

ISM

IT Solutions Management for Human Services

an affiliate of the American Public Human Services Association



A Data Warehouse Approach for the State of West Virginia

West Virginia Department of
Health & Human Resources



Introduction



Systems background:

- **RAPIDS** (Recipient Automated Payment and Information Data System) - West Virginia's mainframe integrated eligibility determination and benefit calculation system
- **RAFT** (RAPIDS Analysis and Formating Tool) – West Virginia's data warehouse system

Presenter:

- Rod Friend – WV RAPIDS Deputy Project Manager, West Virginia Department of Health and Human Resources

Agenda



- Key Business Drivers for Creating a Data Warehouse
- Our Project Approach
- WV RAFT Sample Report
- WV RAFT Sample OLAP Cube
- WV RAFT Demo of OLAP Cube
- Summary of WV RAFT Data Warehouse Benefits
- Question & Answer Session

Key Business Drivers for Creating a Data Warehouse



RAPIDS Technical Environment: Mainframe, COBOL, DB2, Mobius

Usability

- Dependency on the technical team



Presentation

- Static
- Inflexible



Timeliness

- Batch-processed
- Time-consuming ad-hoc report creation via SQL



Cost

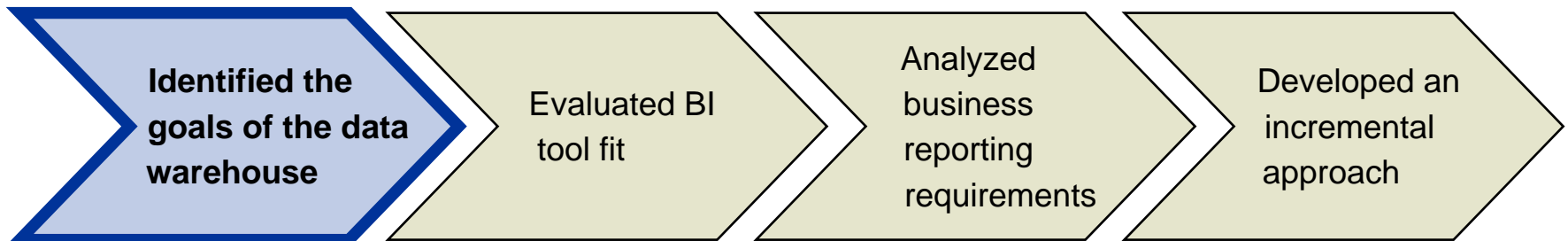
- Time
- Resources
- Transactional

Our Project Approach



Identified the goals of the data warehouse

- **Reduce the burden** on the production transaction processing system's (RAPIDS) **resources** for reporting purposes
- Provide an **environment** that is **optimized** to support querying and reporting activity, and will not need to be tuned to support frequent inserts, updates and deletion of data
- Deliver an **end user interface** which **hides technical complications** that can lead to erroneous reporting results
- **Reduce IT burden** in creating, maintaining, and tweaking the inventory of RAPIDS reports by **providing more functionality** to RAPIDS power users



Our Project Approach



Evaluation of business intelligence tool fit

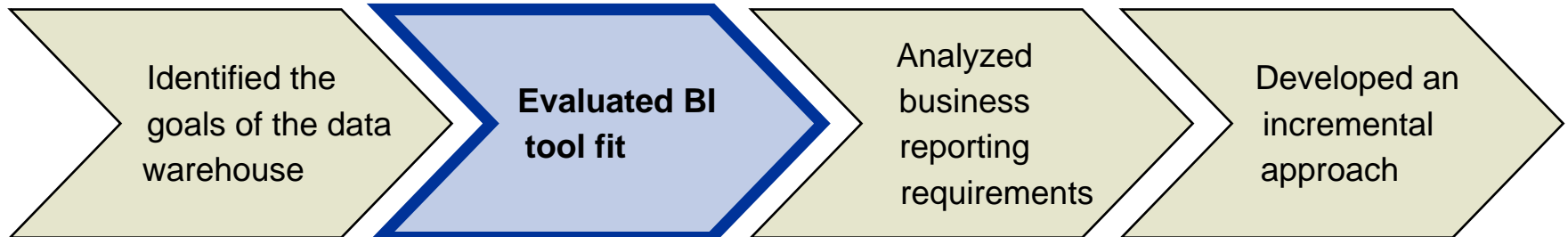


Reporting tool selection:

- Cognos 8 BI
 - ✓ Usability
 - ✓ Presentation
 - ✓ Business analysis capabilities

Database selection:

- Oracle 10g
 - ✓ 24/7 accessibility
 - ✓ Packaged with an ETL (Extract, Transform, & Load) tool: Oracle Warehouse Builder



Our Project Approach



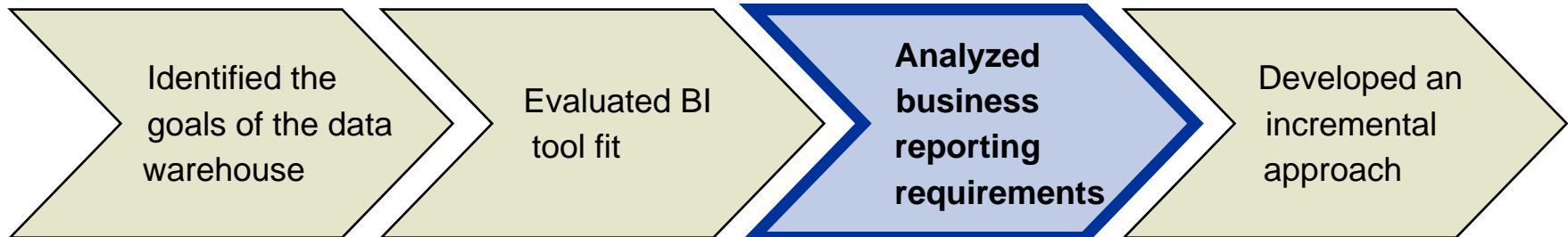
Analyzed business reporting requirements

Release 1

- Operational reporting
- Business analysis capabilities
- Primary data focus:
 - TANF disbursements
 - Supportive service payments
 - Eligibility details for all RAPIDS cases
 - Employment information
 - Individual demographics
 - Eligibility events
- Timeframe: Aug 06 – Dec 06

Release 2

- Business analysis capabilities
- Primary data focus:
 - TANF work participation
 - Food stamps disbursements
 - Resource/asset information
 - Vendor payment information
 - Budget information
- Timeframe: May 07 – Dec 07



Our Project Approach



Analyzed business reporting requirements

“Has the number of child-only TANF cases been on the rise or fall?”

“What supportive service payment areas are of the greatest usage?”

“What is the trend for the length of time cases receive TANF?”

“What is the annual trend of supportive service payment expenditure by region?”

Identified the goals of the data warehouse

Evaluated BI tool fit

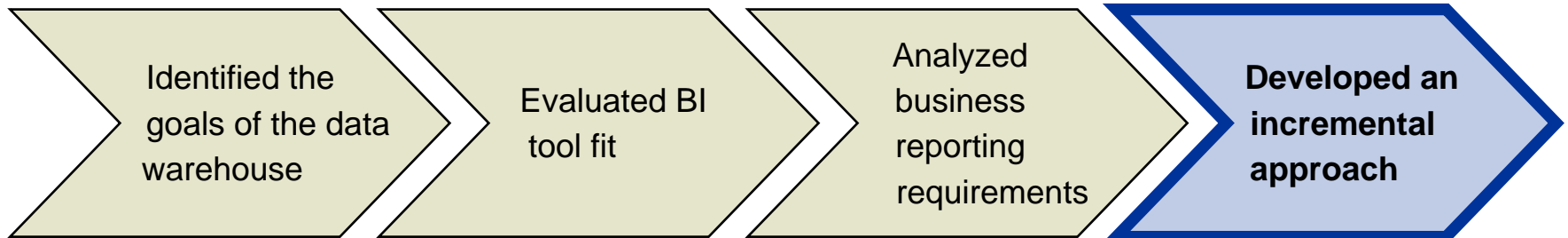
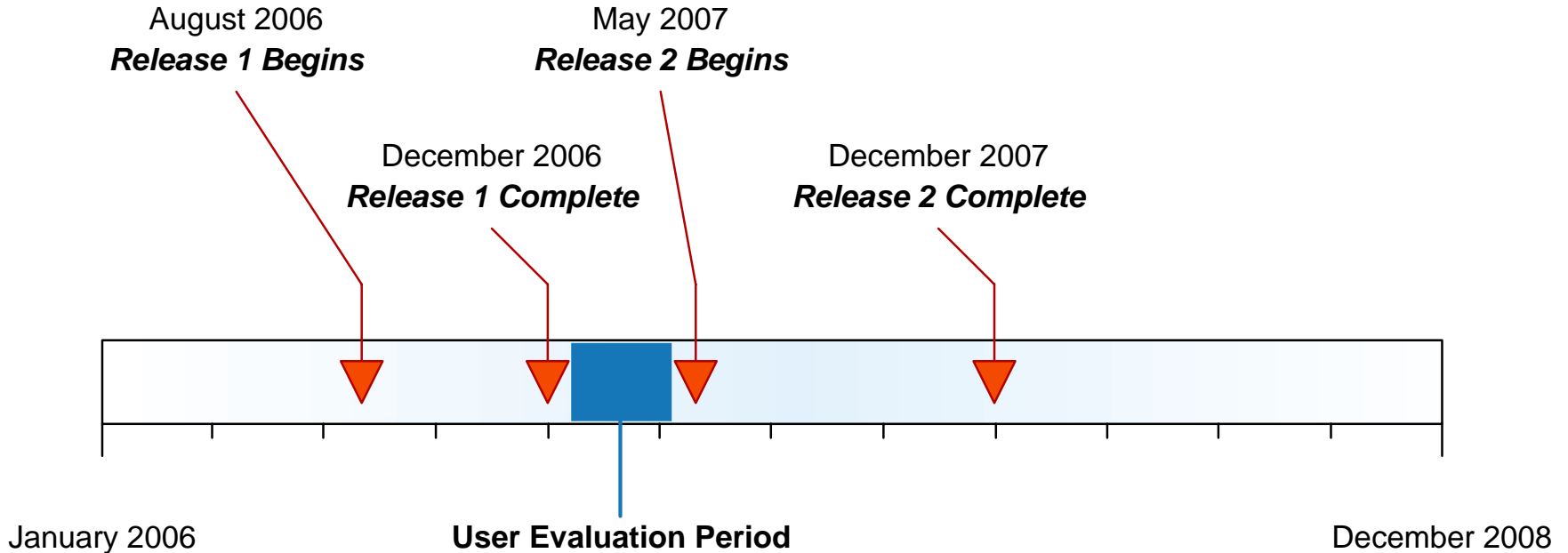
Analyzed business reporting requirements

Developed an incremental approach

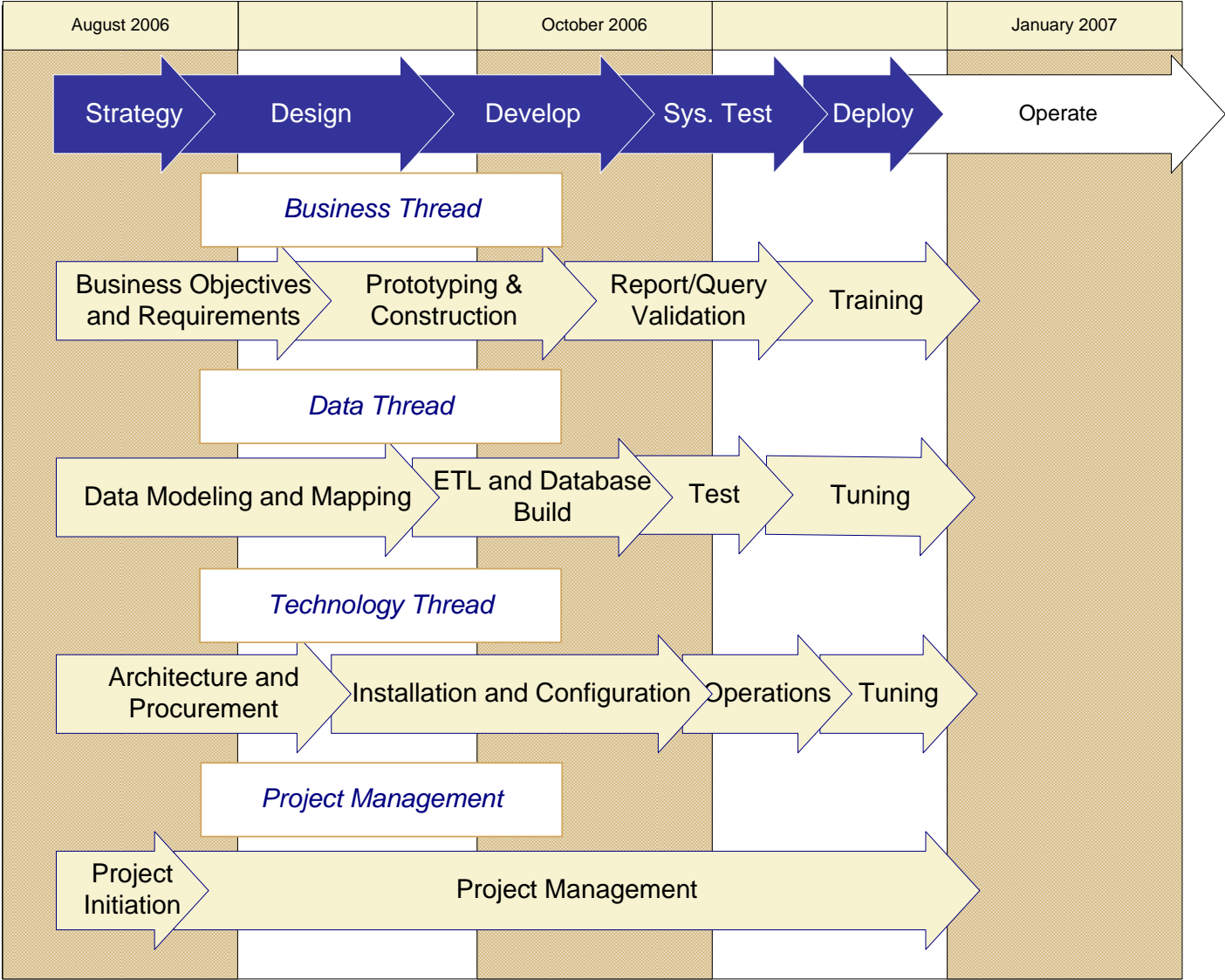
Our Project Approach



Developed an incremental approach



Release 1 Overview



WV RAFT Sample Report



Statewide Support Service Payments Summary

Support Service Payments Summary by Payment Type

Payment Type	Payment Type Description	Number of Individuals	Number of Payments	Average Payment	Total Amount
CL	CLOTHING	267	285	\$156.65	\$44,645.25
CO	COLLATERAL	58	61	\$86.79	\$5,293.96
CR	CAR REPAIR	134	155	\$511.71	\$79,315.43
CT	CONTRACT TRAINING	2	2	\$322.50	\$645.00
DC	DRIVERS LICENSE (CDL)	2	2	\$203.88	\$407.75
DR	DRIVERS LICENSE (REG)	5	5	\$31.40	\$157.00
EI	EIP	14	16	\$243.71	\$3,899.37
GE	PASSING GED EXAM	22	22	\$500.00	\$11,000.00
PL	PROFESSIONAL LICENSE	14	16	\$156.82	\$2,509.08
RE	RELOCATION	13	14	\$1,534.05	\$21,476.74
SS	SELF-SUFFICIENCY BON	47	47	\$500.00	\$23,500.00
TL	TOOLS	20	21	\$312.61	\$6,564.78
TR	TRANSPORTATION	1,651	1,839	\$102.84	\$189,131.54
UI	DUI RELATED EXPENSE	2	2	\$250.00	\$500.00
VI	VEHICLE INSURANCE	115	121	\$248.80	\$30,105.17
Statewide Total		2,366	2,608		\$419,151.07

Support Service Payments Summary by Component Code PL

Work Program Component	Payment Type	Payment Type Description	Number of Individuals	Number of Payments	Average Payment	Total Amount
PL	CL	CLOTHING	68	71	\$157.46	\$11,179.79
PL	CO	COLLATERAL	4	4	\$58.95	\$235.79
PL	CR	CAR REPAIR	41	44	\$514.94	\$22,657.14
PL	DR	DRIVERS LICENSE (REG)	2	2	\$26.50	\$53.00
PL	EI	EIP	1	1	\$229.74	\$229.74
PL	PL	PROFESSIONAL LICENSE	3	3	\$139.71	\$419.13
PL	RE	RELOCATION	3	3	\$1,230.81	\$3,692.42
PL	SS	SELF-SUFFICIENCY BON	47	47	\$500.00	\$23,500.00
PL	TL	TOOLS	5	5	\$253.17	\$1,265.85
PL	TR	TRANSPORTATION	443	490	\$141.16	\$69,166.60
PL	VI	VEHICLE INSURANCE	37	39	\$230.50	\$8,989.50
Statewide Total			654	709		\$141,388.96

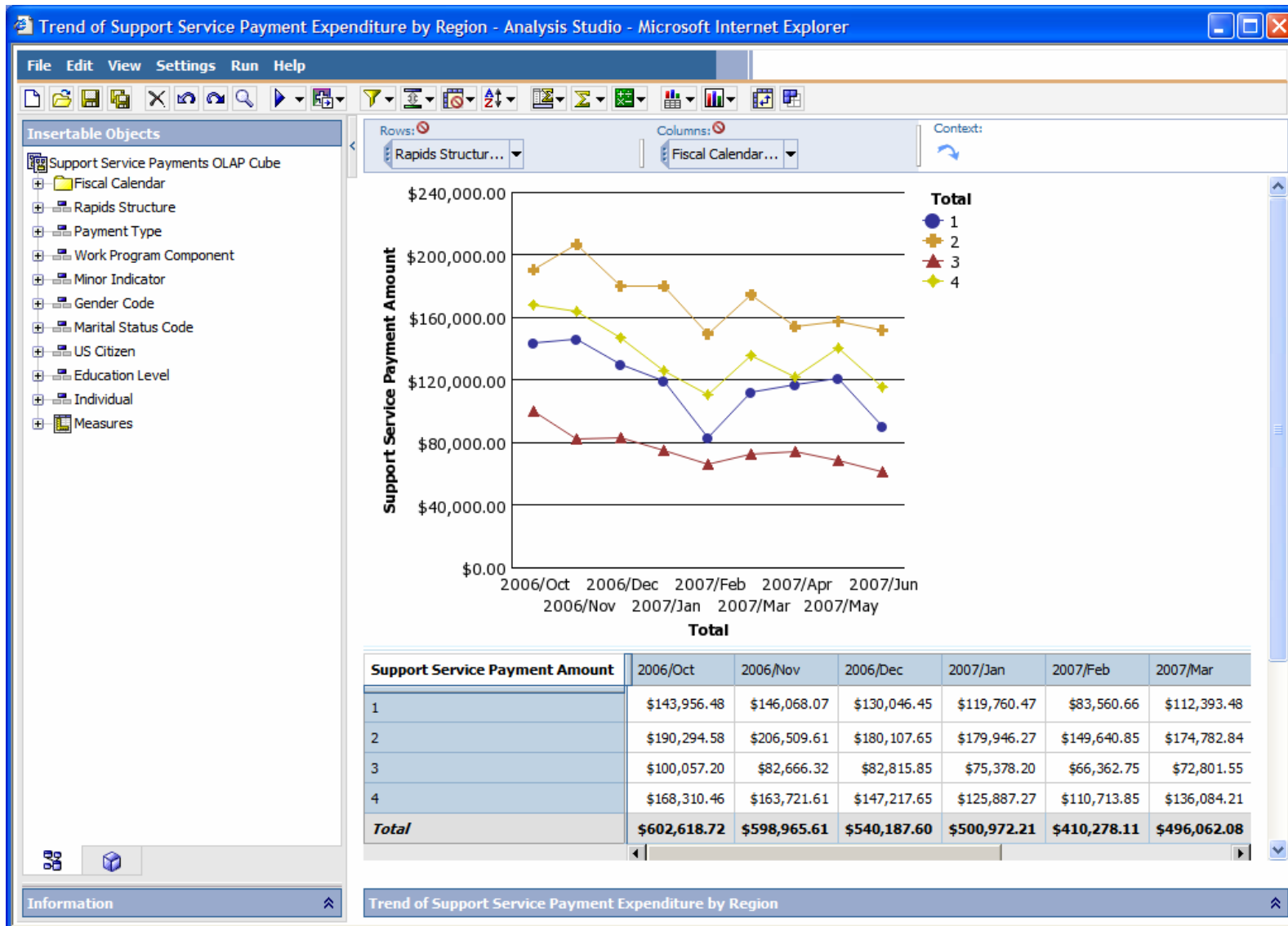
Run Date: Jul 12, 2007 11:06:13 AM
DW Last Load Period: 2007/Jun

Payment Date Range: Between Jun 1 2007 and Jun 30 2007
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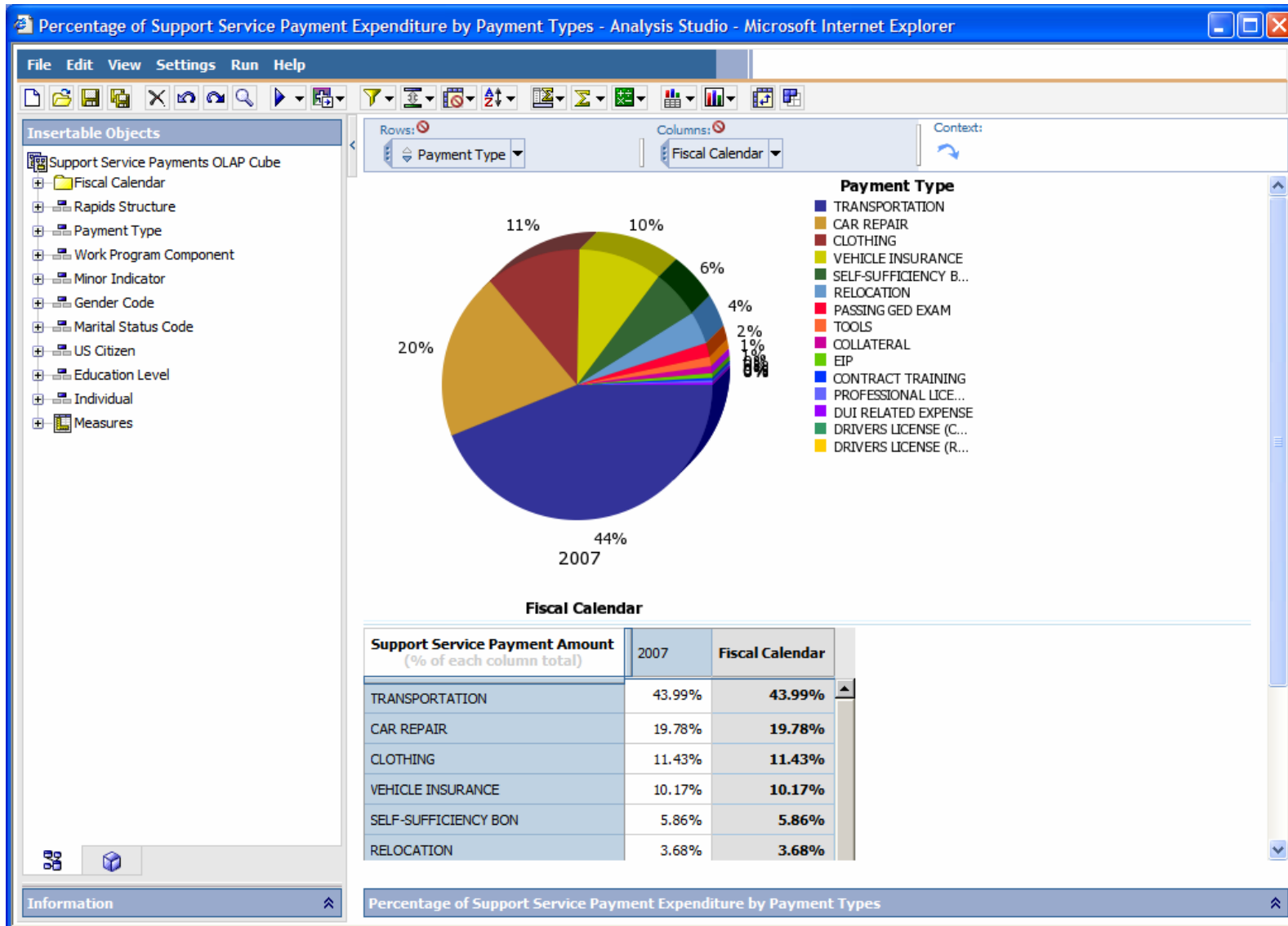
Features and benefits of the data warehouse-based operational report:

- ✓ Presentation
- ✓ Usability
- ✓ Timeliness

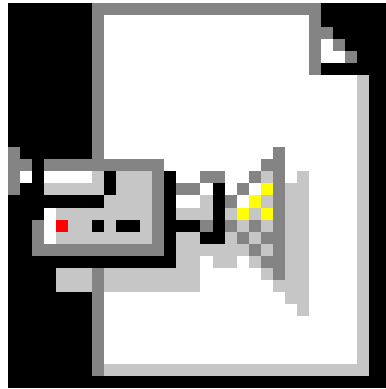
WV RAFT Sample OLAP Cube



WV RAFT Sample OLAP Cube



WV RAFT Demo of OLAP Cube



Video Clip

Summary of WV RAFT Benefits



Data Warehouse Technical Environment: Cognos 8 BI, Oracle 10g

Usability

- Rich graphical user interface
- Point and click, drag and drop, user-friendly environment

Presentation

- PDF, Excel, HTML report formats
- Interactive OLAP cubes

Timeliness

- 24/7 availability
- Scheduled reporting options

Accessibility

- 100% “thin client” – web-based
- Technical team independent

Business Analysis Capabilities

- Simple and intuitive
- Single point of access



Question & Answer Session



Appendix A: Technical Architecture

