

Designing Dashboards and Scorecards for End-User Needs

Jim Hadley

TIBER
SOLUTIONS

Topics

- ▶ **Business Intelligence Definitions**
- ▶ **Past and Current BI Application Capabilities**
- ▶ **Business Intelligence Layers**
- ▶ **BI Application Development Methodology**
- ▶ **Design Techniques**
- ▶ **Q&A**

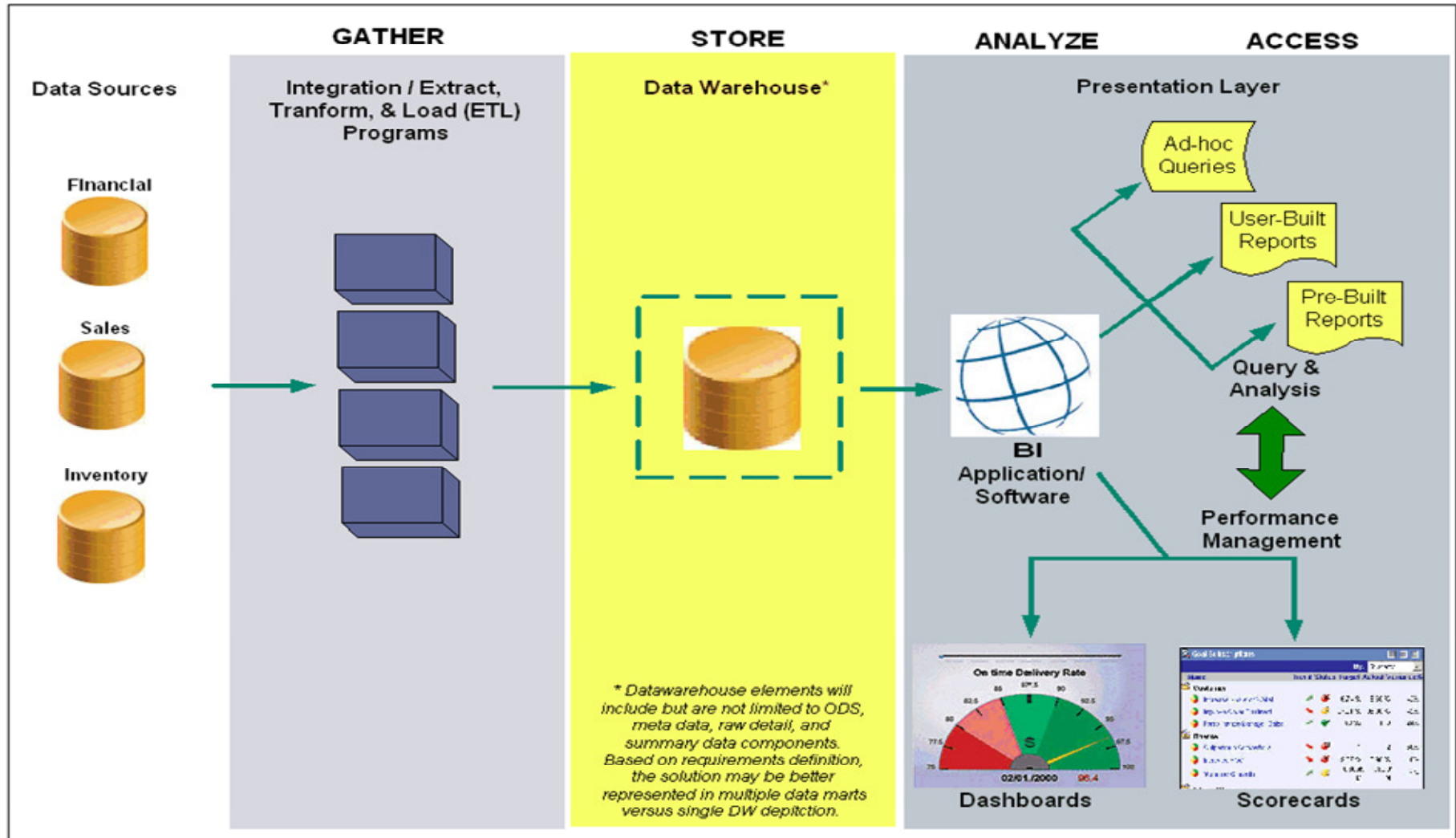
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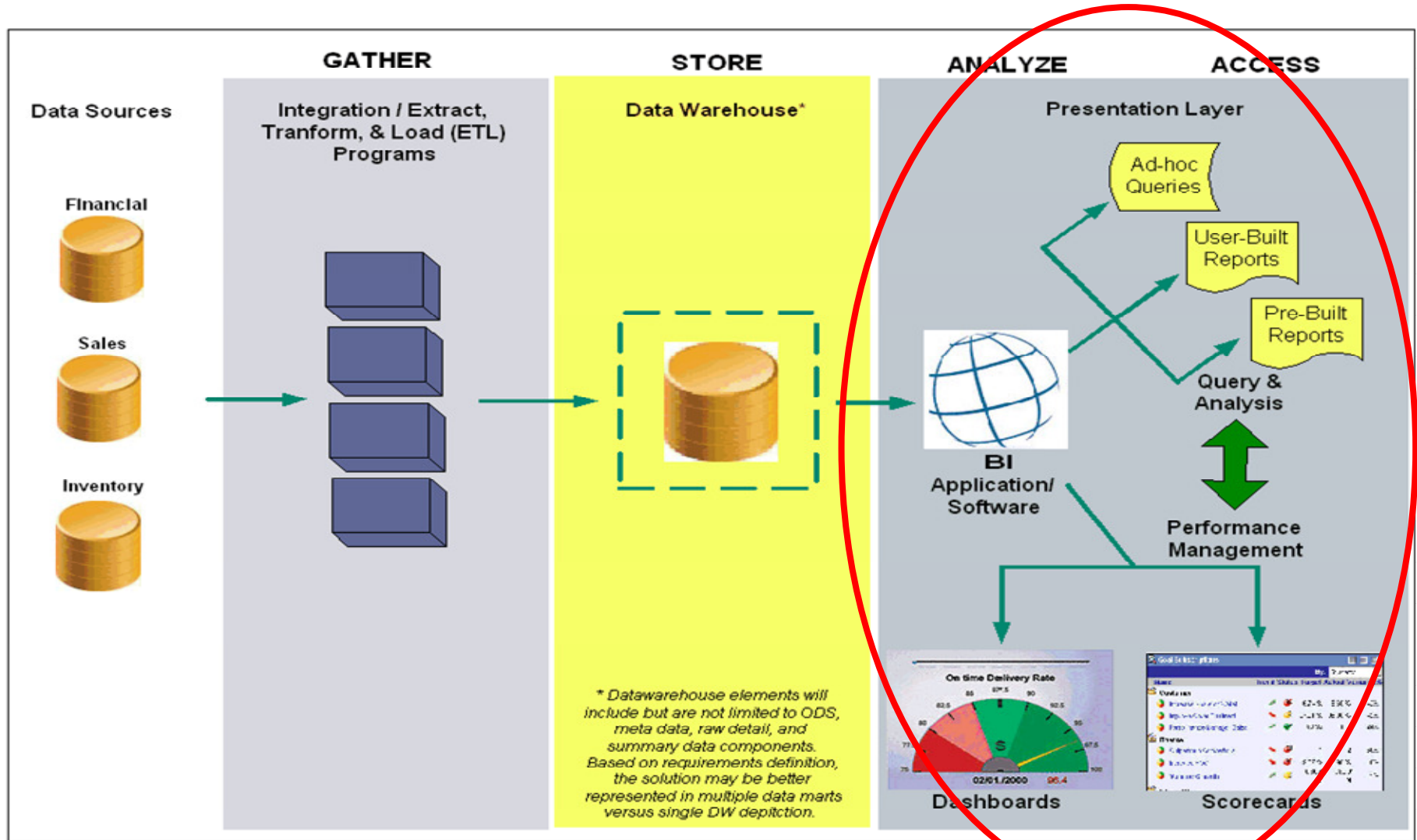
IT's Business Intelligence Definition

- ▶ **Business intelligence (BI) is a broad category of application programs and technologies for gathering, storing, analyzing, and providing access to data to help enterprise users make better business decisions**

IT's Business Intelligence Definition



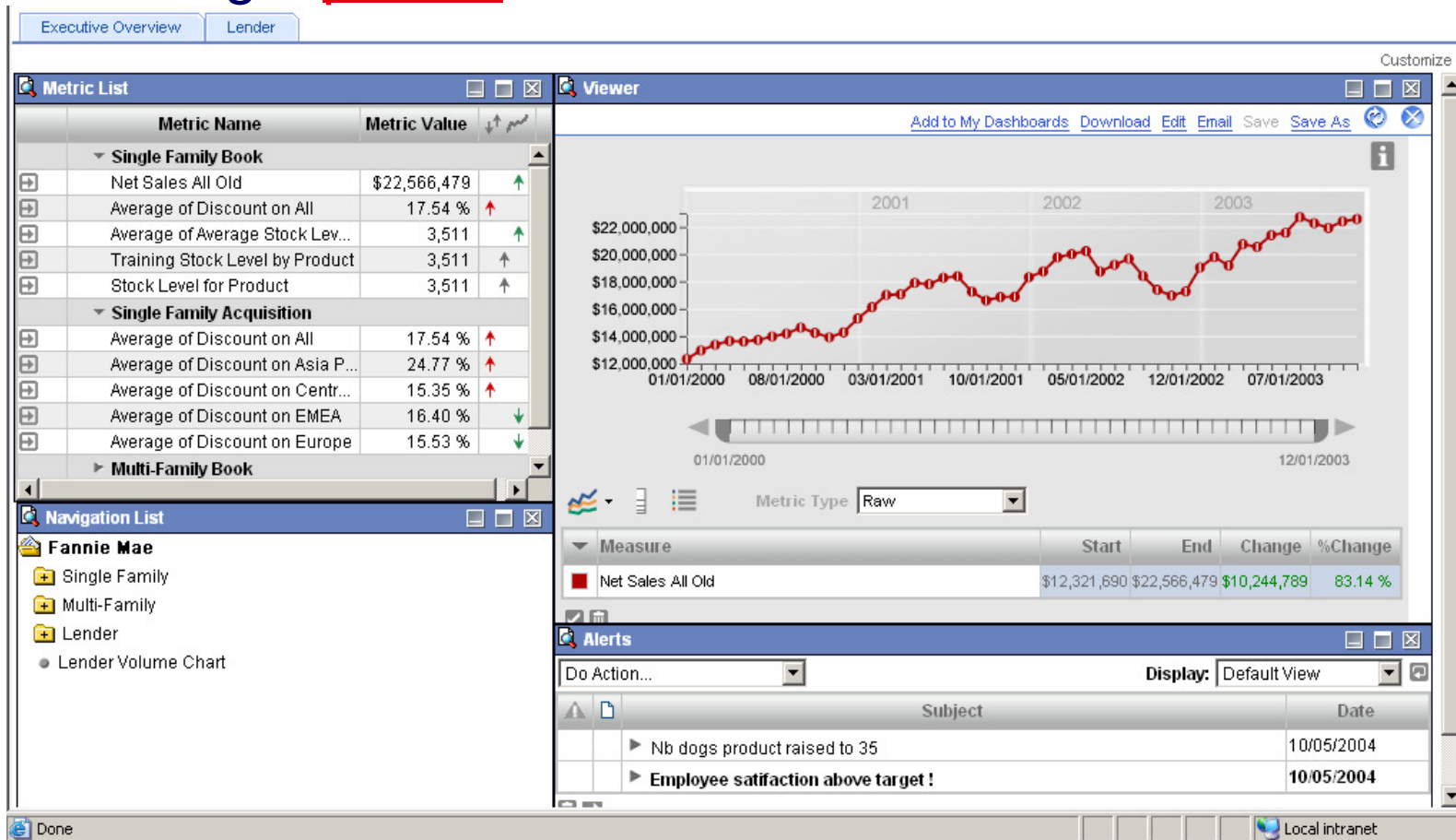
IT's Business Intelligence Definition



End User's Business Intelligence Definition

Business intelligence (BI) provides

- ▶ The right information
- ▶ To the right person
- ▶ In the right format
- ▶ At the right time



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Past BI Applications

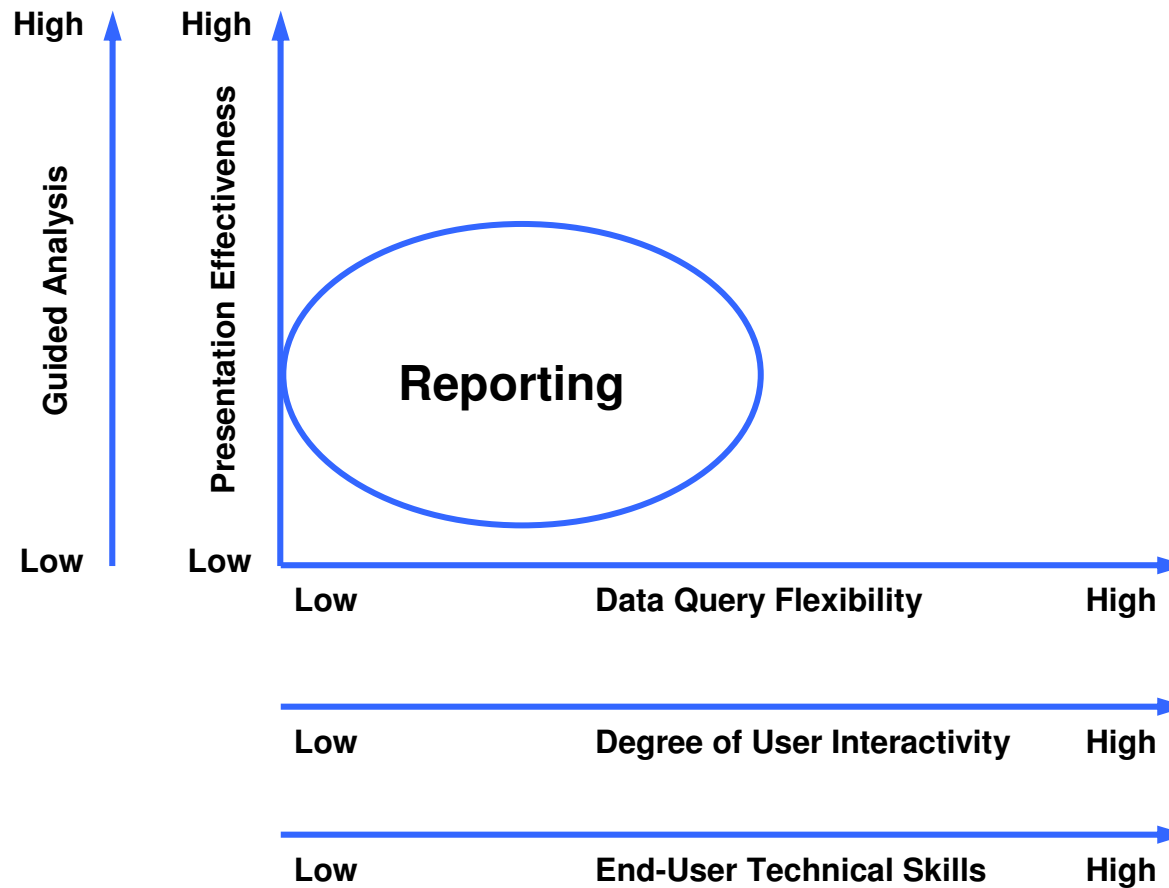
▶ Reporting Applications

- Static query - canned or parameterized
- Static presentation
- Limited presentation formats – tables, graphs, and crosstabs
- Viewed online and hardcopy

▶ Analysis Applications

- Ad hoc query
- Flexible presentation – user interactive
- Limited presentation formats - tables, graphs, and crosstabs
- Viewed online

Past BI Applications

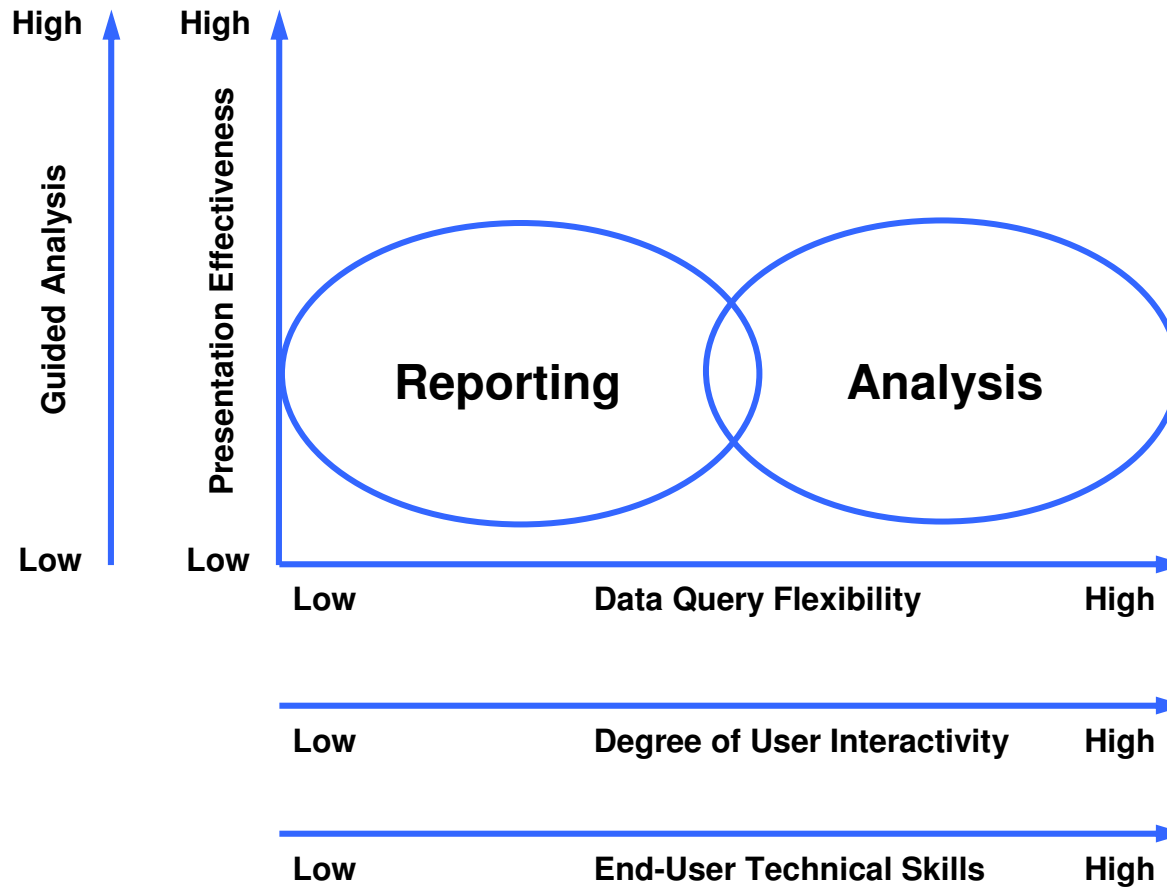


Business Intelligence Layers

▶ Guided Analysis

- Provides end-users with predefined, analytical pathways
- Directs users interactively from one presentation object to more-detailed or related presentation objects for efficient analysis and decision-making
- As users navigate through the analytical pathways, relevant data from the current presentation object is passed to the next related presentation object

Past BI Applications

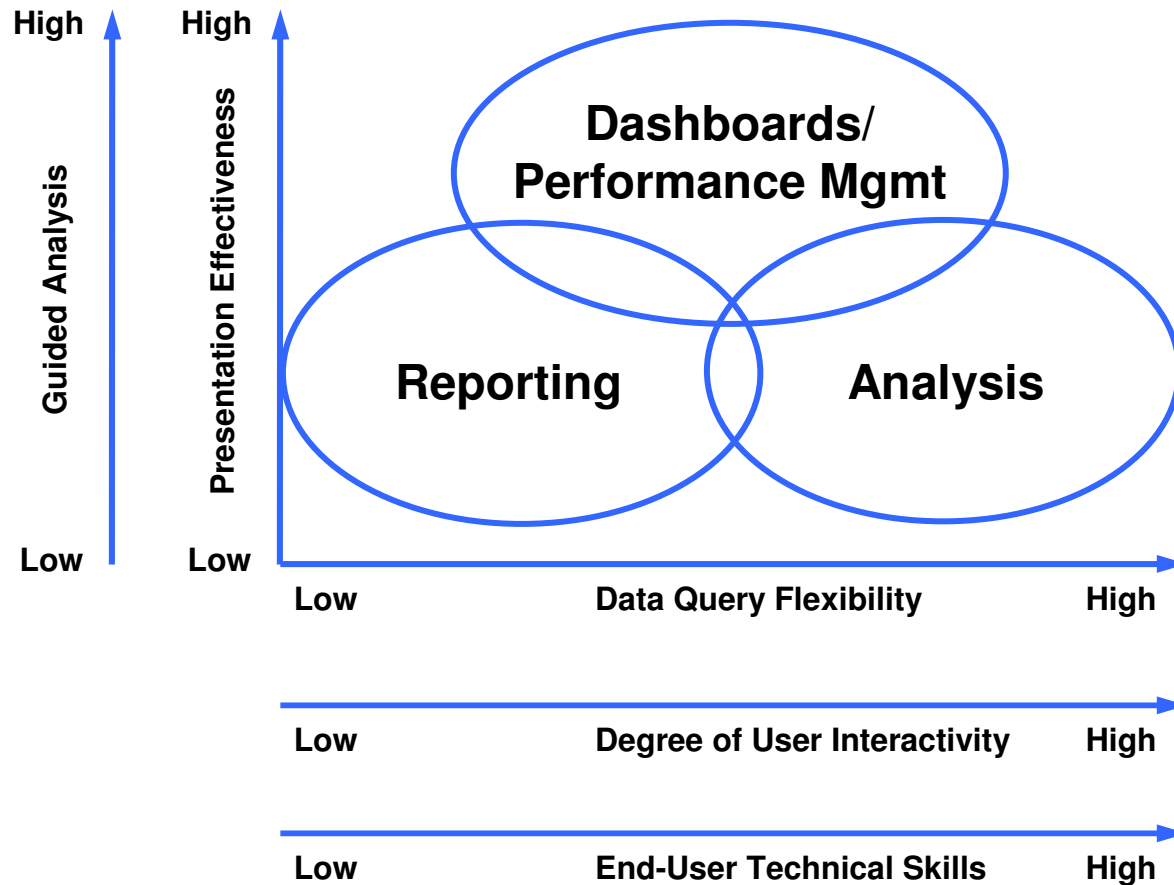


Current BI Applications

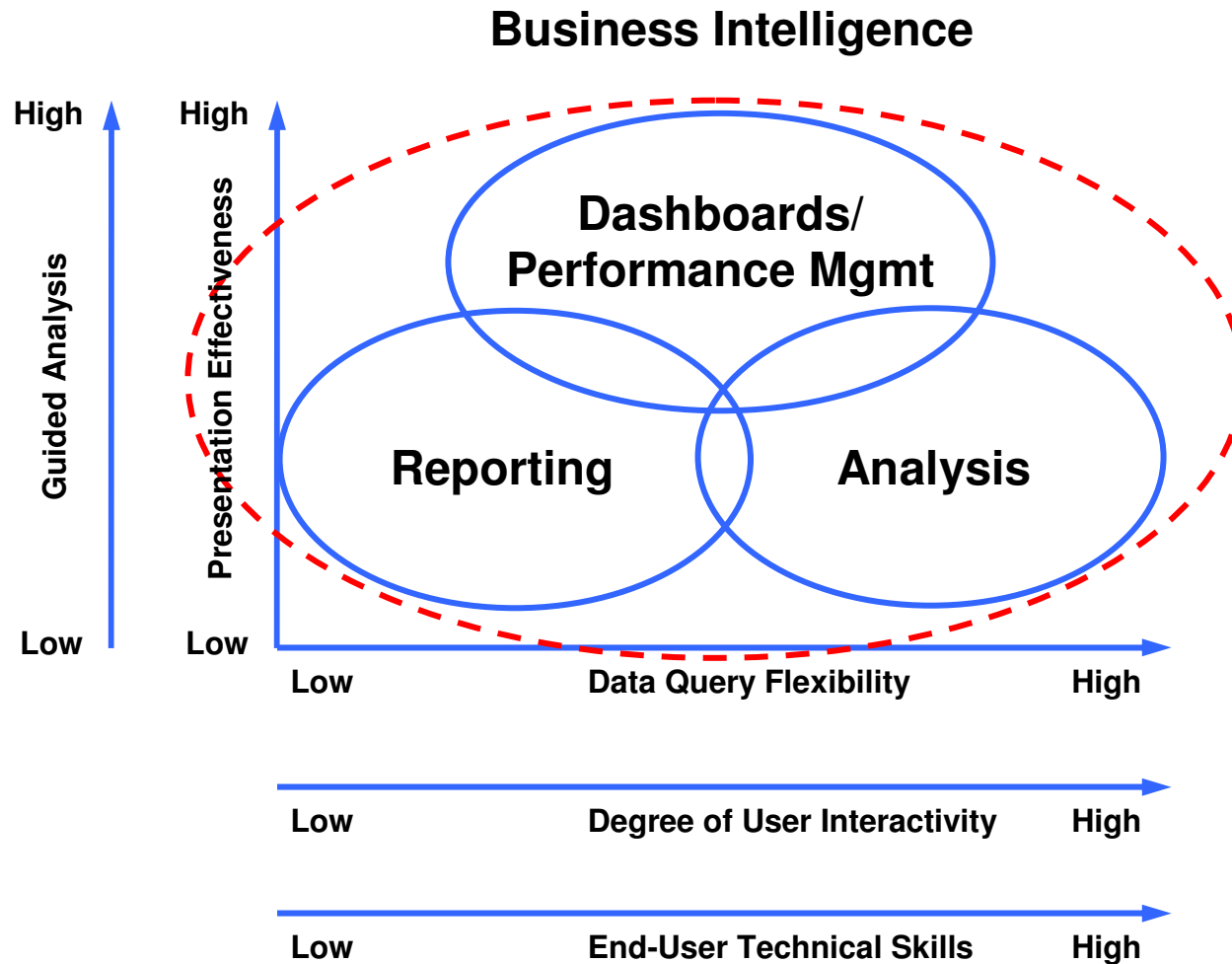
▶ **Dashboards and Performance Management**

- 50+ presentation objects
- Interactive and flexible analysis
- Guided analysis process
- Active and passive information delivery
- User-defined configuration
- Integration with reporting and analysis applications

Current BI Applications



Current BI Applications



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Business Intelligence Layers

Guided Analysis

- Supports predefined analytical pathways for optimal information discovery and decision making
- Supports vertical and horizontal analysis
- Active/passive information delivery

Presentation

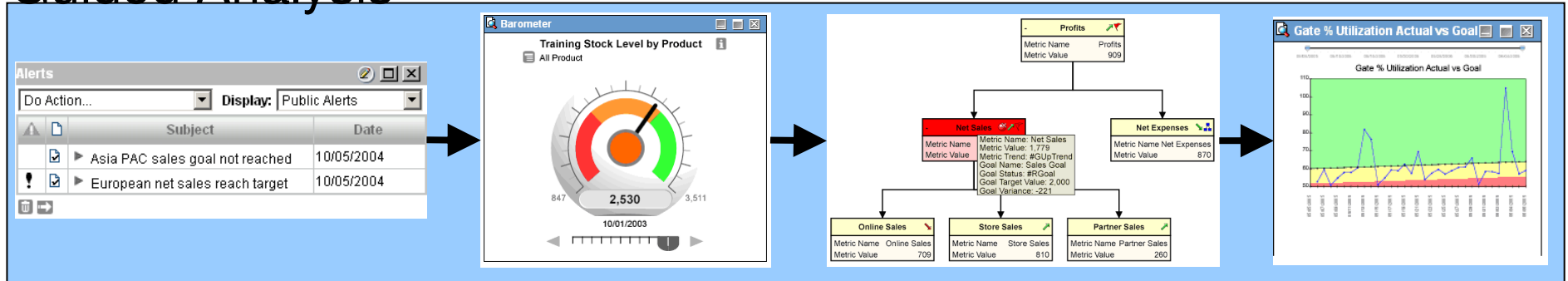
- Data presented to multiple audiences using appropriate presentation objects
- One-to-many relationship between information and presentation objects
- Interactive and flexible analysis

Information

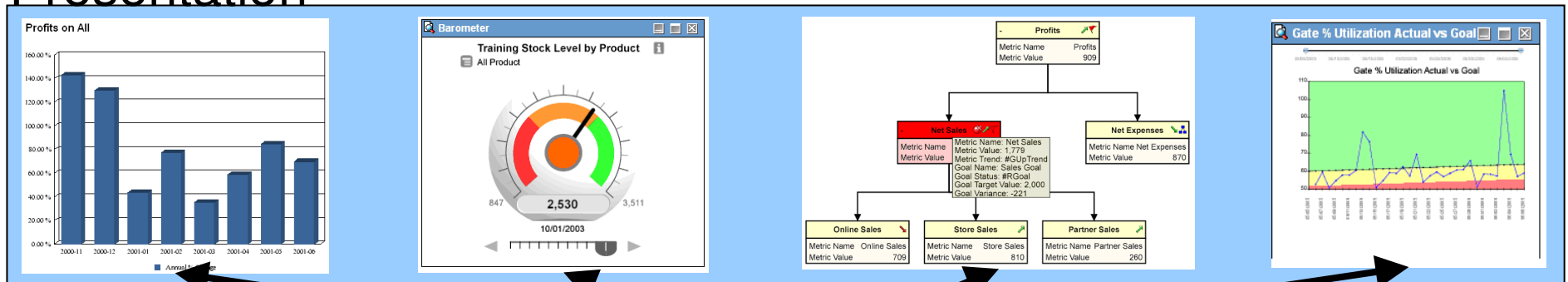
- Right information
- Easy to access
- Fast retrieval
- High quality, consistent results

Business Intelligence Layers

Guided Analysis



Presentation



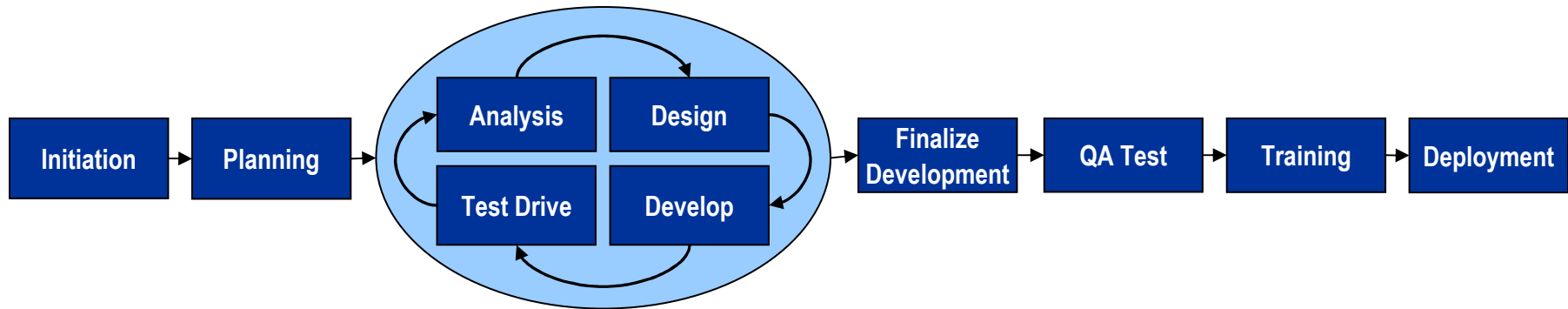
Information

Name	Cost	Profit	Profitability
Laser Printer Cartridges	\$16,858,511	\$8,145,893	48.3%
LCD Monitor, 17"	\$16,212,264	\$6,469,859	39.9%
LCD Monitor, 20"	\$28,031,952	\$5,968,721	21.3%
XGA Projector	\$5,417,868	\$1,412,799	26.1%
4	\$66,520,595	\$21,997,272	33.1%

Topics

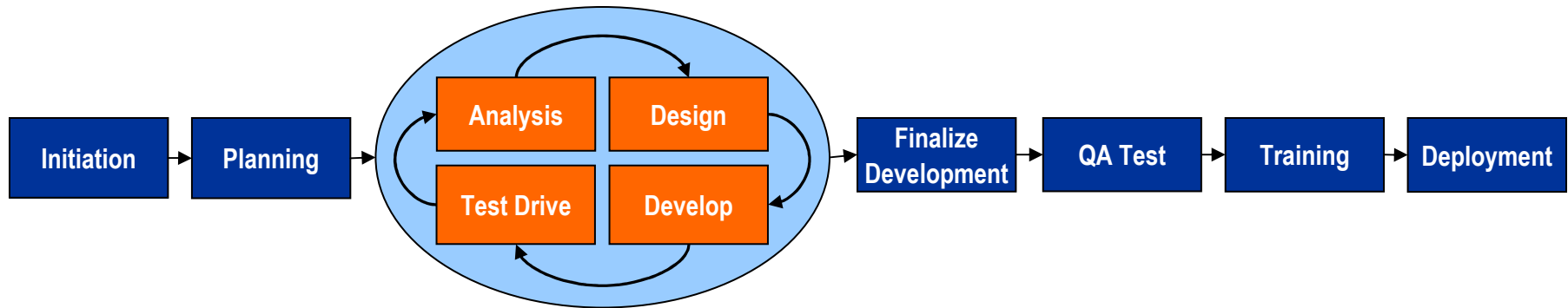
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BI Application Development Methodology



- ▶ **Business users must be involved early and often**
- ▶ **Source system experts must be involved**
- ▶ **Seek first to understand the business**
- ▶ **Projects are defined to be 2 - 4 months in length**
- ▶ **Iterative process is repeated 3 - 4 times**
- ▶ **Each release must seamlessly integrate with previous releases**

BI Application Development Methodology



► Iterative Development Benefits

- Business users provide feedback early and throughout the process.
- Business users see results early.
- Business users begin to understand the enabling capabilities of tool.
- Business users begin to trust the data.
- Business users begin to invent. They begin to think outside the box.
- Business users want more. The organization's BI level matures.

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Design Techniques

Guided Analysis	<ul style="list-style-type: none">• Presentation Object Flow Chart
Presentation	<ul style="list-style-type: none">• Report Rationalization Tool• Presentation Object Selection Tool• Presentation Object Catalog• Presentation Object Design Document
Information	<ul style="list-style-type: none">• Facts-to-Dimensions Matrix

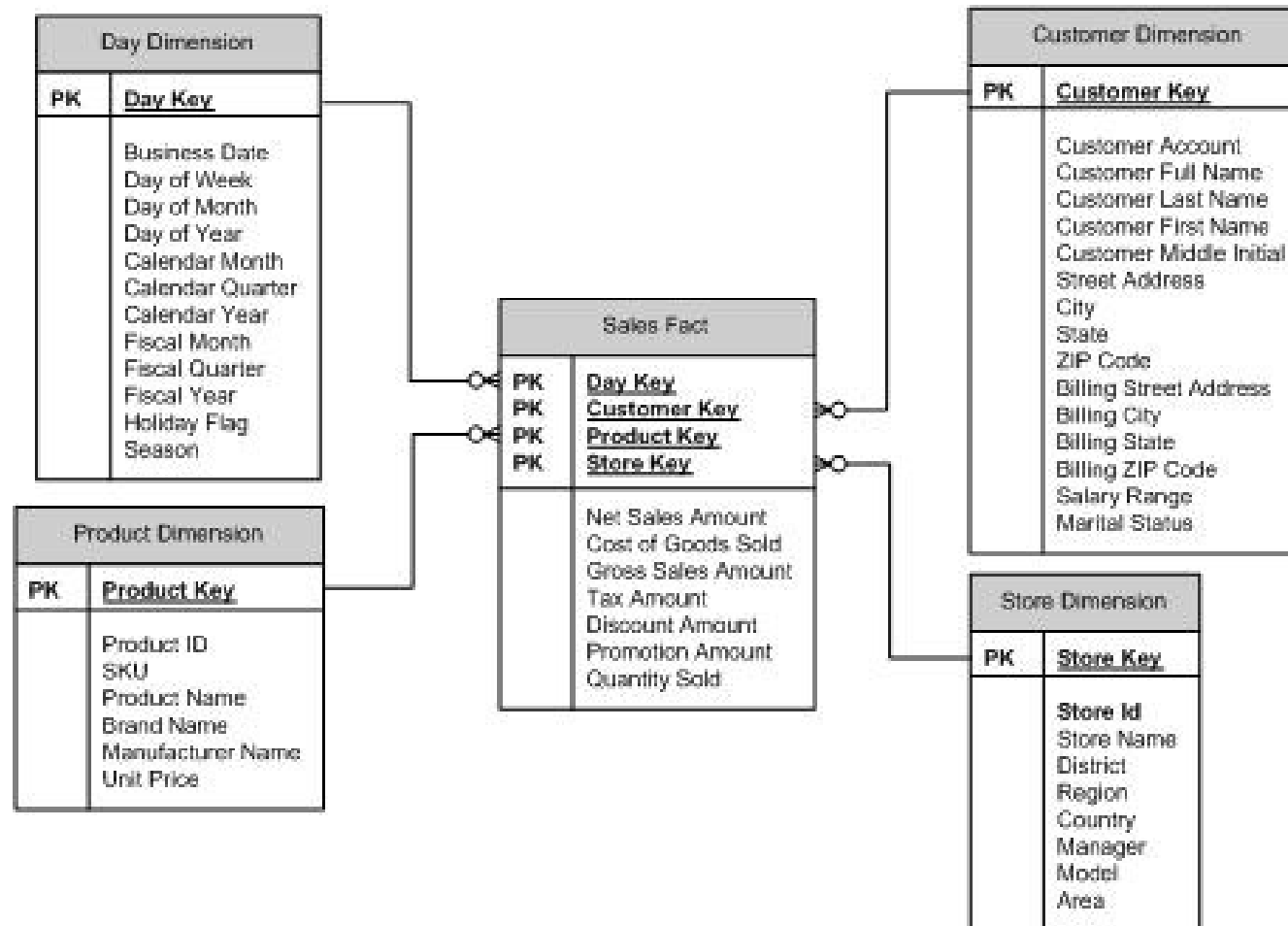
Design Techniques - Information Layer

► Facts-to-Dimensions Matrix

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH			
1		Time												Product								Customer															
2	Measures	date	day of week	day of month	day of year	calendar month	calendar quarter	calendar year	fiscal month	fiscal quarter	fiscal year	holiday flag	season	product id	sku	product name	brand name	manufacturer name	unit price	customer account	customer full name	customer last name	customer first name	customer middle initial	street address	city	state	zip code	billing street address	billing city	billing state	billing zip code	salary range	marital status			
3	net sales amount	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
4	cost of goods sold	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
5	gross sales amount	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
6	tax amount	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
7	discount amount					x	x	x	x	x	x	x	x	x	x	x	x	x	x																		
8	promotion amount					x	x	x	x	x	x	x	x	x	x	x	x	x	x																		
9	quantity sold	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
10																																					
11																																					
12																																					

Design Techniques - Information Layer

► Star Schema Data Model



Design Techniques - Presentation Layer

- ▶ **Report Rationalization Tool**
- ▶ **Presentation Object Selection Tool**
- ▶ **Presentation Object Catalog**
- ▶ **Presentation Object Design Document**

Design Techniques - Presentation Layer

	A	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
1	Phase 1&2 Report Attributes																											
2		2	4	6	7	8	9	10	11	12	15	16	17	21	22	23	24	27	28	29	55	57	67	68	69	70	73	74
4	Dimensions																											
5	Date																											
6	Reporting Month	x	x	x	x								x					x		x	x	x	x		x			
7	Reporting Quarter	x	x	x	x	x		x		x	x	x			x	x	x		x	x	x	x		x	x	x	x	
8	Reporting Year																											
9	Previous Reporting Month				x													x	x	x		x	x		x			
10	Previous Reporting Quarter				x	x					x	x			x		x					x		x	x	x	x	
11	Previous Reporting Year																											
12	Year to Date																											
13	Previous Year to Date																											
14	Geography																											
15	Region Code																					x	x					
16	Region Name	x	x	x								x	x															
17	State	x	x	x																		x	x				x	
18	MSA Code											x	x															
19	MSA Name											x	x									x	x					
20	ZIP Code																											
21	High Risk Drivers																											
22	Book Year	x	x	x				x								x			x		x	x		x			x	
23	Fund Month																											
24	Fund Quarter	x	x	x																								
25	Fund Year																											
26	Credit Enhancement Bucket	x	x	x	x		x				x	x	x		x						x	x	x		x			
27	Primary Recovery Method																											
28	Original LTV Range					x	x	x		x					x							x	x					
29	Current LTV Range					x		x	x																			

Design Techniques - Presentation Layer

	A	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	
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4	Dimensions																												
5	Date																												
6	Reporting Month	x	x	x	x								x					x		x	x	x	x			x			
7	Reporting Quarter	x	x	x	x	x		x		x	x	x			x	x	x		x	x	x	x			x	x	x	x	
8	Reporting Year																												
9	Previous Reporting Month				x													x	x	x		x	x			x			
10	Previous Reporting Quarter				x	x					x	x			x		x					x		x	x	x	x		
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14	Geography																												
15	Region Code																					x	x						
16	Region Name	x	x	x							x	x																	
17	State	x	x	x																		x	x					x	
18	MSA Code										x	x										x	x						
19	MSA Name										x	x										x	x						
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27	Primary Recovery Method																												
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Design Techniques - Presentation Layer

- ▶ **Report Rationalization Tool**
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Q&A

▶ Questions

▶ Contact information

- Name: Jim Hadley
- Email: jhadley@tibersolutions.com
- Phone: 703.593.2833

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