



SOLID
QUALITY
MENTORS

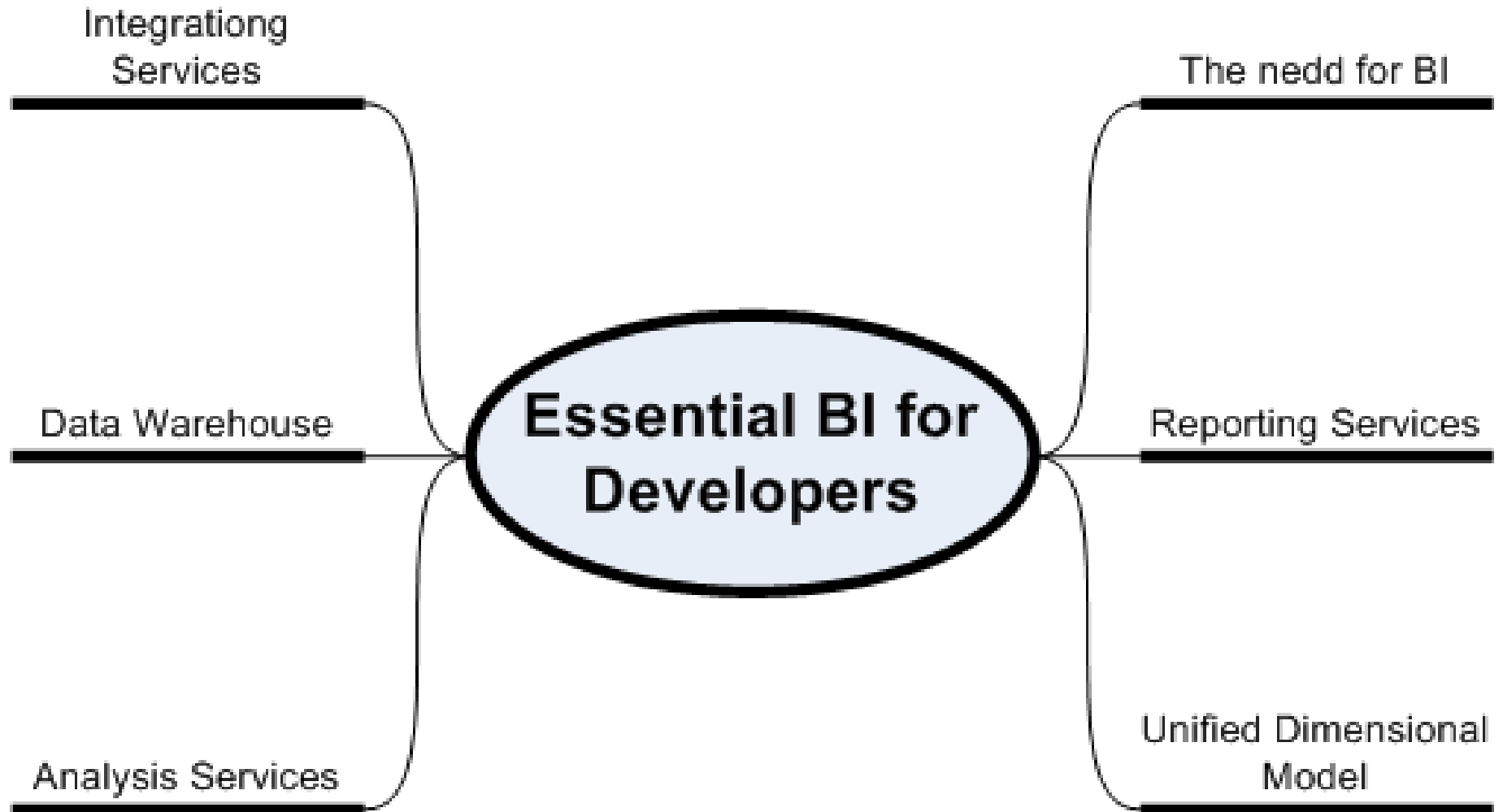


Essential BI for Developers

Part I & II

Javier Loria (javier@solidq.com)
Solid Quality Mentors

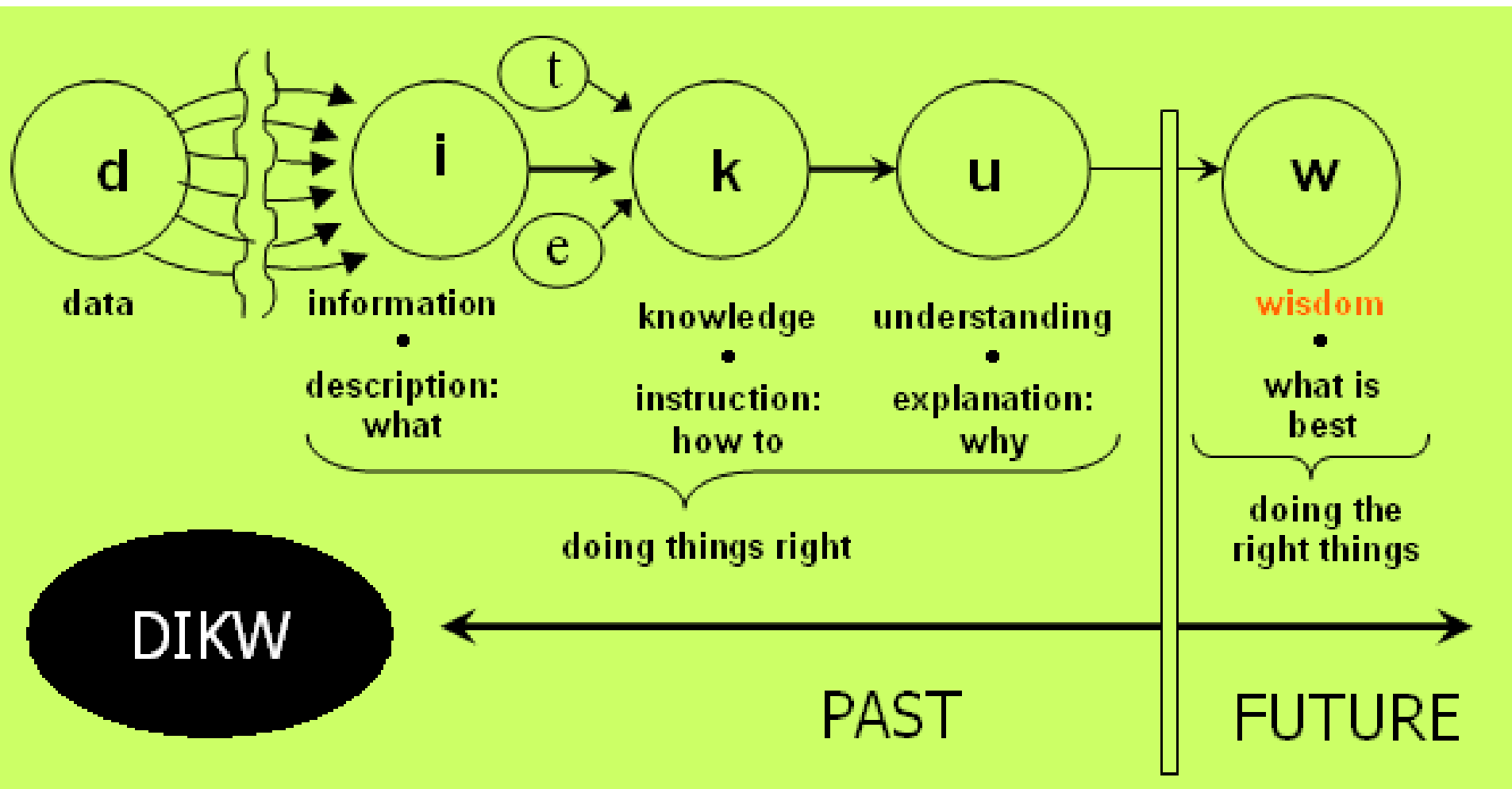
Agenda



Analysis Paralysis



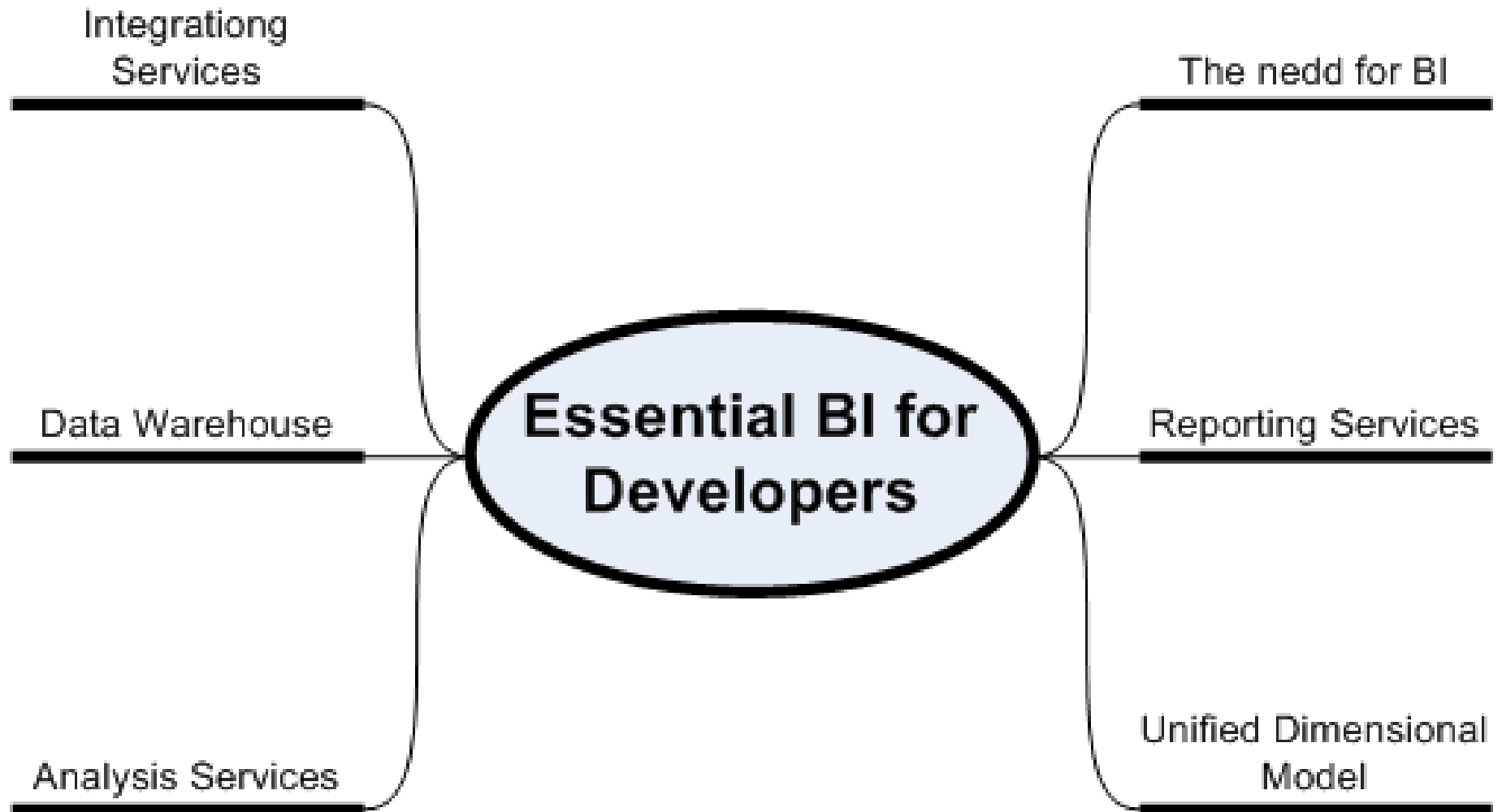
DIKW



The need for BI

- Companies need BI if:
 - Everyone has it's own “version of the truth”
 - Staff having to re-key numbers from reports into Excel spreadsheets.
 - Reports from multiple operational systems do not match.
 - IT is flooded with report requests.
 - Too much time is spent generating information.

Agenda



Reporting Services Overview



Your App

End User Reporting Report Builder from the Source

1

Report Server WS

Report Server
Report Processing and Extensions, including, via a...s, Reporting and Scheduling

demo

Your App

End User Reporting BIDS from the Source

Project Manager

Reporting Web App

CRM

BIDS

2

Report Builder

Report Server WS

Report Server

Report Processing and Extensions, including, data access, rendering and Scheduling

demo

Your App

3

Bringing Report Builder
Into your application

Report Manager

Report Web App

SSRS

BIDS

Report Builder

Report Server WS

Report Server
Report Processing and Extensions, including, data access, rendering and scheduling

demo

Your App

4

Report Server Web Service Using SOAP to Reports

Report Server WS

Report Server
Report Processing and Extensions, including, via a...s, Reporting and Scheduling

demo

Your App

5

Embedding Reports Into your application

Report Manager

Report Web App

SSMS

BIDS

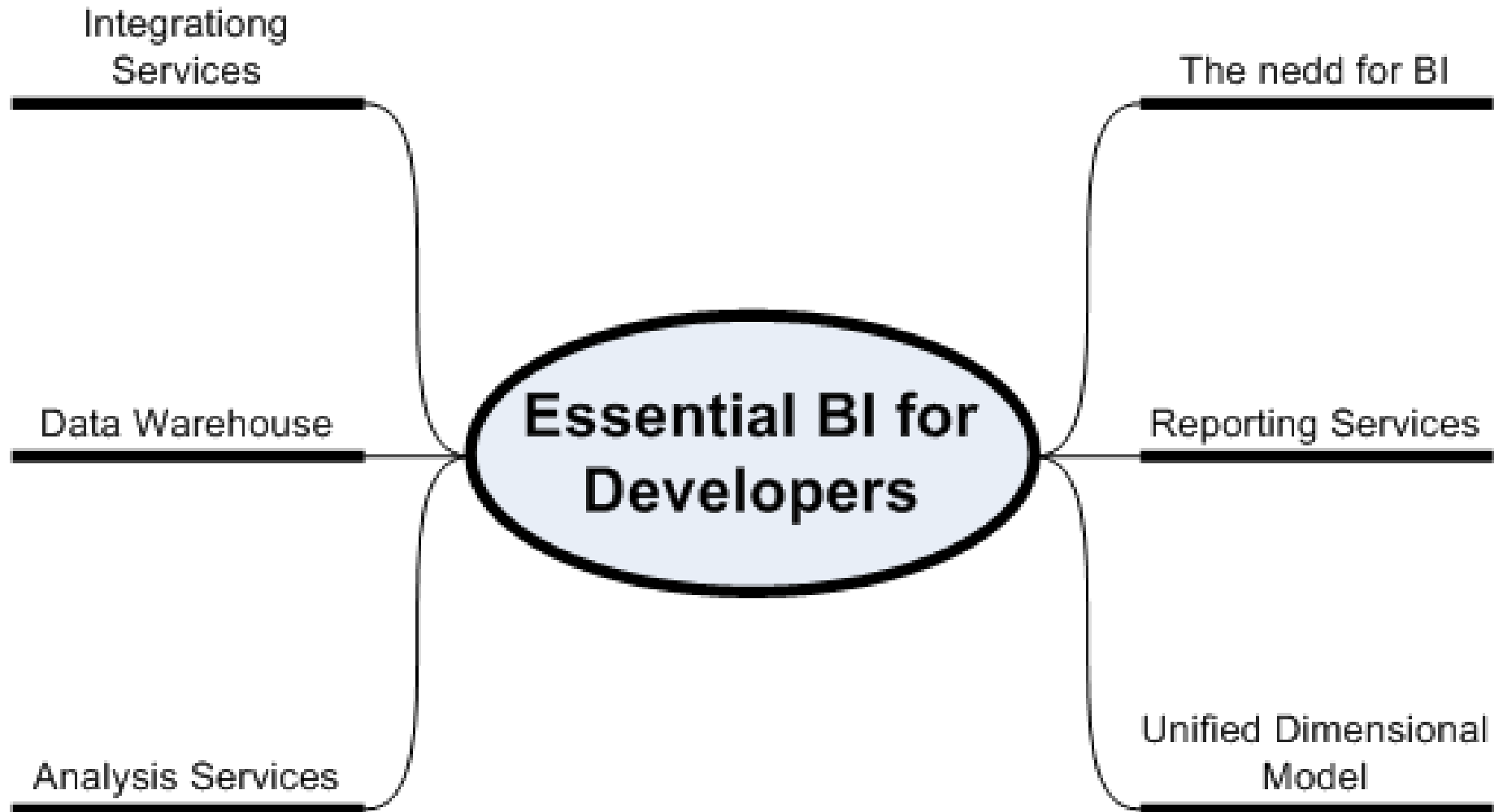
Report Builder

Report Server WS

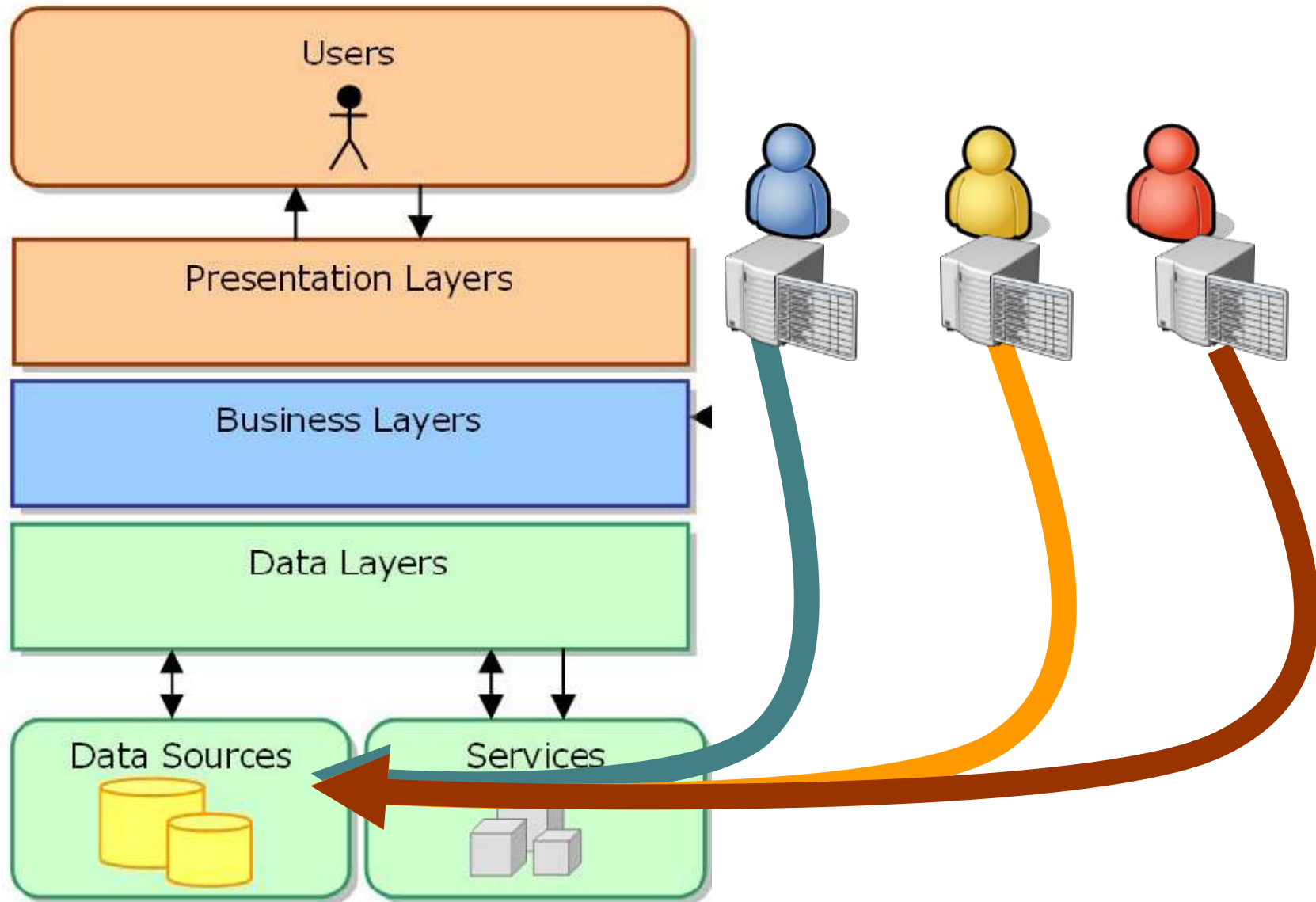
Report Server
Report Processing and Extensions, including, via a... s, Reporting and Scheduling

demo

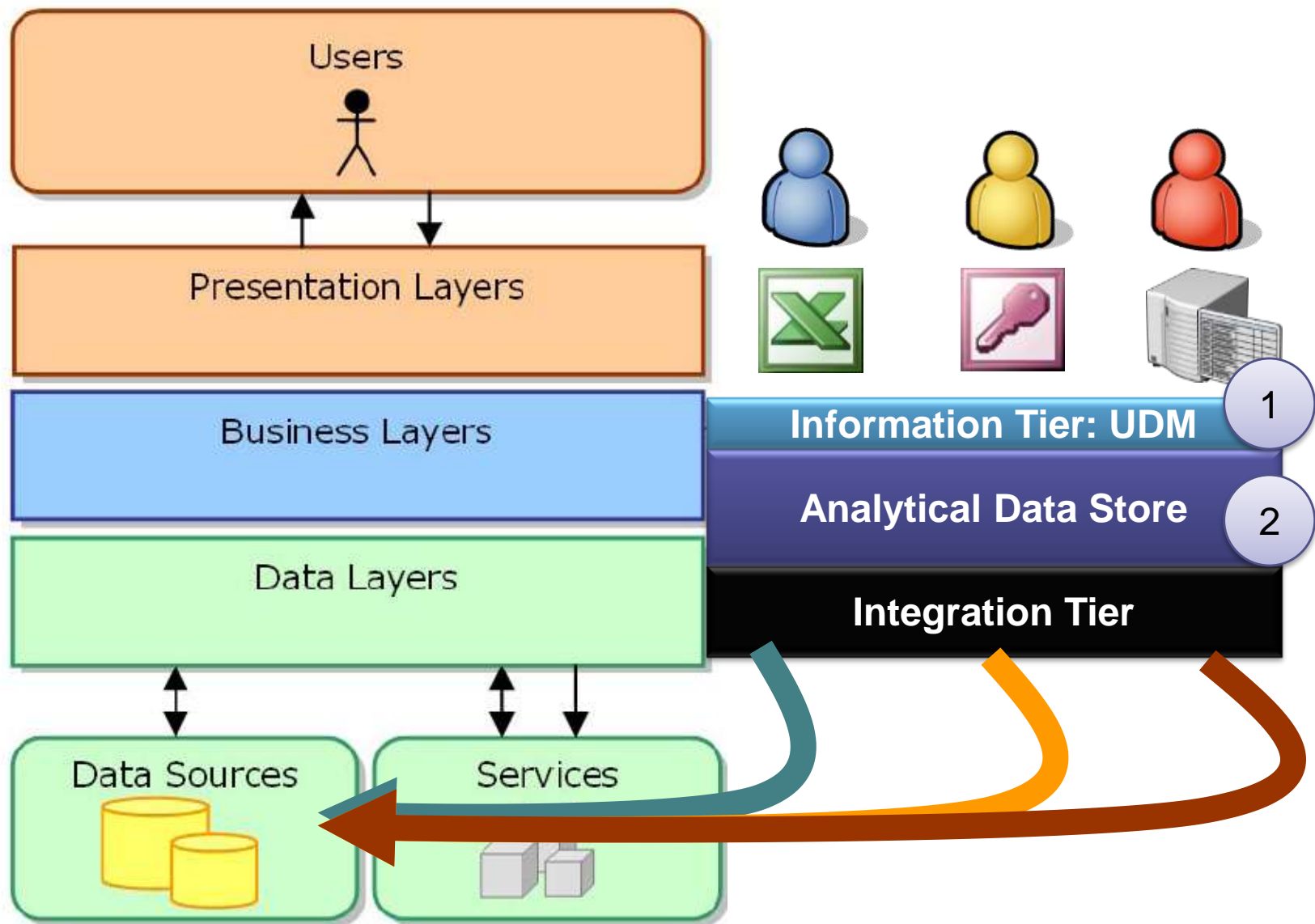
Agenda



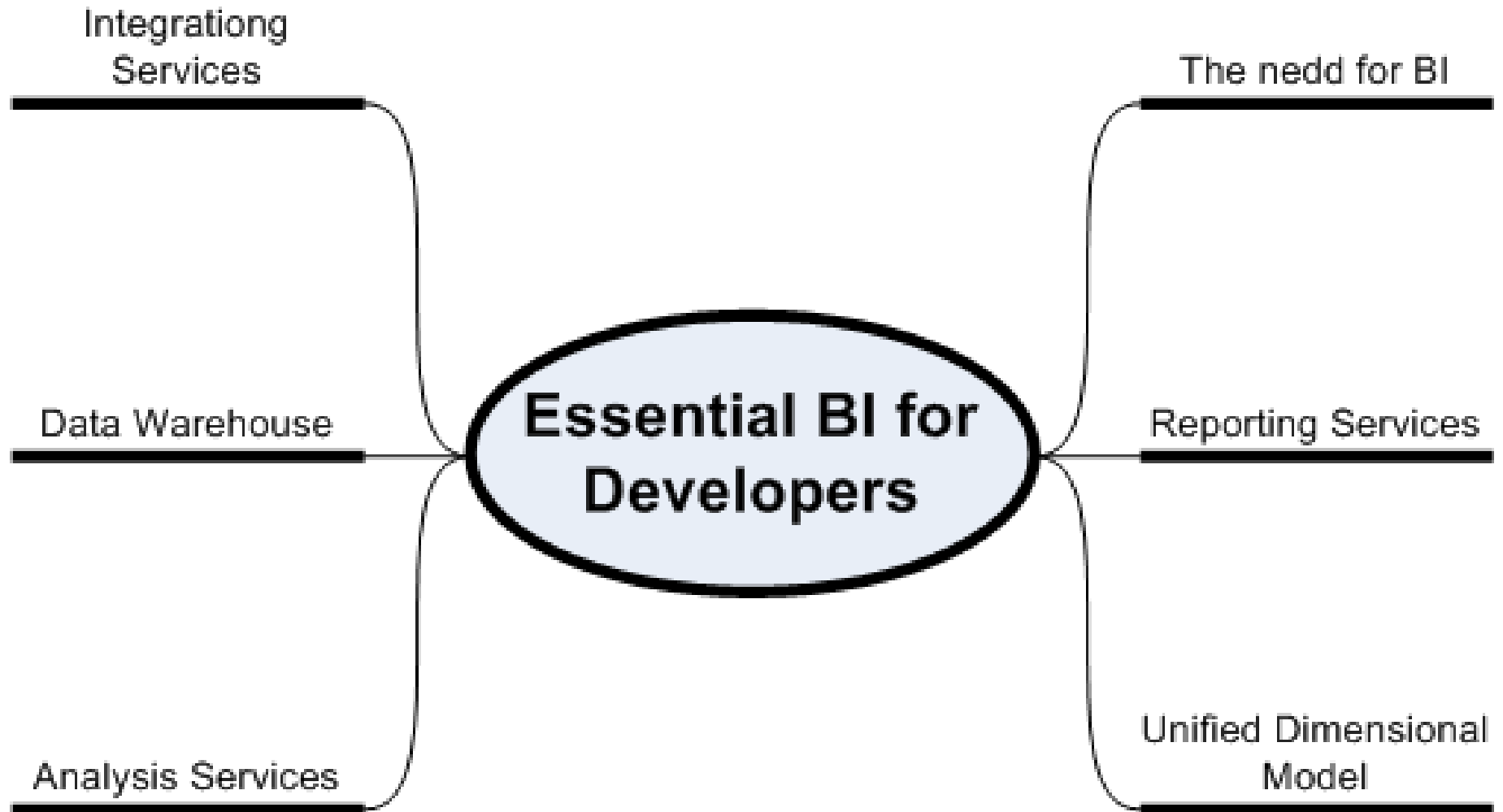
Reporting Architectural View



BI "Development" View

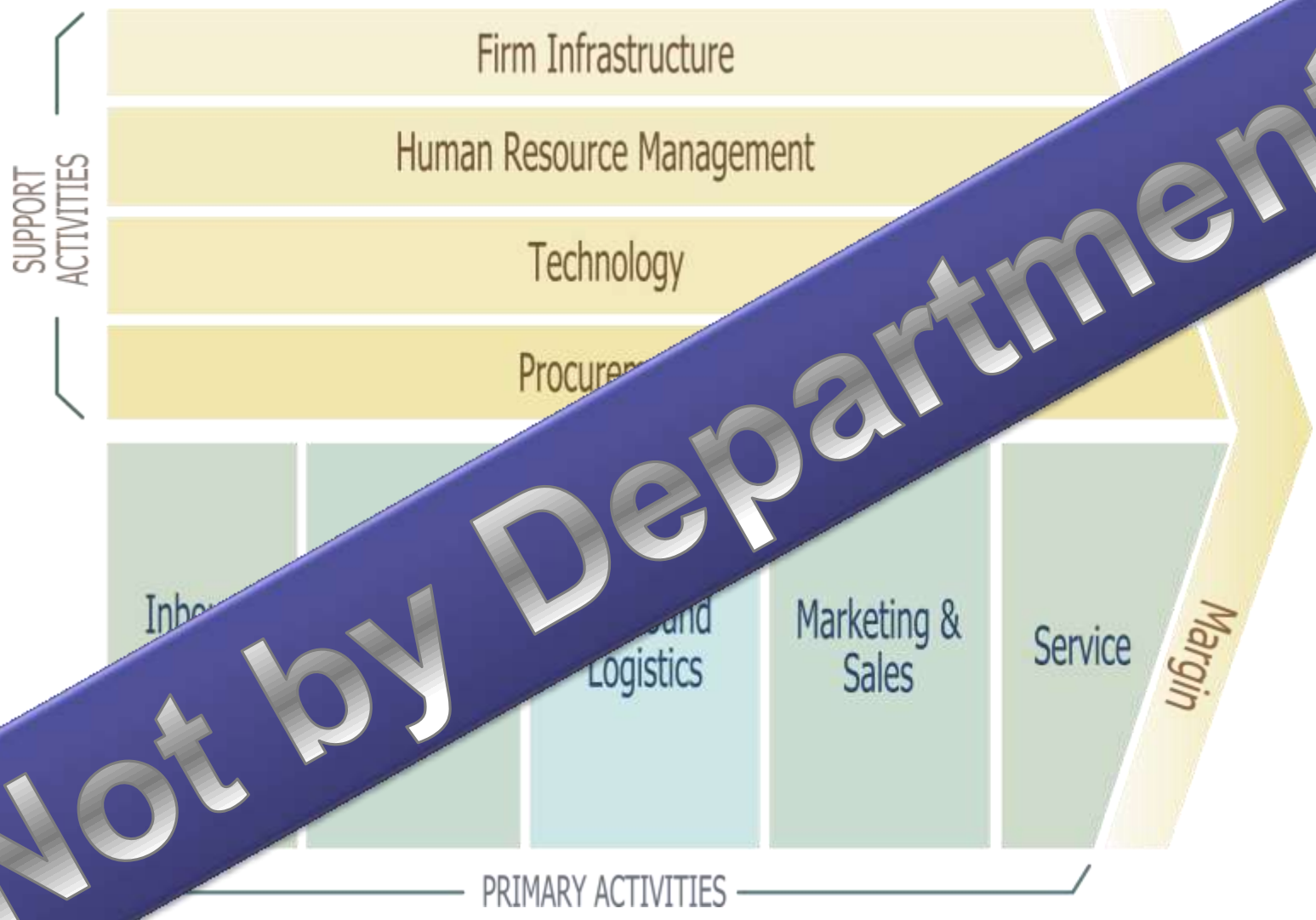


Agenda



Designing UDM

▶ Porter's Value Chain



Not by Department

Top Down Modeling (0/4)

► Designing Analysis Model

Organization



Processes

Event

Measures

Top Down Modeling (1/4)

► Designing Analysis Model

Organization

Data
Warehouse

Processes

Event

Measures

Top Down Modeling (2/4)

► Designing Analysis Model

Organization

Data
Warehouse

Processes

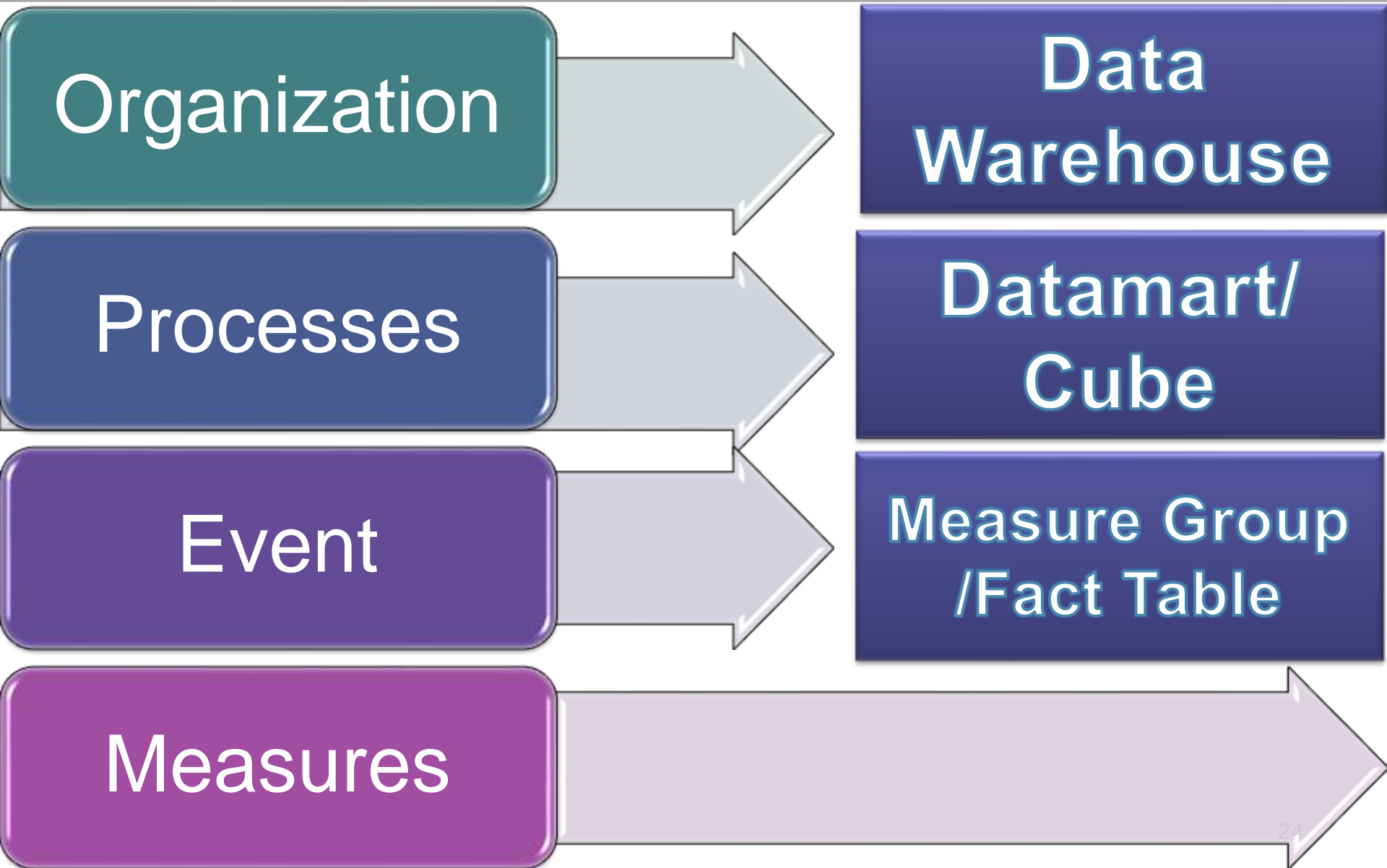
Datamart/
Cube

Event

Measures

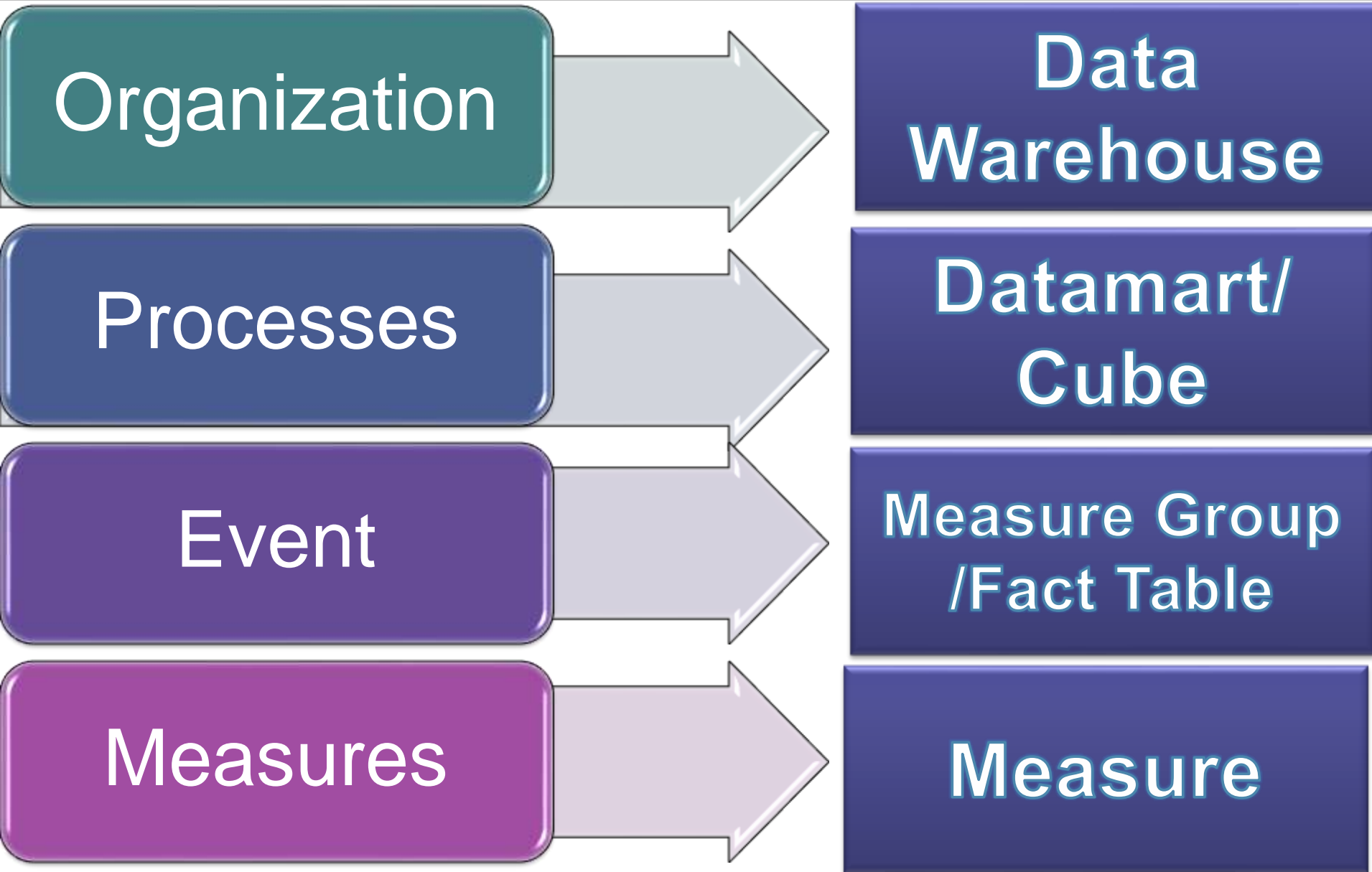
Top Down Modeling (3/4)

► Designing Analysis Model

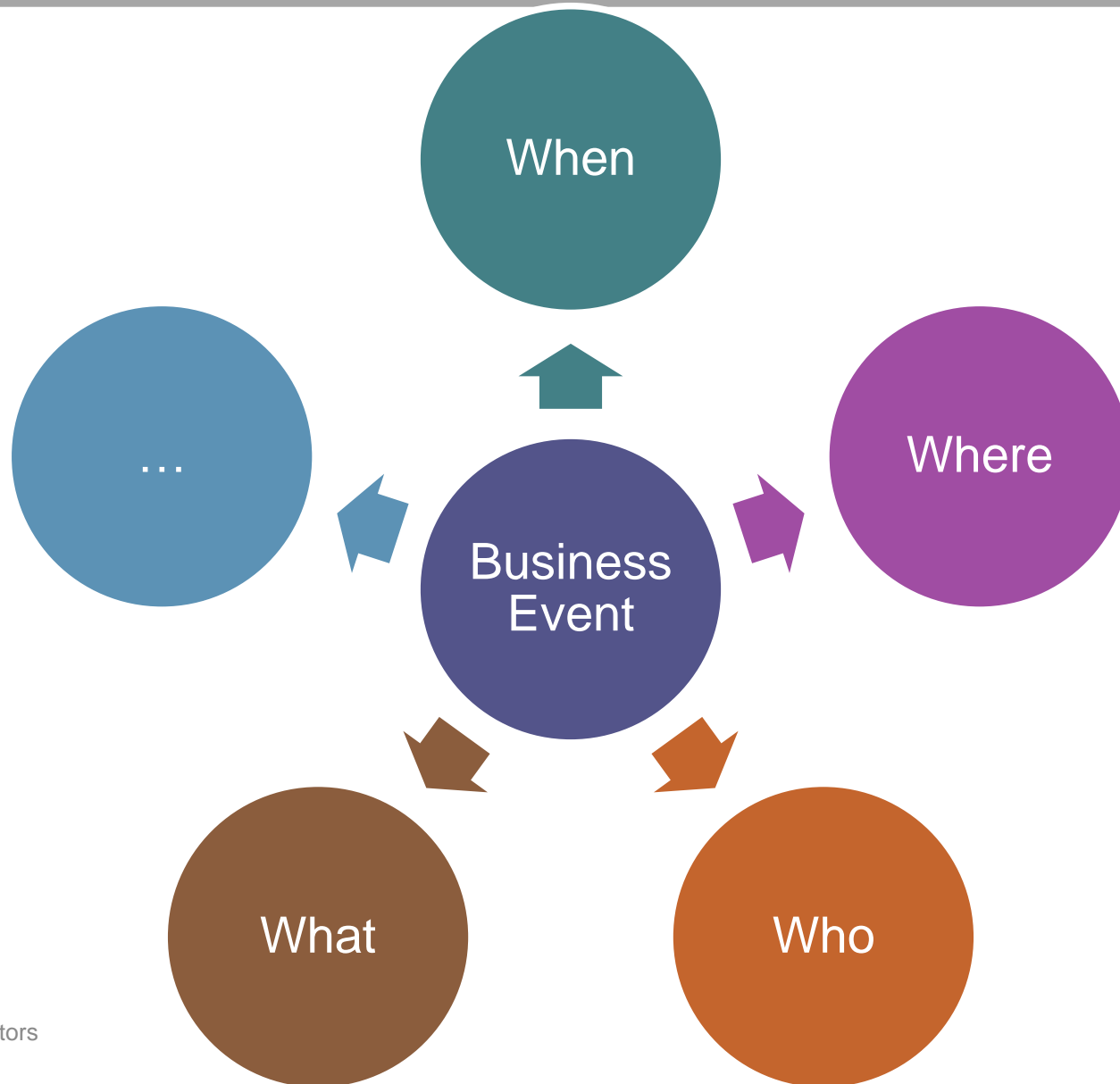


Top Down Modeling (4/4)

► Designing Analysis Model



Dimensions



Dimension elements

Dimensions

- Set of related elements that qualify a Fact

Entities

- Business entities

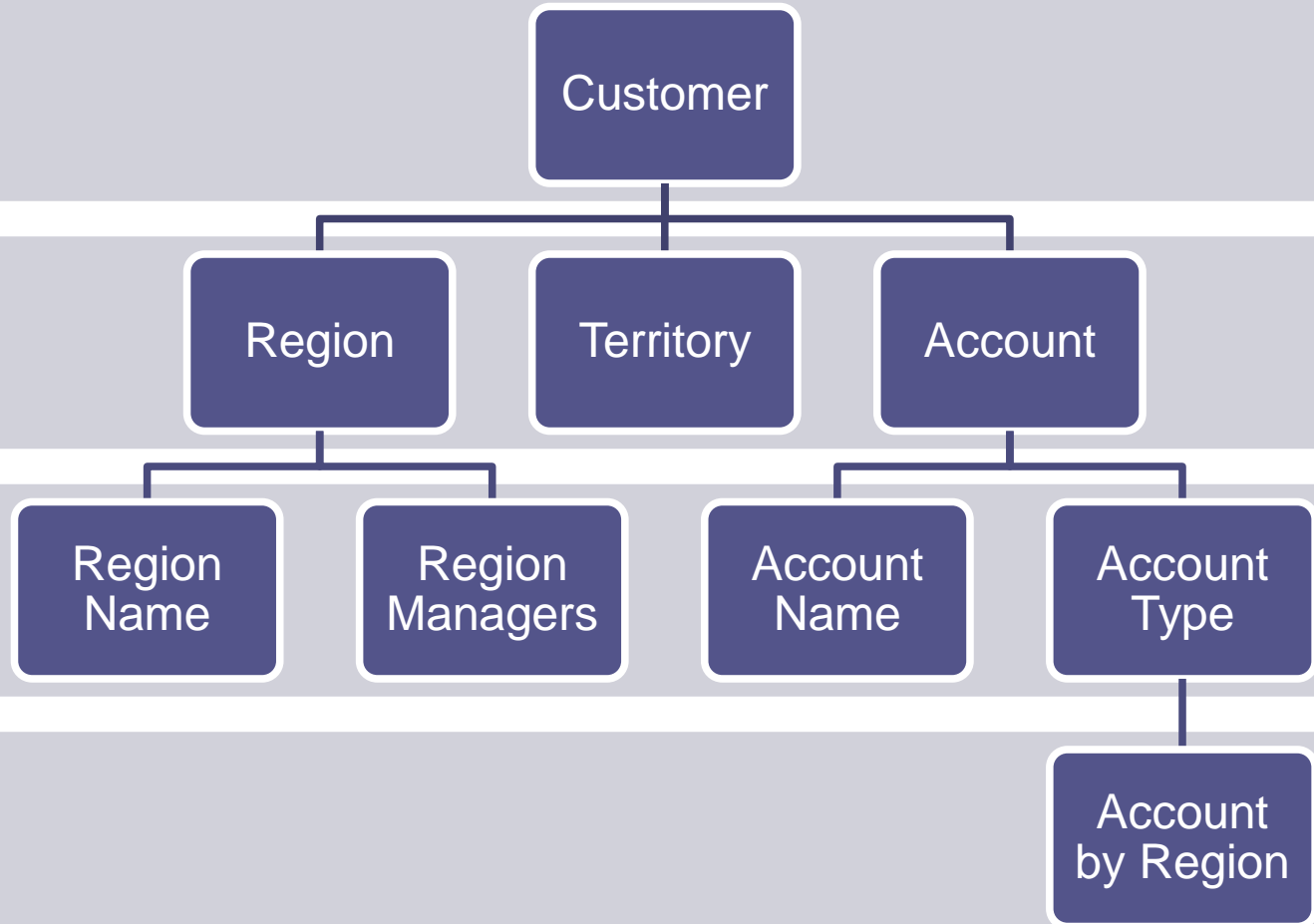


Attributes

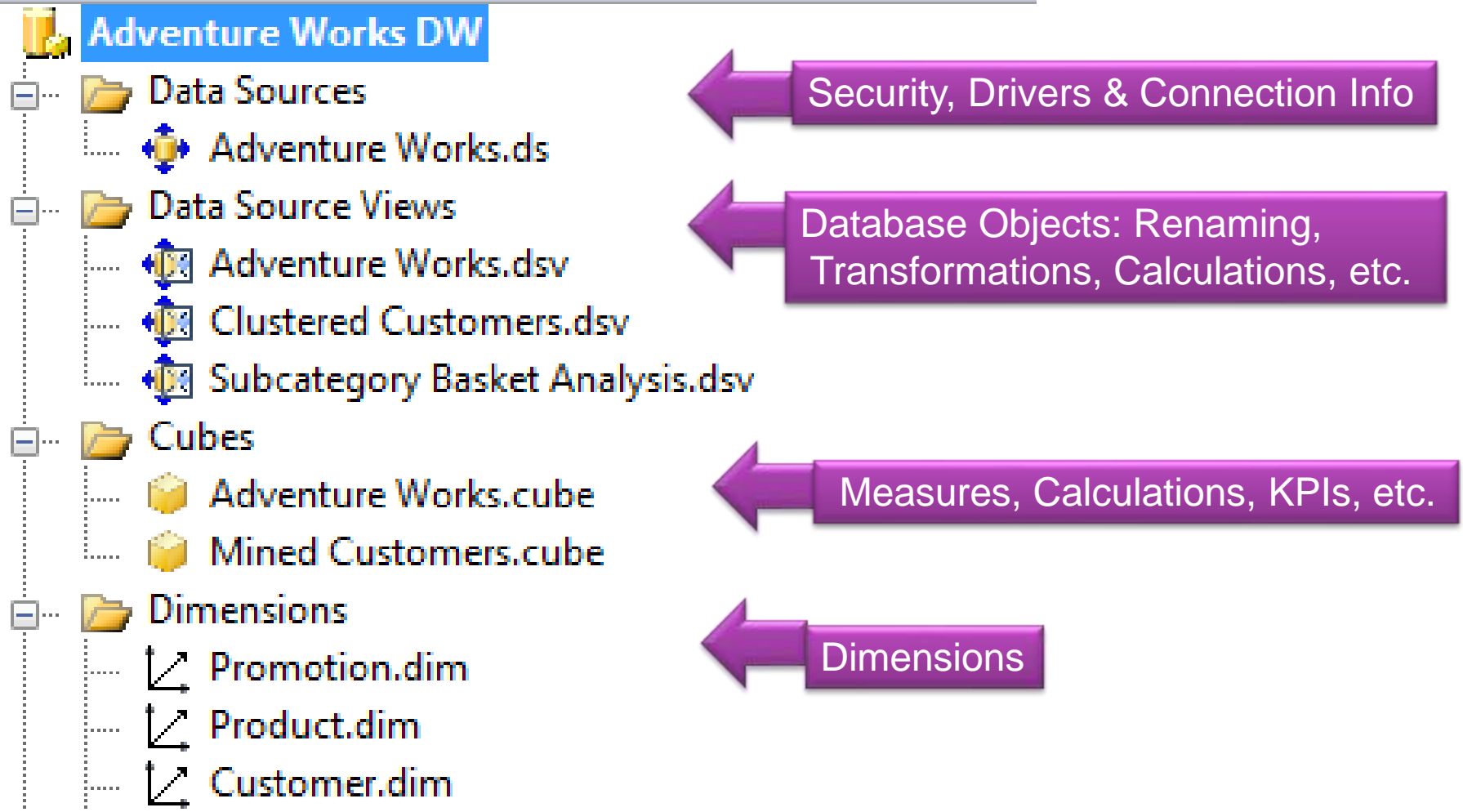
- Property or characteristic of a business entity

Hierarchy

- Defines a navigation/aggregation path of two or more attributes.



Cube Building

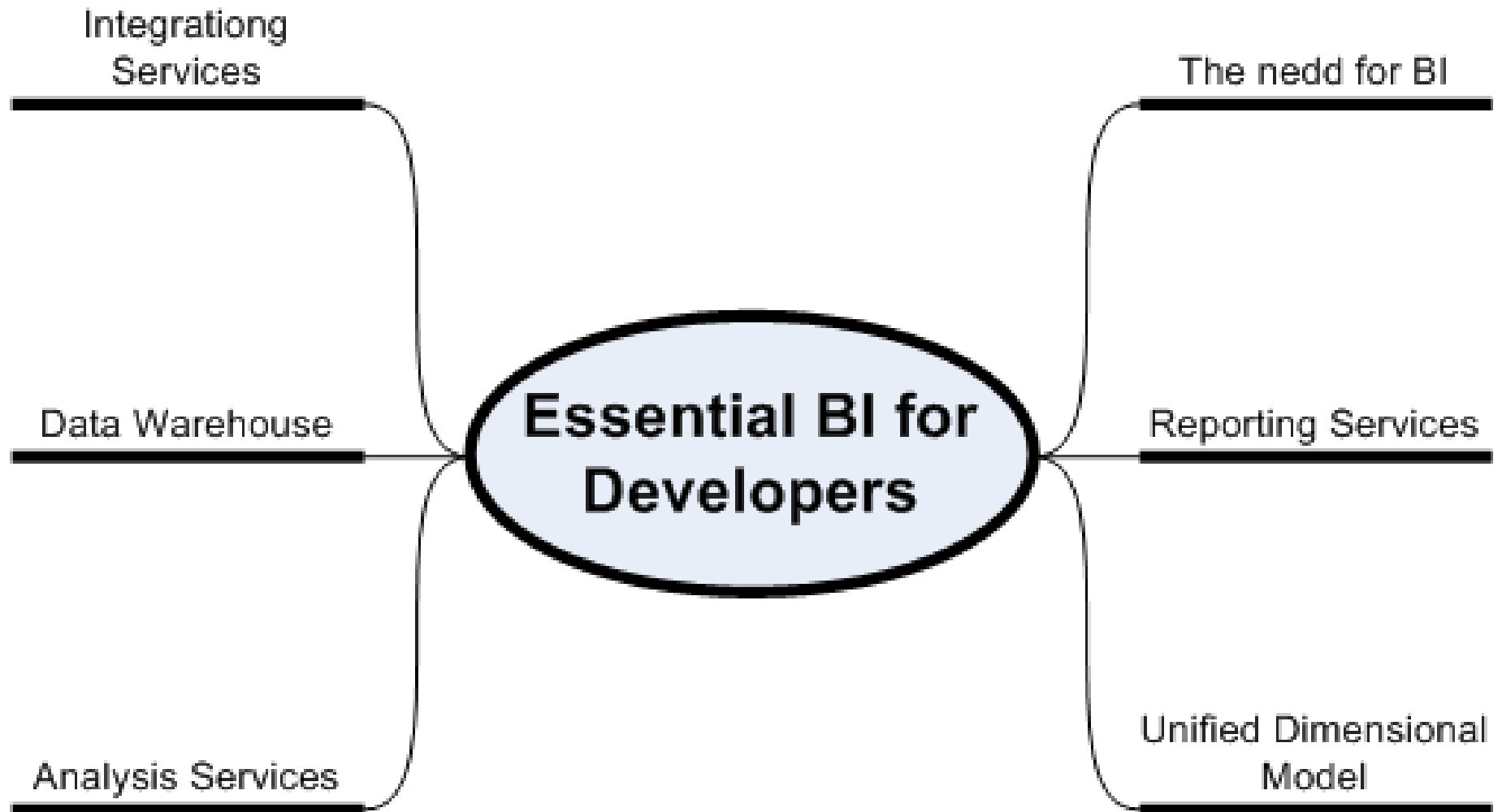


OLAP Development

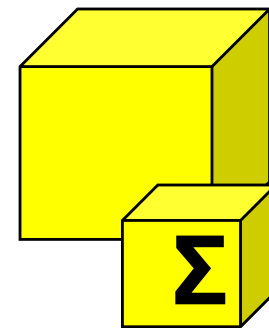
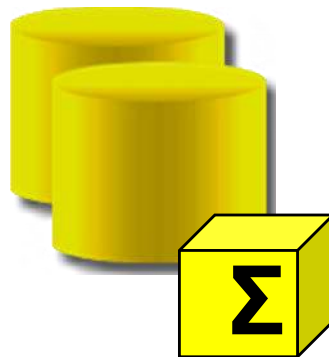
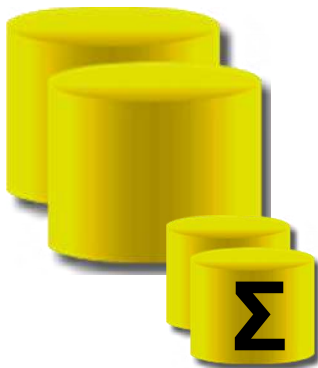
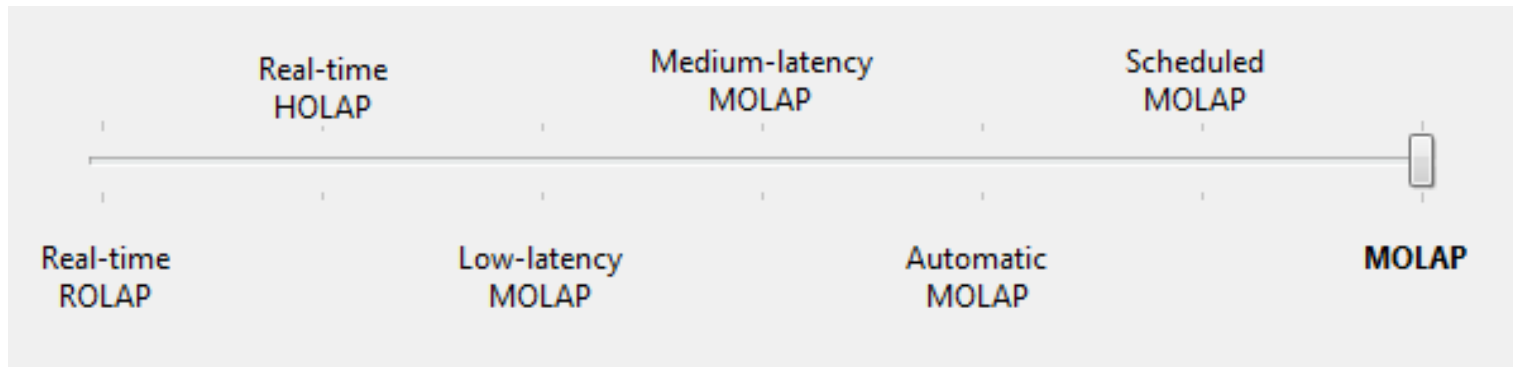
Building UDM

demo

Agenda



Storage Options



Aggregations (1/2)

2	3	5
4	5	9
6	8	14

Aggregations (2/2)

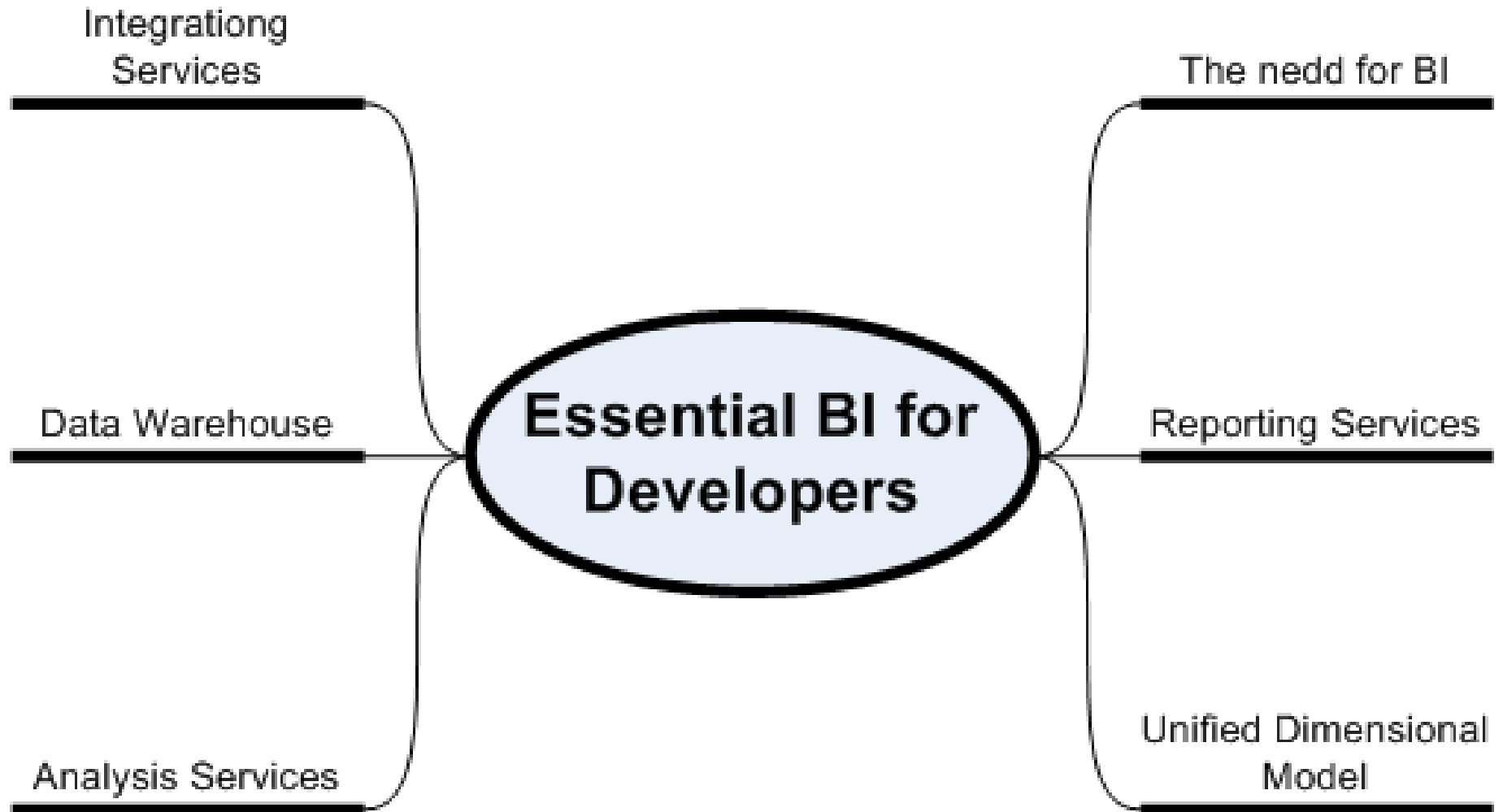
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Sorting:		(none)										Range:		0 - 14			
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[-] [P]	Status	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
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OLAP Building

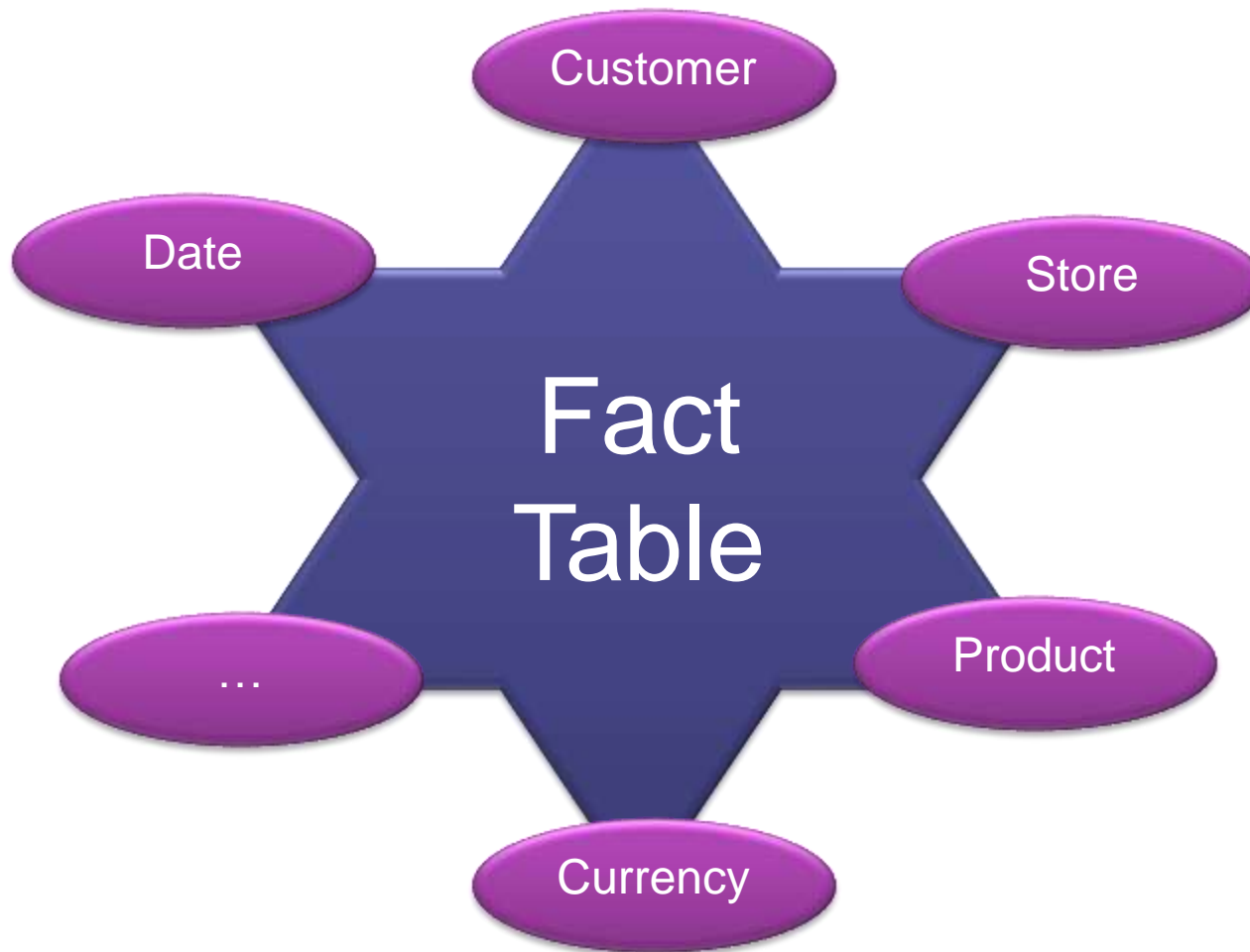
Implementing SSAS Cubes

demo

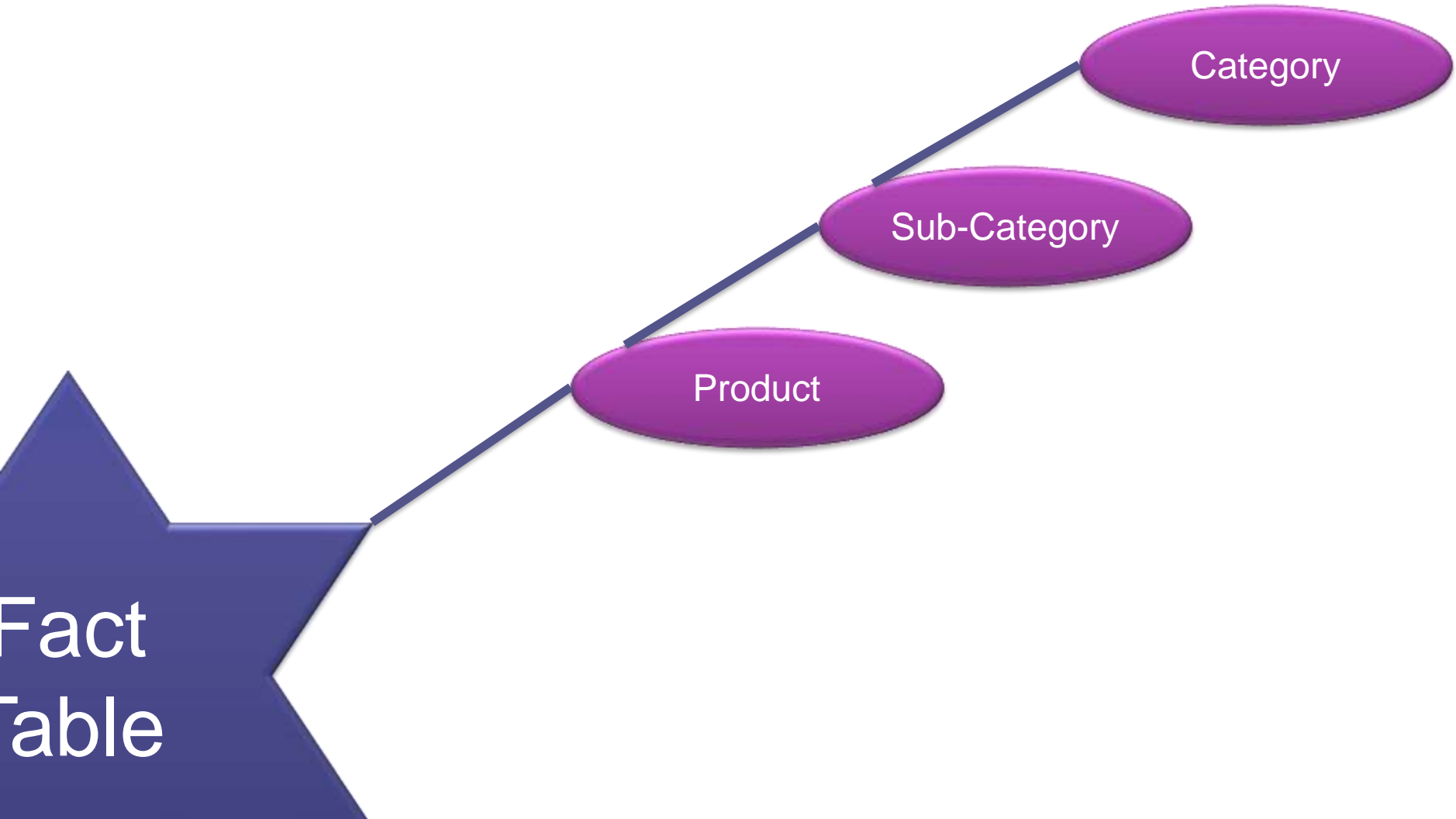
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Star Schema



Snowflake Schema



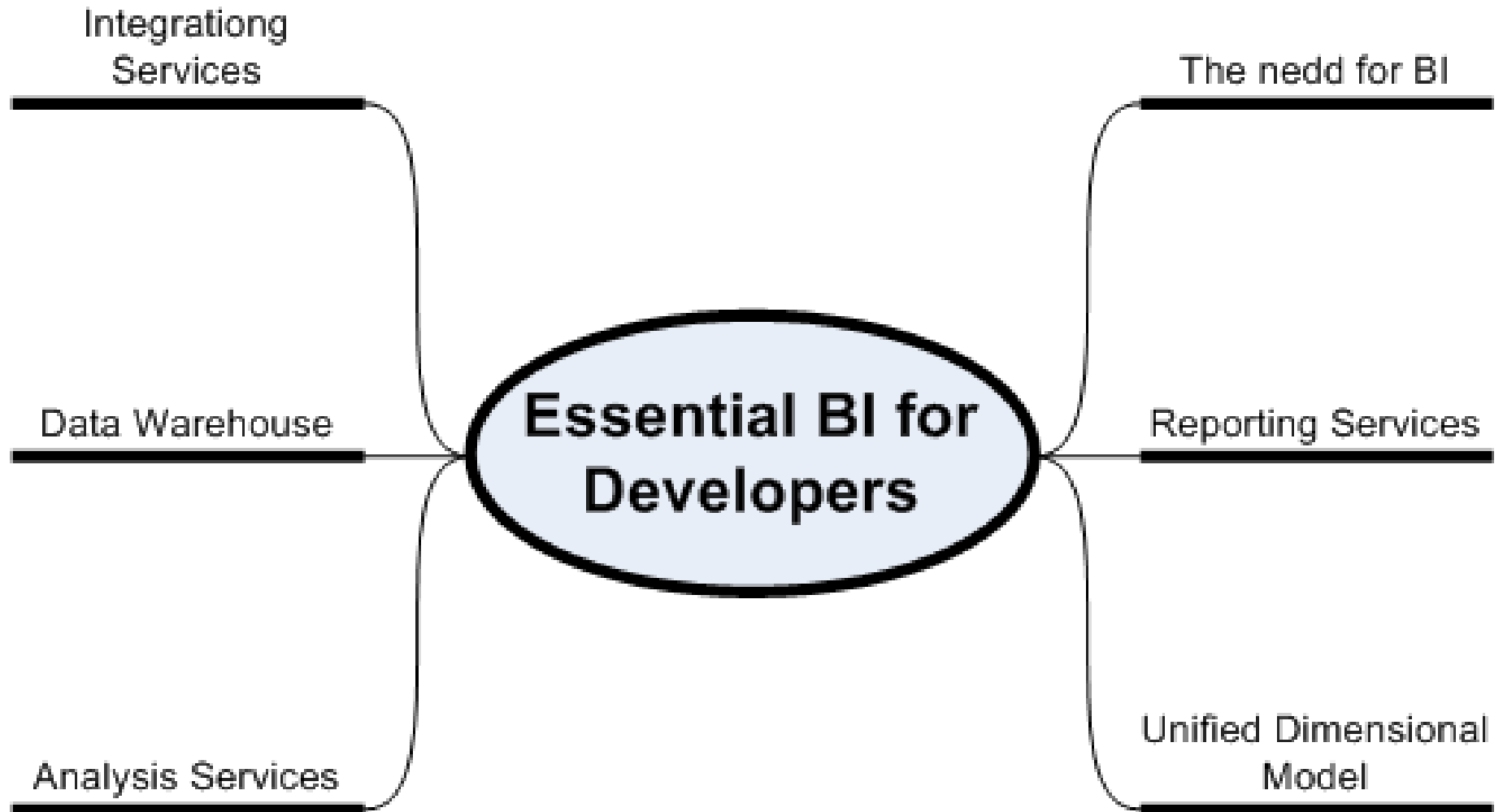
Data Mart/Warehouse Schema

- Dimensions
 - Surrogate Keys
 - Business Keys
 - Attribute types 0,1 and 2
 - Start/End Date
- Snowflake
 - Ref Surrogate Key
 - Ref Business Key
- Fact Table
 - Dimension Ids
 - Measures
 - Metadata
 - ETL Metadata
 - Source Identification

Data Mart/Data Warehouse Schema

demo

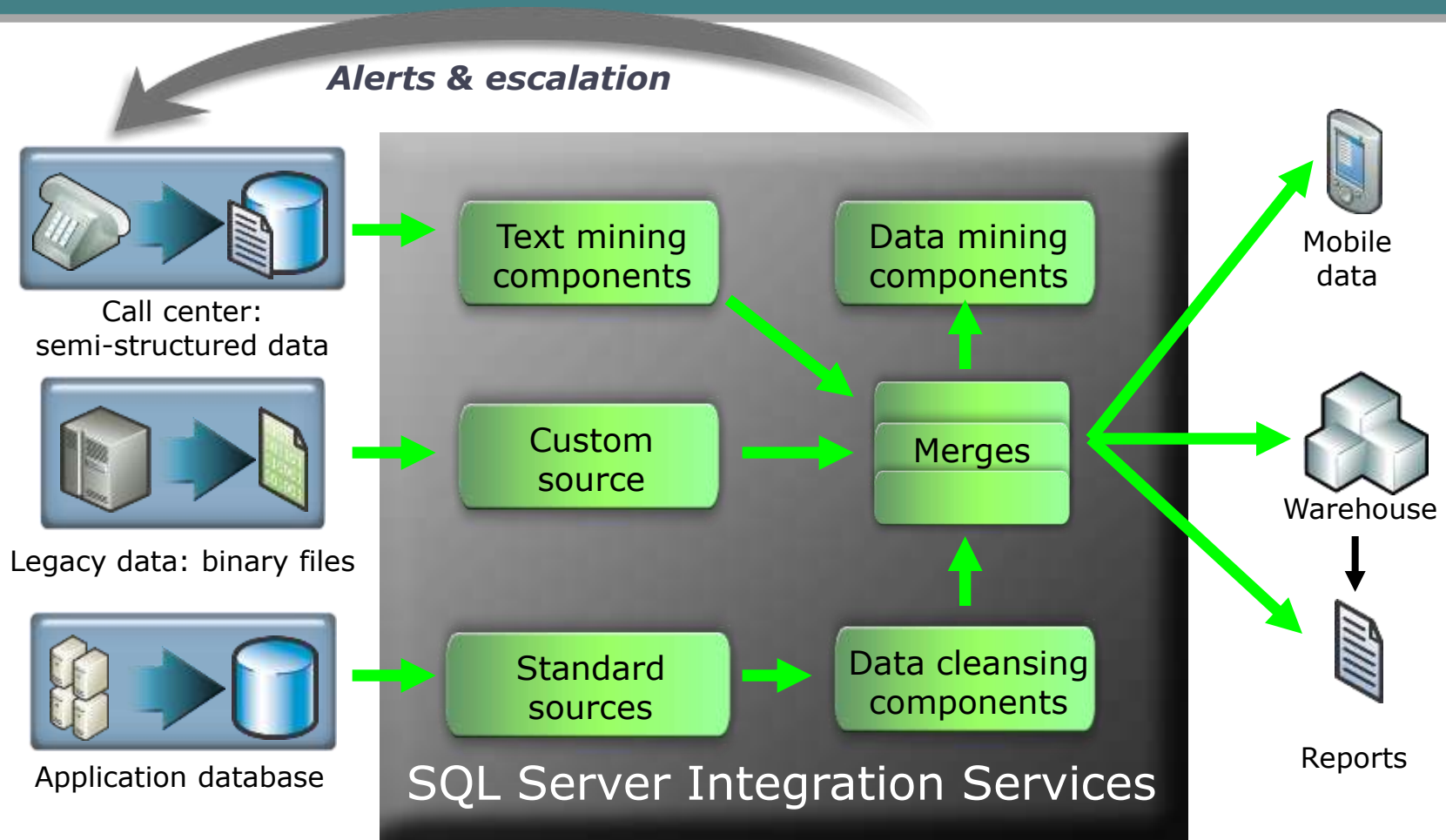
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Software Integration

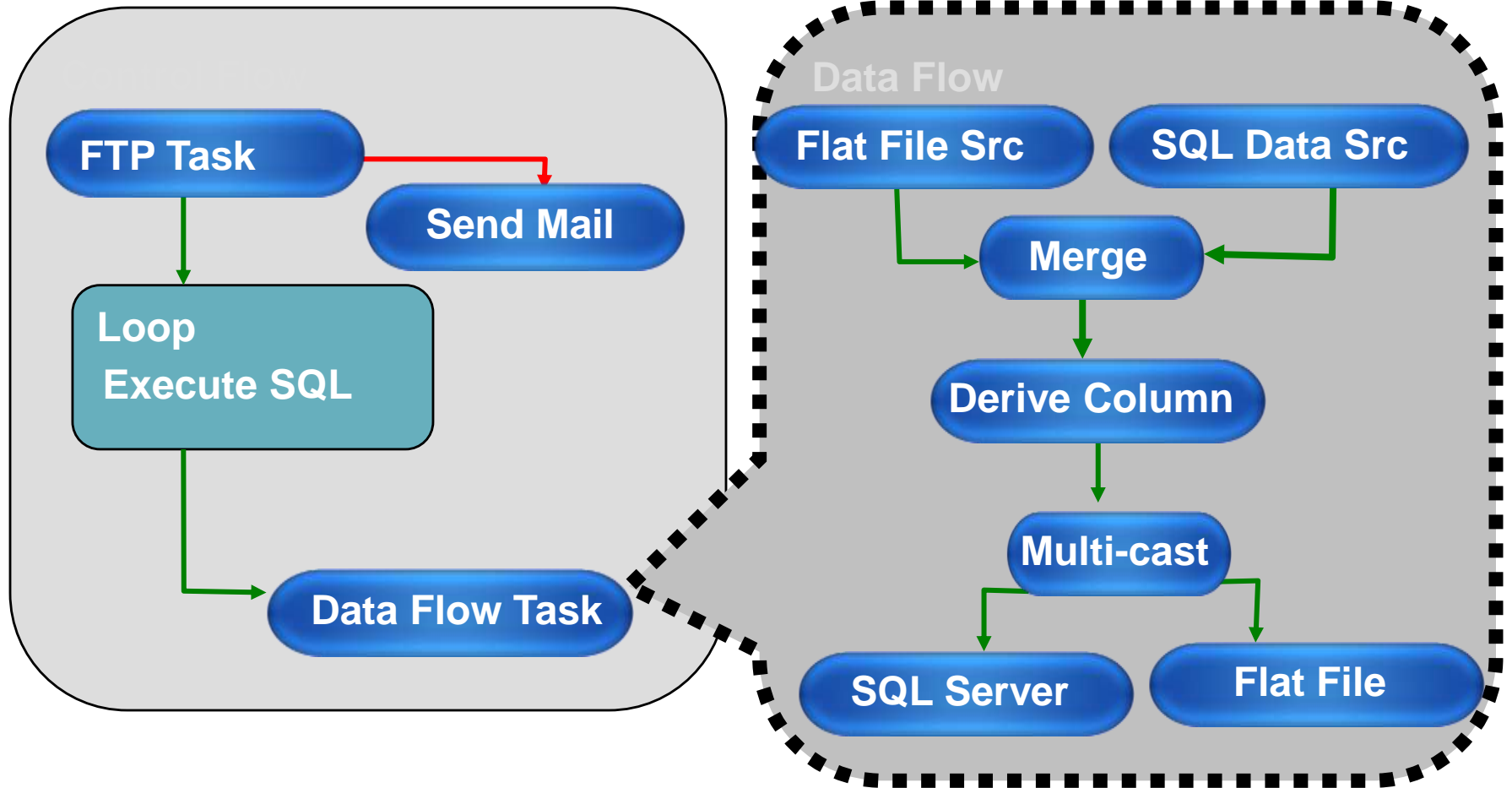


SSIS Architecture



- **Source, prepare and load data in a single, auditable process.**
- **Reporting and escalation can be parallelized during warehouse load.**
- **Scalable models**

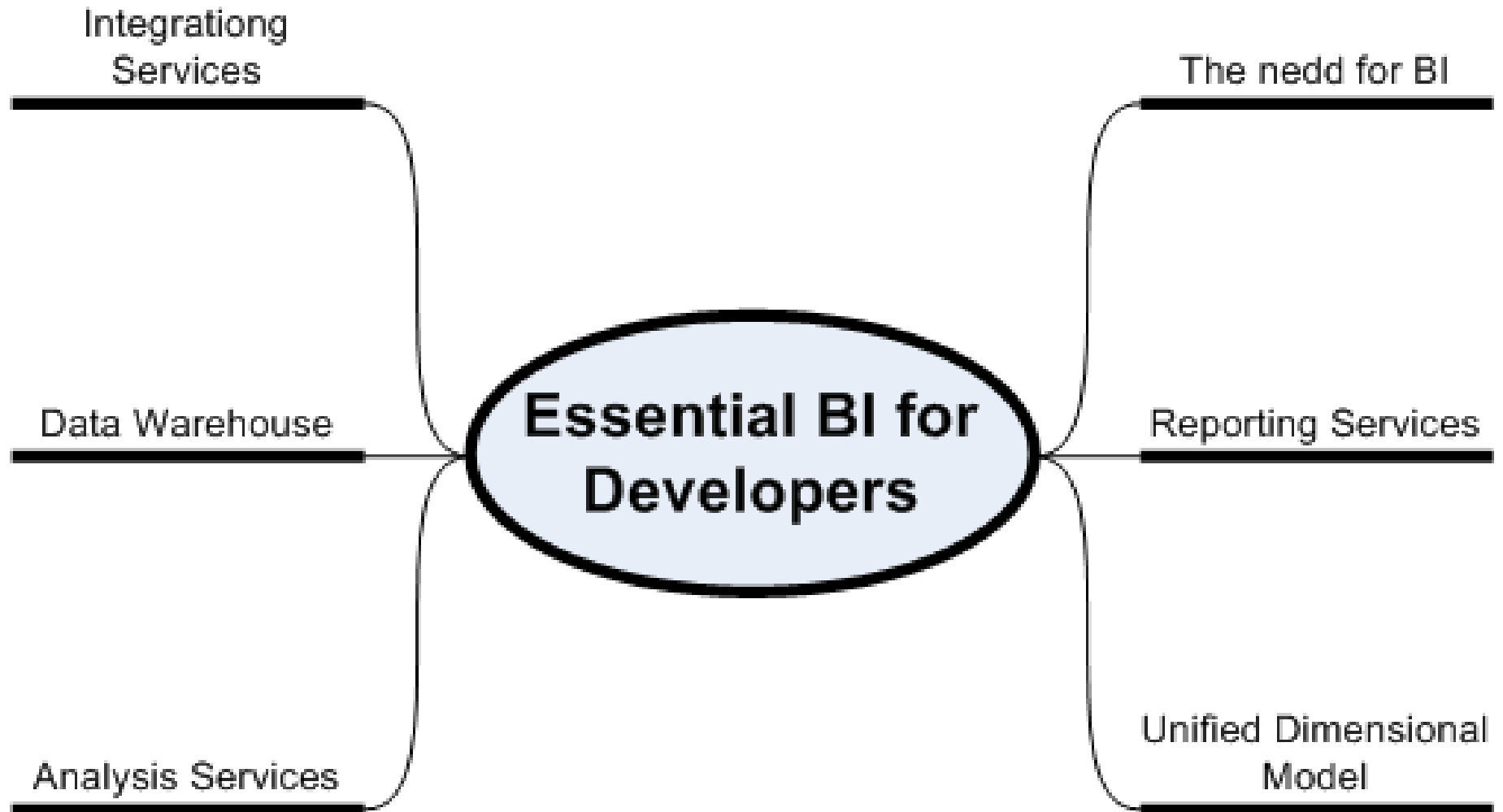
Control Flow & Data Flow



SSIS Demo

demo

Agenda





**Thank
You!!!**

Please remember to fill out evaluations