Data Import with Web versus Modeling with Developer

Matt Pepper - UK Presales
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Agenda

• Industry background
• Modeled versus Ad Hoc schema
• Recommended Strategy
• Governed Data Discovery
The Old Model only Offered One Option to Deploy Analytics

IT would typically have to build a centralized semantic layer prior to allowing business users to adopt BI

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**Benefits**

- Delivers Analytics through a Unified Architecture
- Offers Comprehensive Capabilities to Every User
- Supports Scalable Deployments Easily
- Eliminates Redundancies with Reusability
- Integrates with Other Systems Seamlessly
- Offers High Performance to Every User
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Data Discovery

Cloud Computing

Mobile

Technologies Have Disrupted the BI Landscape

Business users today have easy-to-use options and have become more self-sufficient
Roles and Varying Priorities with Data Discovery

Business guy
Needs answers fast

versus

IT guy
Concerned about security and governance

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Roles and Varying Priorities with Data Discovery

Business guy

Demands
• Flexibility
• Speed
• Self-Service
• Data Discovery
• Rapid, iterative
• Evolving Requirements
• Testing

versus

IT guy

Challenges
• Data Management
• Security
• Performance
• Scalability

→ Governance
The Role of Business Users in BI Today has Greatly Evolved

Business Users are getting more involved in producing analytical content.

Types of BI Users

- Consumers
- Analysts
- Developers
- Administrators

The Old BI World

Business Users

Today’s BI World

IT Users

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Challenges with Unmanaged Self-Service

Issues for IT
- Spreadmart of analytical silos with conflicting information
- Adoption of the enterprise BI system is affected

Issues for Business
- Conflicting KPIs
- Redundant data analysis
- Business gets a subject-oriented view of information

Strategic Issues
- Long-term analytical maturity of business is affected
Modeled versus Ad Hoc schema
Comparisons and trade-offs
Everything Begins with Your Data

Stunning Ease of Use

Comprehensive Analytics

Any and All Data

- Data Aggregation
- Trend Analysis
- Benchmark Analysis
- Affinity Analysis
- Projections
- Optimization

- Databases
- MDX Sources
- Personal / Department
- Cloud Data

Structured
Semi-Structured
Unstructured
Modeled Schema Design

- Durable business value
- Leverage complex database concepts
- Access to granular object editors
- Hierarchy definition
- Compound attributes
- Fact extensions
- Datamart optimization
- Table prefix
- Intermediate table governing
- Join behavior definition
Core Experience | MicroStrategy Architect

MicroStrategy Developer

**Modeled Schema Design**

- Data sources list
- Project tables list
- Attribute and fact definition
- Layer creation and maintenance
- Hierarchy definition
Ad Hoc Schema Design
MicroStrategy Web and Desktop

Ad hoc Schema Design

• Quick speed to value
• Data source agnostic
• Attribute and metric auto-detection
• Geo-mapping
• Data wrangling and refinement
• Relationship definition
• Map to project attribute
• Connect live to data
• Leverage in-memory technology
• Distribute via .mstr file
Core Experience | Data Import
MicroStrategy Web and Desktop

Ad hoc Schema Design

- Data Import
- Auto-detect attribute types
- Auto-create metrics
- Auto-identify data relationships
- Preview data
- Add a new table from anywhere
## Comparison | Modeled versus Ad Hoc schemas

<table>
<thead>
<tr>
<th>Modeled Schema</th>
<th>Ad hoc Schema</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Biggest Strength:</strong></td>
<td><strong>Biggest Strength:</strong></td>
</tr>
<tr>
<td>Gives users fine-grain control over database concepts, MicroStrategy objects, and data governance</td>
<td>Blazing fast speed to value for prototyping use cases and validating data and MicroStrategy concepts</td>
</tr>
<tr>
<td><strong>Biggest Weakness:</strong></td>
<td><strong>Biggest Weakness:</strong></td>
</tr>
<tr>
<td>It can take months to map complex enterprise concepts into a modeled schema</td>
<td>By design, ad hoc schemas are disconnected from the single version of truth and security model for enhanced flexibility</td>
</tr>
</tbody>
</table>
Remember: “Only the Sith Deal in Absolutes.”

Here are some ideas to help you choose the best strategy for you…
Recommended Strategy | Prototype, Pilot and Test
MicroStrategy Web and Desktop

Enterprise Data
Trustworthy, Reliable, Governed

Local Data
Personal and Cloud-based Data Sources, Quick and Ad Hoc

MicroStrategy harmonizes agility and governance.
Recommended Strategy | Prototype, Pilot and Test

- Cut table
- Connect via Data Import
- What can be built in VI?
- Draft schema design
- Draft Document design
- User feedback

Recommended Strategy | Prototype, Pilot and Test

Recommended Strategy | Prototype, Pilot and Test

Recommended Strategy | Prototype, Pilot and Test

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Recommended Strategy | Prototype, Pilot and Test
## Data Approaches

<table>
<thead>
<tr>
<th></th>
<th>Modeled Schema</th>
<th>Ad Hoc Schema</th>
<th>Ad Hoc Schema with Enterprise Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The Data</strong></td>
<td>Relational Databases and MDX sources</td>
<td>Data source agnostic (File</td>
<td>Relational</td>
</tr>
<tr>
<td><strong>The Outcome</strong></td>
<td>Globally-applicable set of objects that leverage the unified security model</td>
<td>Cube with localized security model</td>
<td>A cube that hooks into the central object and security models</td>
</tr>
<tr>
<td><strong>The Value</strong></td>
<td>Single version of the truth; configure once and reuse forever</td>
<td>Quick speed to value for ad hoc analyses and rapid prototyping</td>
<td>Quick speed to value AND the ability to access the central object and security models</td>
</tr>
</tbody>
</table>
Implementing Governance Goes Beyond Technology

People

Process

Product
Steps to Governed Self-Service

Configure → Monitor → Identify → Promote
**MicroStrategy Governance Cycle**

In your Data Lake, who is allowed to do what?

<table>
<thead>
<tr>
<th>Access</th>
<th>What is Governed?</th>
</tr>
</thead>
</table>
| Can view/filter published dashboards and reports | • Dashboard  
• Calculations with Data Owners  
• Data source |
| Can create schema sourced cubes for ad hoc analysis and publish for user groups | • Calculations with Data Owners  
• Data source |
| Can create cubes from created tables for ad hoc analysis and publish for user groups | • Data source |
| Can create queries on raw transaction data from multiple sources for personal ad hoc analysis | |
# Role definitions example

<table>
<thead>
<tr>
<th>User / Role</th>
<th>Capabilities</th>
</tr>
</thead>
</table>
| **System / BI Administrators & Security Architect, Web & Mobile** | Create Modelled Schemas  
Create and manage groups/users  
Administration of the system  
Governance & Monitoring  
Create New Dashboards & Reports  
Develop/Change Interactive Dashboards & Reports |
| **Power Users**  
Business/Operations, Web & Mobile | Create Modelled and Ad-hoc Schemas  
Create New Dashboards & Reports  
Develop/Change Interactive Dashboards & Reports  
Custom Analysis  
Ad-hoc query  
Visual Data Discovery  
Schedule Dashboards and Reports for self and other users |
| **Analysts**  
Web & Mobile | Create Ad-hoc Schemas  
Create Reports  
Develop/Change Interactive Reports  
Custom Analysis  
Ad-hoc query  
Visual Data Discovery  
Schedule Dashboards and Reports for self and other users |
| **Consumers**  
Web & Mobile | Change reports from existing reports  
Develop/change Interactive Reports  
Custom Analysis  
Ad-hoc query  
Visual Data Discovery  
Schedule Dashboards and Reports for self and other users |
MicroStrategy Governance Cycle
Configure your environment

Importing data means RAM

• Needed for loading/holding cubes – ensure you review your system
• Consider live connection for “hot” data to join to SOR “cold” data

Derived metrics means CPU

• Complexity of calculations drives calculation time
• Ensure each CPU has a good core speed
• Consider clustering to load balance
MicroStrategy Governance Cycle

Configure your environment

Deploy Appropriate Licenses for Data Import, Visual Insight Features
• Capabilities available with MicroStrategy Web Product

Identify potential ad-hoc users and provide them access to Data Import
• ACL to allow/deny access to Data Import Functionality

Govern Data Import memory of ad-hoc users
• Max size of file imported per user
• Max memory usage per user

Setup the project to suit your unique organizational needs
• Single Server and single project
• Multiple servers multiple projects
MicroStrategy Governance Cycle
Prepare your BI Environment

**Single Project**
- Fewer Resources
- Easier to Setup, Manage, Replicate
- Resource Contention

**SOR**

**Ad hoc**

- Separate Infrastructure
- Additional Tools to Manage Object Transfer
- Increased Flexibility for Users

(SOR Ad hoc)
User Fence: Used to process requests from a list of specified Users or User Groups. User fences can be further limited by specifying applicable projects.

Workload Fence: Used to run subscriptions triggered by event or time-based schedules for specified projects. On-demand event subscriptions such as run immediately, preview, or personal view are not included.
MicroStrategy Governance Cycle
Observe and track ad-hoc usage

Acquire Automated Monitoring Capabilities
• Enterprise Manager is available with MicroStrategy Server Product

Setup Monitoring Infrastructure
• Setup Statistics Database
• Create Enterprise Manager Reports

Track Most Popular Ad-hoc Scenarios
• Cubes with maximum hits
• Reports accessed most frequently
• Most active Ad hoc users
MicroStrategy Governance Cycle
Observe and track ad-hoc usage – Enterprise Manager Sample Dashboard
MicroStrategy Governance Cycle
Observe and track ad-hoc usage – Enterprise Manager Sample Dashboard
MicroStrategy Governance Cycle
Identify Applications Best Suited for Certifications

Prioritize Applications based on Usage
• How beneficial is this Use Case?
• Are the number of consumers significant?
• Overall purpose?
• Is there cross functional impact?

Prioritize Based on Data Source and Content
• Does Data exist in Certified Environment?
• Does Data conform to existing BI structure?
• Create Best Practices for data unavailable in Certified Environment?
MicroStrategy Governance Cycle
Observe and track ad-hoc usage

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Incrementally add Self-Service Data to System of Record
- Data Blending – No Architecting required
- Multi-Source – Architecting required
- Single DWH – Architecting is recommended (cross-functional reporting)

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Recreating dashboards – Data Discovery Visualizations to Pixel Perfect Dashboards
- Added BI functionality, and enterprise reporting capability
- Added functionality (Mobile; Transactions)
- Improve performance
Thank you!
Enjoy the symposium

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