Business Intelligence Maturity Model

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If you don’t know where you are going, any path will get you there.
Cautionary Notes

• The model is generalized
  – *Rates of evolution may vary!*

• Skipping stages is possible but risky
  – *Requires expert assistance, strong executive commitment, sizable funding*

• Regressing stages is also possible
  – *Mergers, acquisitions, reorganizations*
  – *New CEO/CIO*
  – *New regulations*
Maturity Model Adoption Curve – Six Stages

1. Prenatal
2. Infant
3. Child
4. Teenager
5. Adult
6. Sage

“Production Reporting”

“Spreadmarts”

“Data Marts”

“Data Warehouses”

“Enterprise DW”

“Analytic Services”

Business Value
Data Consolidation
Semantic Integration

EDUCATION AND RESEARCH
Adoption Rates

- **Stage of BI/DW deployment** (from TDWI Survey of BI Directors, 2006)
  - “*We’re getting serious about it for the first time.*” (8%)
  - “*We have completed our first iteration and looking to expand.*” (23%)
  - “*We’ve successfully completed two or more iterations.*” (23%)
  - “*We’re doing a major overhaul of the program.*” (31%)
  - “*We have a mature solution that delivers high business value.*” (15%)
The Gulf and Chasm

• Gulf
  – *Executive perceptions of BI*
  – *Proliferation of spreadmarts*
  – *Data quality issues*
• Chasm
  – *Executive perceptions of BI*
  – *Proliferation of spreadmarts, data marts, DWs*
  – *Politics and control*
  – *Architectural inflexibility*
  – *Mental silos*
  – *Unfitted BI tools*
BI Adolescence - Symptoms

• Your BI team moves perpetually from one crisis to the next
• You have to plead with executives to keep your budget
• Usage of the BI/DW peaked soon after the initial deployment
• The number of spreadmarts continues to grow
• Data quality is still an issue
• Users keep asking IT to develop custom reports
• Executives believe BI is operational reports or power tools
• Query performance degrades as more users use the system
• Users don’t know what’s in the data warehouse
• Users forget how to use the BI tools
• It takes too long to deliver new subject areas
### Local vs Enterprise Value

#### Prenatal
- **Scope**: System
- **Funding**: CFO
- **Team**: IT
- **Governance**: CFO
- **Flexibility/Standards**: Production Reporting
- **Architecture**: Local control

#### Infant
- **Scope**: Individual
- **Funding**: H.R. Analyst
- **Team**: CFO
- **Governance**: CEO
- **Flexibility/Standards**: Enterprise Standards
- **Architecture**: "Think Local, Resist Global"

#### Child
- **Scope**: Department
- **Funding**: Dept. Budget
- **Team**: IT Analyst
- **Governance**: BI Project Mgr
- **Flexibility/Standards**: Data Marts
- **Architecture**: "Negotiate & Consolidate"

#### Teenager
- **Scope**: Division
- **Funding**: Div. Budget
- **Team**: Dept. IT
- **Governance**: BI Program Mgr
- **Flexibility/Standards**: Data Warehouses
- **Architecture**: "Plan Global Act Local"

#### Adult
- **Scope**: Enterprise
- **Funding**: IT/Bus.
- **Team**: Info Mgt (IM)
- **Governance**: Governance Team
- **Flexibility/Standards**: Self-funding
- **Architecture**: BI Business Unit

#### Sage
- **Scope**: Inter-Enterprise
- **Funding**: Self-funding
- **Team**: BI Business Unit
- **Governance**: BI Unit Execs
- **Flexibility/Standards**: Analytical Services
- **Architecture**: E.D. W and R.E.
# Strategic Value and ROI

## Type of System

<table>
<thead>
<tr>
<th>Prenatal</th>
<th>Infant</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Financial System</td>
<td>Executive System</td>
<td>Analytical System</td>
<td>Monitoring System</td>
<td>Strategic System</td>
<td>Business Service</td>
</tr>
<tr>
<td>Reports</td>
<td>Spreadsheets</td>
<td>OLAP</td>
<td>Dashboards</td>
<td>Cascading Scorecards</td>
<td>Embedded</td>
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</table>

## Analytical Tools

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<td>“Empower Workers”</td>
<td>“Inform Executives”</td>
<td>“Cost Center”</td>
<td>“Drive the Market”</td>
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## Executive Perception

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## Value

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<tr>
<td>Production Reporting</td>
<td>Spreadmart</td>
<td>Data Marts</td>
<td>Data Warehouses</td>
<td>Enterprise DW</td>
<td>Analytical Services</td>
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## Architecture

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## ROI

Cost: Value
Analytic Usage

User

Focus

Application

Prenatal

Infant

Child

Teenager

Adult

Sage

All

Analyst

Kn. Worker

Manager

Executive

Customer

Results

Plans

Tasks

Processes

Strategy

Services

Monthly Report

Briefing Books

Interactive Reports

Dashboards

Cascading Scorecards

Embedded Analytics

“IT Backlog”

“Self Service”

“Customized Delivery”

“The BI Utility”

Casual Users

Power Users

Production Reporting

Spreadmarts

Data Marts

Data Warehouses

Enterprise DW

Analytical Services

Architecture

EDUCATION AND RESEARCH
### Analytic Output

<table>
<thead>
<tr>
<th>BI Focus</th>
<th>BI Output</th>
<th>Tools</th>
<th>Prenatal</th>
<th>Infant</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>What happened?</td>
<td>What will happen?</td>
<td>Why did it happen?</td>
<td>What is happening?</td>
<td>What should we do?</td>
<td>What can we offer?</td>
</tr>
<tr>
<td></td>
<td>Information</td>
<td>Plans</td>
<td>Reports</td>
<td>Spreadsheets</td>
<td>Rules</td>
<td>OLAP</td>
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<td>Dashboards</td>
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<td>Decision Latency</td>
<td>Awareness</td>
<td>Understanding</td>
<td>Data Freshness</td>
<td>Insights</td>
<td>Action</td>
<td></td>
<td></td>
<td></td>
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**Decision Automation**

**Actionable Information**

**Data Freshness**

**Awareness**

**Understanding**

**Insights**

**Action**
Change Management/Administration

- Mapped to Software Engineering Institute’s Capability Maturity Model

- **CMM Level 1** ~ Infant stage - “Ad hoc” processes
  - *Process is unpredictable; Varies by individual and team*

- **CMM Level 2** ~ Child stage – “Project methodology”
  - *Projects establish best practice policies and procedures (i.e. documented, enforced, trained, and measured); Prevents unauthorized changes to schedules and requirements.*

- **CMM Level 3** ~ Teenager stage – “Development methodology”
  - *Organization establishes standard policies and procedures (not just best practices); Administrators are trained.*

- **CMM Level 4** ~ Adult stage – “Measure/monitor performance”
  - *Establishes performance metrics and acceptable thresholds; Risks are known & proactively managed; Output is predictable.*

- **CMM Level 5** ~ Sage Stage – “Continuous improvement”
  - *Organization focuses on continuous process improvement and reducing defects through evaluation and sharing best practices*
Next Steps

• How do you get from one stage to the next??
Contact Information

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Data Warehouse Maturity Assessment

Maximum Leverage of Your EDW Investment

Lance Miller
Director Services Marketing
Teradata / TDWI Seminar
1 Mar 06

You’ve never seen your business like this before.
Teradata is Positioned in Global Enterprise

Top Ten Ranking in Fortune 500

- **80% of Top Global Telco Firms**
- **60% of Top Global Airlines**
- **50% of Top Global Retailers**
- **60% of Top Most Admired Global Companies**
- **50% of the Top Transportation Logistic Firms**

- Division of NCR (Fortune 500)
- Leaders in various industries
- World class customer list
- Global presence

**History**

Teradata products & services – the definitive leader since 1979 in providing insights, experience, capabilities, and personnel wholly focused on data warehouse technology to solve business & IT problems
Our Customers Are Recognized Leaders

**BI Excellence Award**  
Sponsor: Gartner Group  
Continental Airlines

**Computerworld’s Best Practices Award in Business Intelligence**  
Hospital Corporation of America, Inc. - Creating a BI Vision and Strategies for Improved ROI

**1to1 Impact Award**  
Sponsor: Peppers & Rogers  
Continental Airlines - Technology Optimization

**TDWI Best Practices Award**  
Sunrise – Customer Relationship Management

**Innovation Prize**  
Sponsor: 01 Informatique Champion (groupe Carrefour)

**2005 World Class Solution Award in the Business Intelligence**  
Sponsor: DM Review  
Verizon Wireless – Business Intelligence

**CRM Magazine’s 2005 Market Leaders Awards**  
Fubon Financial Holding - CRM Elite, Analytics  
Teradata - CRM Market Leader, CRM Analytics

**Editors’ Choice Awards**  
Sponsor: Intelligent Enterprise  
Teradata - “Dozen” Most Influential BI Companies  
Teradata - Customer Analytics category

**Technology Leadership Award**  
Sponsor: Frost & Sullivan  
Teradata selected for Leadership Award – CRM Analytics
Teradata Consulting & Support Services

Teradata Expertise

- Enterprise Data Management
  - Enterprise Architecture
  - Data Integration
  - Logical Data Models
  - Industry Expertise
  - Business Analytics

- Operational Excellence
  - System Performance
  - Mission-critical Availability
  - Business Continuity
  - Upgrades and Migrations

- Superior Consulting Capabilities
  - Industry-leading expertise & skills
  - Partners with IT & Business
  - Best practices and deliverables
  - Accelerate DW planning & implementation
  - Scalable services

Teradata Professionals

- 4400 Teradata associates
- 8200+ external experts

Teradata University Program

SIs & VARs Partnerships
Evolving to the Enterprise Data Warehouse

EDW Maturity Model

- Comprehensive model for assessing processes within organization
- Applicable to multiple disciplines
- Maturity Models are highly effective evaluative techniques
- Valuable tool for organization to improve their management processes and technical development
- Leverages a patent-pending, proven Maturity Model framework to improve management processes and technical development

“Teradata provides a scalable service which offers a technology-neutral methodology that promotes team contribution from our business units.”

“The Maturity Assessment findings provided the strategic roadmap for senior management – now considered the document of record for the company’s data warehousing.”
Maturity Assessment Leverages Your DW

- **Align** Your EDW and BI practices to support business objectives and strategic initiatives
- **Compare** EDW and BI Management and Technical capabilities against best practices in the industry
- **Benchmark** your practices and processes against other companies in multiple dimensions of performance
- **Identify** areas that are opportunities for alignment
- **Prioritize** improvements to Governance, Information Management and technical practices
- **Recommend & Act** upon prioritized list
- **Quantify** value over time
- **Eliminate** barriers to achieve maximum return on your investment
- **Grow** your business & decision making capabilities

The overall purpose of maturity models is to establish a process improvement roadmap so a route can be drawn from “where we are today” to “where we want to be.”
# Data Warehouse Maturity Phases

## Business Stage

<table>
<thead>
<tr>
<th>Operate</th>
<th>Understand</th>
<th>Change</th>
<th>Grow</th>
<th>Compete</th>
<th>Lead</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business startup; defining and developing products and services</strong></td>
<td><strong>Internal operations; scorecards are product and business unit focused</strong></td>
<td><strong>Customer focused; scorecards are cross-functional or enterprise wide</strong></td>
<td><strong>Market segmentation across products and business units; target markets drive strategies</strong></td>
<td><strong>Performance measured against competitors and customer profitability</strong></td>
<td><strong>Management innovation drives industry standards, practices and productivity</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level-0</th>
<th>Level-1</th>
<th>Level-2</th>
<th>Level-3</th>
<th>Level-4</th>
<th>Level-5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Is it happening?</strong></td>
<td><strong>What happened?</strong></td>
<td><strong>Why did it happen?</strong></td>
<td><strong>What will happen?</strong></td>
<td><strong>What is happening?</strong></td>
<td><strong>Make it happen!</strong></td>
</tr>
</tbody>
</table>

**DW/BI Maturity**

[Teradata logo]
Dimensions of Data Warehouse Maturity

These dimensions can SUPPORT or PREVENT the evolution of the EDW
Business Alignment Approach

Business Requirements

- BI Workload Profile
- User Access
- Decision Support
- Data Quality
- Data Currency
- Metadata
- Architectural Governance
- Business Governance
- Data Protection
- Communications and Training

DWM Scorecard

Depth (29 Categories)

0 1 2 3 4 5

DW Is Not Aligned With Business Goals

DW Is Somewhat Aligned With Business Goals

DW Meets Business Goals

Teradata
Summary

- Teradata, Global Leader in DW & BI
- Award-winning Customers
- Professional Services for DW
- DW/BI Maturity Framework
- Dimensions of DW/BI Maturity
- Alignment & Scorecards
- Thank-you

Questions