



# *Asset Management in the Boardroom*

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# Financial Impact

- 2005 Direct Cost for R&M = \$200B USD
- 20% of the USA Annual GDP of \$12.5T = ~\$2.5T
- 60% of maintenance programs are reactive
- Poor Asset and R&M practices = Poor Investment



# Top Ten Economies 2005 GDP

1. United States: \$12.5T
2. Japan: \$4.5T
3. Germany: \$2.8T
4. China: \$2.2T
5. United Kingdom: \$2.2T
6. France: \$2.1T
7. Italy: \$1.7T
8. Spain: \$1.1T
9. Canada: \$1.1T
10. Brazil: \$0.8T



USA Lost Opportunity is greater  
Than all of the annual GDP's of  
All global economies other than  
The top three!!!

# Controlling Business Costs

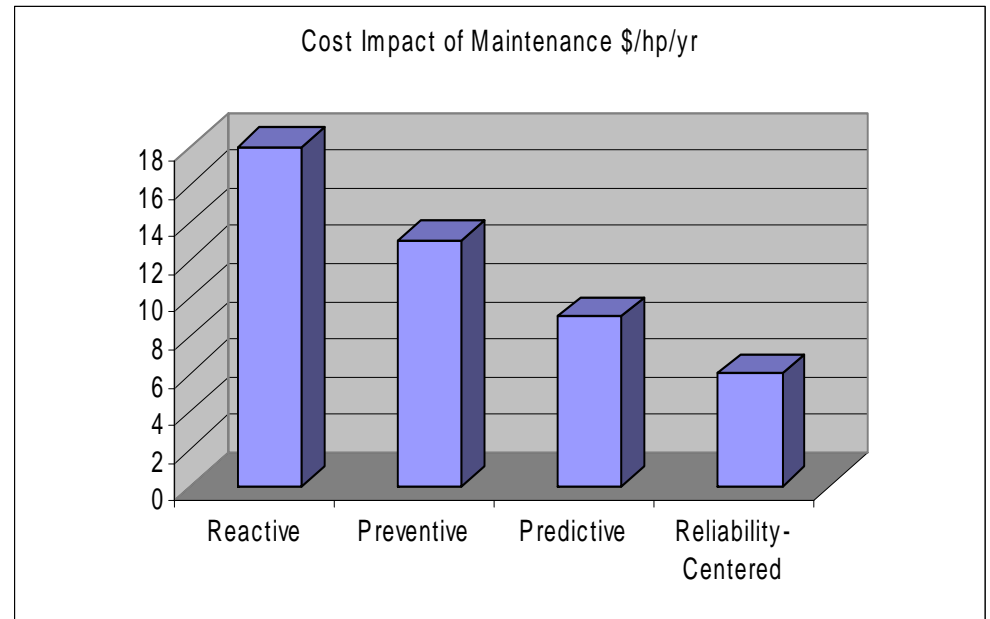
- Common Strategies from 1980's:
  - Slash and Burn
  - Eliyahu Goldratt: If you say you have reduced costs, show me where you have eliminated a job.
  - General Electric: Eliminate everything not core business and remove bottom 10% every year.



TOC Improvement Concepts:  
-Improve Throughput  
-Improve Inventory  
-Improve Costs

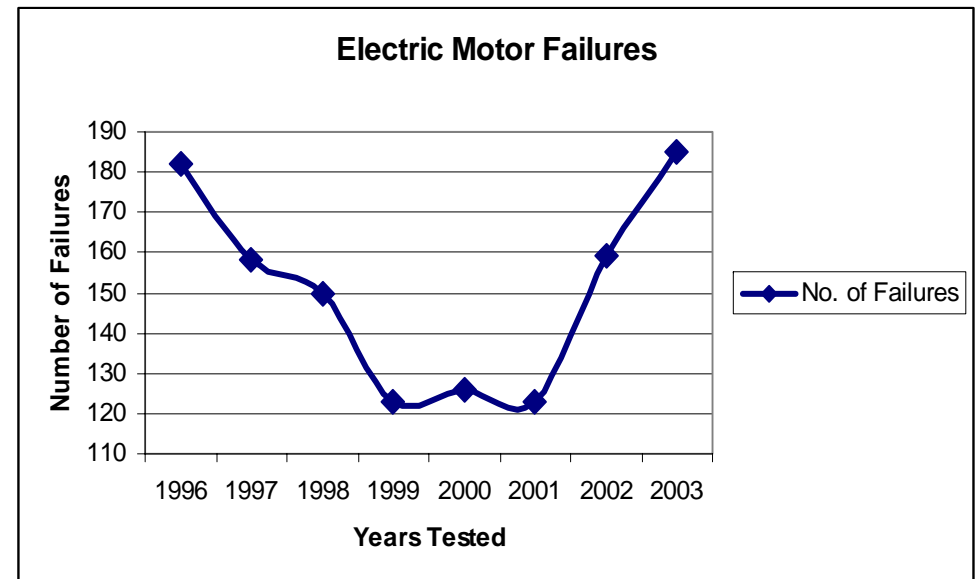
# Least Understood

- Reliability & Maintenance
  - Programs of the month
  - Hero Maintenance
- Asset Management
  - Most for Least
  - Short Term Vision
  - ‘Magic Numbers’
- The two are tied

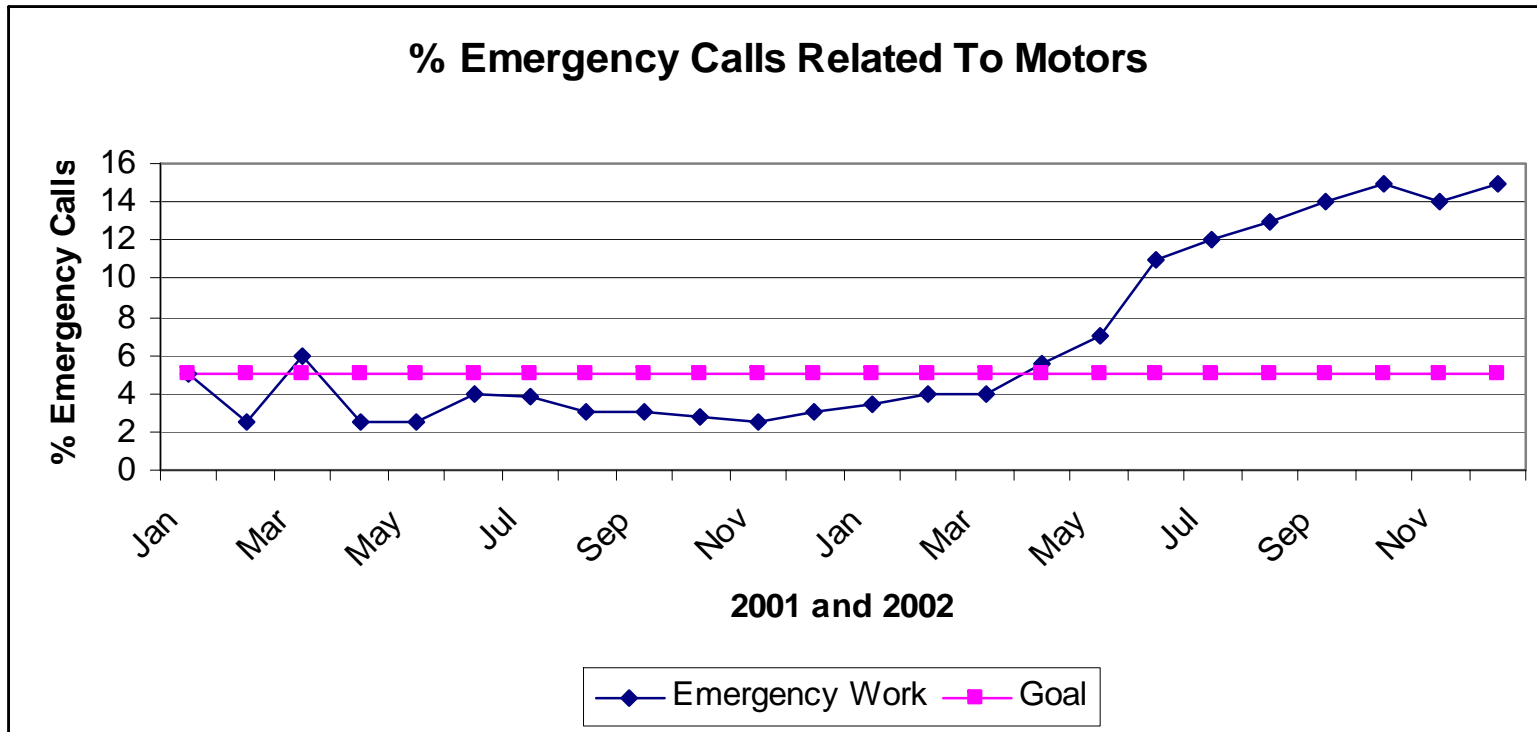


# R&M Program Lag Times

- Repairs dropped over 33% while production remained constant
- Improvement in equipment availability
- Direct reduction in emergency work orders by over 66%
- Reduction in maintenance overtime costs and higher rate of completed PM's
- Severity of remaining repairs reduced



# Additional Impacts



Successful program stopped in 2001



# Asset Management Defined

- Getting the best return on investment
- Business philosophy for managing infrastructure life-cycle to achieve a desired service level with least risk. It encompasses all components of the business including: Physical infrastructure; data and information; company image; people; and, other company defined assets.
- Asset (Dictionary): 1a. The property of a deceased person subject by law to the payment of his or her debts and legacies b. the entire property of a person, association, corporation or estate applicable or subject to the payment of debts; 2. Advantage, resource; 3a. An item of value owned b. the items on a balance sheet showing the book value of property owned; 4. Something useful in an effort to foil or defeat an enemy: as a. a piece of military equipment b. spy.

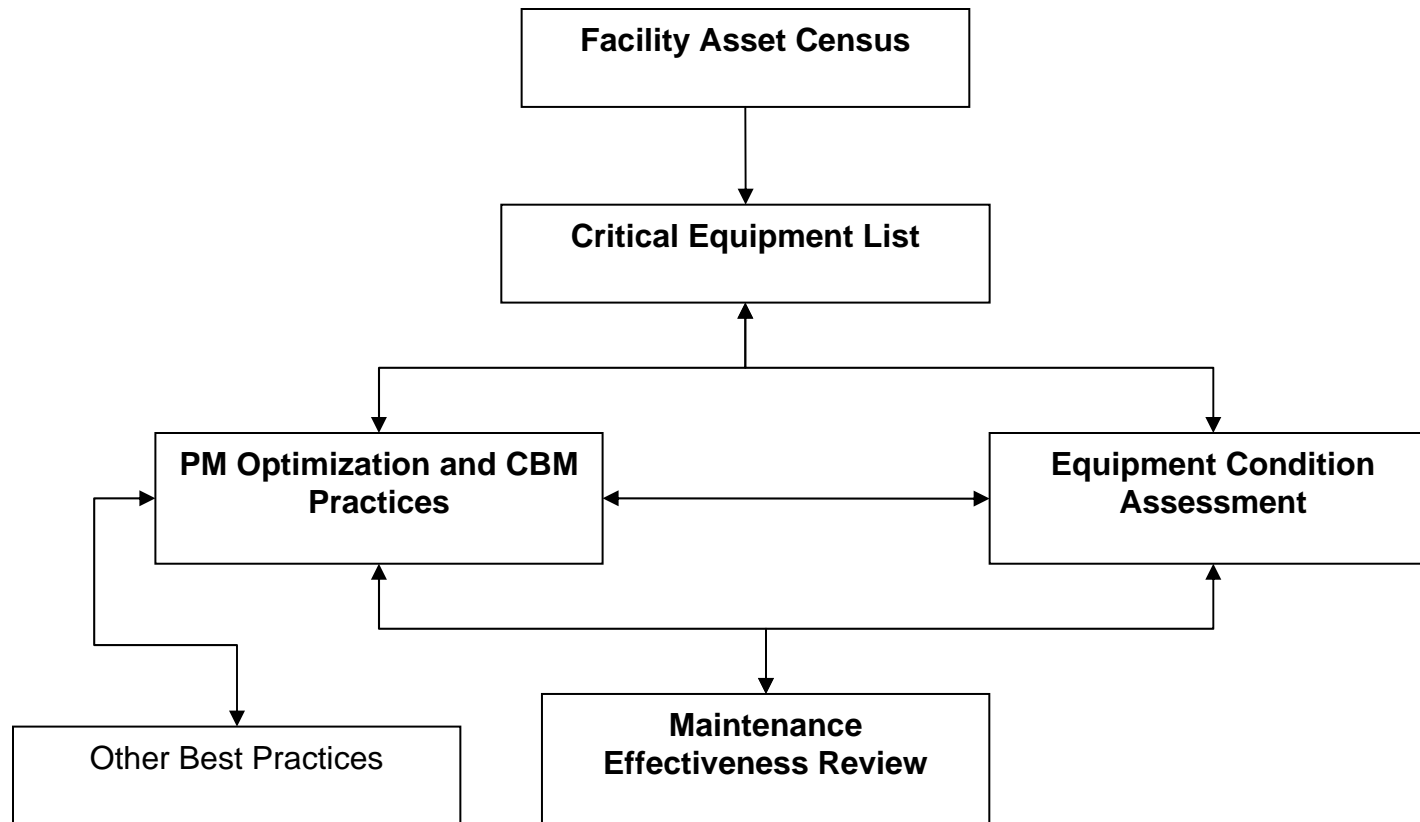


# People

- While people are not property, there is an investment in their training, tools and general knowledge that make them an asset to the company.
- Maintaining this asset can be more important than the facility or machinery.



# Where to Start?



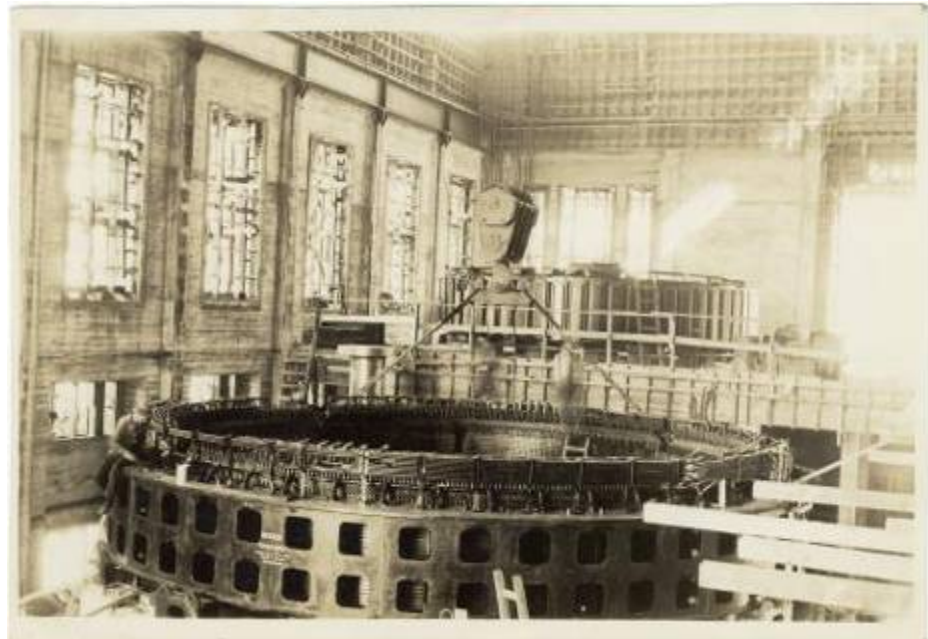
# Asset Census

- Identification of assets
- Most companies do not know what they own or have available
  - People
  - Property
  - Equipment
  - Information
  - Other Resources
  - Reputation



# Critical Equipment List

- Personnel Safety
- Regulatory
- Production
- Cost
- Other company priorities



# Maintenance Process

- Maintenance Process Selection
  - PM Optimization
  - CBM Processes
  - Other tools
- Condition Assessment
  - Licenses and agreements
  - Success rate on maintenance
  - General conditions
- Maintenance Effectiveness Review



# Other Best Practices

- Benchmarking
- Knowledge Capture
- Uniform Practices
- Process and Maintenance Improvements



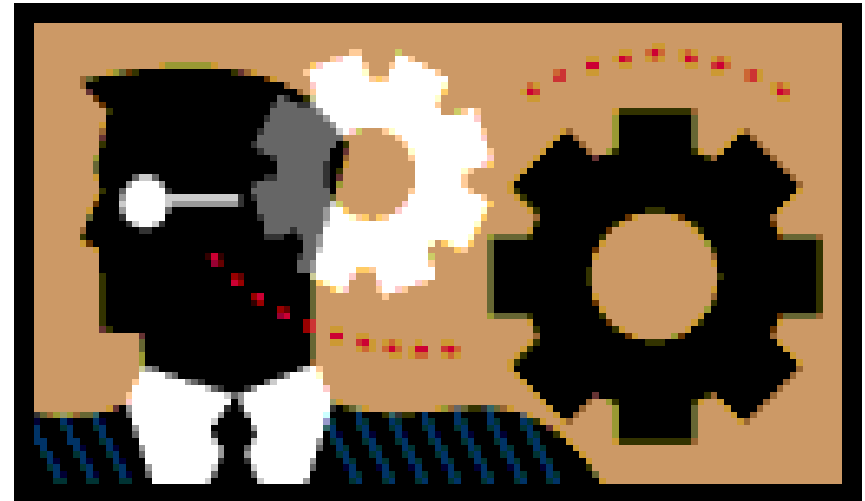
# Impact the Boardroom

- WIIFM
  - Investors
  - Customers/Clients
- Impacts
  - Throughput
  - Inventories
  - Costs
  - Other



# Other Business Impacts

- Reduced operating costs
- Reduced inventory
- Breaking bottlenecks
- Reducing overtime
- Profitability
- Throughput
- JIT Delivery



***BUT STILL***





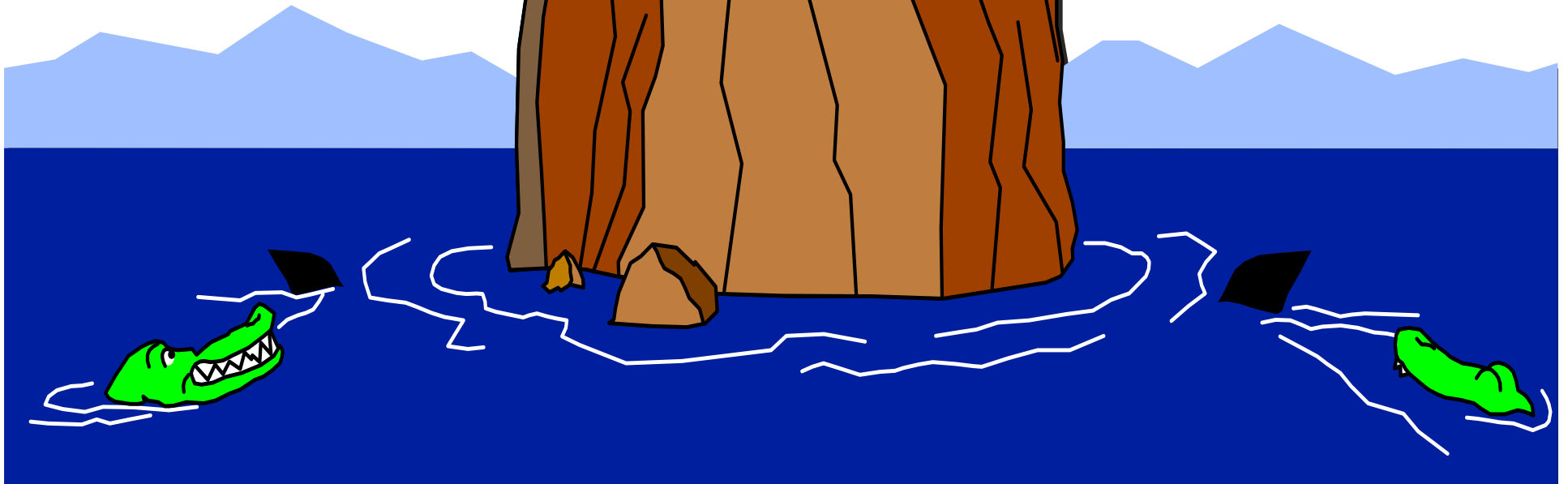
# ***Failures Happen***

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**Asset Management is**

**A Balancing Act**





## Asset Management Plan (Change from Reactive)

- Reduction in Maintenance Costs of 24-30%
- Elimination of Breakdowns by 70-75%
- Reduction in Downtime of 35-40%
- Increase in Throughput of 20-25%
- Reduction of PM's by 33-66%
- Man-Hour Utilization Improvements of 40-50%



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