

The Business Case for Process Safety

New Industry Study Shows Four Benefits:

- Corporate Responsibility
- Business Flexibility
- Risk Reduction
- Sustained Value



“We have seen process safety benefit our business in ways we had not anticipated. We need to share this message with others.”

Arnold Allemang
Vice President, Global Manufacturing
The Dow Chemical Company



Introduction

- A benchmark study of CCPS member companies provides conclusive evidence that process safety provides benefits essential to your business:
- Two qualitative benefits
 - You can see them in the way the public, your shareholders, government bodies, and your customers relate to your company
- Two quantitative benefits
 - These have measurable impact in terms of your bottom line and company performance

All four benefits combine to support the profitability, safety performance, quality, and environmental responsibility of your business

Two Qualitative Benefits

- **Corporate Responsibility**
 - Image, reputation, and brand
- **Business Flexibility**
 - License to operate
 - Increased business options



Two Quantitative Benefits

■ Risk Reduction

- Process safety prevents human injury
- Process safety avoids significant losses and environmental damage

■ Sustained Value

- Process safety helps boosts productivity
- It helps produce high quality products, on time, and at lower cost
- It contributes to shareholder value



What is Process Safety?

- A management system to help prevent major incidents
- Essential for managing complex chemical operations
- Process Safety focuses on:
 - Technology
 - Facilities
 - Personnel



Corporate Responsibility

- An effective process safety program displays sustained corporate responsibility
- It helps you:
 - Fulfill your obligation to protect employees and the community
 - Enhance customer and supplier relationships
 - Comply with regulations
 - Conform to industry standards worldwide



Corporate Responsibility

Process Safety:

- Protects reputation and shareholder value
- Creates lower risk perception by investors
- Increases value of corporate image and brand
- Reduces concerns within the local community
- Engages employees - morale, loyalty, retention
- Helps assure insurance coverage at attractive rates
- Enhances lenders' confidence
- Helps regulators understand your facility



Business Flexibility

- A company's freedom to operate can be severely compromised due to an accident
 - regulatory scrutiny
 - legal complications
 - intervention by directors when key stakeholders sense increased risk
 - community discontent
- Process Safety is how accidents are avoided

Business Flexibility

- Proves your worthiness to hold a license to operate
- Strengthens and maintains good relationships with the local community
- Helps investors feel confident in your ability to grow and earn profits
- Helps you attract and retain high performance staff
- Helps you obtain approval for expansion permits or new facilities more quickly
- Strengthens and maintains good relationships with regulators

Risk Reduction

- *A robust process safety program will help your company reduce risk and avoid loss*
 - Save lives and reduce injuries
 - Reduce property damage costs
 - Reduce business interruptions
 - Protect market share
 - Reduce litigation costs
 - Reduce regulatory penalties from accidents
 - Reduce regulatory attention



Risk Reduction

Benefits to your company

- Significant reductions in injury rates
 - One company reduced injuries and fatalities resulting from major incidents by 50%
 - This saved \$5 million/year in losses
 - Additional savings of \$3 million/year in worker's comp costs
- Incidents cause operational interruptions
- Incidents divert management's attention from long-term business planning



Risk Reduction

- *Effective process safety programs provide industry-wide benefits*
 - What happens at your plant in Beijing can affect your plants in Brussels or Baton Rouge
 - An incident at an unrelated company negatively affects the public's perception of the entire industry
 - An incident at a raw material can keep you from meeting obligations to your customers



Sustained Value

- *Companies in this study reported significant direct cost benefits of up to:*
 - 5% increases in productivity
 - 3% reduction in production costs
 - 5% reduction in maintenance costs
 - 1% reduction in capital budget
 - 20% reduction in insurance costs



Sustained Value

- *Process Safety helps increase productivity:*
 - Increased process and equipment reliability from mechanical integrity programs
 - User-friendly, accurate operating procedures
 - Improved team effectiveness through employee training
 - Employee ownership of the systems
 - Enhanced troubleshooting capabilities
 - Extended intervals between major turnarounds
 - Decreased turnaround time for major turnarounds and minor repairs



Sustained Value

- *Production costs are reduced through*
 - Improvement in yields
 - Lower costs for material rework (quality)
 - Lower costs for waste stream disposal
 - Prevention of hazards and operability issues before they occur
 - More efficient staffing requiring less supervision
 - Engaged employees participating in continuous improvement



Sustained Value

- *Maintenance costs are reduced through*
 - Effective equipment maintenance procedures
 - Contractor safety programs
 - Repairing or replacing critical equipment before it fails
 - Avoiding unplanned shutdowns
 - Lower maintenance turnaround costs
 - Thorough periodic inspection



Sustained Value

- *Capital budgets are reduced through*
 - Inherently safer process designs that begin in the conceptual phase
 - Process hazard analyses for new projects and facilities
 - Lower capital expenditures because project teams have up-to-date process safety information

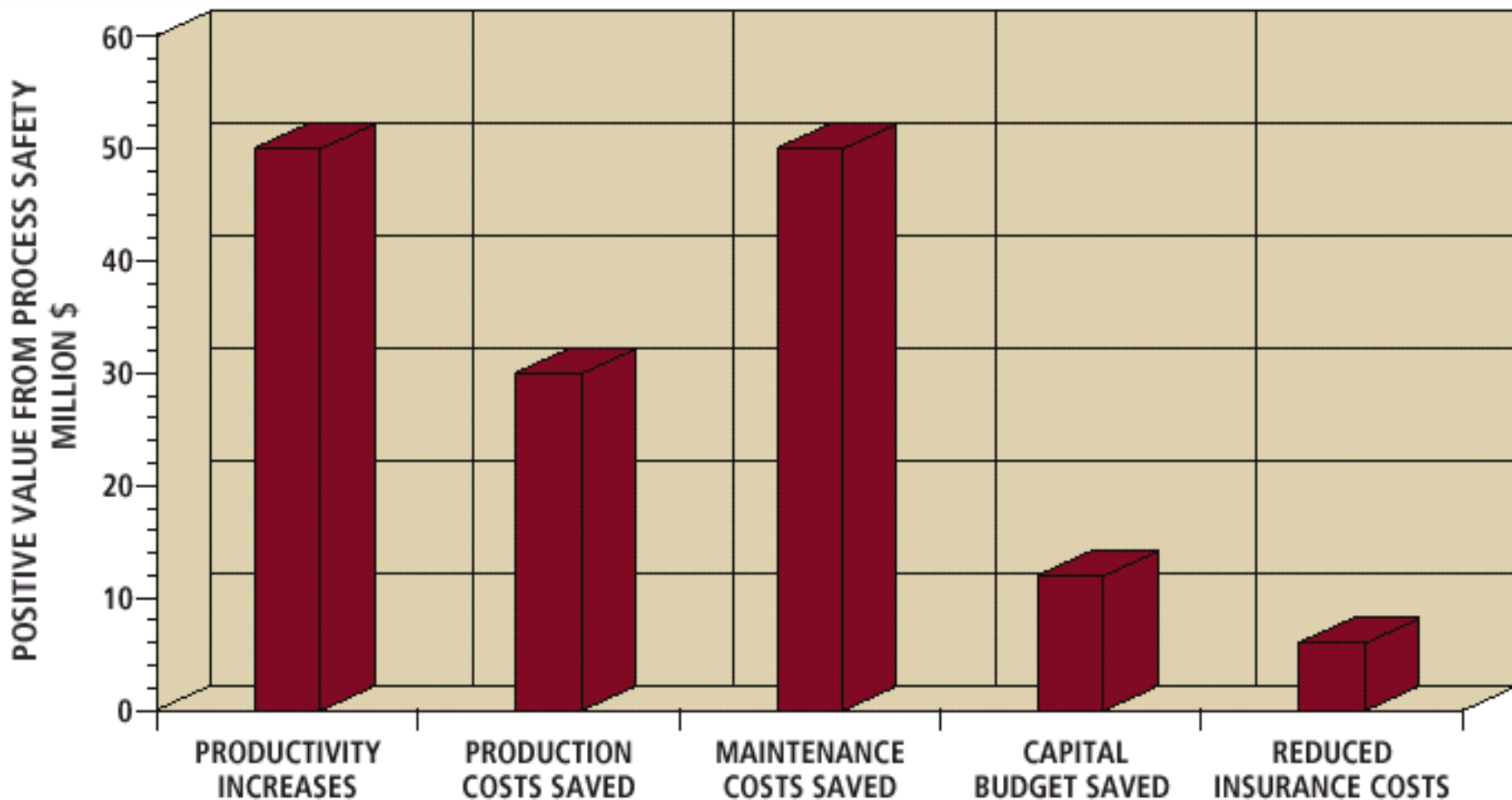


Sustained Value

- *Insurance costs are reduced through*
 - Effective emergency planning and response
 - Reporting and investigation of “near misses” to identify potential problems early
 - Thorough incident reporting and investigation programs to prevent incidents from being repeated
 - Lower casualty insurance premiums



Sustained Value Data



Source 2001 CCPS Workshop

What Process Safety Can Do

- *Process safety supports and underpins other management systems*
- *One of the most robust*
 - Responsible Care®
 - Quality
 - Environmental compliance
 - Worker health and safety
- *Combine process safety management with other systems to increase efficiency*



Business Case Summary

A robust process safety program enhances your business four ways...

1. Displays your company's high level of corporate and social responsibility
2. Gives your company the freedom to manage your business
3. Helps your company manage risk and prevent major losses
4. Creates sustained value for your company and shareholders



The Path Forward

REALIZE THE BENEFITS: Seven key steps

1. Assign personnel who will be accountable
2. Adopt a personalized company philosophy of process safety
3. Learn more about process safety
4. Take advantage of the strong synergy process safety has with your other business drivers
5. Set achievable process safety goals
6. Track your performance
7. Revisit your process safety program



CCPS Support

- Contact CCPS to find out about:
 - How your company can become a CCPS sponsor
 - Our process safety books
 - Regular networking and conference opportunities
 - Effective training resources
 - Peer input to help you build or upgrade your process safety program
 - Participation in projects that expand our industry's capabilities in Process Safety
 - Visit www.aiche.org/ccps for more information

