

# Seven Deadly Sins of ERP-MES Integration in the Paper Industry



PIMA IT Conference  
Vancouver, BC  
April 2003

# Presentation Objectives

- ✓ **Evaluate Large Project (ERP-MES) implementation & Integration**
- ✓ **Discuss the 7 Big Issues that companies face in this endeavor.**
- ✓ **Learn Something New (\$20 Guarantee).**

# Theory vs Reality

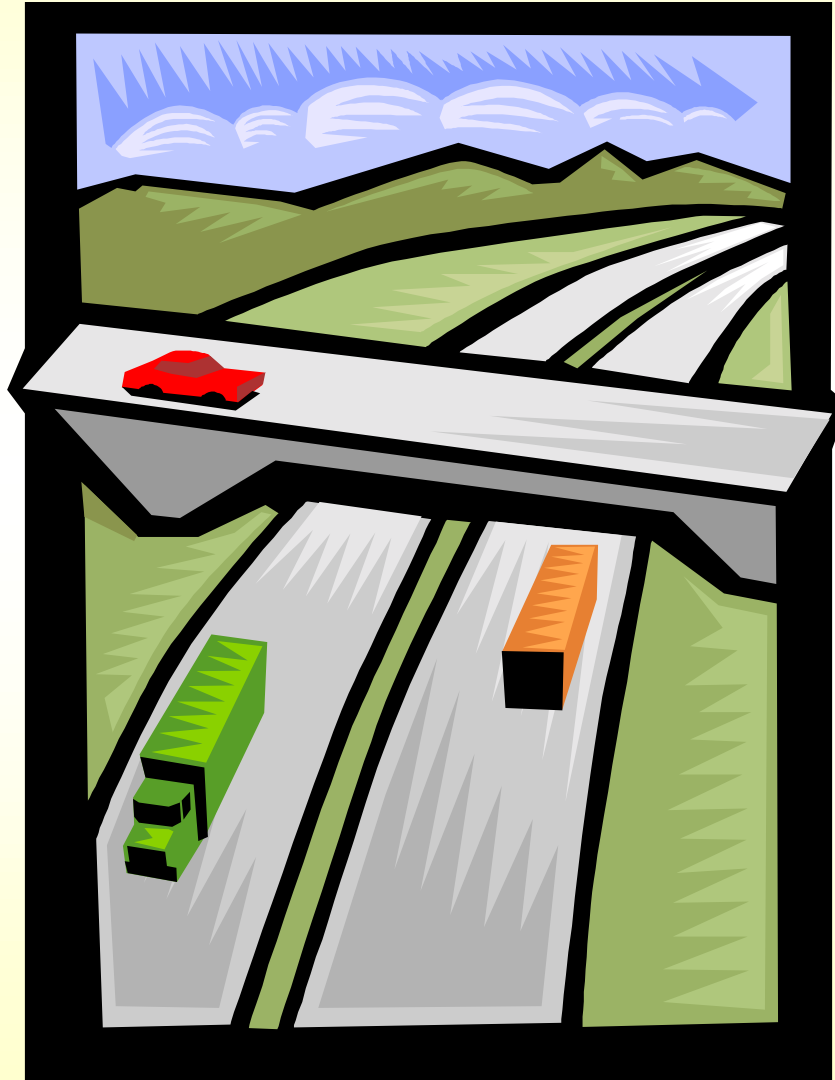
## Step 1: Set the Foundation

According to Webster:

**Theory** - *an ideal or hypothetical set of facts, principles, or circumstances.*

**Reality** - *a real event, entity, or state of affairs*

# Morning Commute Theory



# Morning Commute Reality



# TV Family Theory



**Ozzie &  
Harriet!**

# Reality TV Family



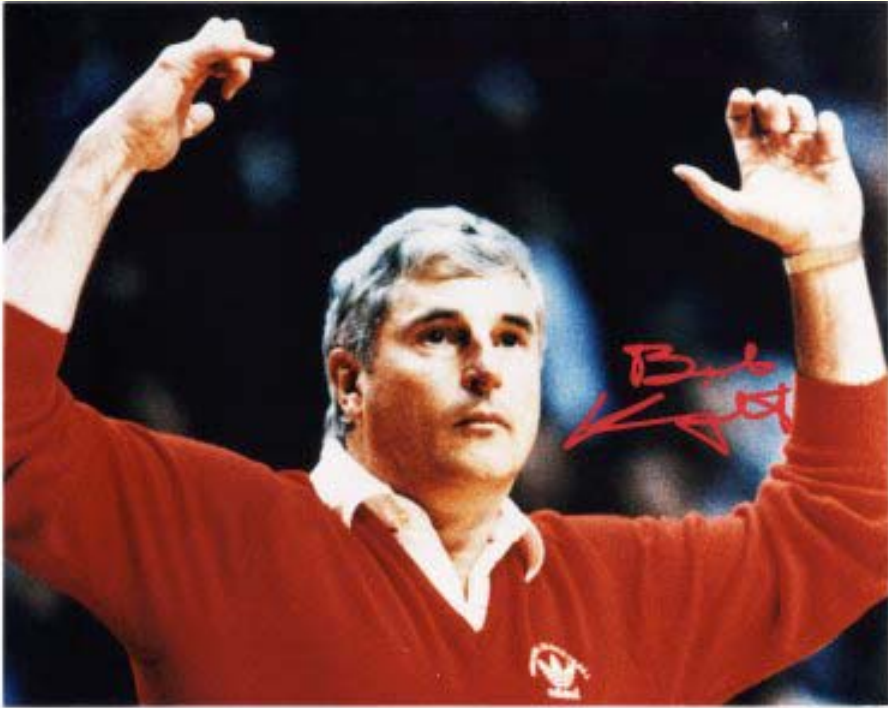
**Ozzie &  
Sharon?**

# *ERP Theory*



Our Prince, A  
Knight in Shining  
armor.

# *Alternative Reality*



A Knight?



A Prince (formerly). 9

# Reality!



## Set Realistic Expectations

# ERP Integration *Theory*



A Perfect Fit!

# ERP Integration Reality



- ✓ Some assembly required.
- ✓ Batteries not included.
- ✓ Objects in mirror are closer than they appear
- ✓ No Substitutions.
- ✓ Please allow 6-8 weeks for delivery.
- ✓ No Metal Spikes allowed.
- ✓ Map not drawn to scale.
- ✓ Not available in all states.
- ✓ Settling of contents may occur.
- ✓ Keep hands & arms inside the ride at all times
- ✓ Void where Prohibited.

**Set Realistic Expectations**

**What *drives* us to ERP?**

# Value-Add Motivator\$

- ✓ Need to Standardize the Processes
  - Within and Amongst Internal Businesses
  - With our Internal and External Customers
- ✓ Streamline Processes (Efficiency)
- ✓ Standardize Systems
- ✓ Ease of Use (Internally & Externally)
- ✓ Direct Benefit to the Bottom Line
  - Positive ROI
  - Increased Shareholder Return
  - Save Money *H.O.F.*



# Non Value-Add Motivators

- The Big Leagues are doing it. Its got to be good!
  - Eli Lilly, P&G, Ford, GM, GE, Hershey, Whirlpool
- Integrated System. (*Theory / Reality*)
- Publicity: Front Page of The Wall Street Journal!
- Latest Technology
- My IT Dept. thinks it's a **Good** Idea.
- My Integration Partner thinks it's a **Great** Idea.
- My ERP Vendor thinks it's a ***Fantastic*** Idea!

**Get Advice from Unbiased Sources**

# 7 Deadly Sins

**If they don't kill you ...**

**they will hurt a lot and cause a *really* nasty infection.**



## #7 - Denial that the Paper Industry is Unique.

**Fact:** ERP packages are SKU-based.

**Fact:** Primary & Secondary Scheduling is Unique & Complex

**Fact:** Paper Pricing algorithms are insane.

**Fact:** Grade codes are interchangeable.

**Fact:** 2<sup>nd</sup> Quality, Joblot production

**Fact:** Roll/Pallet ID's: Unique, Informative, **important.**

**Fact:** Quality & Genealogy are **very** important

**Fact:** WIP may be FG & FG may be WIP – it depends

## #7 - Denial that the Paper Industry is Unique.

**Fact:** Rolls can be coated, embossed, cutdown, built-up, trimmed, cut into multiple rolls, slabbed, grouped, bundled, wrapped, re-wrapped, sheeted, guillotined, reamed, boxed, grade-changed and broke as planned or 'Ad-Hoc' processes.

ERP Full-Suite Paper Industry Reference Sites  
are rarer than Hen's teeth.

# #6 Assume ERP can be Specific

- ERP Systems are GENERIC to the Paper Industry
  - MUST **significantly** modify the software
    - Release Upgrade Issues
    - Reoccurring Costs
    - Higher Internal Support Costs
  - Significant Fundamental Differences
    - Lot vs. Roll Number
    - Configurator to handle roll/skid attributes.
    - Data field limitations (roll, order, grade code)
    - Roll Genealogy
    - Primary & Secondary Scheduling Gaps (Bolt-Ons)
    - Roll / Skid Inventory Detail
- Paper Industry is a small ERP Customer
  - Biggest Return get the R&D dollars.
  - Biggest Return get programming priority.

**GOAL: As  
Vanilla As  
Possible!**

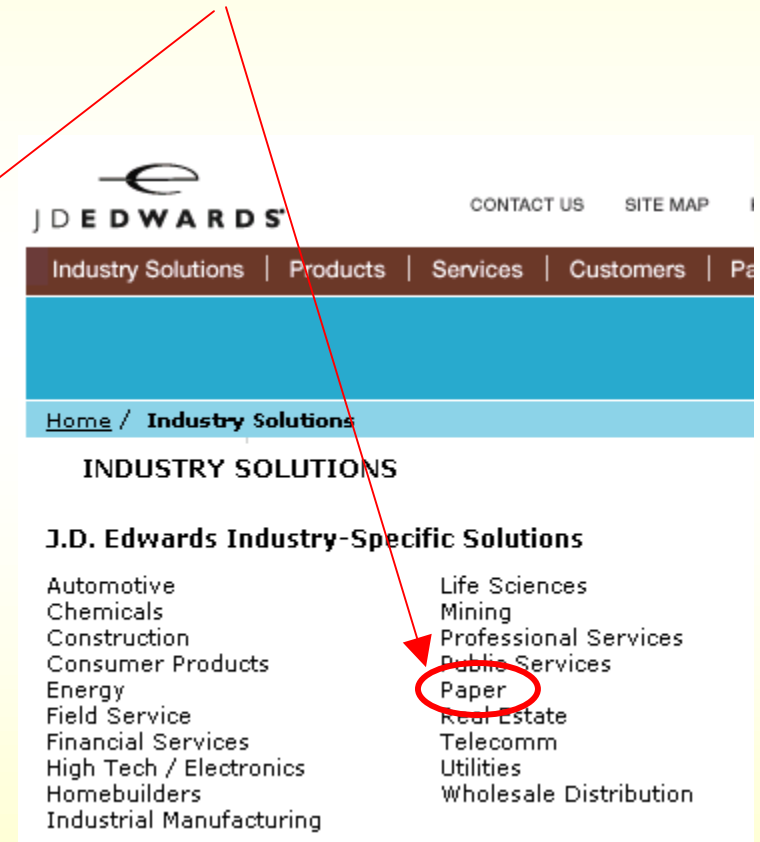
# Enterprise Software Industry Solutions



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mySAP Business Suite Industry Solutions

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- mySAP Higher Education & Research
- mySAP High Tech
- mySAP Industrial Machinery & Components
- mySAP Insurance
- mySAP Media
- mySAP Mill Products**
- mySAP Mining
- mySAP Oil & Gas
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- mySAP Public Sector
- mySAP Retail
- mySAP Service Providers
- mySAP Telecommunications
- mySAP Utilities



**J.D. EDWARDS** CONTACT US SITE MAP

Industry Solutions | Products | Services | Customers | Pa

Home / **Industry Solutions**

### INDUSTRY SOLUTIONS

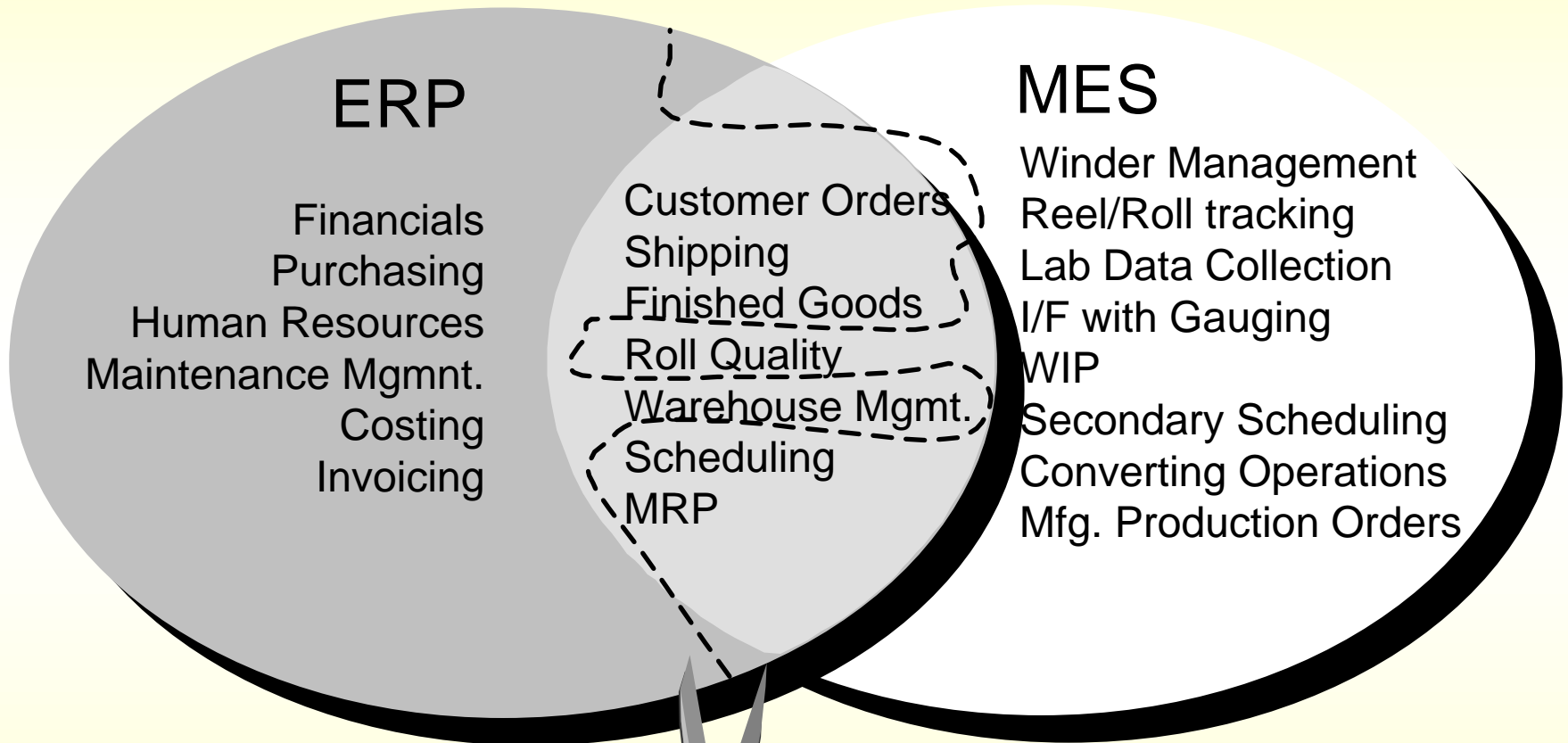
#### J.D. Edwards Industry-Specific Solutions

Automotive	Life Sciences
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Consumer Products	Public Services
Energy	<b>Paper</b>
Field Service	Real Estate
Financial Services	Telecomm
High Tech / Electronics	Utilities
Homebuilders	Wholesale Distribution
Industrial Manufacturing	

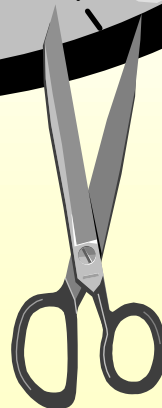
# #5: Choosing the System before defining the Process

- Step 1:** Define the problem - What are you trying to Fix?- Be Specific.
- Step 2:** Define the processes in significant detail to address the problem.
- Step 3:** Select the “functionally superior” system to address the process (Goal - *AVAP*).

# Where does Functionality Reside?



It Depends...



# ERP- MES Package Functionality Strategy A

**ERP:** Financials, HR, Order Entry, Planning, Secondary Scheduling, Materials, Inventory, Invoicing

**MES:** Production Tracking Only

**Highest Cost**

SAP Modifications

**Highest Risk**

**Lowest ROI**

Lack of Industry Specific Functionality

**Highest Cost of Ownership**

**Highest Negative Impact on Customer Satisfaction**

**Longest time to achieve benefit.**

**Summary – Most Time, Highest Cost, Lowest ROI**

# ERP - MES Package Functionality Strategy B

**ERP:** Financials, HR, Planning, Material Mgmt, Invoicing

**MES:** Vendor Package for Order Entry, Prod. Tracking, Inventory

## **Lowest Cost / Highest Functionality**

Integrated, Industry-Specific Functionality (Order Entry, Scheduling, Trim & ReTrim, Pulp Tracking)

## **Lowest Risk**

Proven Standard System, Proven SAP Interface, Solid Data Integrity

## **Highest ROI**

## **Lowest Cost of Ownership**

Added Industry Specific Functionality

Annual Upgrades

Headcount Reduction (Order Entry, Planning, etc)

## **Highest Positive Impact on Customer Satisfaction**

**Summary: Shortest Time, Least Cost, Highest ROI**

# #4 Underestimating Cost & Effort

- Real-life Paper Industry Examples
  - Standard Roll Label Format
  - Standard Roll Number
  - Enterprise-wide Inventory Management
- Underestimated – factor of 10
- Complication Factor Formulas
  - Effort** = (#Businesses \* #Facilities \* #Core Team Members)<sup>S</sup>  
S= # of systems modified, replaced or interfaced.
  - Cost** = [2.5(Initial Estimate) \* Relative Constant]

# #4 Underestimating Cost & Effort

Using the Relative Constant of a Gallon of Gasoline ....



This project's going to cost body parts.

# #3: The Unknown (aka Scope Creep)

- Peeling the Onion will make you cry.
  - Additional systems to interface
  - More processes to accommodate
  - Additional features to implement
  - Special customers to handle
  - Transition Period (half on – half off)
- How do you develop a common model?
  - Enterprise / Business / Department
- Where do you draw the line?

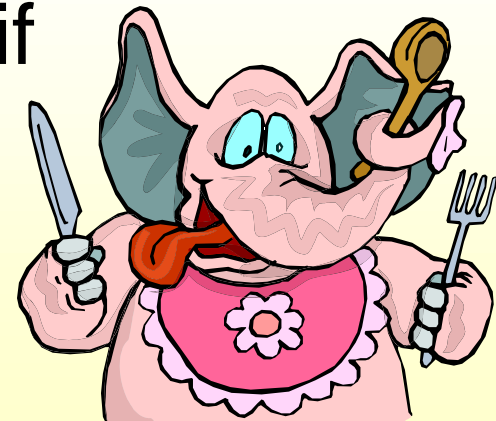


## #2: I.T. Owns the Project

- A Forest Products Company
  - Make money on Forest Products
  - Goal: World-Class Company
  - Goal: World-Class Customer Service (Amazon.com)
- Address Business Processes
  - Standardize & Streamline
  - The Customer is Majority Owner, Users are a Majority Owner, IT is a minority owner.
  - **Champion Cutsize JDE**: 85% of benefit *before* system implementation
- Business Owned with *Paper* Customers.

# #1: Vision too Broad

- Take DEAD Aim
  - Be Specific: *What are you trying to fix?*
  - Start with the End in Mind.
- Detail Design EARLY in the process.
- Pilot / Prototype / Plan the project
- Phase it! Eat the Elephant one Bite at a Time – Use Steak Sauce if necessary.
- Learn & Apply Knowledge



## In Summary

- ✓ Paper Industry is Unique. *Not* SKU-Based.
- ✓ ERP Systems are Generic
- ✓ Define the Process *then* Choose the System to handle the process
- ✓ Takes *Significant* Time & Money
- ✓ Define Project Scope Early. *Stick to it.*
- ✓ Business owns the project
- ✓ Take Dead Aim. Detail Design *Early*
- ✓ **Eat the Elephant one bite at a time**
- ✓ **Don't let the Elephant eat your lunch!**

# \$20 Guarantee: Learn Something New

- 40% of McDonald's profits: **Happy Meals**.
- Barbie Doll's full name: **Barbara Millicent Roberts**.
- 2/3 of the world's eggplant is grown in **New Jersey**
- The almond is a member of the **Peach** family
- The longest word that is typed with only the left hand **Stewardesses**
- Elephants: only land mammals that can't **jump**
- If Wal-Mart's \$2 billion in annual theft losses were incorporated as a business, it would rank No. **694** on the FORTUNE 1,000

# Questions, Comments, Discussion....

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