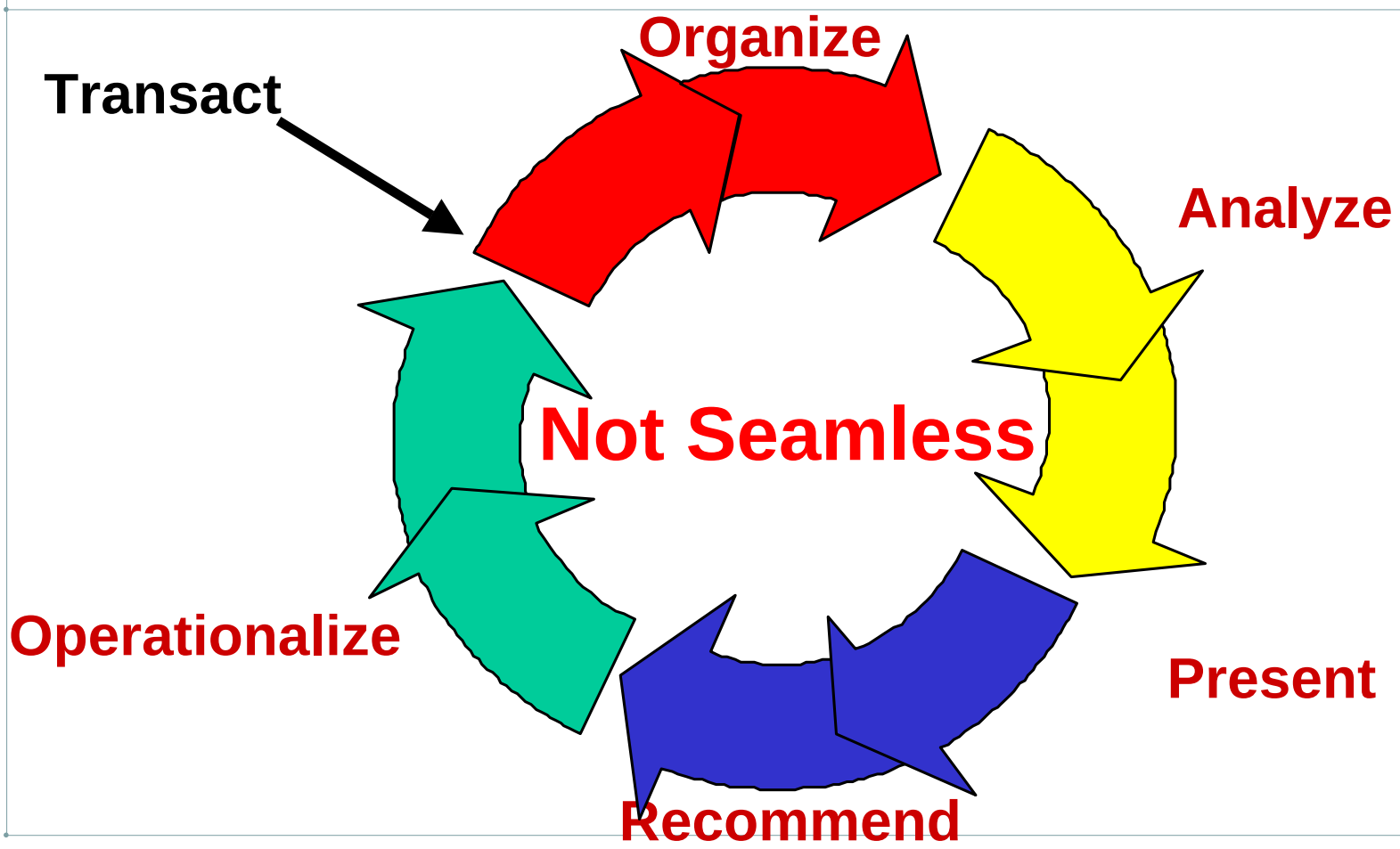
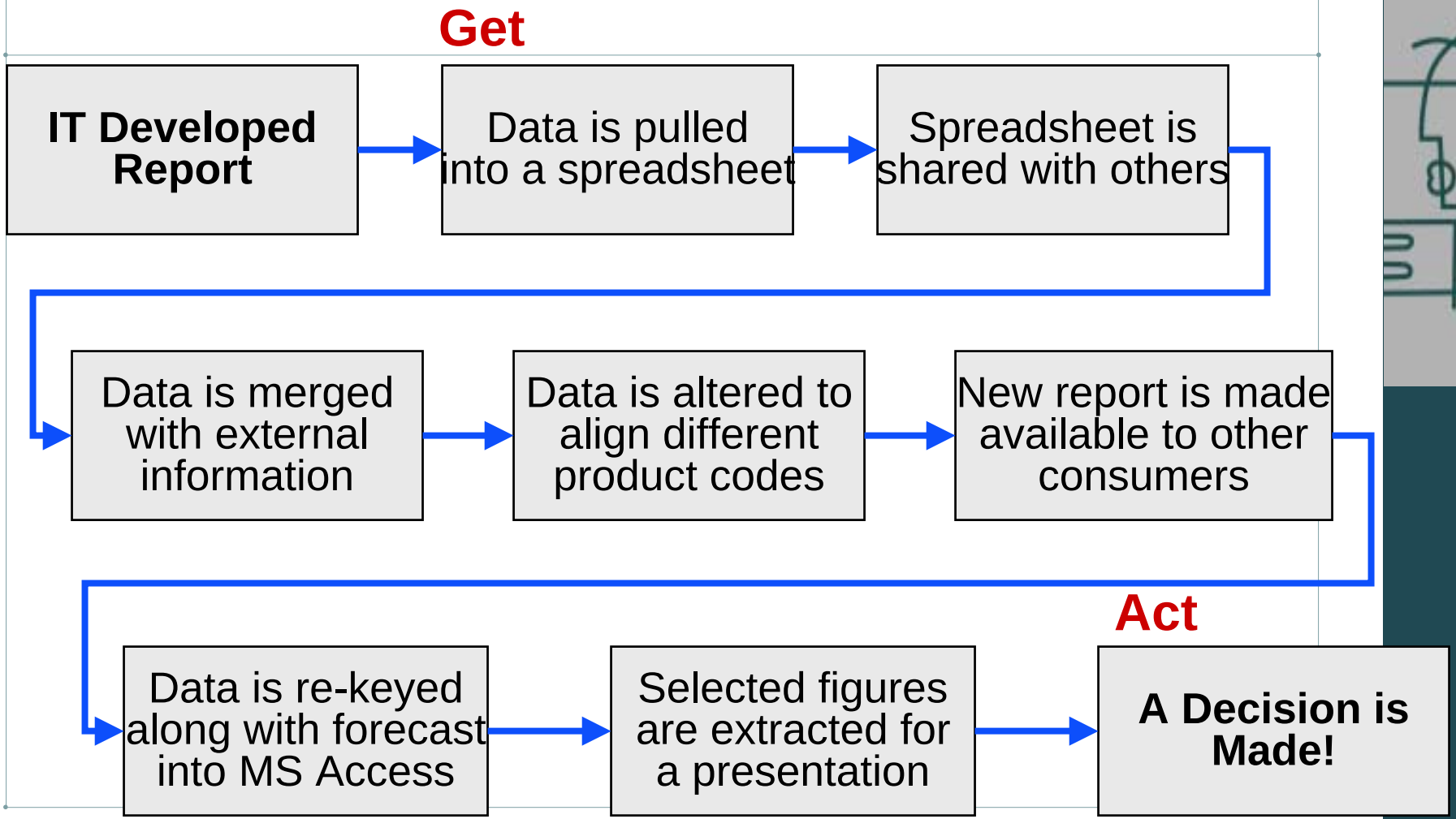
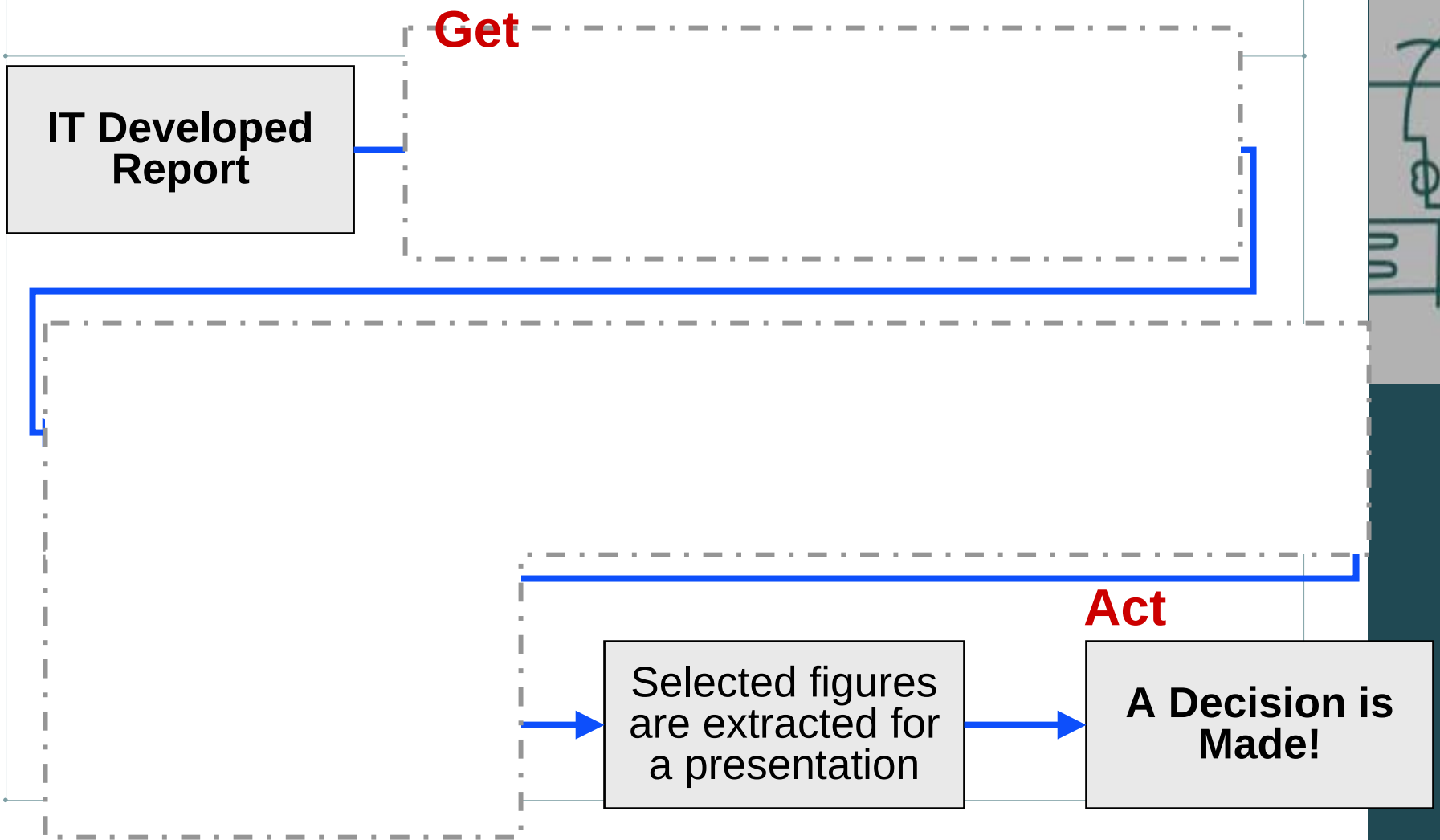
The BI Lifecycle – Reality Check



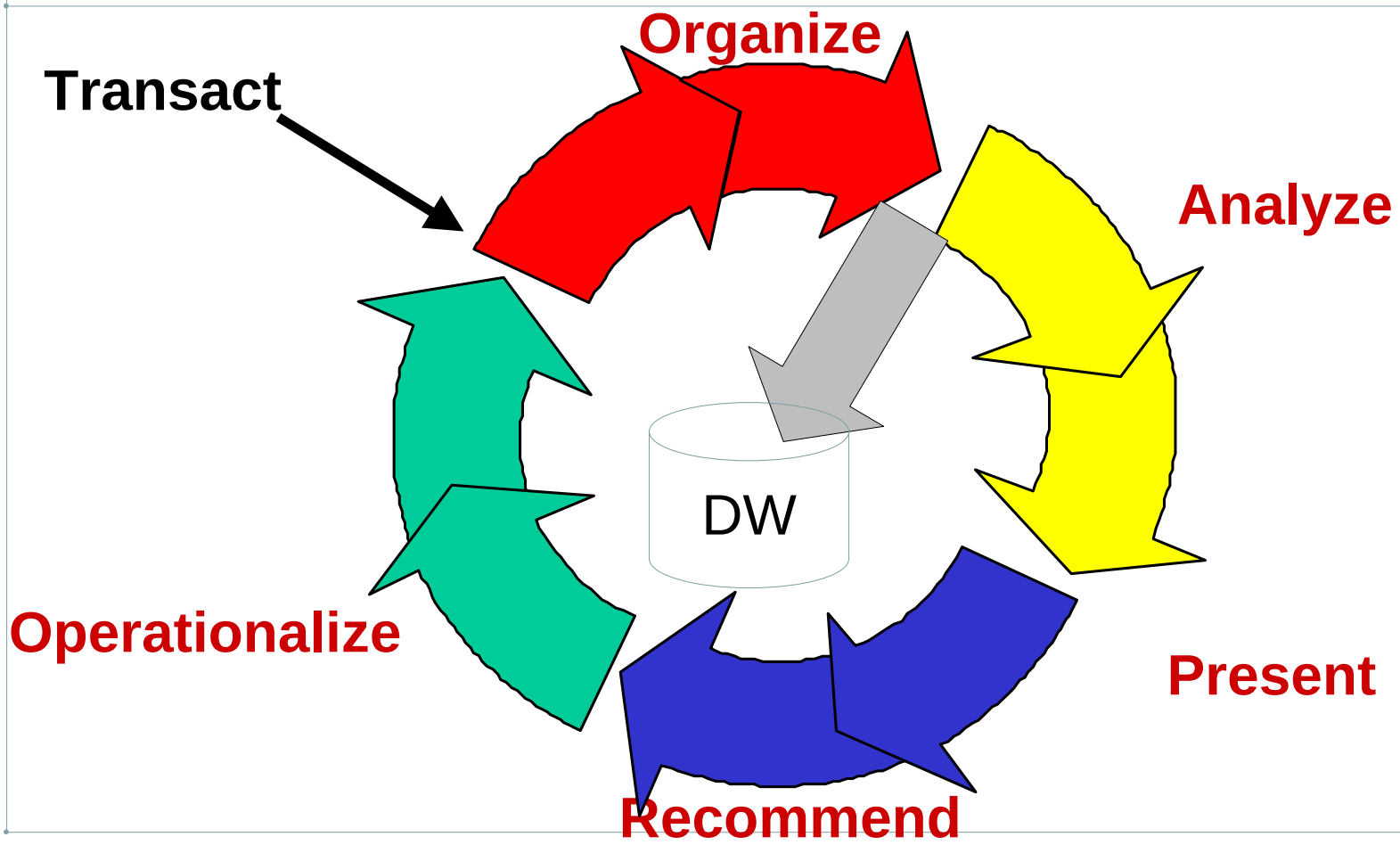
The Steps Between “Get” and “Act



Extending Down the Info Supply Chain



The BI Lifecycle – Organize



The BI Lifecycle - Organize

Activities:

Plan, Audit, Cleanse, Model, Transform, Map, Load

Tools:

Ascential, Brio, Informatica, Microsoft, IBM

Structures:

ODS, Data Warehouse, Data Marts

Step By Step™ Lifecycle

Establish the Program	1. Develop the Rationale 2. Target the Opportunities 3. Define the Architecture 4. Create the DW Program
Prepare the Project	5. Plot the Project Tasks 6. Establish the Infrastructure 7. Procure the Tool Kit 8. Assemble the Team
Initiate the Database	9. Investigate Consumer Needs 10. Triage the Source Elements 11. Model States and Dimensions 12. Design the Database 13. Acquire Source Data 14. Populate the Database
Explore the Data	15. Iterate Base Table Design 16. Explore Consumer Usage Interactively 17. Tune Collection Design 18. Plan Cycles and Production Migration
Implement the Deliverables	19. Prepare for Release 20. Train the Consumers 21. Initiate Support Processes 22. Migrate to Production
Expand the Environment	23. Manage the DW Inventory 24. Synchronize with Evolving Business Needs 25. Evangelize Endlessly 26. Do it Again!

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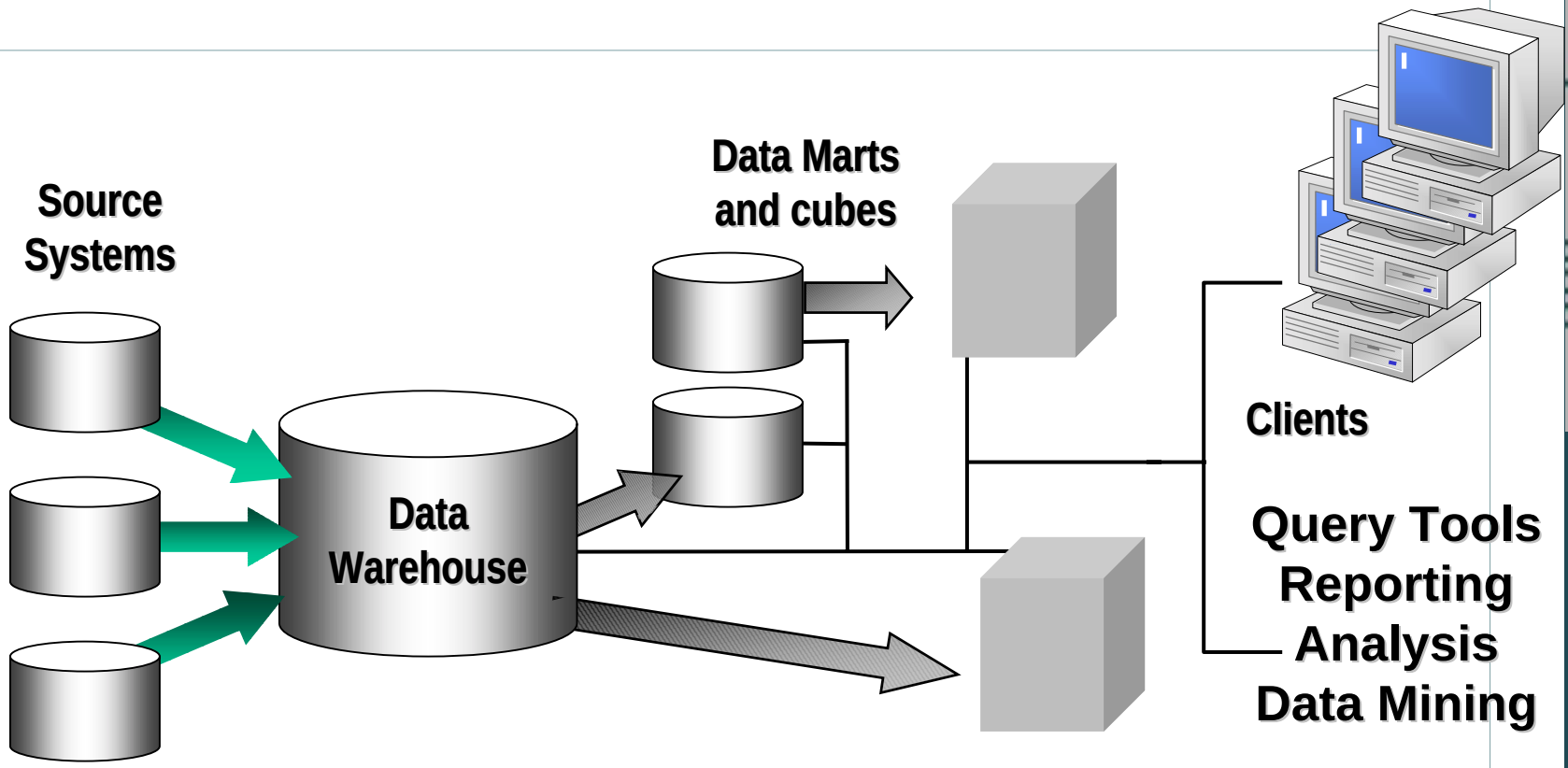
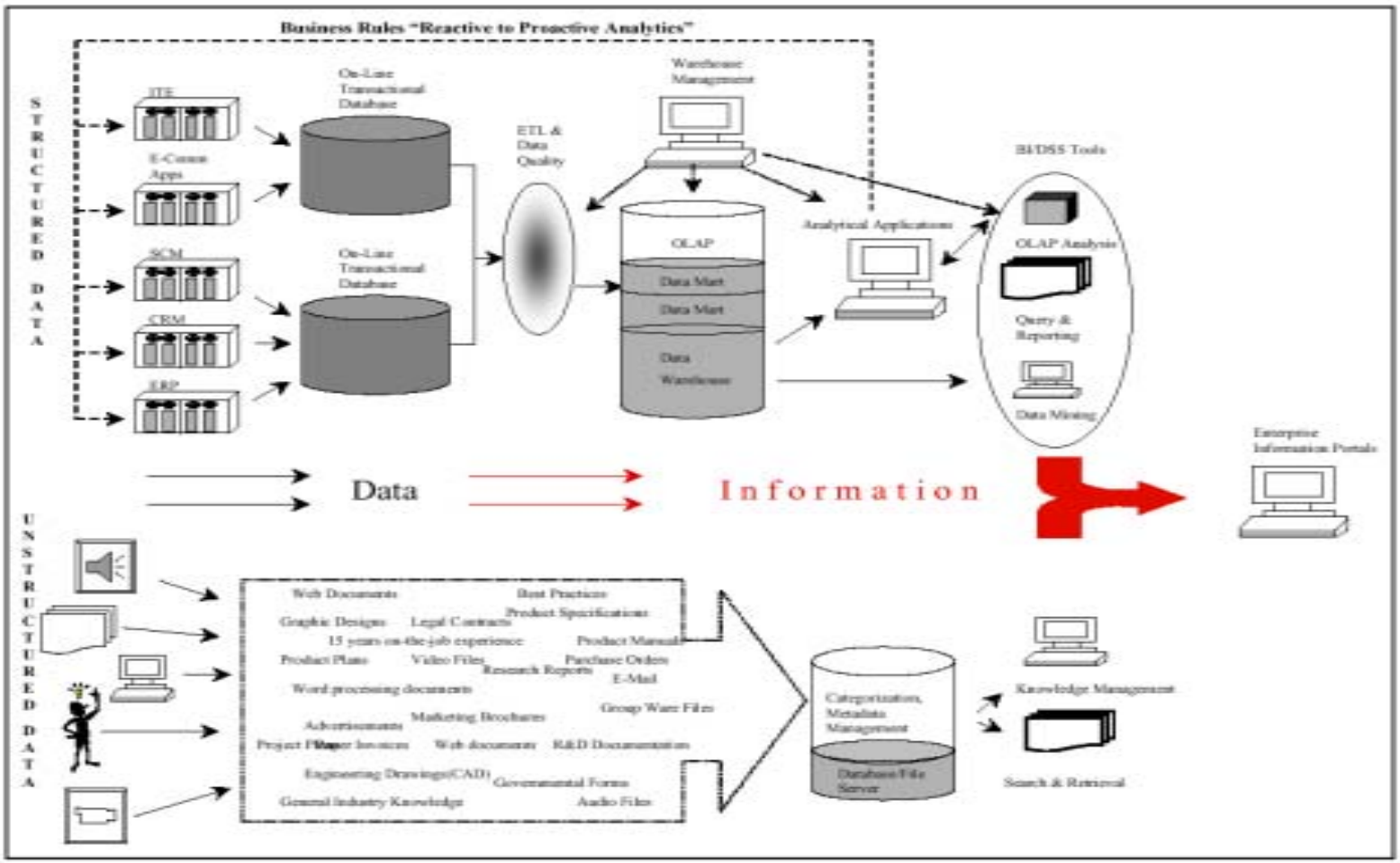
Classical BI Architecture



Design the Data Warehouse → Populate Data Warehouse → Create OLAP Cubes → Query The Data

Architecture - The BI Lifecycle



Data Warehouse Architecture

Principles — Rules-of-the-road relating what is unique about data warehousing.

Information Architecture — A framework for managing the usage, meaning, structure, and movement of data within the enterprise.

Technical Architecture — A component strategy for a data warehouse.

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Data Warehouse Definition

Subject Oriented	**Regrouped into Business Topics**
Integrated	**Connected by Common Domains**
Consistent	**Rationalized to Explain Variances**
Non-Volatile	**Organized for Repeatability**
Time Variant	**Presenting Multiple Periodicity**
Historical	**Retaining As-Was Detail**
Dimensional	**Standardized for Business Access**
Adaptive	**Configured for Future Needs**

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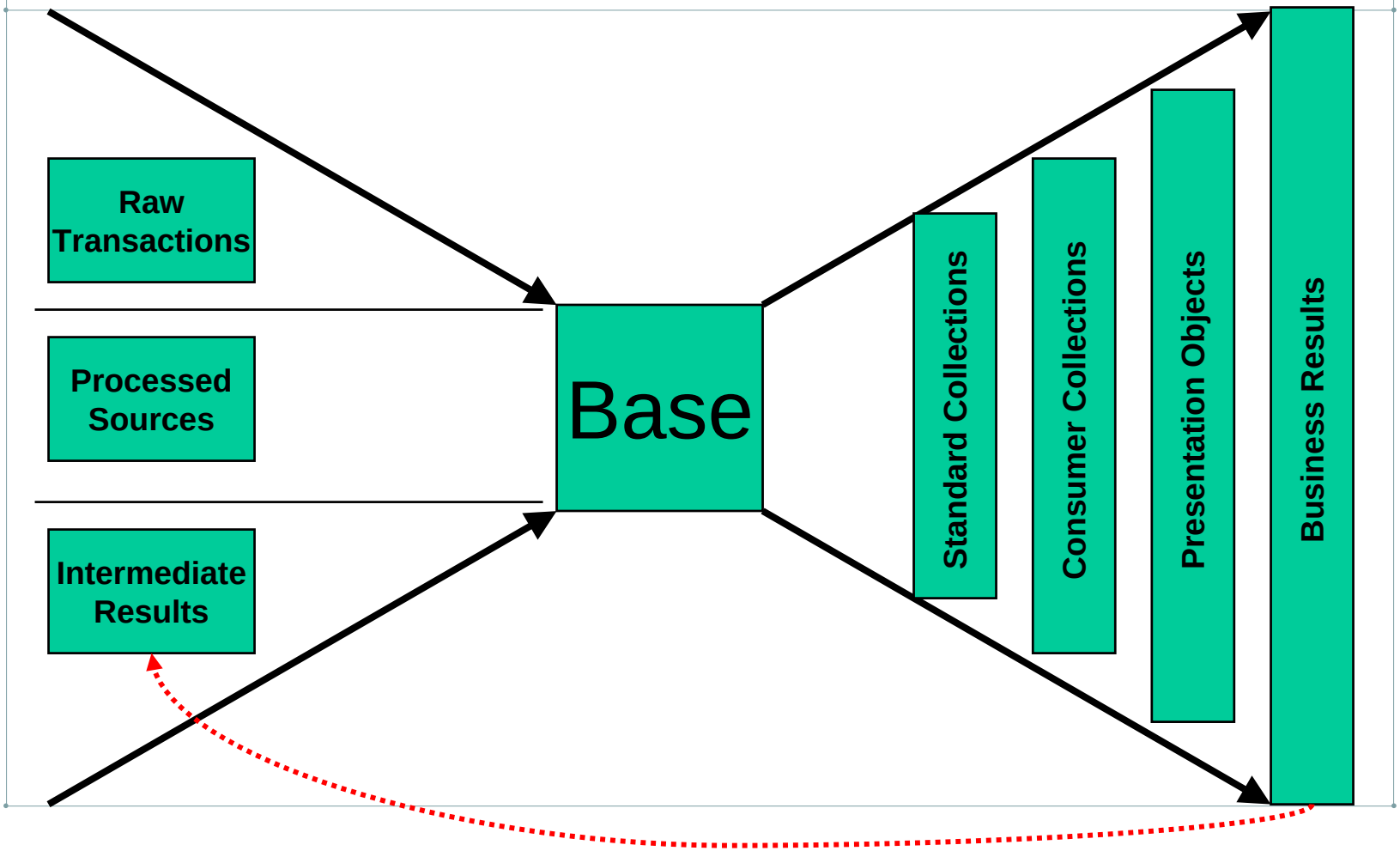
Collect – Integrate – Specialize



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Optimal Design

- Retains fundamental integrated base detail
- Provides common reference & translation tables for integration
- Uses data-driven quality management
- Retains as-is and as-was for consistency
- Creates the right number of collections
- Supports a diversity of data structures
- Captures intermediate results in the information supply chain

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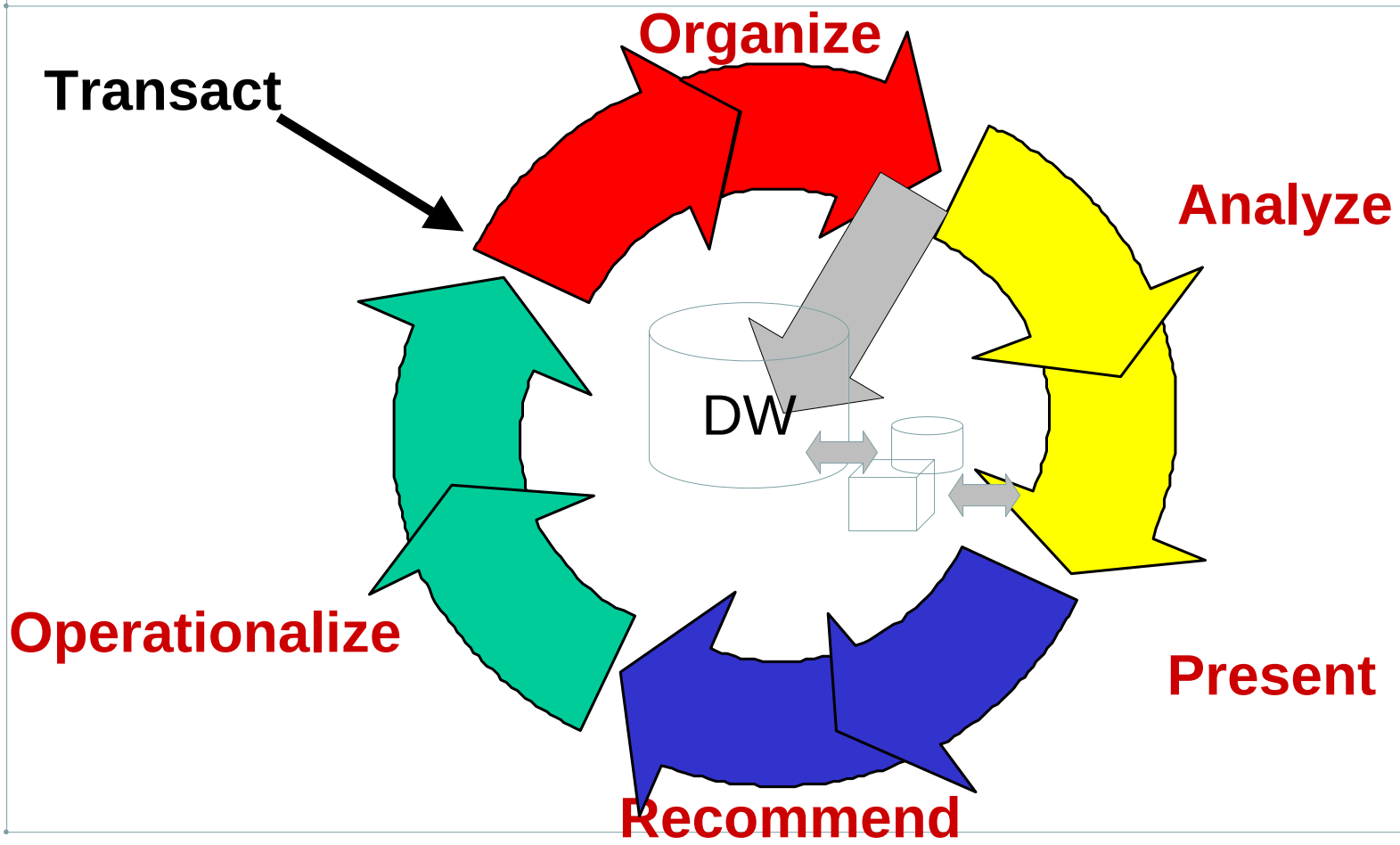
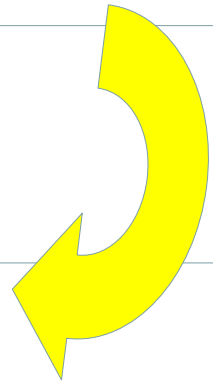
"Putting an enterprise architecture in place is a never-ending process. What we need people to understand is that it's not just about the initial creation, it's about the ongoing maintenance. Everything [about an enterprise architecture] has a half-life."

-- Jerry Simonoff, Director of Virginia's Department of Technology Planning

The BI Lifecycle – Analyze



The BI Lifecycle - Analyze



Activities:

Query, Reporting, Stat. Analysis, OLAP, Data Mining

Tools:

Brio, Hyperion, IBM, Informatica, Microsoft, SAS, SPSS

Structures:

ODS, Data Warehouse, Data Marts, Cubes

What is OLAP?

OnLine Analytical Processing

- **OLAP aggregates data (it pre-summarizes data) across all dimensions**
  - Example: by MO, QTR, YR or by City, County, State …
- **Basic argument:**
  - Why read through each and every detailed transaction to get an answer when the question can be answered more quickly using summary level data

Why Use OLAP With DWHS?

OLAP is an enabling technology that supports dynamic analysis

- Intuitive multidimensional model provides drill-down, slice & dice, drill-through
- Fast response times against huge databases
- Offers complete syntax for expressing analytical queries and business logic
- Optimizes the use of network resources as well as Internet/Intranet deployments

Understand the Tool Categories

Report

Driven by output image
Weak access specification
Non-interactive usage

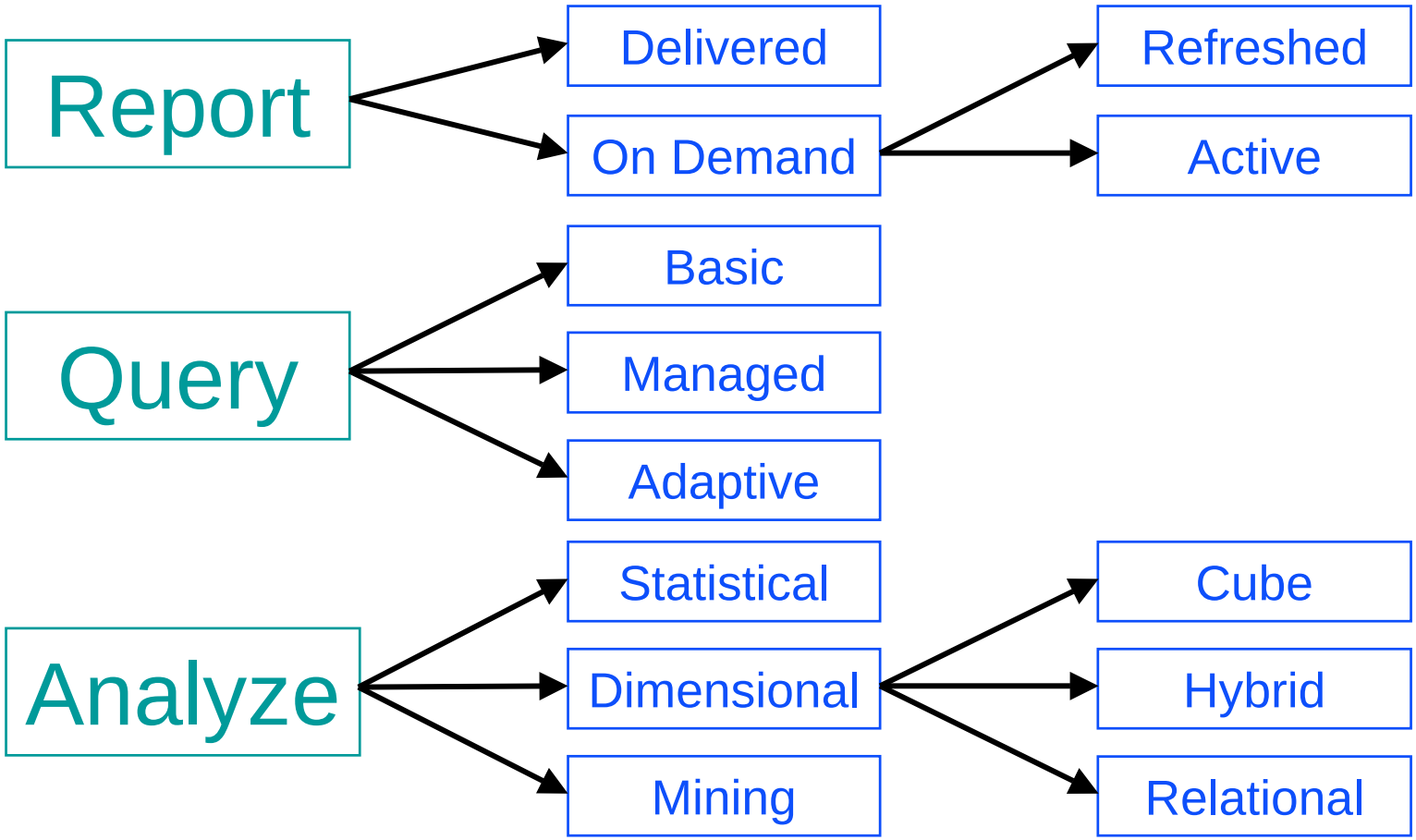
Query

Driven by access specification
Output format options secondary
Interactive but non-exploratory

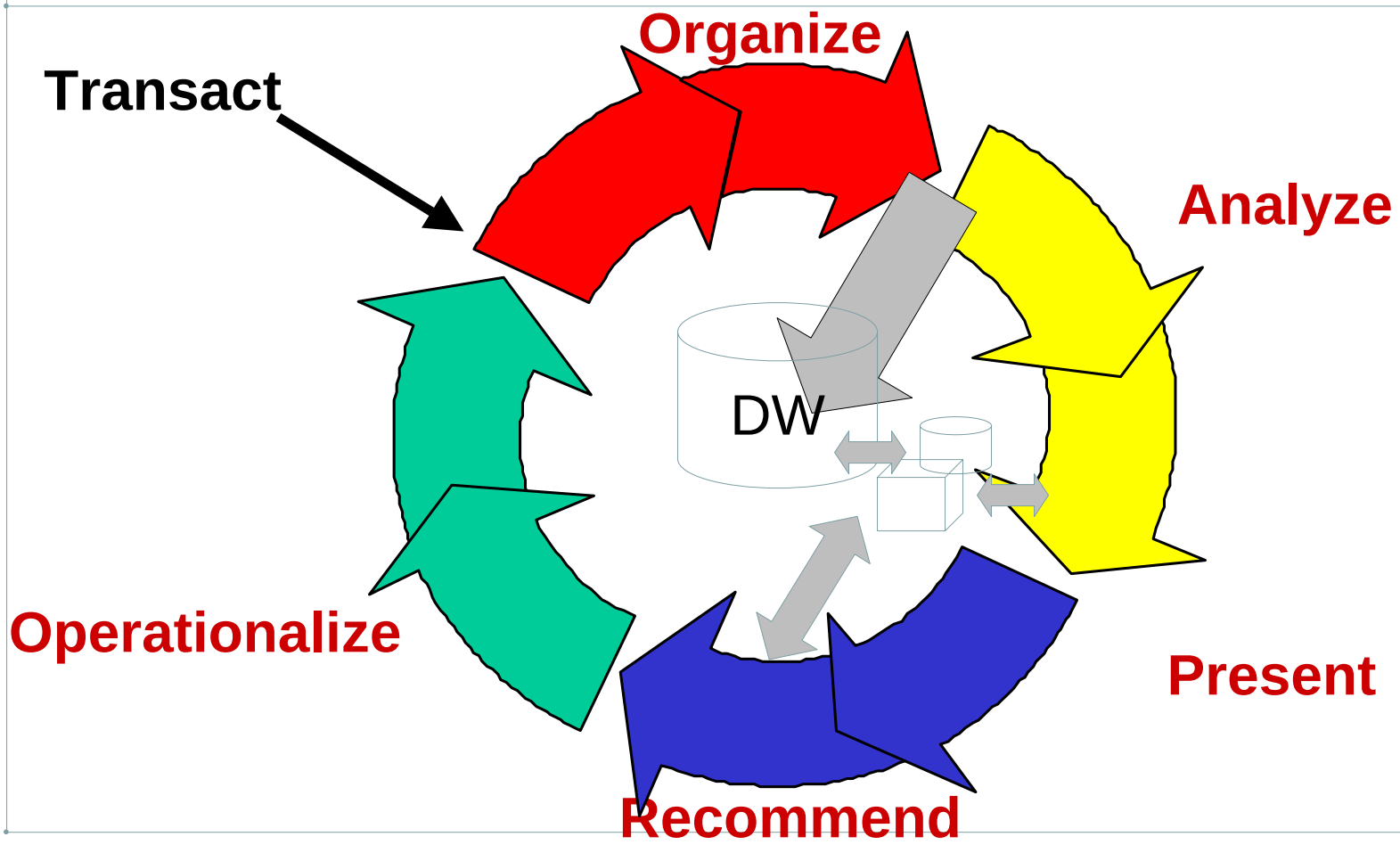
Analyze

Driven by exploratory paradigm
Deterministic access path
Output format not a design concern

Understand the Tool Sub-Categories



The BI Lifecycle – Present



The BI Lifecycle - Present

Activities:

Format, Annotate, Chart, Publish, Deliver

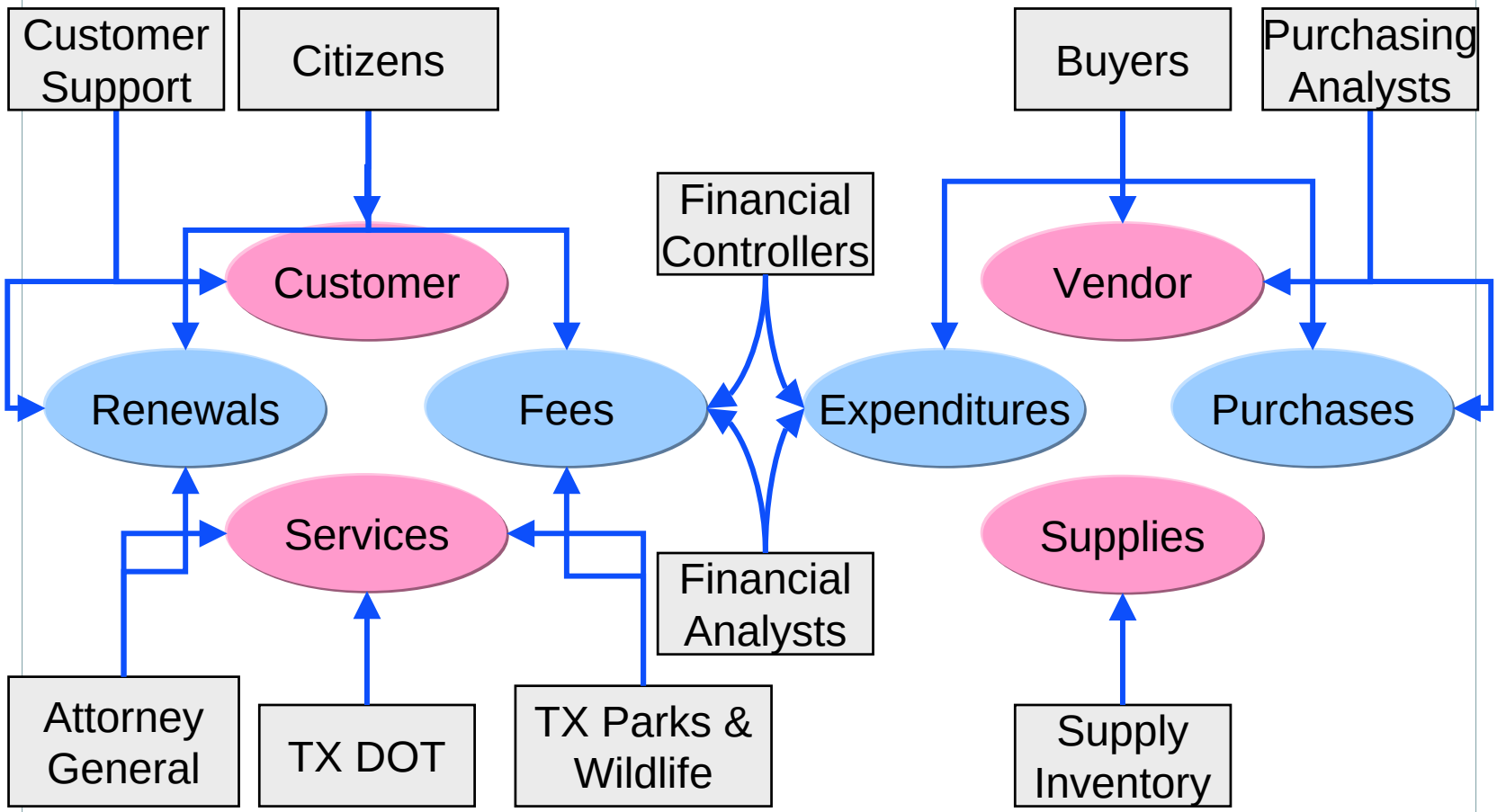
Tools:

Brio, Crystal, Hyperion, Microsoft, Proclarity

Structures:

ODS, Data Warehouse, Data Marts, Cubes

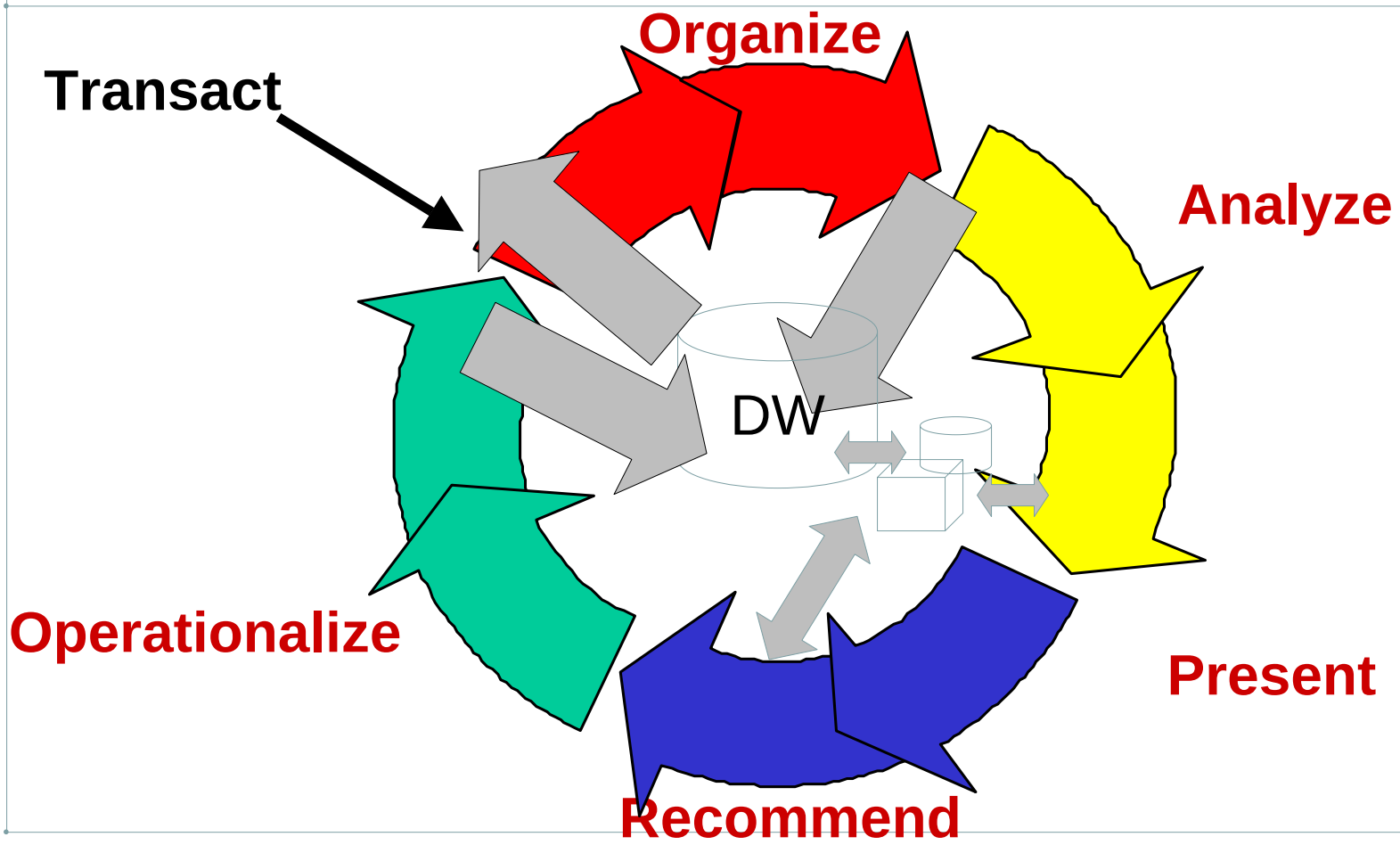
Constituencies: Expand the Use



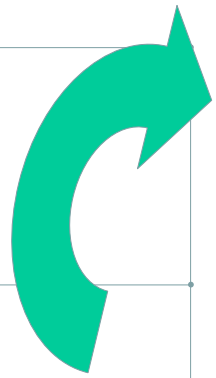
Know Your Consumers

Value-Added Distributor	**Builder**	Creates custom solutions
	Provider	Develops queries and provides data
	Mentor	Helps indirect consumers learn the tools
Direct Information Consumer	**Hunter**	Validates a vision
	Miner	Searches for insights
	Planner	Sets new targets
	Forecaster	Projects the future
	Analyst	Seeks the cause
	Tracker	Scans for targets
	Clerk	Generates results for others
Indirect Consumer	**User**	Uses data but not data access tools
	Skeptic	Does not do data (or so they say)

The BI Lifecycle – Recommend



The BI Lifecycle - Recommend



Activities:

Business Rules - Alerts, Exceptions, Modify

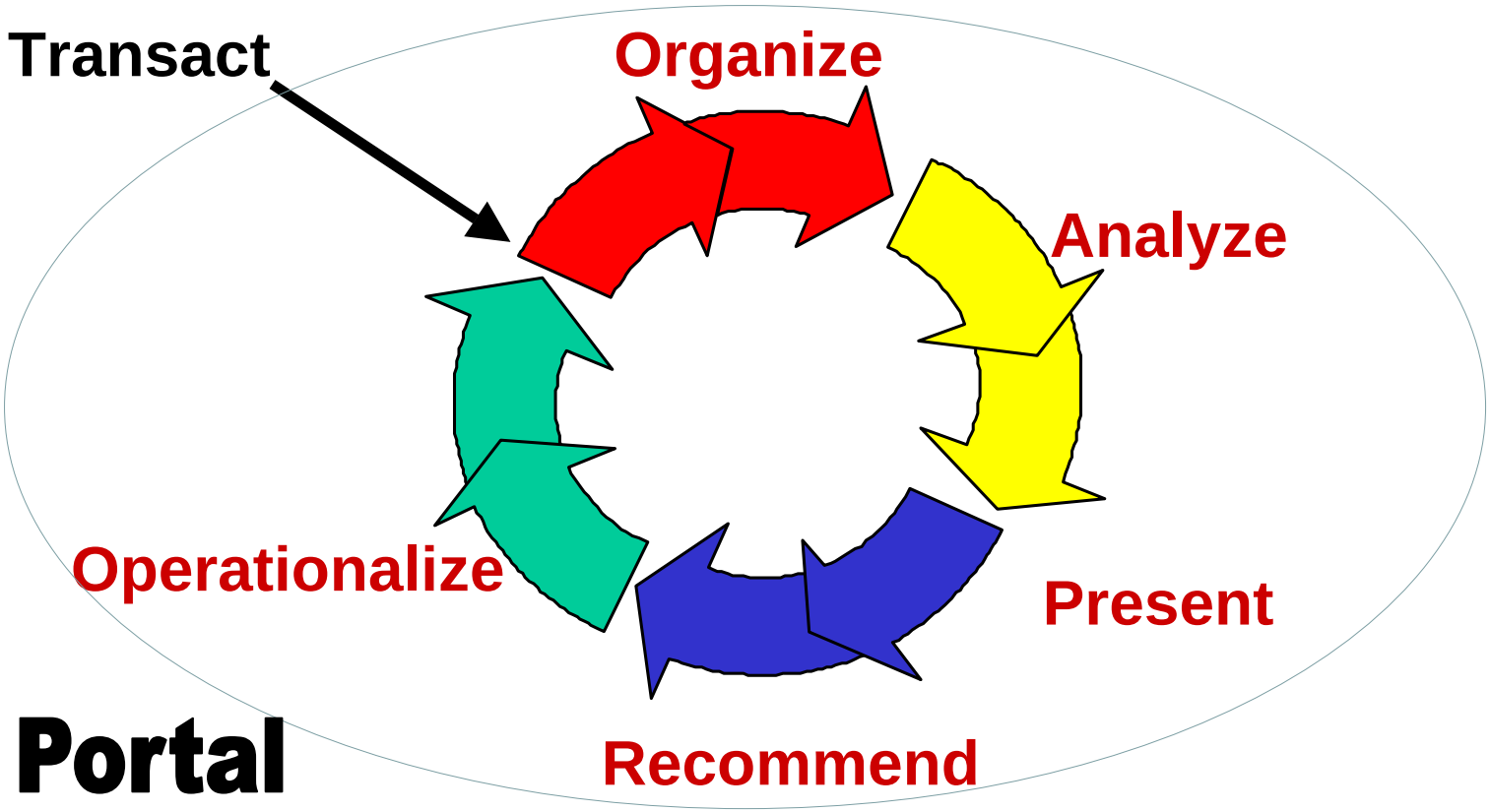
Tools:

Brio, Crystal, IBM, Hyperion, Microsoft, Proclarity

Structures:

OLTP, ODS, Data Warehouse, Data Marts, Cubes

The BI Lifecycle – Portal



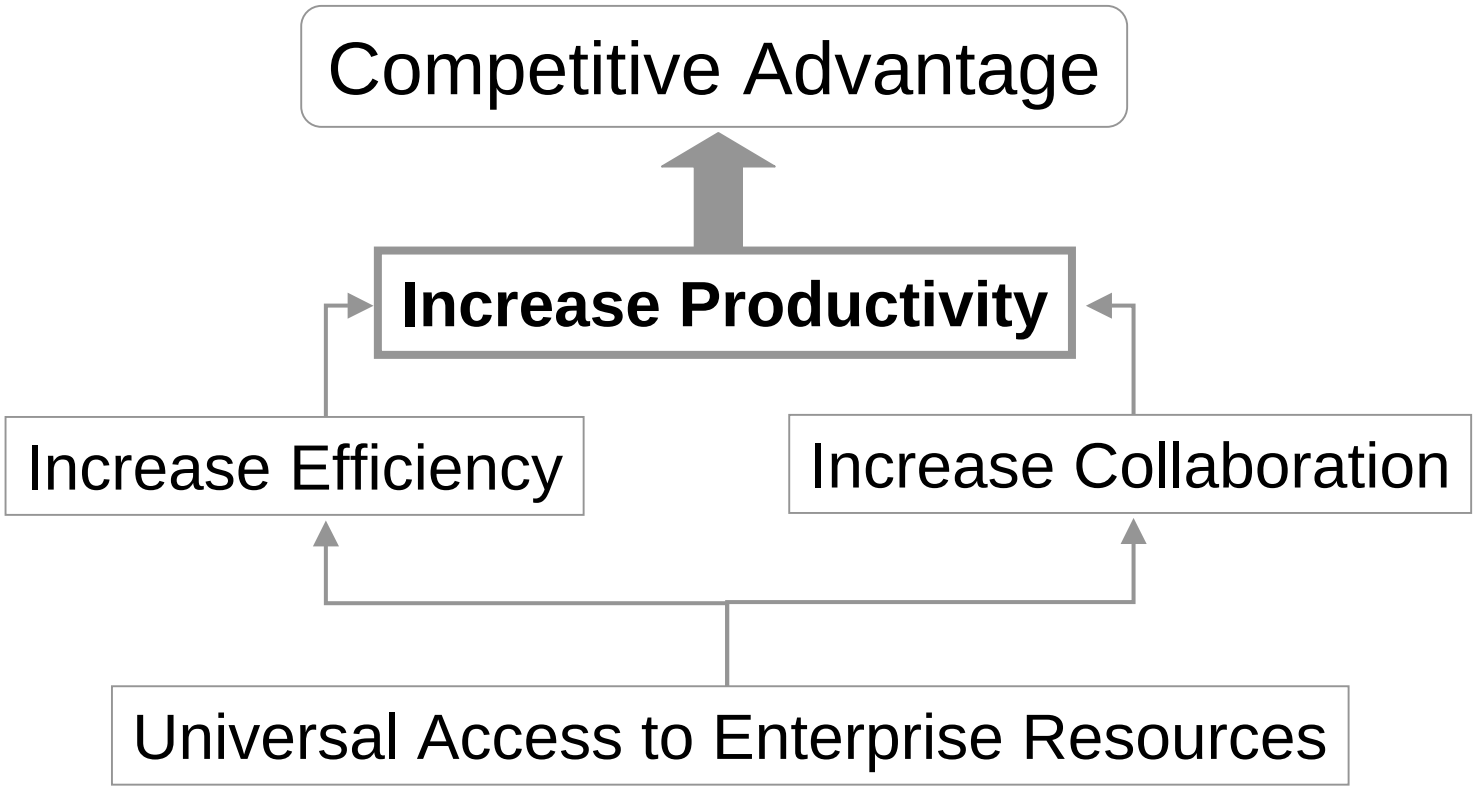
Portals

"Enterprise Information Portals are applications that enable companies to unlock internally and externally stored information, and provide users a single gateway to personalized information needed to make informed business decisions. "

". . . an amalgamation of software applications that consolidate, manage, analyze and distribute information across and outside of an enterprise (including Business Intelligence, Content Management, Data Warehouse & Mart and Data Management applications.)“

- Merrill Lynch Analysis, 1999

Relation of Benefits



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NASCIO, www.nascio.org

Federal Computer Week, www.fcw.com

End of Presentation

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