

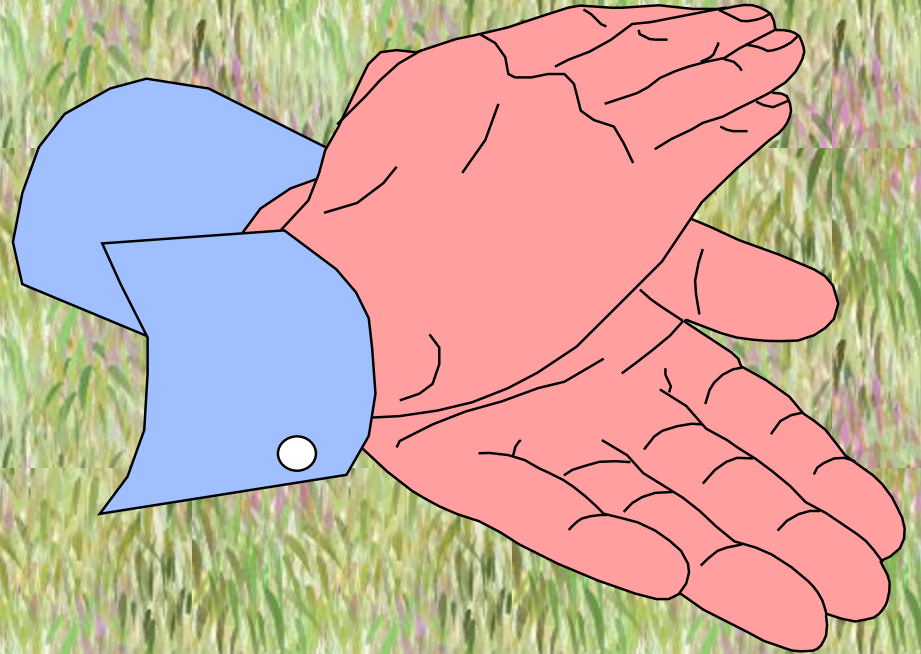
# BUSINESS - ORIENTED ENVIRONMENTAL MANAGEMENT

**Celso Foelkel**



# SIMPLIFICATION

- **THE SIMPLER**
- **THE BEST**



# **EMPOWERMENT OF OPERATORS**

- **# AVOID ROUTINE TASKS**
- **# WORK FOR RESULTS**
- **# AWARD SYSTEM**

# **EMPOWERMENT OF OPERATORS**

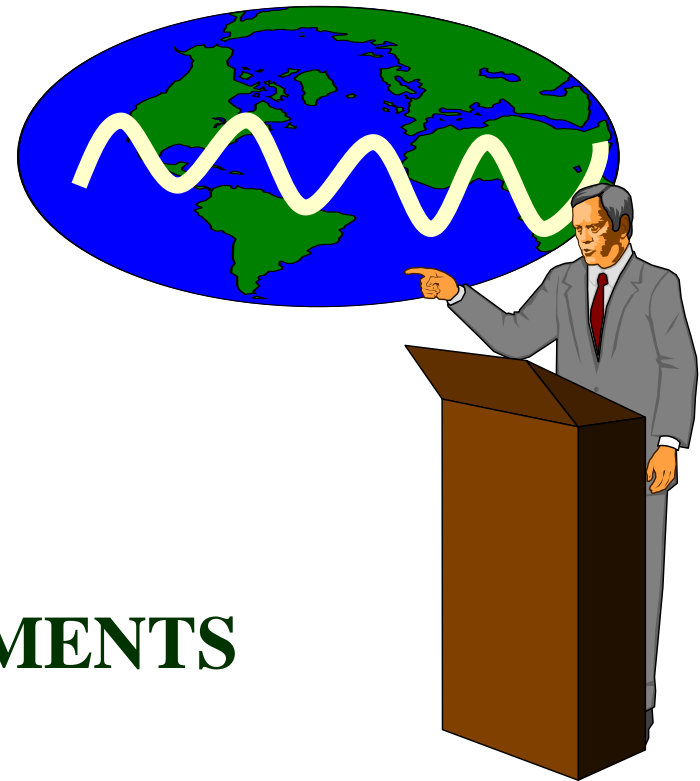
- **# PROCESS CONTROL LINKED**
- **# WIDE INTEGRATION**
- **# WHOLE MILL CONCEPT**
- **# AVOIDING DISTURBANCES IN PROCESS**

# **EMPOWERMENT OF OPERATORS**

- **# HIGHLY QUALIFIED PEOPLE**
- **# JOB ENLARGEMENT**
- **# MONITORS / ANALYSTS / PURCHASERS OF THE REQUIRED SERVICES**
- **# PRODUCTION ORIENTED & ENVIRONMENTALLY FRIENDLY**

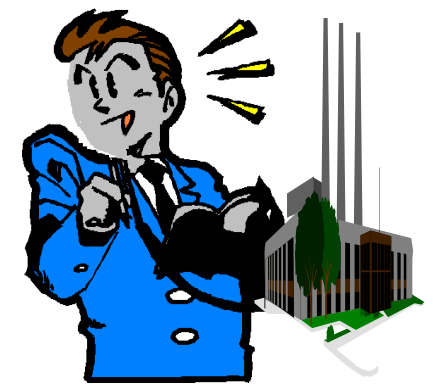
# MEGATRENDS

- ✓ **FRAGMENTED MARKET**
- ✓ **VOLATILE MARKET**
- ✓ **GLOBAL MARKETS**
- ✓ **COMMODITY PRODUCTS**
- ✓ **DECLINING PRICES**
- ✓ **LOW PROFITABILITY**
- ✓ **HIGH CAPITAL REQUIREMENTS**
- ✓ **SUSTAINABLE FORESTRY**



# MEGATRENDS

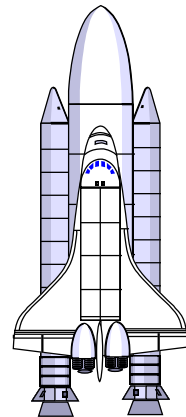
- ✓ **SCALE OF PRODUCTION**
- ✓ **CONSOLIDATION / MERGERS**
- ✓ **INFORMATION / INTEGRATION TECHNOLOGY**
- ✓ **ENVIRONMENTAL RESTRICTIONS**
- ✓ **ECO-FRIEND INDUSTRY**
- ✓ **SAFETY & OCCUPATIONAL HEALTH**
- ✓ **CLOSED SYSTEMS**



***“FEWER PLANTS / HIGHER CAPACITIES”***

# DRIVING FORCES

- **COMPETITIVENESS**
- **COST EFFECTIVENESS (CAPITAL / OPERATING)**
- **PRODUCTION STABILITY / FLEXIBILITY**
- **WISE UTILIZATION OF RESOURCES**
  - **MAN**
  - **WOOD**
  - **ENERGY / CHEMICALS**
  - **MACHINERY**
- **NEW MARKETS AVAILABILITY**





# **DRIVING FORCES**

- **PROVEN TECHNOLOGY**
- **DISTRIBUTION**
- **QUEST FOR SURVIVAL**
- **QUALITY STABILITY**
- **HUMAN RESOURCES (INTELLECTUAL CAPITAL)**
- **REDUCTION OF ALL WASTES AND BETTER USE OF RAW MATERIALS AND ENERGY**
- **PRODUCTIVITY**
- **MAINTENANCE**

# **MAINTENANCE & BETTER ENVIRONMENT**

- ⊗ AVAILABILITY (USE OF AVAILABLE MACHINERY)**
- ⊗ OPERATING EFFICIENCY**
- ⊗ HIGHLY EFFICIENT PROCESS**
- ⊗ RIGHT DESIGN**
- ⊗ OPERATING CONDITIONS**
- ⊗ EMPOWERMENT OF OPERATOR**
- ⊗ FOCUS ON PROBLEMS SOLVING**
- ⊗ FOCUS ON WASTE GENERATION**

**ALL THIS MEANS**

**FOCUS ON  
THE  
BUSINESS**

**EXCELLENCE**

**LIFE CYCLE COST**



**LOWEST COST**

**SIMPLIFICATION**





**THE NEW  
MANAGER' PROFILE**

# PROFITABILITY

MARKET POSITION

COMPETITIVE POSITION

PRODUCTION POSITION

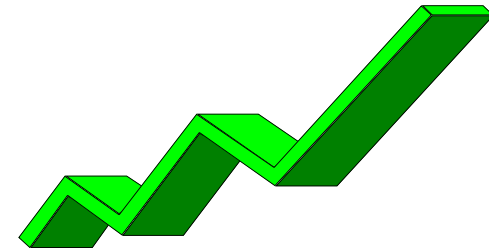




# MANAGEMENT TODAY

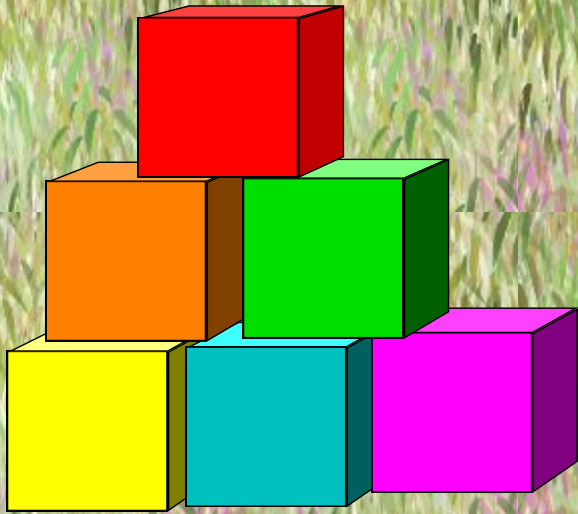
## *KEY PEOPLE TO GUARANTEE*

- **LOW COST**
- **HIGH PRODUCTION**
- **HIGH OPERATING PERFORMANCE**
- **HIGH QUALITY**
- **EXCELLENT ENVIRONMENT HEALTH**
- **SUCCESS IN THE BUSINESS**



A background image of a field of green grass with scattered purple flowers. The text is overlaid on this background.

MILLS HAVE TO RUN WELL AS  
MILLS HAVE TO RUN  
MUCH AS POSSIBLE



**PROCESS INDUSTRIES ARE  
PRODUCTION ORIENTED**

The image features three stacks of gold coins. One stack of two coins is positioned at the top left, another stack of two coins is at the top right, and a third stack of two coins is at the bottom center. The coins are rendered in a simple, cartoonish style with a yellow-gold color and a dark outline.

***COMMODITIES ARE  
LOW PRICE PRODUCTS***

# CASE STUDY #1

	<b>mill A</b>	<b>mill B</b>
DAILY CAPACITY (ton)	2000	2000
EFFICIENCY	90%	80%
DAILY PRODUCTION (ton)	1800	1600
YEAR PRODUCTION (ton)	655 000	565 000
VARIABLE COST / ton	200 US\$	200 US\$
FOB NET PRICE	550 US\$	550 US\$
SALES MARGIN	350	350
<b><i>DIFF ON TOTAL MARGIN</i></b>	<b><i>30 MILLION US\$</i></b>	

# CASE STUDY #1

	<b>mill A</b>	<b>mill B</b>
TOTAL FIXED COST (M US\$)	80	80
FIXED COST / ton	122	142

***DIFF FAVORING mill A***

***20 US\$ / ton***

# **INDICES OF PERFORMANCE**

**ADMINISTRATIVE**

**TECHNICAL**

**COST  
RELATED**

**BUSINESS PERFORMANCE**

# CASE STUDY #2

*600 000 ton/year*

## ***WASHER DRUM PERFORMANCE***

	<b>mill A</b>	<b>mill B</b>
OUTLET CONSISTENCY	14%	11%
COD CONCENTRATION (PPM)	1500	1500
COD LOSSES (kg/ton)	9.2	12.1
<b>DIFF ACTIVE CHLORINE / YEAR</b>	<b>900 ton</b>	



# CASE STUDY #3

## *WOOD CHIPPERS / SCREENING PERFORMANCE*

	<b>mill A</b>	<b>mill B</b>
SAWDUST DISCARDED	0.8%	1.5%
SAWDUST / YEAR	9,600	18,000
<b>DIFF IN SAWDUST</b>	<b>8,400 ton</b>	
<b>DIFF IN EQUIVALENT PULP</b>	<b>4,200 ton</b>	



**ALL SAVED CENT  
TURNS IN A HUGE FIGURE  
IN THE  
YEARLY BASIS**

**FOCUS ON BUSINESS PERFORMANCE**

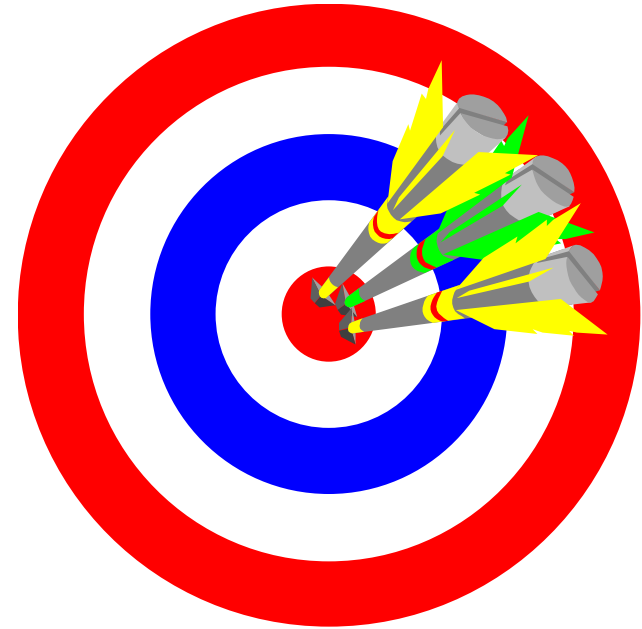
**NOT  
ON**

**CUTTING COSTS UNTIL SEEING  
WHAT RESULTS**

**OR  
WHAT LASTS!**

# MANAGEMENT TEAM

- **OPERATION**
- **ENGINEERING**
- **MAINTENANCE**
- **R & D**
- **SALES / PURCHASING**
- **ACCOUNTING**
- **ENVIRONMENT**



# **MANAGEMENT TEAM**

**IS TO ACT**

**AS A TEAM**

**AS ENTREPRENEURS**

**AS PEOPLE MOTIVATOR**

**MONEY IS NOT  
A GIFT PROVIDED  
BY THE TOP  
MANAGEMENT TO  
BUY A NEW “TOY”**



**MONEY IS SPENT TO HAVE A RETURN**

**BUSINESS SUCCESS DEPEND ON THIS**

**GOOD LUCK**

