

# *Technologies for Rapid Business Change*

**Information Architecture Conference  
Chicago  
Monday, November 2, 1998  
1:00 P.M. - 4:00 P.M.**



**David McGoveran  
Alternative Technologies  
13150 Highway 9, Suite 123  
Boulder Creek, CA 95006  
Telephone: 408/338-4621  
[www.AlternativeTech.com](http://www.AlternativeTech.com)**

# OVERVIEW

- An Overview of Zero Management<sub>tm</sub>
- Zero Management<sub>tm</sub> Technology Principles
- An I.T. Framework for Zero Management<sub>tm</sub>
- Zero Management<sub>tm</sub> Technology Products

***NOTE: Zero Management is a trademark of Alternative Technologies.***

***BEFORE YOU LEAVE TODAY...***

***PLEASE FILL OUT YOUR  
EVALUATIONS!***

***Thank you!***

***AN  
OVERVIEW  
OF  
ZERO MANAGEMENT<sub>tm</sub>***



# TODAY'S BUSINESS MANAGEMENT

- **Enterprise Objectives Are Seldom Actionable**
  - CORPORATE CHARTERS, EXECUTIVE POLICIES
- **Enterprise Progress Isn't Quantifiable**
  - DISTINCT FROM PROFITABILITY, OTHER PERFORMANCE METRICS
- **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

# THE PERILS OF REACTIVE MANAGEMENT

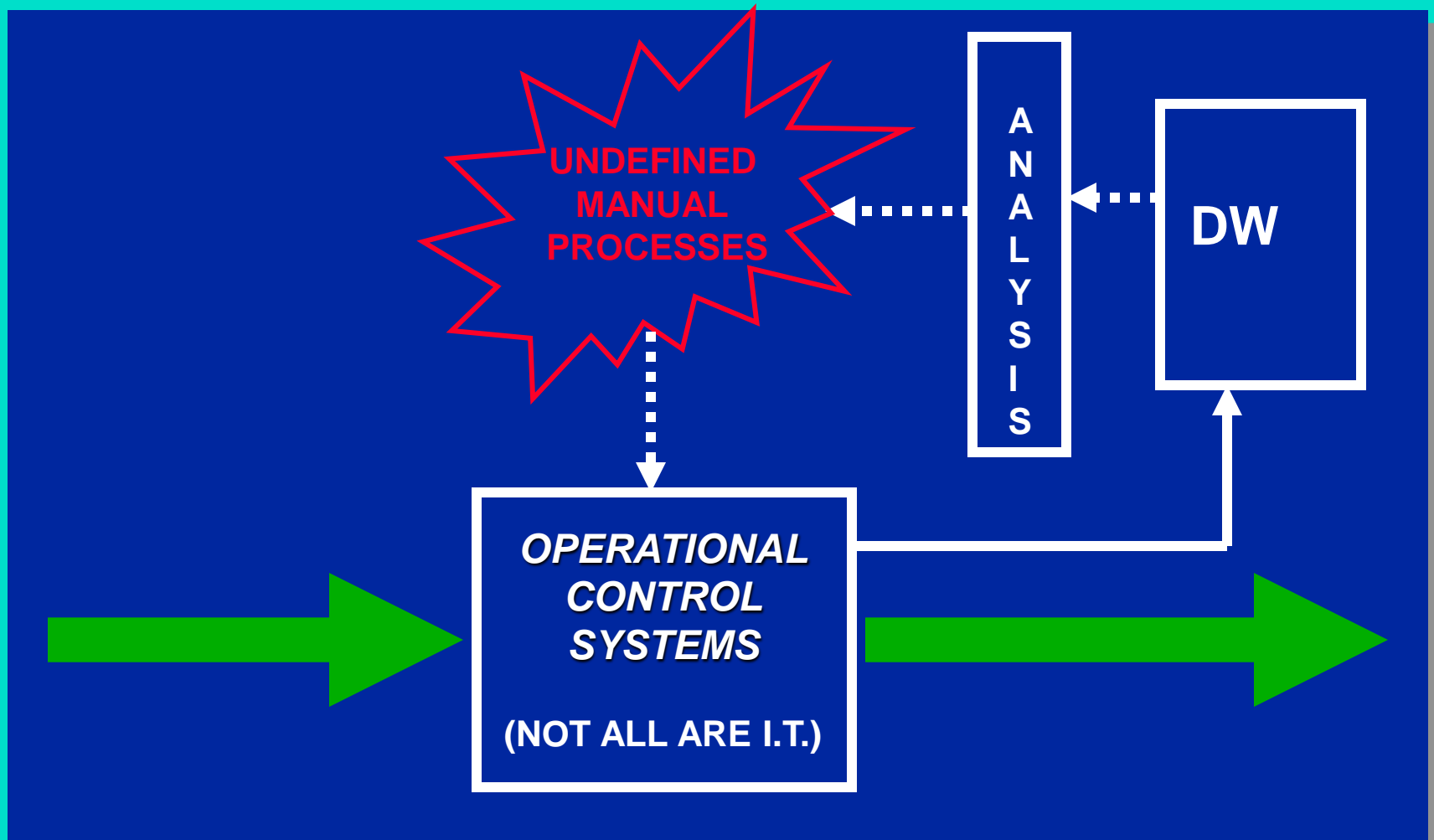
- **Does NOT Permit Capture of:**
  - ANALYSIS GUIDELINES
  - MANAGEMENT POLICY (STRATEGIC PLANNING)
  - DECISION RULES
- **Cannot Enable Automation of Critical Portions of the Business!**
- **Poor Business Response to Sudden Changes**
  - OBSERVATIONS ARE MEDIATED BY MANUAL DSS
  - LITTLE INFLUENCE 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 Contextual Judgement
  - POOR RECORDS KEEPING OF SITUATION, REASONING, AND DECISION
  - LITTLE FEEDBACK ON RESULTS
  - DECISION IS HEURISTIC AND AD-HOC
  - BUSINESS CAN'T "LEARN"
  - DECISIONS ARE SLOW, EVEN IF REPEATED
  - "POLICY MANUALS" DON'T FIX THE PROBLEM  
(NO ONE READS THEM ANYWAY!)
  - NOT PREFERRED BY MANAGERS!
- (Decision) Support Often Means Justification!

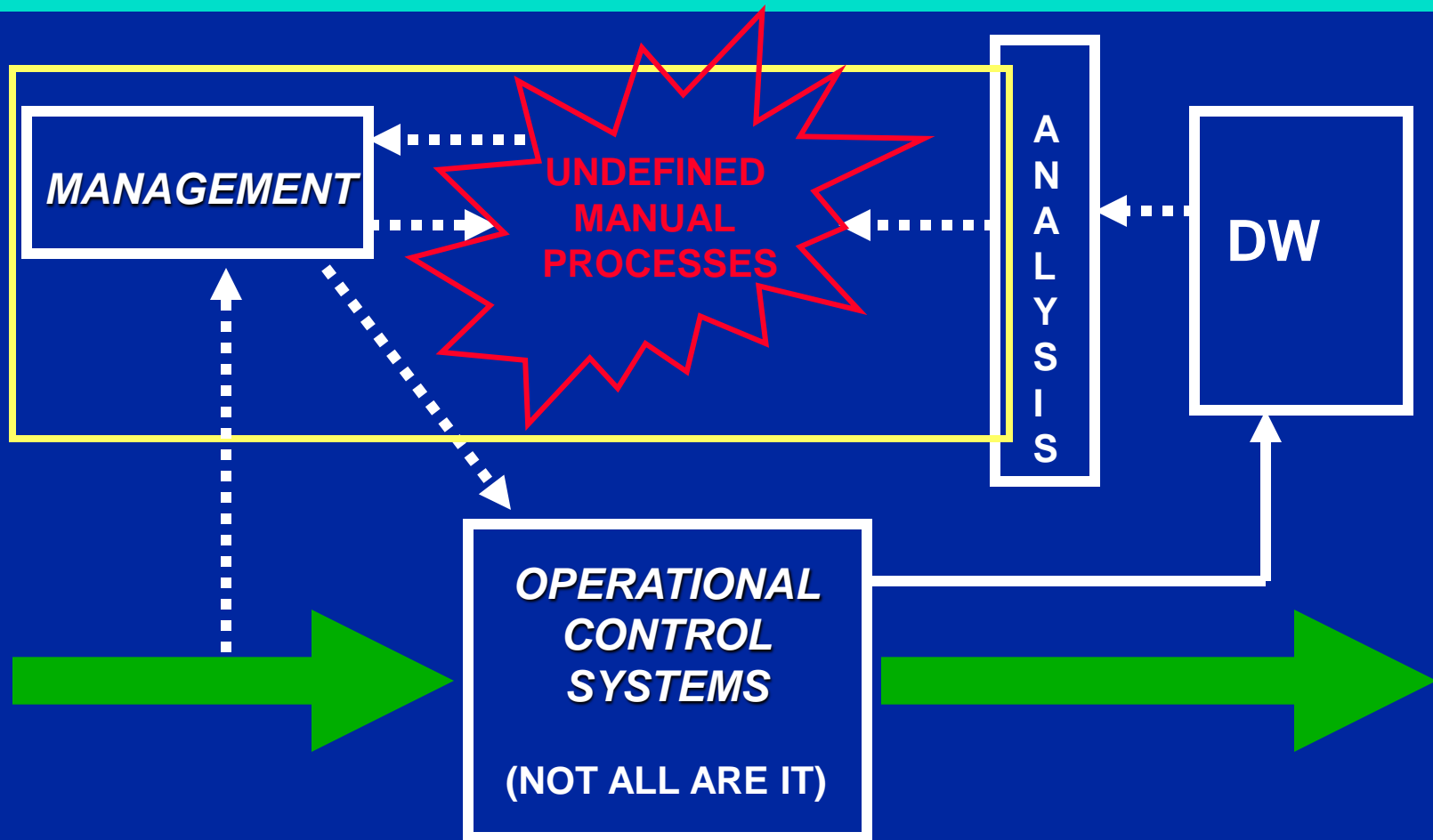
# SUPPORTING THE JUDGEMENT

## *THE DSS APPROACH*



# SUPPORTING THE JUDGEMENT

## THE DSS APPROACH



# **MARKET PRESSURES**

## ***THE NEW MILLENIUM***

- **Electronic Commerce**
  - \$236 BILLION U.S. BY YEAR 2002 (FORRESTER RESEARCH)
  - LOTS OF BUSINESS, BUT YOU MUST RESPOND NOW!
- **Globalization - Good News, Bad News**
  - THE SMALLEST COMPANY CAN NOW COMPETE...WITH YOU!
  - COMPLEX INTER-REGIONAL REGULATORY REQUIREMENTS
- **Disintermediation**
- **Supply Chain Integration**
- **Build to Order, Service Level Guarantees, . . .**
- **Y2K, EMU, Deregulation, Mergers and Acquisitions,...**

# ***A NEW BUSINESS OPPORTUNITY LEVERAGING THE VALUE OF CHANGE***

- **Almost Unlimited Opportunity**
  - ***R.O.I. POTENTIAL ESTIMATED AT > 15% REVENUE ANNUALLY!***
    - » ***GARTNER GROUP SAYS 3-6% FROM SIMPLE ADMINISTRATIVE PROCESS AUTOMATION ALONE***
  - **MUST BE ABLE TO TELL THE STORY AND PROVE IT**
- **Rapid, Incremental Absorption of Business Change**
  - **AVOID LOST OPPORTUNITY COSTS**
    - » ***ONLY 1 IN 7 SAY THEY KEEP UP \****
  - **INCREASES OPPORTUNITY TO MAINTAIN ALIGNMENT**

*\* STATISTICS COURTESY OF NINA LYTTON, OPEN SYSTEMS ADVISORS*

# ***A NEW BUSINESS OPPORTUNITY LEVERAGING THE VALUE OF CHANGE***

- **Proactive Response to Rapidly Changing Business Requirements**
  - “RESPONSIVENESS TO CHANGE NUMBER ONE ISSUE” \*
  - HIGH COST OF DELAYED REACTION
    - » 70% I.T. SAY “>1 YR TO IMPLEMENT L.O.B. CHANGES” \*
  - “BUSINESS CHANGE IS CONSTANT” (60%) \*
    - » 80% I.T. SAY “1 YR OR LESS” \*
  - ABILITY TO MANAGE AHEAD OF THE CURVE
    - » ONLY 6% I.T. THINK THEY CAN CHANGE QUICKLY ENOUGH \*
- **Focus on Managing Business Dynamics**
  - WITHOUT COSTLY I. T. EFFORTS
  - CONSISTENT BUSINESS PROCESSES IN THE FACE OF CHANGE

\* STATISTICS COURTESY OF NINA LYTTON, OPEN SYSTEMS ADVISORS



# **BUSINESS TRENDS**

## ***THE NEW MILLENIUM***

- **Visibility Is Trending to Zero**
  - MANAGEMENT CAN'T ANALYZE INFORMATION FAST ENOUGH
  - LITTLE ABILITY TO FORESEE OPPORTUNITIES
  - “PREDICTABILITY IS DEAD!” \*
  - MANAGEMENT CAN'T EVEN TO BE INFORMED FAST ENOUGH
- **Response Window Is Trending to Zero**
  - OPPORTUNITY TO APPROVE AND IMPLEMENT DECISIONS
  - I.T. CAN'T DELIVER FAST ENOUGH
- **Rapid Change Is Pervasive**
  - *DEMANDS FAST, DECISIVE, OPERATIONAL ACTION*
  - *BPR, WHILE VALUABLE, IS NOT A SOLUTION TO RAPID CHANGE*

\* *The Power of Corporate Kinetics, c.1998*

# OPPORTUNITY MANAGEMENT

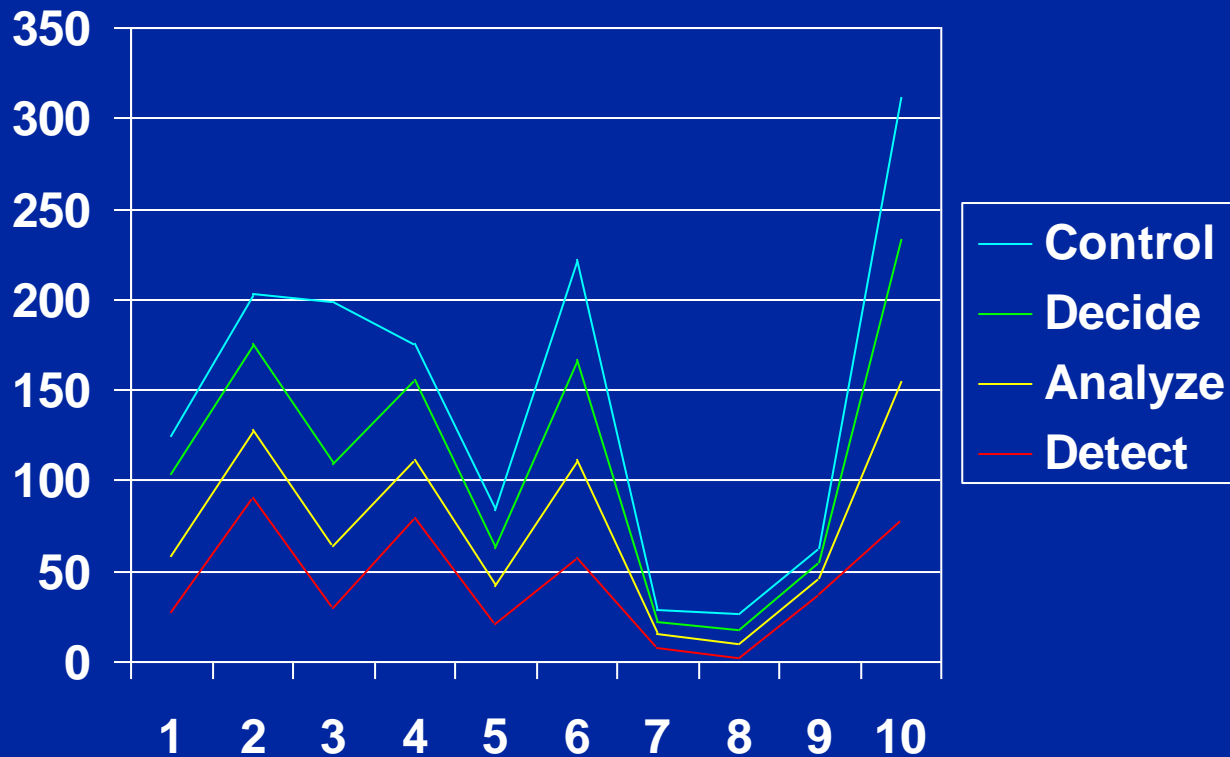
## *THE NEW MILLENIUM*

- Old Style Management Won't Suffice
  - TOO SLOW AND AD-HOC
- Success Will Depend on Opportunity Management
  - IDENTIFY, “ANALYZE”, & SEIZE APPROPRIATE OPPORTUNITIES
  - OPPORTUNITY WINDOW REDUCED FROM MONTHS TO HOURS
  - COST MANAGEMENT HAS LIMITED RETURN
  - FAST REACTION AND RAPID CHANGE ABILITY ARE KEY

### CONCLUSION

*Business Survival Requires Business Agility*

# *Businesses Must Change to Survive*



# ZERO MANAGEMENT<sup>tm</sup>

## THE CONCEPT

- ☆ **A Business Effectiveness Goal for Business Agility**
  - A RALLYING CRY LIKE *ZERO DEFECTS* AND QUALITY CONTROL
- 🕒 **Reduce *Traditional* Management Authority Structure to Zero**
  - ENABLE AUTONOMY, OWNERSHIP, AND DISTRIBUTION
- 🕒 **Reduce *Traditional* Management Processes to Zero**
  - TRADITIONAL ANALYSIS, DECISION CYCLE DOESN'T WORK
  - ENABLE FAST CYCLE TIMES FOR MANAGEMENT
  - AVOID THE DEADLY “MEMO-MEDIATED MANAGEMENT”
  - AVOID REACTIVE MANUAL DECISIONS
  - ENABLE PROACTIVE DECISION RULES!

# ZERO MANAGEMENT<sup>tm</sup>

## KEY PRINCIPLES

- Respond Rapidly
  - VIA PREDICTIVE SYSTEMS
- Anticipate Short Term Changes
- React With Many Coordinated Small Decisions
  - MINIMIZE IMPACT OF INDIVIDUAL ERRORS
- Apply Over Short Interval
- Capture Knowledge Assets
  - EVERY DECISION IMPLEMENTED AS A RULE
  - PERFORMANCE MEASURES IDENTIFIED
- Controlled Empowerment
  - DISSEMINATE DECISION RULE SYSTEMS, NOT AUTHORITY *PER SE*

### Result:

*Minimum Risk, Maximum Leverage*

# MANAGEMENT'S NEW ROLE

## *CREATING RULE-BASED ACTIVE MODELS*

- **Traditional Reactive Management**
  - MONITORS AND IDENTIFIES “IMPORTANT” BUSINESS EVENTS
  - ANALYZES BUSINESS REQUIREMENTS
  - IDENTIFIES AND IMPLEMENTS A PLAN OF ACTION
- **Zero Management Approach Is Anticipatory**
  - ANTICIPATE BUSINESS CONDITIONS THAT WOULD SIGNAL CHANGE: BUSINESS EVENTS
  - 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!*

***TECHNOLOGY***  
***PRINCIPLES***  
***of***  
**ZERO MANAGEMENT<sub>tm</sub>**

# **ZERO MANAGEMENT<sup>tm</sup>**

## ***KEY PRINCIPLES: DECISIONS***

- **Anatomy of a Management Decision**
  - TRIGGERED BY A SET OF CONDITIONS
  - IMPLIES AN ACTION TO BE TAKEN
  - A DECISION CHANGES THE “STATE” OF THE BUSINESS
  - DECISIONS ARE PARTIALLY ORDERED IN TIME
  - A DECISION IS ONE BRANCH POINT IN A PROCESS
- **Relationship to Business Rules**
  - A RULE CONSISTS OF TWO PARTS: CONDITIONS AND ACTIONS
  - CONDITIONS AND ACTIONS MAY BE PARAMETERIZED
  - AN IMPLEMENTATION OF A BUSINESS RULE IS A DECISION
- **Relationship to Process Models**
  - A NETWORK OF BUSINESS RULES
  - ACTIVITIES TRANSITION THE STATE OF A BUSINESS



# DECISIONS AND BUSINESS RULES

- **Decision**

- SEND THE ORDER TO HONG KONG FOR PACKAGING AND DO NOT SEND IT TO MILANO OR CHICAGO
- CONDITION: ORDER ENTRY IS COMPLETE AND CUSTOMER ADDRESS IS IN PACIFIC RIM
  - » THE “WHY”
- ACTION: SEND THE ORDER TO HONG KONG FOR PACKAGING

- **Business Rule**

- IF CONDITION, THEN ACTION
- IF *ORDER ENTRY IS {COMPLETE} AND CUSTOMER ADDRESS IS IN {PACIFIC RIM}*  
THEN *SEND THE ORDER TO {HONG KONG} FOR PACKAGING*

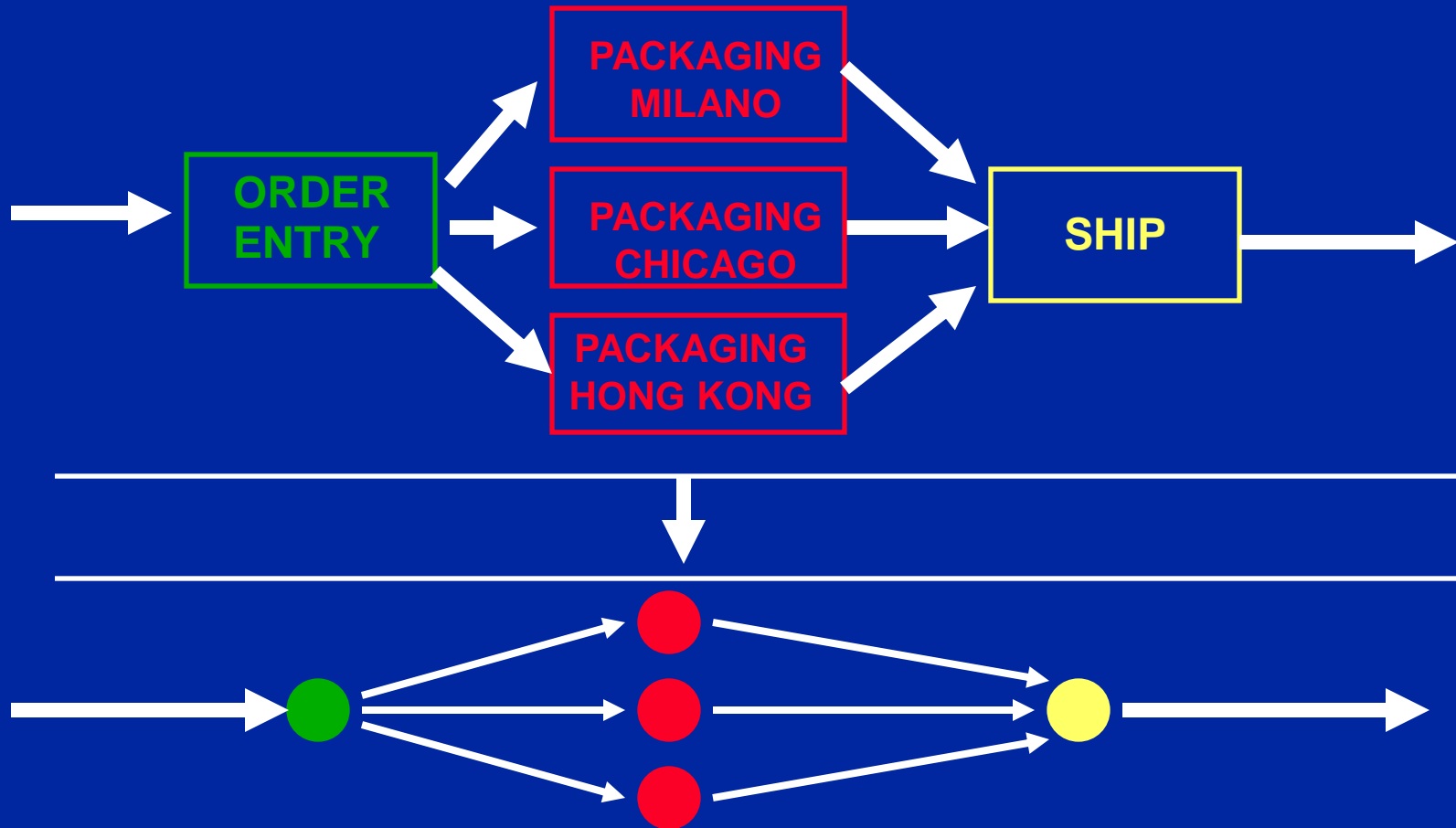
*IF* → ● → *THEN*

# **ZERO MANAGEMENT<sup>tm</sup>**

## ***KEY PRINCIPLES: PROCESSES***

- **Process Management**
  - AN IMPROVEMENT OVER WORKFLOW
  - TYPICALLY REPRESENTED AS A DIRECTED GRAPH
    - » ARROWS IMPLY DIRECTION IN TIME
    - » BRANCH NODES ( MULTIPLE OUTPUTS) ARE DECISIONS
- **Enable the Business Manager**
  - CAPTURE DECISIONS AS DECISION RULES AND PROCESSES
    - » *REPEATABLE AND AUTOMATABLE PROCESS MODEL*
    - » *INFERENCE AND RULE DISCOVERY*
  - INTELLIGENT, CONTINUOUS IMPROVEMENT OF PROCESS
    - » *AD-HOC CONDITIONING OF PROCESS BRANCHES*
    - » *RESPOND TO BUSINESS ERRORS VIA NEW PROCESS FLOWS*
    - » *NOT INVESTMENT HEAVY BPR!*

# BUSINESS PROCESS MODEL



# ZERO MANAGEMENT<sup>tm</sup>

## KEY PRINCIPLES: PROCESSES

- **Process: Abstract, Connected Set of State Transitions**
  - » **NODE: TRANSFORMATION OF CONDITIONS TO ACTIONS**
  - » **ARC HEAD: PARTICULAR CONDITIONS (EVENTS)**
  - » **ARC TAIL: PARTICULAR ACTIONS**
  - » **ARCS CARRY STATE INFORMATION (DATA)**
  - **COMPLETENESS: EVERY ACTION A CONDITION FOR SOME NODE**
  - **PROCESSES CAN BE VERY ABSTRACT OR VERY DETAILED**
  - **SEMANTICS**
    - » **FAN IN/FAN OUT DETERMINES THE “DEGREE” OF A NODE**
    - » **FAN IN/FAN OUT DETERMINES THE “DEGREE” OF AN ENTIRE PROCESS DIAGRAM (EXCLUDING SINKS AND SOURCES)**
    - » **THE CONDITIONS AND ACTIONS OF A NODE OR DIAGRAM (EXCLUDING SINKS AND SOURCES) DETERMINE ITS “TYPE”**
  - **SUBSTITUTION: A NODE CAN BE REPLACED BY A DIAGRAM OF THE SAME DEGREE AND TYPE**

# ZERO MANAGEMENT'S BUSINESS VISION

- Technology for Business People
- Make Every Business Process Real
  - ESPECIALLY THE DECISION PROCESS
  - VIEW AT MULTIPLE FUNCTIONAL LEVELS
  - EVERY INTERACTION ACCESSIBLE AND CONTROLLED ONLINE
  - EVERY STATUS ACCESSIBLE ONLINE
- Capture and Improve Decision & Process Efficiency
  - INNOVATION
  - TRANSFORMATION
- Capture Decision & Process Knowledge and History
- Enhanced, Dynamic Business Management

# ZERO MANAGEMENT'S TECHNOLOGY VALUE

- **Help I.T. Reduce Costs**
  - REMOVE CONCEPTUAL BARRIERS TO ACCEPTANCE
  - REMOVE COST BARRIERS TO ACCEPTANCE
    - » *TIME TO DEPLOYMENT AND INITIAL R.O.I.*
    - » *INTERNAL I.T. AND EXTERNAL I.T. COSTS*
- **Specific Cost Reductions**
  - INCORPORATES AND LEVERAGES DIRECT APPLICATION-TO-APPLICATION INTEGRATION EFFORTS
  - INCORPORATES COMPONENT APPROACHES
  - MINIMIZES COST BARRIERS TO INTEGRATION
  - APPLICABLE TO MONOLITHIC (“LEGACY”) APPLICATIONS AS WELL AS NEWER COMPONENTS
  - INTEGRATES WITH MANUAL PROCESSES

# ZERO MANAGEMENT'S TECHNOLOGY VALUE

- **Incremental Absorption of Technology Change**
  - NEW APPLICATION VERSIONS
  - ADDITIONAL APPLICATIONS
  - MINIMIZE DELAYS DUE TO ROLLOUT
- **Leverages Existing Integration Efforts**
  - CAN SIT ABOVE TIGHTLY INTEGRATED APPLICATIONS
    - » *CANNOT BE RESPONSIBLE FOR CONTROLLING INTERNAL PROCESS FLOWS*
    - » *BUT CAN STILL MONITOR THE FLOW*
  - PROVIDES KEY PERFORMANCE AND BUSINESS CYCLE TIME INFORMATION, COST ANALYSIS, AND MUCH MORE
  - CAN EXPAND TO THE SUPPLY AND VALUE “WEBS”

# ZERO MANAGEMENT'S TECHNOLOGY VALUE

- **Primary Value**

- COMMAND, TRACKING, AND CONTROL OF BUSINESS PROCESSES BY MANAGERS
- AUTOMATING REPETITIVE, COMPLEX MANAGEMENT
  - » ENABLEMENT THROUGH DECISION RULES
- ENABLE FUNCTIONAL MANAGERS AND ABOVE TO CEO
- ENHANCED, DYNAMIC BUSINESS MANAGEMENT

- **Secondary Value**

- MOVE I.T. FROM A COST CENTER TO A VALUE CENTER
- HELP MINIMIZE TIME TO DELIVERY
  - » *DECREASE DEPLOYMENT COSTS*
  - » *PROMOTE INCREMENTAL R.O.I.*

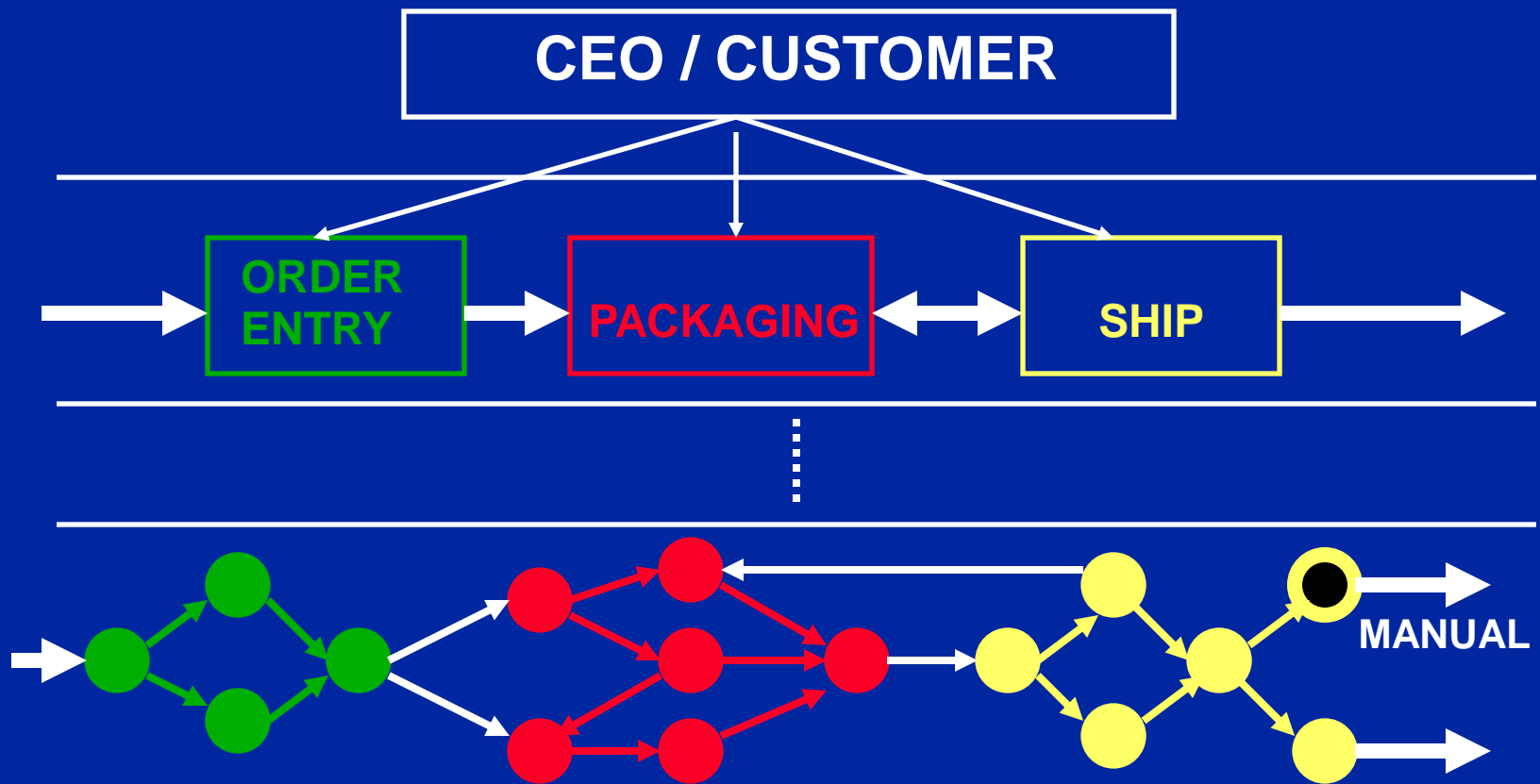
**PROCESS INDEPENDENCE IS KEY!**



# BUSINESS PROCESS INDEPENDENCE

- **A Business Process Hierarchy**
  - LEVELS RELATED BY ABSTRACTION
    - » *DIFFERENT DEGREES OF DETAIL ABOUT A PROCESS*
  - SUBSTITUTION PRINCIPLE GUARANTEES HIERARCHY CONSISTENCY VERTICALLY
  - COMPLETENESS PRINCIPLE GUARANTEES HIERARCHY CONSISTENCY HORIZONTALLY
  - ALL LEVELS OF ABSTRACTION WORK THE SAME
  - HIGHER LEVELS HIDE DETAILS OF PROCESS IMPLEMENTATION
    - » *PHYSICAL LOCATION AND TECHNOLOGY*
- **Application Integration**
  - A PARTICULAR TYPE OF HORIZONTAL PROCESS FLOW
  - *INCLUDING SUPPLY CHAIN INTEGRATION*

# BUSINESS PROCESS INDEPENDENCE

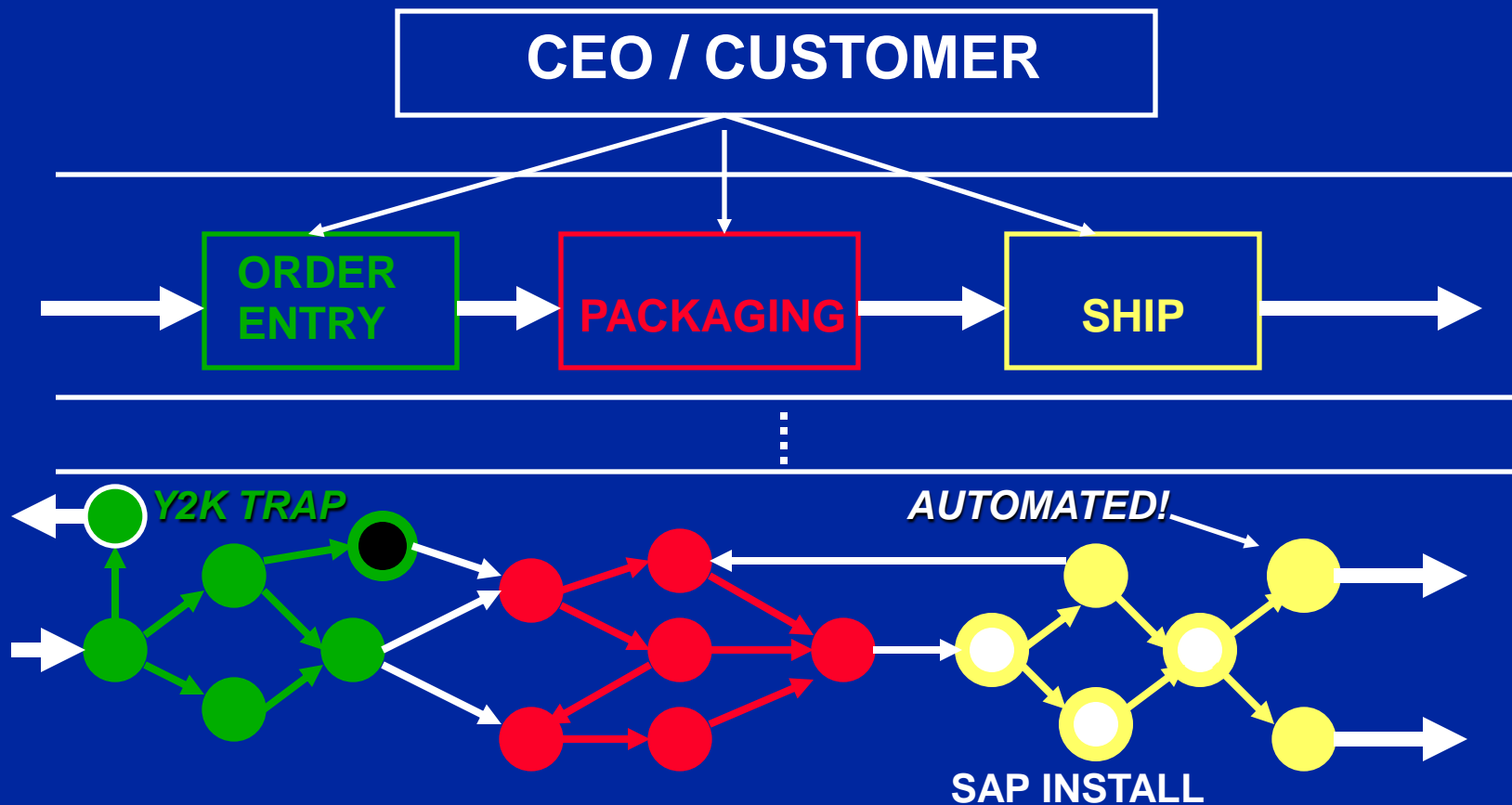


# BUSINESS PROCESS INDEPENDENCE

- **Benefits**

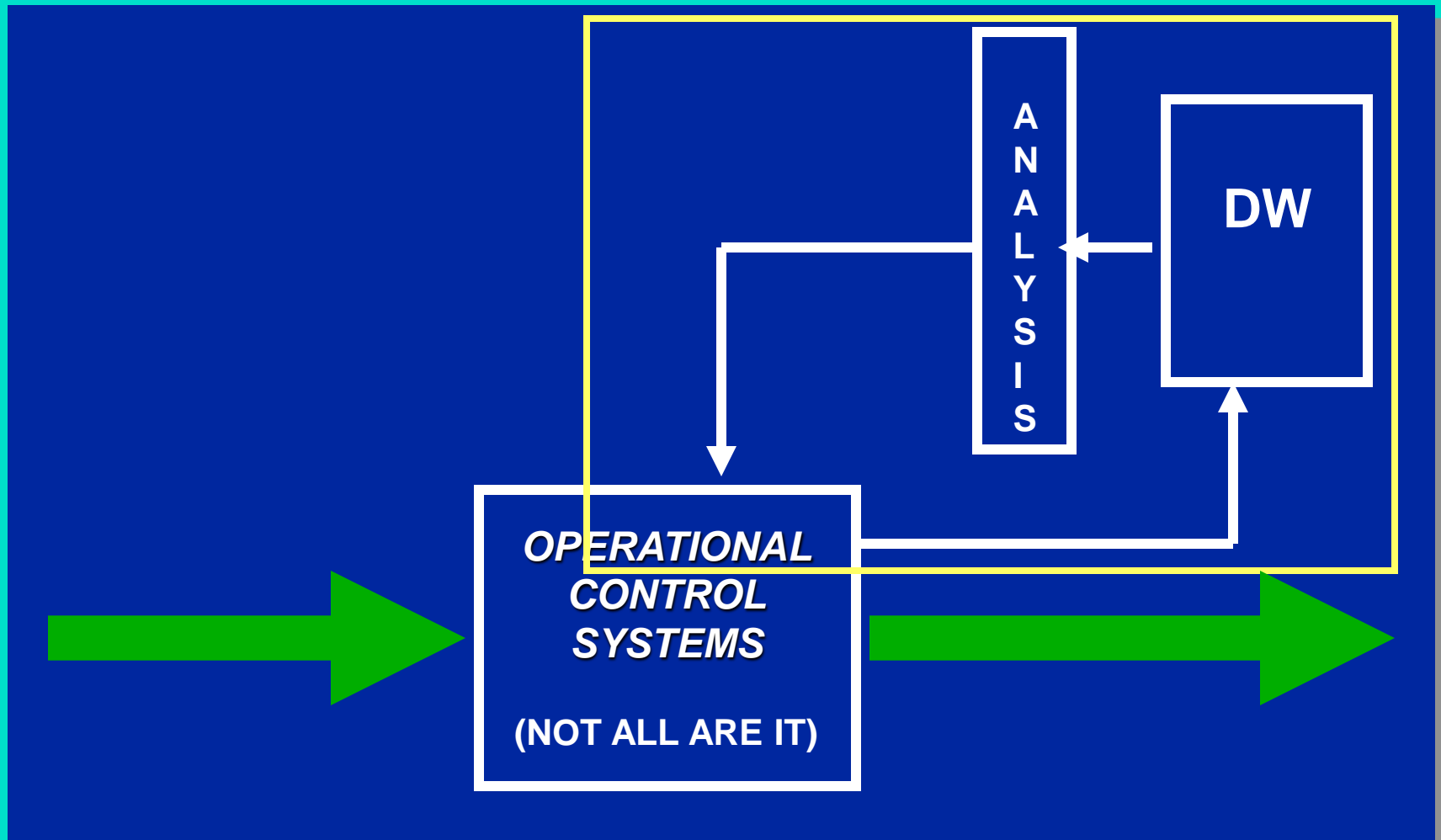
- BUSINESS RULES AND DECISIONS ARE INTEGRATED WITH PROCESS
- MIGRATE BETWEEN MANUAL & AUTOMATED IMPLEMENTATIONS
- ADD NEW OR TEMPORARY PROCESS FLOWS
- DECISION RULES CAN BE “PUSHED DOWN” FOR CONTROLLED EMPOWERMENT
- PROCESS IMPLEMENTATIONS CAN BE CHANGED “ONLINE”
  - » *APPLICATION VERSIONS AND ROLLOUT*
  - » *NEW APPLICATION FUNCTIONALITY*
  - » *AUGMENTING APPLICATIONS (Y2K CONTROL)*

# BUSINESS PROCESS INDEPENDENCE



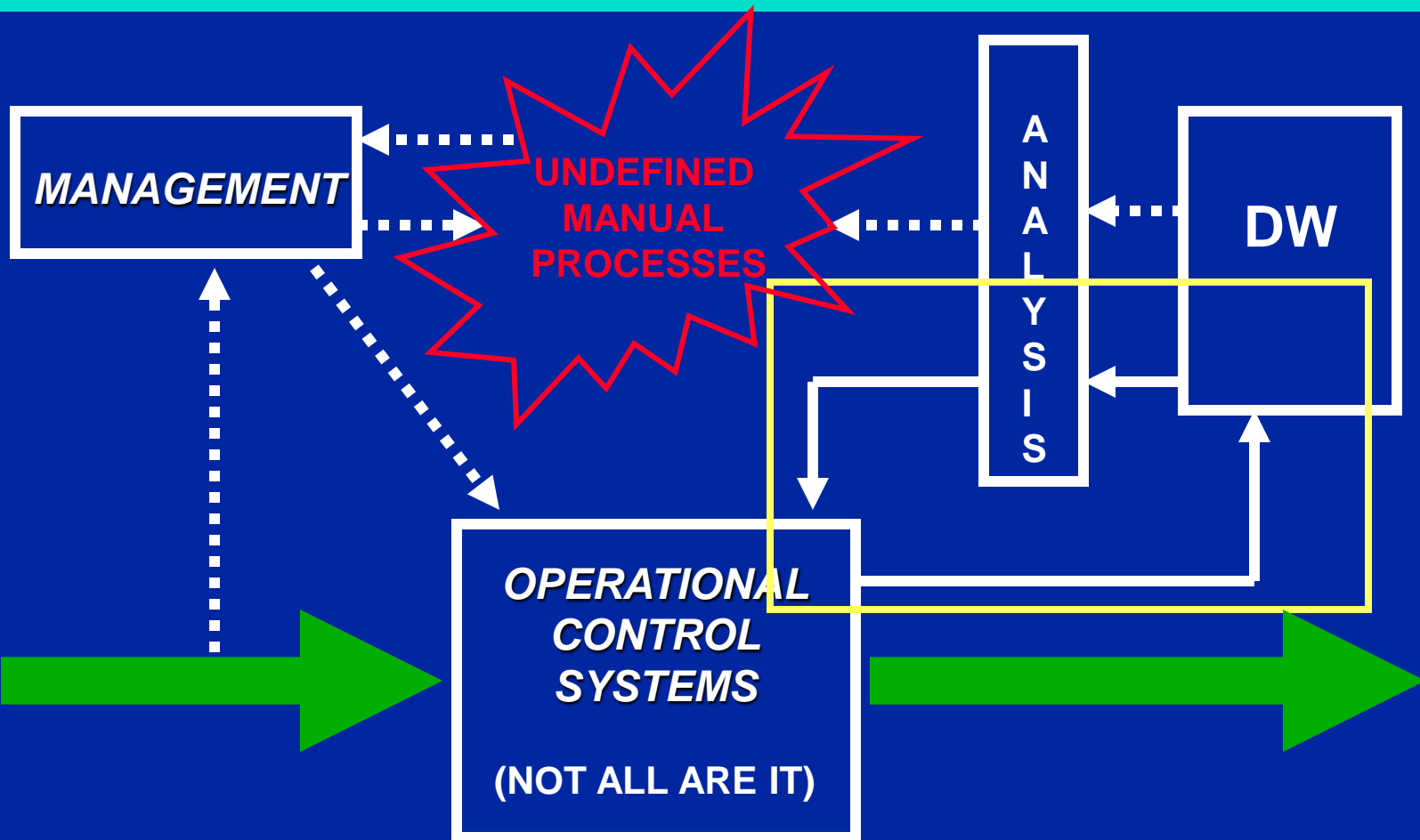
# OLDM

MORE THAN CLOSED LOOP DSS



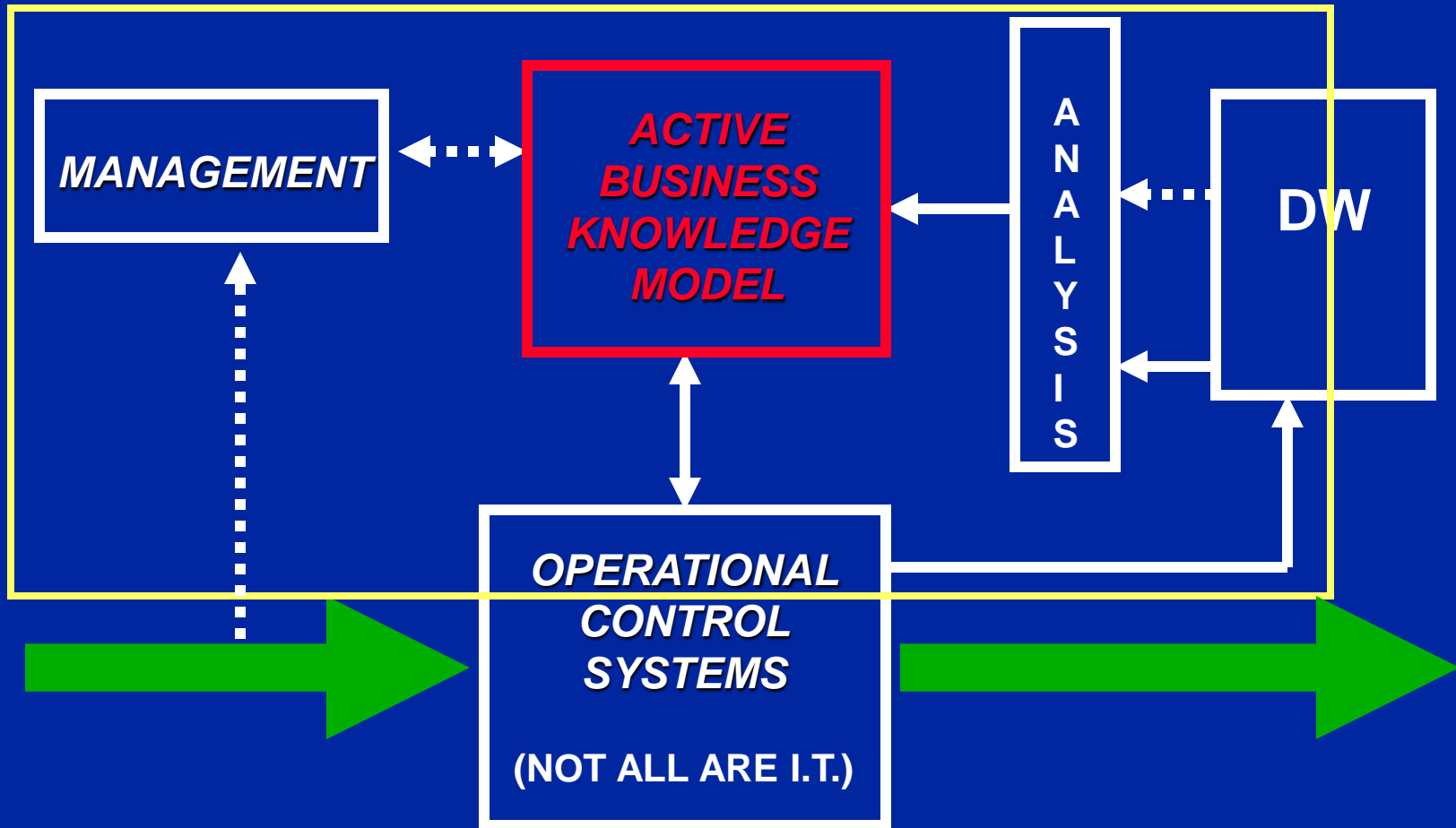
# OLDM

## INTEGRATING DSS WITH OLTP



# ZERO MANAGEMENT<sup>tm</sup> TECHNOLOGY

## OLDM, DECISION & PROCESS MANAGEMENT

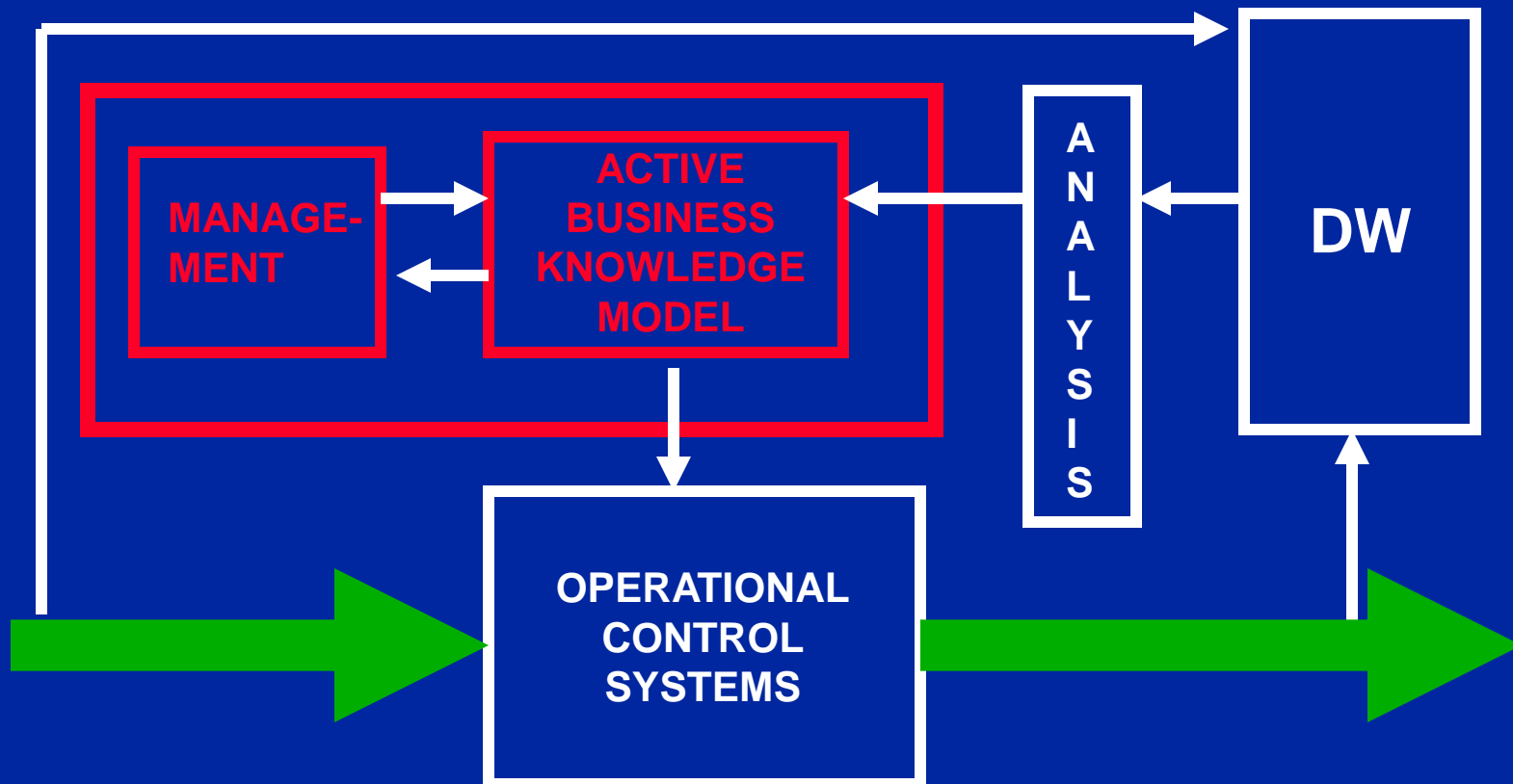


*An*  
***I.T. FRAMEWORK***  
*for*  
***ZERO MANAGEMENT***<sub>tm</sub>



# ZERO MANAGEMENT<sup>tm</sup> TECHNOLOGY

## OLDM, DECISION & PROCESS MANAGEMENT



# ZERO MANAGEMENT<sup>tm</sup>

## TECHNOLOGY CHARACTERISTICS

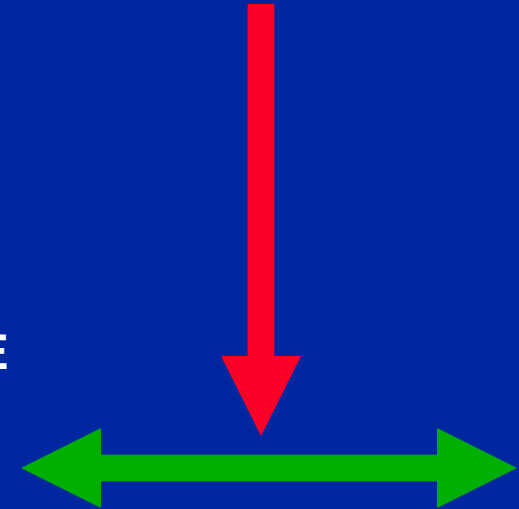
- **Vertical** Process Integration

- TOP DOWN MANAGEMENT HIERARCHY
- PROCESS INDEPENDENCE
- PROVIDES EVENT AND DATA CONTEXT
- DYNAMIC CONTROL
- I.T. SUPPORTS THE PROCESS BACKBONE

- **Horizontal** Data Integration

- ACTIVITY TO ACTIVITY
- APPLICATION TO APPLICATION
- PROCESS ENGINE DATA TRANSFER
- BUSINESS TRANSACTION INTERFACES
- I.T. OWNS THE BOTTOM LEVEL OF THE PROCESS HIERARCHY
- FACILITIES

» *REPLICATION, TRANSFORMATION, CLEANSING*



# **ZERO MANAGEMENT<sub>tm</sub>**

## ***TECHNOLOGY CHARACTERISTICS***

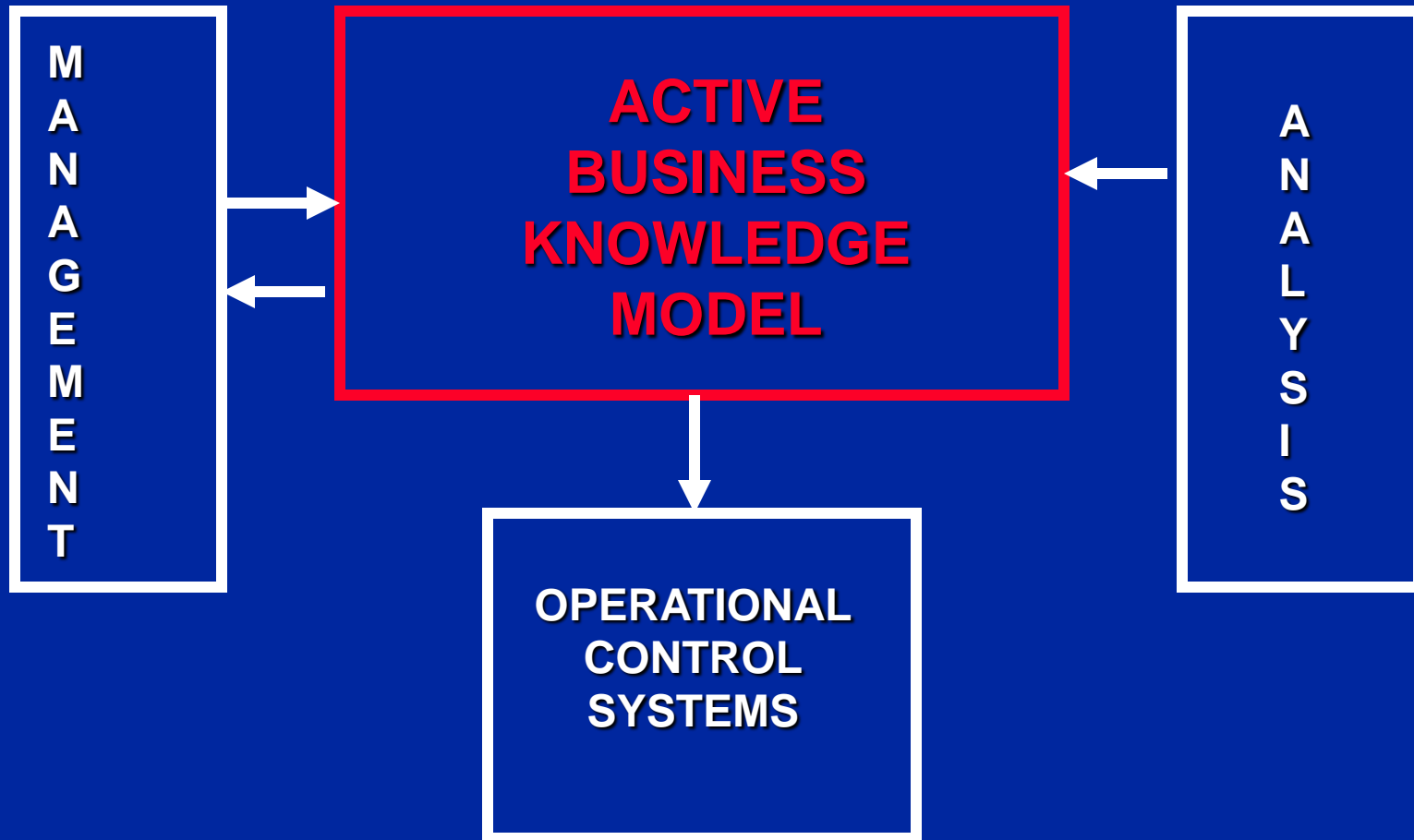
- **Business Event Driven**
  - PROCESS MECHANISM “UNDERSTANDS” EVENTS
- **Process Enabled**
  - CONTROL IMPLEMENTED VIA PROCESS
    - » INITIATION, TERMINATION, STATUS,...
- **Rule Based**
  - FLEXIBLE AND DYNAMICALLY MAINTAINABLE
  - CAN BE DRIVEN FROM ACTIVE BUSINESS KNOWLEDGE MODEL
- **Scalable**
  - PLATFORM EXTENSIBLE
    - » HIERARCHICAL ARCHITECTURE
    - » OBJECTS CAN SPAN HARDWARE
  - NO SOFTWARE LIMITATIONS

# **ZERO MANAGEMENT<sub>tm</sub>**

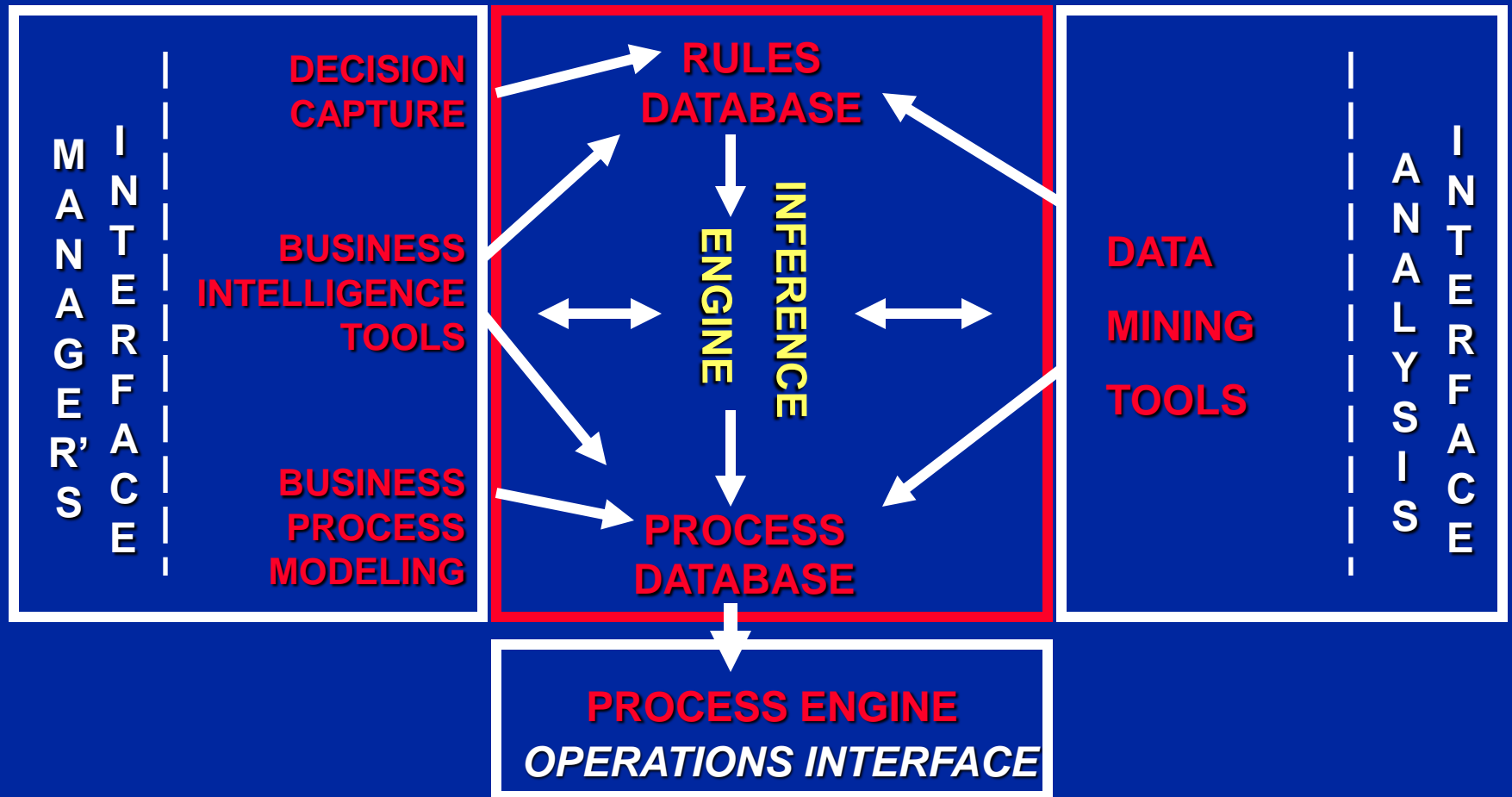
## ***TECHNOLOGY CHARACTERISTICS***

- **Component Based**
  - COARSE GRANULARITY BASED ON BUSINESS TRANSACTIONS
  - INPUT / OUTPUT ARE BUSINESS EVENTS
  - COMPOSED OF FINE GRANULARTIY LOGICAL TRANSACTIONS
- **Distributable**
  - JAVA?
  - INDEPENDENCE
  - DYNAMIC LOAD BALANCING AND ROUTING
- **Parallelized**
  - MULTI-THREADED
  - DATA FLOW PRINCIPLES
    - » CONSISTENT WITH EVENT-DRIVEN REQUIREMENT

# ZERO MANAGEMENT'S ACTIVE BUSINESS KNOWLEDGE MODEL



# ZERO MANAGEMENT'S ACTIVE BUSINESS KNOWLEDGE MODEL



# **ZERO MANAGEMENT'S ACTIVE BUSINESS KNOWLEDGE MODEL**

- **Rules Database**

- A REPOSITORY FOR DECISIONS
  - » *HISTORY OF CONDITIONS, ACTIONS TAKEN, AND ACTIONS NOT TAKEN*
- A REPOSITORY FOR BUSINESS RULES (see Ron Ross)
- A REPOSITORY FOR DECISION RULES
  - » *CONDITION / ACTION PAIRS*

- **Process Database**

- A REPOSITORY FOR PROCESS DEFINITIONS
  - » *MULTIPLE PROCESS MODELS*
  - » *HIERARCHICAL MODELS*
  - » *MULTI-DIRECTIONAL FLOWS*
  - » *USER-CONDITIONED BRANCHING NODES*
  - » *DYNAMIC, ONLINE EDITING*

# **ZERO MANAGEMENT'S**

## ***ACTIVE BUSINESS KNOWLEDGE MODEL***

- **Inference Engine**

- **DERIVING BUSINESS RULES FROM SPECIFIC DECISIONS**
- **DERIVING ACTIONS FROM COMPLEX CONDITIONS**
- **MUST MANY INFERENCE ALGORITHMS**
- **CASE-BASED REASONING**
- **SITUATIONAL ANALYSIS**



# **ZERO MANAGEMENT'S ANALYSIS INTERFACE**

- **OLAP**
  - PROVIDE PERFORMANCE METRICS DATA
    - » BUSINESS
    - » TECHNOLOGY
  - CAN BE ANY INCREMENTAL MEASURE
- **Data Mining**
  - IDENTIFYING RELATIONSHIPS AMONG CONDITION AND ACTIONS
  - CLUSTER ANALYSIS
  - TIME SEQUENCE ANALYSIS
  - RELATE PERFORMANCE METRICS TO RULES

# **ZERO MANAGEMENT'S MANAGEMENT INTERFACE**

- **Business Intelligence Tools**
  - EXECUTIVE INFORMATION SYSTEM
  - EVALUATE DECISION AND RULE EFFECTIVENESS
    - » QUERY AND ANALYZE PERFORMANCE METRICS
- **Business Process Interface**
  - VIEW PROCESS MODEL
  - PROCESS DRILL DOWN
  - PROCESS STATUS AND TRACKING
  - PROCESS SIMULATION

# ZERO MANAGEMENT'S *MANAGEMENT INTERFACE*

- **Decision Capture and Management**
  - ASSOCIATE A DECISION WITH A PROCESS
  - IDENTIFY CONDITIONS AND ACTIONS
  - DECISION TO BUSINESS RULE INFERENCING AND VERIFICATION
  - CHECK CONSISTENCY OF THE RULE COMPLEX
  - ENABLE *PUSH* OF DECISIONS AND RULES THROUGH PROCESSES
  - *KNOWLEDGE MANAGEMENT* TOOLS PLAY A ROLE
    - » CAPTURE KNOWLEDGE DURING DECISION MAKING
    - » MAKE PERVASIVE

# **ZERO MANAGEMENT<sup>tm</sup>**

## ***OPERATIONAL SYSTEMS INTERFACE***

- **Process Engine**
  - DRIVEN FROM AN ACTIVE PROCESS MODEL
  - COMPLETE STATE CAPTURE AND MANAGEMENT
  - MULTI-INSTANCE PROCESS MANAGEMENT
  - OPEN INTERFACES
    - » DATA ENTRY, QUERY, REPORTING, EMAIL, WEB
    - » PACKAGED OR COMPONENT-BASED APPLICATIONS
    - » LEGACY APPLICATIONS
    - » MIDDLEWARE
  - PUSH MANAGEMENT DECISIONS AND RULES TO ACTIVITY
- **Application Integration Environments**
  - IMPLEMENTS I.T. LEVEL PROCESS MODELS
    - » SEPARATE FUNCTION AND PHYSICAL RESOURCES
  - PROVIDE DATA INTEGRATION AND TRANSFORMATION

# ZERO MANAGEMENT<sup>tm</sup>

## OPERATIONAL SYSTEMS

- Applications

- BUSINESS TRANSACTIONS, TRIGGERED BY PROCESS ENGINE
- PROVIDES DATA, CONTROL, AND STATE INFORMATION
  - » DATA AND STATE DRIVE NEXT TRANSACTION IN PROCESS
  - » CONTROL INFORMATION DRIVES PROCESS BRANCHING
- WRITTEN TO CONCEPTUAL OR LOGICAL DATABASE
- MAY USE “OBJECT-RELATIONAL” PERSISTENT STATE DB
- SFA, MARKETING DATABASES, MARKETING AUTOMATION, ERP, HELP DESK, CALL CENTER

- Operational Database

- EVOLVE FROM OLTP TO **OLCP** TRANSACTIONS
- INTEGRATED WITH **OLDM**
- DISTRIBUTED AND REPLICATION ENABLED

# ZERO MANAGEMENT<sup>tm</sup>

## INFORMATIONAL SYSTEMS

- Data Movement
- Data Extraction, Transformation, and Cleansing
- Informational Databases
  - ODS
  - DATA WAREHOUSE
    - » DESIGN AND EVOLVE VIA **CRYSTAL METHODOLOGY**
    - » FULLY QUALIFY DATA QUALITY
    - » PROPAGATE CONFIDENCE FACTORS
  - MULTI-DIMENSIONAL
  - END-TO-END SEMANTIC TRACEABILITY
- Meta Data Captured As Semantic Rules

# **ZERO MANAGEMENT<sup>tm</sup>**

## ***ANALYTICAL SYSTEMS***

- **OLAP**
  - MULTI-DIMENSIONAL DATABASES
  - EVOLVING TO A CALCULUS (see E. Thomsen)
    - » FULLY INTEGRATED WITH THE RELATIONAL MODEL
- **Data Mining**
  - RULES DRIVEN DISCOVERY
  - DISCOVER RULES
    - » MANAGEMENT, MARKETING, PROCESS EFFICIENCY, MAINTENANCE
- **Data Presentation**
  - VISUALIZATION
  - REPORTING

***TECHNOLOGY  
PRODUCTS  
for  
ZERO MANAGEMENT<sub>tm</sub>***



# PRODUCT EXAMPLES

## *ACTIVE BUSINESS KNOWLEDGE MODEL*

- **Inference Engines**
  - CBR CONTENT NAVIGATOR (INFERENCE CORPORATION)
  - KATE-CBR (ACKNOSOFT)
  - RE-SOLVER (MULTILOGIC)
- **Rules Databases**
  - AION (PLATINUM)
  - XPERT RULE (ATTAR SOFTWARE)
  - ACQUIRE (ACQUIRED INTELLIGENCE)
- **Process Databases**
  - TYPICALLY RELATIONAL
  - AVAILABLE WITH
    - » *PROCESS MODELING TOOLS*
    - » *PROCESS ENGINES*

# **PRODUCT EXAMPLES**

## ***MANAGEMENT INTERFACES***

- **Decision Capture & Management**
  - **VERY WEAK TODAY, BUT...**
    - » **DPL (APPLIED DECISION ANALYSIS)**
    - » **JUDGEMENT MAKER (FUZZY SYSTEMS ENGINEERING)**
    - » **ANALYTICA (LUMINA DECISION SYSTEMS)**
    - » **DECISION PRO (VANGUARD SOFTWARE)**
  - **KNOWLEDGE MANAGEMENT: KnowledgeX, IBM**

# **PRODUCT EXAMPLES**

## ***MANAGEMENT INTERFACES***

- **Executive Information Systems**
  - **HCT (PSOL)**
    - » **PROCESS DRIVEN VIEWING!**
  - **FOREST & TREES (PLATINUM)**
  - **ENTERPRISE SCORECARD (CORPORATE RENAISSANCE GROUP)**
  - **DYNACARD (GRAPHICAL INFORMATION)**
  - **GEMS (EXECUSYS)**
  - **EXECUTIVE INFORMATION SUPPORT SYSTEM (APPLIED MEDIA RESOURCES)**

# PRODUCT EXAMPLES

## *MANAGEMENT INTERFACES*

- **Process Modeling**

- **GRADE MODELER (INFOLOGISTIK GMBH & U. LATVIA)**
  - » *COMPREHENSIVE BP MODELING PRODUCT*
- **SIMPROCESS (CACI)**
  - » *EVENT DRIVEN & PROCESS HIERARCHIES*
  - » *EXTENSIVE SIMULATION*
- **PROCESSWISE WORKBENCH (TEAMWARE)**
- **PROCESS TEAM (CAYENNE)**
- **PROCESS MODEL (PROMODEL)**

# **PRODUCT EXAMPLES**

## ***ANALYSIS INTERFACES***

- **OLAP**
  - **ESSBASE (HYPERION)**
  - **DSS AGENT & SERVER (MICROSTRATEGY)**
- **Data Mining**
  - **DATA MIND (DATA MIND)**
  - **ENTERPRISE MODELING SERVER (BIOCOMP SYSTEMS)**
  - **INTELLIGENT MINER (IBM)**
  - **ANSWER TREE (SPSS)**
  - **BUSINESS MINER (BUSINESS OBJECTS)**
  - **DARWIN (THINKING MACHINES)**
  - **DECISION PRO (VANGUARD SOFTWARE)**

# **PRODUCT EXAMPLES**

## ***OPERATIONAL SYSTEM INTERFACES***

- **Process Engines**
  - CHANGENGINE (HEWLETT PACKARD)
  - MQ INTEGRATOR (IBM CORPORATION)
  - BUSINESSWARE PROCESS AUTOMATOR (VITRIA)
  - ENTERPRISE PROCESS EXECUTIVE (NEON)
  - PROCESS MANAGER (NETSCAPE)
- **Workflow Products**
  - FLOWMARK (IBM)
  - VISUAL WORKFLO (FILENET)
  - AWD (DST)
- **Other**
  - ACTIVATOR (PINE CONE SYSTEMS)

# PRODUCT EXAMPLES

## *OPERATIONAL SYSTEMS*

- **PACKAGED APPLICATION SOFTWARE**

- ERP: BAAN, ORACLE APPLICATIONS, PEOPLESOFT, SAP

- » *BAAN AND PEOPLESOFT ARE MORE PROCESS ENABLED*

- SFA: SEIBOLD, AURUM, APPLIX, MEHTA

- MARKETING AUTOMATION: SEIBOLD

- HELP DESK: APRIORI (PLATINUM)

- CALL CENTER: NET EFFECT (NET EFFECT)

- PURCHASING: DIGITAL BUYER (DIGITAL MARKET)

- **Operational Databases**

- IBM, INFORMIX, ORACLE, SYBASE, TANDEM

# PRODUCT EXAMPLES

## *OPERATIONAL SYSTEMS*

- **Application Integration Environments**
  - **AION DS (PLATINUM)**
    - » *RULES-BASED!*
  - **SAPPHIRE/WEB (BLUESTONE)**
    - » *PROCESS ENABLED*
  - **NEON (NEONSOFT)**
    - » *PROCESS ENABLED*
  - **NETSCAPE APPLICATION SERVER (NETSCAPE)**
  - **HAHTSITE (HAHT)**
  - **OBJECT BRIDGE (VISUAL EDGE)**



# **PRODUCT EXAMPLES**

## ***INFORMATIONAL SYSTEMS***

- **Data Movement**
  - PLATINUM (INFOHUB)
  - DATA PROPAGATOR (IBM)
  - REPLICATION SERVER (SYBASE)
- **Data Extract, Cleansing, and Transformation**
  - ETI\*EXTRACT (ETI)
  - VALITY
  - TAPESTRY (D2K)
- **Informational Databases**
  - THE USUAL SUSPECTS!
- **Data Marts and DS Applications**
  - DATA MART SOLUTION (SAGENT)
  - POWER MART (INFORMATICA)

# PRODUCT EXAMPLES

## ANALYSIS

- **OLAP**

- **ESSBASE (HYPERION)**
- **DSS AGENT & SERVER (MICROSTRATEGY)**
- **DECISION SUITE (INFORMATION ADVANTAGE)**

- **Data Mining**

- **INTELLIGENT MINER (IBM)**
- **DATA MIND (DATA MIND)**

# PRODUCT EXAMPLES

## ANALYSIS

- **Reporting and Visualization**
  - **BRIO QUERY (BRIO TECHNOLOGY)**
  - **BUSINESS OBJECTS (BUSINESS OBJECTS)**
  - **CRYSTAL REPORTS (SEAGATE SOFTWARE)**
  - **BBN/CORNERSTONE (BBN SOFTWARE)**
  - **DATA VISUALIZATION WORKSTATION (COMPUTER SCIENCE INNOVATIONS)**
  - **VISUAL INSIGHTS (LUCENT)**
  - **VISUALIZATION DATA EXPLORER (IBM)**

# *Conclusions*

# **ZERO MANAGEMENT<sup>tm</sup>**

## ***SOME ANTICIPATED PRODUCT EVOLUTION***

- **All Products**
  - BETTER PROCESS ENABLEMENT
  - EVENT TRIGGERED, RULES DRIVEN
- **Decision Capture and Management**
  - NEW TOOL CATEGORY
  - SUPPORT FOR “STRUCTURED” AND “UNSTRUCTURED”
  - FOCUSED ANALYSIS FUNCTIONALITY NEEDS DEVELOPMENT
- **Modeling**
  - INTEGRATION OF DECISIONS, RULES, AND PROCESS
  - MORE FOCUSED ON DECISION RULE DESIGN
  - ABILITY TO DRIVE PROCESS ENGINES

# **SUMMARY**

## **ZERO MANAGEMENT<sub>tm</sub> TECHNOLOGY**

- **Numerous Benefits**
  - **GIVES BUSINESS PROCESS CONTROL TO MANAGERS**
    - » ***FASTER REACTION and CYCLE TIMES***
  - **“UNLIMITED” OPPORTUNITY TO PROFIT FROM CHANGE**
    - » ***NEW LINES OF BUSINESS and VIRTUAL OFFERINGS***
    - » ***BUILD TO ORDER and PACKAGING BY SEGMENT***
  - **INDEPENDENT IMPLEMENTATION CONTROL TO I.T.**
    - » ***ADAPTABLE TO NEW APPLICATIONS AND PROCESSES INCREMENTALLY***
  - ***MORE EFFICIENT I.T. RESOURCE USE***
- **Commitments by Vendors and Consulting Firms**
- **Conference Coming in '99**

***STAY TUNED!***

***Questions?***

# BIOGRAPHY

David McGoveran is a well-known management and relational database consultant. He is president of Alternative Technologies (Boulder Creek, CA), specialists in solving difficult relational applications problems since 1981. He published The Database Product Evaluation Report Series; has authored several books with Chris Date; and is completing Zero Management: Business in the New Millenium. This seminar is based partially on his Client/Server University courses.



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

***Thank you!***