

# **OLDM**

## ***BUSINESS BEYOND THE DATA WAREHOUSE***

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***PLEASE FILL OUT YOUR  
EVALUATIONS...***

***Thank you!***

# OVERVIEW

- **Today's Business Management**
- **The Role of the Data Warehouse Today**
- **Market Pressures and the 21st Century**
- **A New Role for Management**
- **OLDM: IT Beyond the Data Warehouse**
- **What Is OLDM?**
- **A Simple OLDM Example**
- **Rule-Based Management**
- **The OLDM Decision Process**
- **The Potential of OLDM**

# TODAY'S BUSINESS MANAGEMENT

- **Enterprise Objectives Are Seldom Actionable**
  - CORPORATE CHARTERS, EXECUTIVE POLICIES
- **Enterprise Progress Isn't Quantifiable**
  - DISTINCT FROM PROFITABILITY AND OTHER MEASURES
- **Management Processes Are Fragmented**
  - STRATEGIC OBJECTIVES AREN'T OBVIOUSLY CONNECTED TO TACTICAL OBJECTIVES AND ACTIONS?
- **Knowledge Assets Are Intangible**
  - INCOMPLETE ASSET VALUATION
  - GROW STALE, LOST WHEN PEOPLE LEAVE
  - NOT MAINTAINED IN A USABLE FORMAT

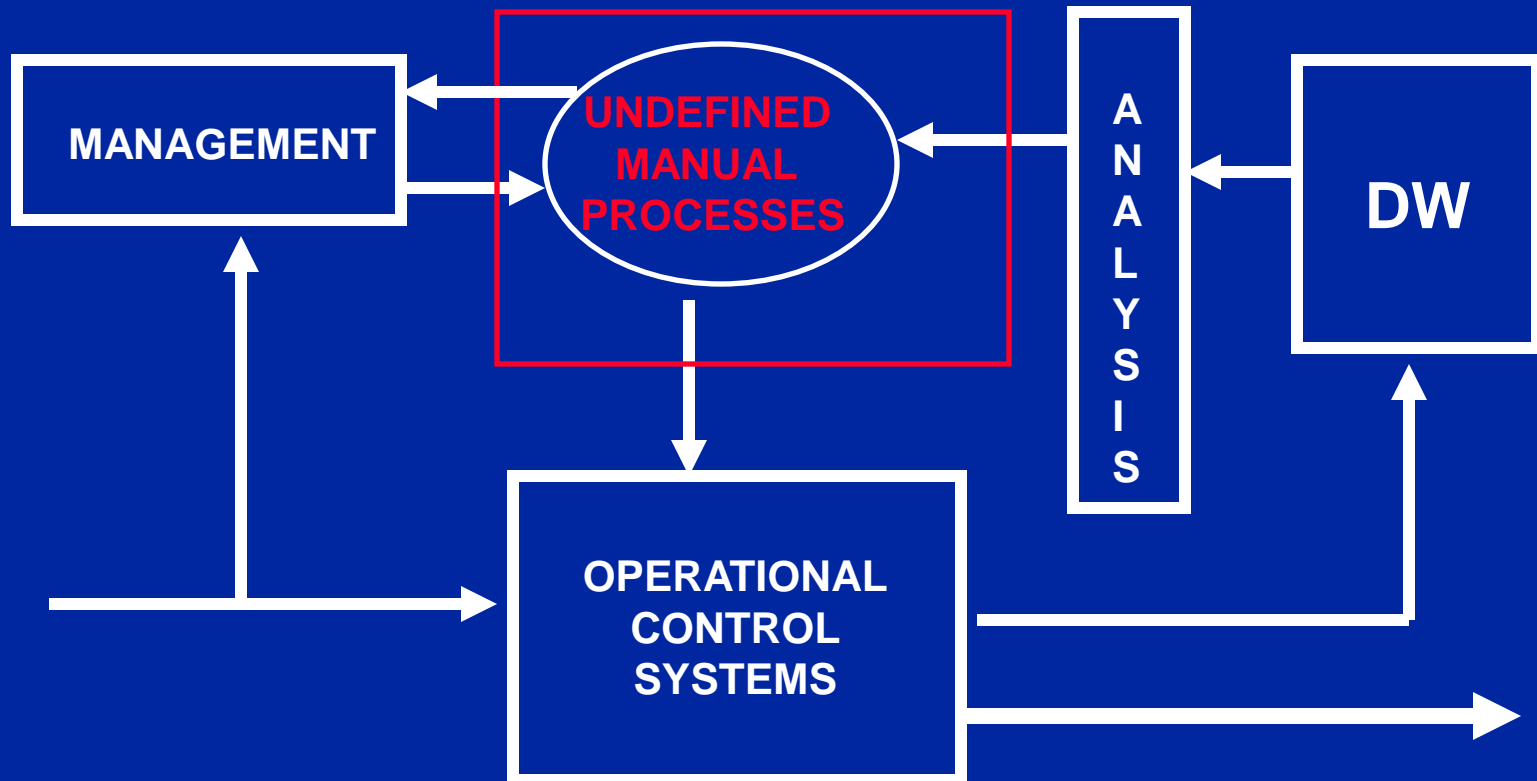
# REACTIVE MANAGEMENT

- **Does NOT Permit Capture of:**
  - ANALYSIS GUIDELINES
  - MANAGEMENT POLICY (STRATEGIC PLANNING)
  - DECISION RULES
- **Cannot Enable Automation of Critical Portions of the Business!**
- **Poor Business Response to Sudden Changes**
  - OBSERVATIONS ARE MEDIATED BY MANUAL DSS
  - LITTLE INFLUENCE OF HISTORY ON DECISIONS
    - » Learning from mistakes is difficult
  - PRIMARILY MANUAL CONVEYANCE OF STRATEGIES
  - REQUIRES INTEPRETATION BEFORE IMPLEMENTATION

# TRADITIONAL DECISION PROCESS

- **Management Decisions Traditionally Based on Judgment**
  - POOR RECORDS KEEPING OF SITUATION, REASONING, AND DECISION
  - LITTLE FEEDBACK ON RESULTS
  - DECISION IS HEURISTIC AND AD-HOC
  - NOT PREFERRED BY MANAGERS
  - BUSINESS CAN'T "LEARN"
  - DECISIONS ARE SLOW, EVEN IF REPEATED
  - "POLICY MANUALS" DON'T FIX THE PROBLEM (NO ONE READS THEM)

# THE ROLE OF THE DATA WAREHOUSE



# MARKET PRESSURES AND THE 21ST CENTURY

- **Rapid Change Demands Operational Action**
  - FASTER THAN MANAGEMENT CAN ANALYZE INFORMATION
  - FASTER THAN MANAGEMENT CAN BE INFORMED
- **Electronic Commerce**
  - \$236 BILLION U.S. BY YEAR 2002 (FORRESTER RESEARCH)
- **Globalization**
- **Old Style Management Won't Suffice**
  - TOO SLOW
  - TOO AD-HOC

## CONCLUSION

***Businesses Must Change to Survive***

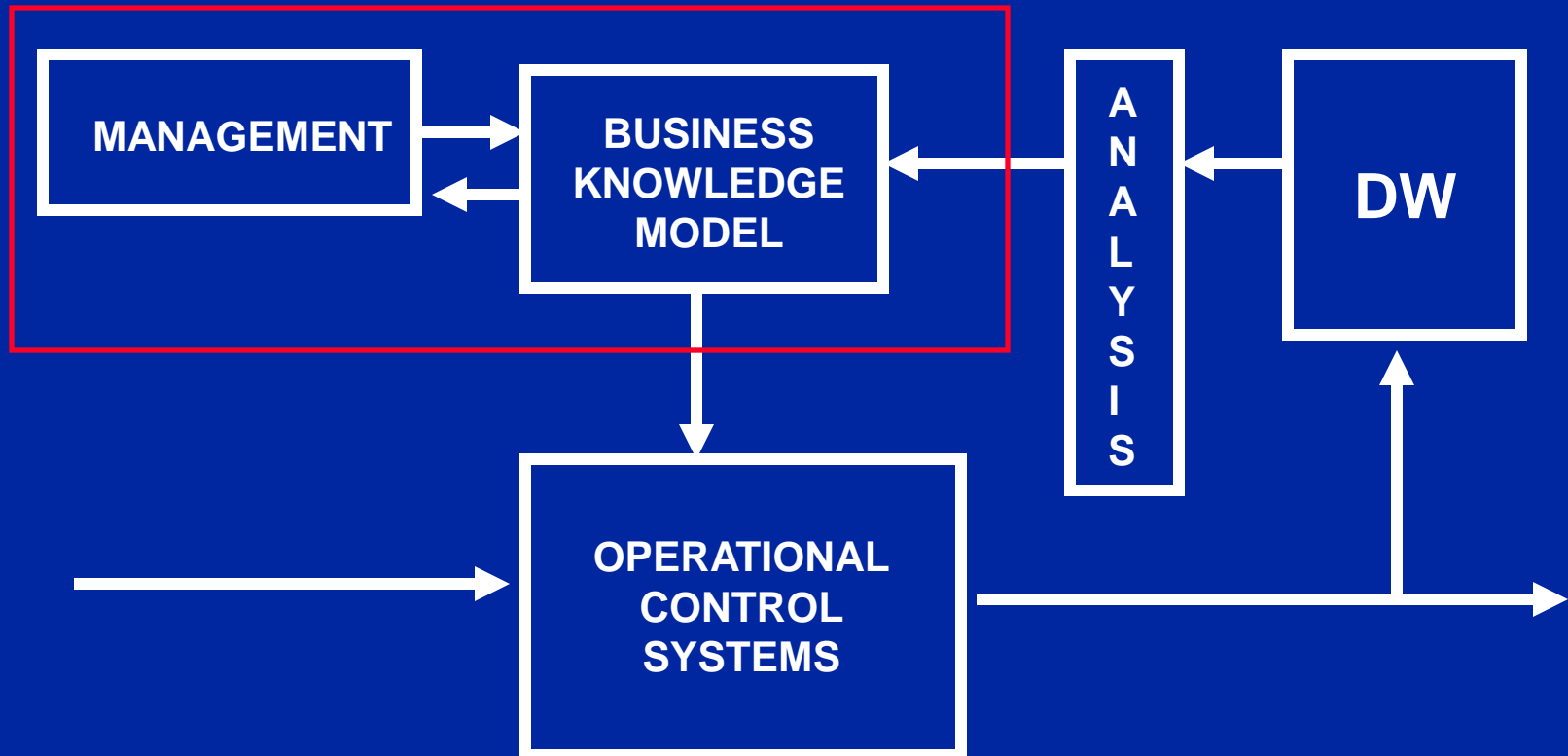


# A NEW ROLE FOR MANAGEMENT

- **Reactive Management**
  - MONITORS AND IDENTIFIES “IMPORTANT” BUSINESS EVENTS
  - ANALYZES BUSINESS REQUIREMENTS
  - IDENTIFIES PLAN OF ACTION
- **Anticipatory Management**
  - ANTICIPATE BUSINESS CONDITIONS THAT WOULD SIGNAL CHANGE
  - ANTICIPATE APPROPRIATE ACTIONS
  - STATE THESE AS RULES
  - MONITOR RULE EFFECTIVENESS
  - TUNE AND EVOLVE THE RULES
  - HANDLE EXCEPTIONAL SITUATIONS MANUALLY
    - » An opportunity to define new rules!

# OLDM

## *IT BEYOND THE DATA WAREHOUSE*



# WHAT IS OLDM?

## *(On-Line Decision Management)*

- **Highly Integrated OLTP, Decision Support, Business Modeling, and Planning Functions**
  - INCREMENTAL RATHER THAN PERIODIC
- **Immediate Capture or Computation of Decision Support Information**
- **Online Access to Control Information**
- **Immediate Responsiveness to Changes in Control Information**
- **Rule Based**
  - DATABASE EQUIVALENT OF AN EXPERT SYSTEM

# OLDM VERSUS OLTP

## *OLTP Order Processing Example*

- **Focus on Collecting Information (Order Acquisition)**
  - CORRECTNESS
  - SPEED
  - QUEUED FOR FULFILLMENT (PACKING, SHIPPING, BILLING)
- **Automated "Customer" Interaction Is Sequential**
  - CUSTOMER ORDERS ARE INPUTS
  - SHIPMENTS AND BILLS ARE OUTPUTS
- ***Only Secondarily* Drive Business Functions**
  - DELAYS OF DAYS OR WEEKS POSSIBLE

# **OLDM VERSUS OLTP**

## ***OLDM Order Processing Example***

- **Focus on Customer Satisfaction and Business Profitability**
  - **CORRECTNESS AND SPEED ARE STILL IMPORTANT**
  - **ERRORS AND REPROCESSING ARE AVOIDED**
  - **INVENTORY IS ASSIGNED, BILLING IS PREPARED, AND SHIPPING SCHEDULED *ONLINE***
  - **ONLY PHYSICAL WORK IS POSSIBLY DEFERRED**
  - **PHYSICAL WORK CAN BE SCHEDULED BY SYSTEM BASED ON CUSTOMER REQUIREMENTS, WORK LOADS, AND AVAILABLE RESOURCES**
  - **CUSTOMER CAN BE GIVEN A DELIVERY COMMITMENT**

# BUSINESS MANAGEMENT THROUGH INFORMATION

- **Analysis of Historical Records**
  - ORDER PROCESSING, INVENTORY LEVELS, SHIPMENTS, RECEIVABLES, CUSTOMER HISTORY, ETC.
- **Goals Include:**
  - MEASURES OF EFFICIENCY
  - ANTICIPATE CHANGES (PLANNING AND FORECASTING)
  - MAKE ADJUSTMENTS
  - INTEGRATION OF MODEL & CONTROL FUNCTIONS

# RULE-BASED MANAGEMENT

- **Create Strategic Rules**

IF

**MARKET DEMAND DECREASES**

THEN

**IMPLEMENT MARKETING CAMPAIGN B1**

IF

**PROFIT MARGIN DROPS BELOW VALUE X**

THEN

**ADJUST OVERHEAD BY .....**

- **Must Not Forget Alert Rules**

- IF UNANTICIPATED CONDITION, THEN NOTIFY THE CFO

- **Must Not Be Too Reactive**

- WOULD CAUSE “THRASHING”

# OLDM DECISION PROCESS

- **Simultaneous Capture Of:**
  - **DECISION SUPPORT INFORMATION**
    - » Example: Surveyed customer online in exchange for an additional discount!
  - **WITH BUSINESS FUNCTION INPUTS**
- **Immediate Computation or Estimation of Secondary Information**
  - **BASED ON PLANNING AND FORECASTING RULES**
- **Decision Support Information Is:**
  - **AVAILABLE ONLINE**
  - **READY TO USE "AS IS"**
- **Management Defined!**



# OLDM DECISION PROCESS

- **Derived Data Becomes Control Information**
- **Automation of Analysis and Decision Support**
  - IMMEDIATELY AVAILABLE TO MANAGEMENT
- **Problems Documented On-line**
- **Classes of Problem and Corrective Action Codified**
  - PROBLEM RECOGNITION
  - DECISION RULES

# OLDM DECISION PROCESS

- **Requires Four Types of Information**
  - **THE CHARACTERISTICS WHICH IDENTIFY A CLASS OF PROBLEM**
  - **THE CORRECTIVE ACTIONS (MANAGEMENT RESPONSES BY PROBLEM CLASS)**
  - **RULES TO IMPLEMENT ACTIONS**
  - **RECORD OF RESULTS**

***An OLD M Application = a Database Expert System***

# THE POTENTIAL OF OLDM

- **Better Managed Businesses**
  - KNOWLEDGE ASSET CAPTURE AND RETENTION
  - CONSISTENCY ACROSS THE ENTERPRISE
  - FLEXIBLE, HIGHLY RESPONSIVE
- **Close Loop With Customer**
  - EVENT AND MARKET DRIVEN, BUT CONTROLLED
- **Direct Customer Interaction**
  - VIA WEB, TELEPHONE, REMOTE CONNECTION
- **Improved System Capacity Planning and System Management**
- **The Re-alignment of Business and IT**

# BIOGRAPHY

David McGoveran is a well-known relational database consultant and president of Alternative Technologies (Boulder Creek, CA), specialists in solving difficult relational applications problems since 1981. He publishes The Database Product Evaluation Report Series; has authored (with Chris Date) A Guide to SYBASE and SQL Server; and is completing Perpetuating Enterprise Success: Management in the 21st Century. This seminar is based partially on his workshop: The Client/Server University: Designing Effective Applications.

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