



'Off-the-shelf Efficiency: Making Transit Business Intelligence Accessible and Affordable for All'

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Today's Session



- What is business intelligence?
- How do we build business intelligence?
- Benefits of off-the-shelf business intelligence
- Case Study: How Colorado Springs used off-the-shelf business intelligence to:
 - Reduce the time and cost to implement a BI solution
 - Save hundreds of administrator hours providing reports for managers and executives
 - Improve communications with customers regarding service changes
 - Streamline report generation and distribution processes.

Audience – Show your hands



Who runs, receives or use reports ?

Who finds that these reports generate more questions or leave gaps?

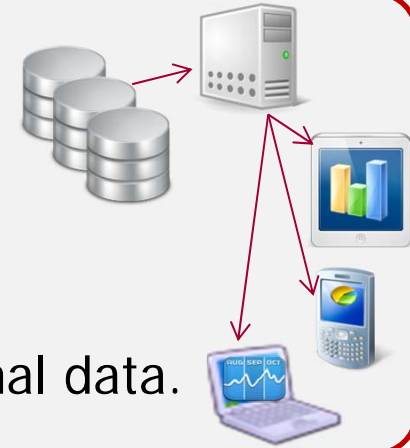
Who publishes information to a board or the public ??

Business Intelligence



What is business intelligence?

- Organizes information
- Delivers new insight to your organization
- Using data to make informed decisions
- Easily access, analyze and distribute operational data.



How do you build a BI solution?

- Design a business intelligence solution in-house
- Work with consultants to design a solution
- Procure an off-the-shelf solution



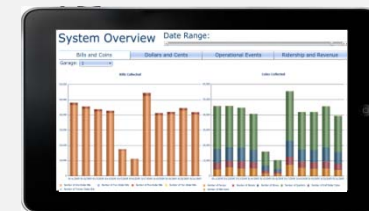
Building Business Intelligence



Step	Typical Business Intelligence	Off-the-shelf
Requirements Gatherings	Determine what you want to report on (Facts) and how you want to look at the numbers (Attributes)	Complete: pre-built to accommodate uniqueness
BI Vendor Procurement	Evaluate different BI vendors on toolkit, services, experience, price, functionality, usability	Complete: BI tool selected
Data Warehouse Design	Determine a schema design that balances reporting requirements, performance requirements and maintenance	Complete: Transit Data warehouse is pre-built
ETL Process Implementation	Determine cleansing requirements	Complete: ETL is pre-built
Report and Dashboard Creation	Determine user requirements Design and create reports	Complete: Reports and Dashboards with industry key performance indicators
Testing and Rework	Validate data	<ul style="list-style-type: none"> ▪ Test Plan Provided

Benefits of off-the-shelf BI

- Faster time to value
- Industry standardized attributes, metrics and reports while accommodating uniqueness
- Provide a single point of access to all KPIs with the ability to scale for additional data
- Built in proactive alerting and scheduled report generation
- Agencies of all sizes can implement business intelligence





Colorado Springs

Colorado Springs



Type of Service:

- Public and Paratransit Transport

Number of Vehicles:

- 48 Fixed Route Vehicles
- 48 Paratransit Vehicles

Number of Fixed Routes

- 18

Number of Paratransit trips per Day

- 600



Business Case



- **Prior to Business Intelligence**

- Collecting a vast amount of data from a multitude of systems
- Using operational data packages standard reports, third party reporting tools, queries and excel to get to the data

- **Goals**

- Consolidating data into a single system
- Leveraging what others have done

- **Concerns**

- Limited staff and resources to launch an enterprise wide BI solution

Direct Benefits



Examples of Return on Investment

Cost to Implement

Completed BI project in 8 months and didn't require internal staff to design and develop solution.

- Used industry standard metrics, attributes and reports to meet some of their reporting needs
- Able to modify standard report and dashboards to meet some of their needs
- Accommodated for their uniqueness using the methods provided in the off-the-shelf business intelligence

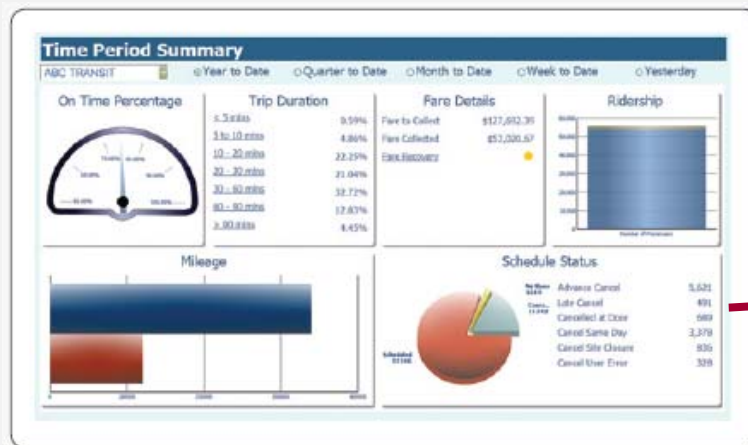
Direct Benefits



Examples of Return on Investment

Report Generation Save Hundreds of hours annually in report generation, allowing for a reallocation of resources.

- Allow resources to analyze data rather than generate reports
- Drill to the details from any dashboard



Schedule Status	Scheduled Date	Metrics							Number of Bookings		
		JAN 01, 2010	JAN 02, 2010	JAN 04, 2010	JAN 05, 2010	JAN 06, 2010	JAN 07, 2010	JAN 08, 2010	JAN 09, 2010	JAN 11, 2010	
Completed Normally		0	138	278	284	274	252	288	106	274	
No-Show		0	0	2	4	6	0	4	0	4	
		0	0	0	0	0	0	0	0	0	
Schedule Status		Metrics		Number of Bookings							
Scheduled Month	2010 JAN	2010 FEB									
Completed Normally	6,374	6,396	2	0	2	0	0	0	0	0	
No-Show	56	72	14	8	36	0	0	0	0	0	
No-Show Missed Trip	12	20	4	0	8	0	0	0	0	0	
Advance Cancel	760	750	0	0	0	0	0	0	0	0	
Late Cancel	32	32									
Cancelled at Door	18	18									
Cancel Same Day	608	744									
Cancel Site Closure	116	0									
Cancel User Error	104	56									
Same Day Add-Aborted	12	8									

Direct Benefits



Examples of Return on Investment

Improved
Transparency

All departments have access to same data. Ability to pull service details for clients allowing for targeted communications such as service changes

- Consolidated environment promotes sharing and transparency
- Allows easy access to the data for generating ad hoc reports for communication and distribution purposes

Direct Benefits



Examples of Return on Investment

Data Analysis Anyone can build their own reports, drill into data and analyze results, freeing IT resources.

- A good BI tool will allow you to build reports without
 - Understanding the database structure
 - Requiring knowledge of a query language tool
- A good BI tool will allow you to drill into the data, graph results and modify reports with a click of the mouse



Direct Benefits



Examples of Return on Investment...

Streamline
Report
Generation and
Distribution

Monthly Reports and Invoices are auto-generated and emailed, meaning that they are always ready and on-time

- In a good BI system, you will be able to set up schedules and thresholds for sending reports to email, printer and file locations for distribution



Off-the-Shelf BI



- **Agencies using off-the-shelf Business Intelligence**
 - Mountain Metropolitan Transit, Colorado Springs, Colorado
 - CATA, Lansing, Michigan
 - DATS, Edmonton, Alberta
- **Agencies implementing off-the-shelf Business Intelligence**
 - Saskatoon Transit, Saskatoon, Saskatchewan
 - COTA, Columbus, Ohio
 - OC Transpo, Ottawa, Ontario
 - VTA, San Jose, California
 - MTA Baltimore, Baltimore, Maryland

Highlights



**Agencies of all sizes
can implement
Business
Intelligence**



**Faster time to
value while
reducing resource
requirements**



**Standardize reports
faster and cost-
effectively**



**Provide a single
point of access to
all KPIs with an
ability to scale for
additional data**

Off-the-Shelf BI



“Before using off-the-shelf business intelligence it took us days to complete our monthly reports. Now, it only takes moments.

The business intelligence packages all the information together in an easy to use application. We love the ability to develop and analyze our own reports and create graphs, export through Excel and e-mail, all through a web browser.

Wendy Patterson, Senior Information Systems Analyst Supervisor, Mountain Metropolitan Transit



Thank You



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