



Managing the Regulatory Maze: Tips to Manage Environmental Health and Safety Issues for Small to Midsize Manufacturers

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Webinar Logistics

Session Format

- All participants are muted
- 45-minute presentation
- 15-minute Q&A session
 - Use the Questions box on your sidebar to submit questions
 - We'll respond to as many questions as we can in the Q&A session so we can end on time!
- Web/Phone Conference Issues or Concerns
 - If you are having difficulty seeing/hearing the presentation, please submit your questions using the Chat box
- **Presentation materials will be sent to all attendees after the session**

About BSI EHS Services & Solutions

History

- Founded in 1990 by Environmental, Health and Safety (EHS) managers to offer comprehensive EHS management and technical consulting services to the high tech industry
- In late 90s, successfully diversified our client base into multiple regional and vertical markets across the US and beyond

Today

- An integral part of British Standards Institute (BSI), an international management systems certification organization
- 400 employees supporting hundreds of customers from 10 offices in US; HQ in San Jose, CA
- Multidisciplinary EH&S and Sustainability consulting team
- Well established partners allow for cost-effective and highly responsive international support
- ISO 14001 and OHSAS 18001 Certified

About the Pacific Northwest Defense Coalition

- The Pacific Northwest Defense Coalition (PNDC) is the association for Northwest defense and security industry businesses. PNDC focuses on strengthening our members' business growth, our region's economy, and our nation's security through training, one-on-one counseling, business-to-business networking, and advocacy.
- [1-888-701-PNDC](tel:1-888-701-PNDC) (7632)/ info@pndc.us



Our Presenter

Dave R. Meyer

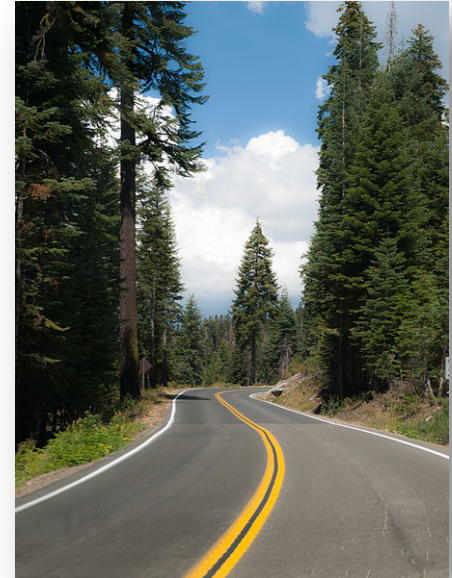
- Senior EHS & Sustainability Consultant
- 35 years in strategic planning, implementation & management of environmental, health and safety issues for small to global-sized manufacturing businesses, strategic improvement & sustainability programs across many industry sectors
- Holds a Masters Degree from University of Denver
- Contact Info: david.meyer@bsigroup.com



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Agenda

- ✓ Framing the Issue & EH&S Drivers
- ✓ Regulatory Framework
- ✓ Typical EH&S Issues
- ✓ Taking a Systems Approach to EH&S



Universe of EH&S Related Regulations



Overview – What Issues Are Regulated?

- Discharges from processes
 - Wastewater, stormwater, sediment (Clean Water Act)
 - Dust, odors, air pollutants (Clean Air Act)
- Waste generated
 - Hazardous waste, solid waste (RCRA/SWDA)
- Storage and handling of hazardous materials
- Storage and management of oil, fuel, and other petroleum products
- Worker health and safety (OSHA)

What is Happening Out There? Environmental Challenges

- Context
 - Growing public concern
 - Customer-driven mandates/product preferences
 - Increased demand for transparency
 - Environmental mandates in regulations (restricted materials)
 - Responsible Care provisions/safe transport
 - Increasing availability of greener products and services



Common Hazards in the Workplace

Top 10 most frequently cited OSHA standards violated in FY2015

- Fall protection, construction
- Hazard communication standard, general industry
- Scaffolding, general requirements, construction
- Respiratory protection, general industry
- Control of hazardous energy (lockout/tagout), general industry
- Powered industrial trucks, general industry
- Ladders, construction
- Electrical, wiring methods, components and equipment, general industry
- Machinery and machine guarding, general requirements
- Electrical systems design, general requirements, general industry

In 2011, there were 18,691 accepted disabling claims in Oregon; \$334 million was paid for workers' compensation medical services



The Cost of an Accident

Direct – Insured Costs

Indirect – Uninsured, Hidden Costs – Out of Pocket

Examples:

1. Time lost from work by injured employee
2. Lost time by fellow employees
3. Loss of efficiency due to break-up of crew
4. Lost time by supervisor
5. Training costs for new/replacement workers
6. Damage to tools and equipment
7. Time damaged equipment is out of service
8. Loss of production for remainder of the day
9. Damage from accident: fire, water, chemical, explosives, etc.
10. Failure to fill orders/meet deadlines
11. Overhead costs while work was disrupted
12. Other miscellaneous costs

Unknown Costs –

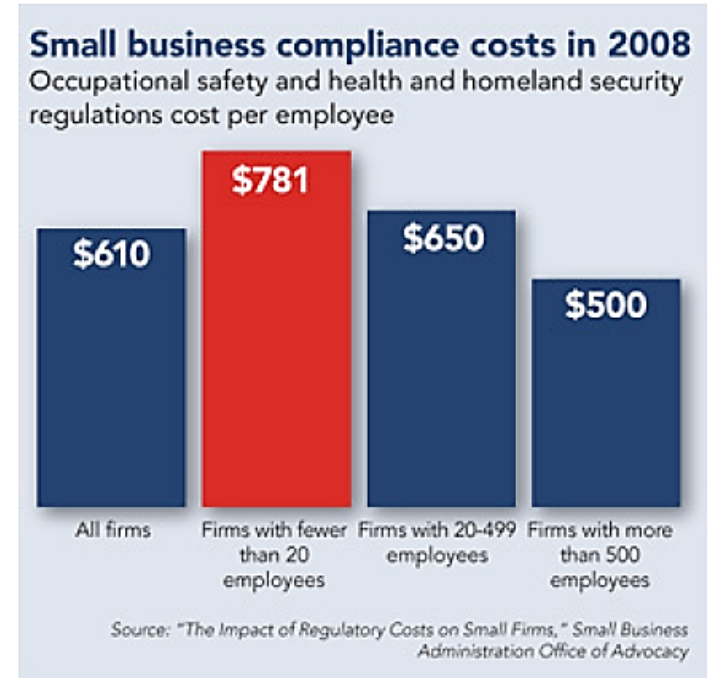
1. Human tragedy
2. Morale
3. Reputation

"Just the tip of the iceberg"



Small Business EHS Challenges Persist

- RAND Corporation Findings:
 - The average single location firm with fewer than 20 employees had a rate of 3.4 fatalities per 100,000 workers
 - Sites with fewer than 20 workers that were part of a larger firm of 20-50 employees had a rate more than 6 times higher: 21.7
 - For a small firm w/ multiple locations, resources can thin out and it can be harder to ensure safety at each worksite



Why Be Concerned with EHS?



Effective EHS management is good business

- Right thing to do...
 - Employee morale/protection of most valuable resource
 - Control costs (direct and indirect)
- EHS excellence correlates with business excellence (quality, efficiency, profitability)

Injury Pyramid

Look at how much impact we can make by being proactive!

Reactive



Proactive



Source: 2003, Conoco Phillips Marine

EHS Management Add Value by:

- Reducing health care costs
- Reducing environmental impacts
- Improving productivity
- Increasing efficiency
- Improving product/service quality
- Enhancing morale
- Strengthening company image
- Aiding competitiveness



Common Workplace Environmental Impacts and H&S Risks

Environmental

- Hazardous Chemicals
- Hazardous & Solid Waste
- Biological/Medical Waste
- Air Emissions
- Radiation
- Stormwater/ Wastewater
- Energy Use
- Water Use

Health and Safety

- Employee Exposures (IH)
- Blood-borne Pathogens
- Electrical Hazards
- Mechanical Hazards
- Slip/Fall Hazards
- Ergonomics
- Confined Space Impacts

Critical EHS Programs: Health and Safety

- Personal Protective Equipment
- Hot Work Permit Program
- Confined Space
- Electrical Safety Program
- Lock Out Tag Out (LOTO)
- Ladder Safety Program
- Working at Heights
- Bloodborne Pathogens
- Respiratory Protection
- Hearing Conservation
- Powered Industrial Trucks Program
- Radiation/Laser Safety Program
- Ergonomics Program
- Chemical Hygiene/Chemical Safety



Critical EHS Programs: Environmental

- Air Emission Management Program
- Waste Management Program
- Industrial Wastewater Management
- Stormwater Management
- Spill Prevention and Accident Prevention Program
- Process Safety (High Hazard Chemicals)
- Emergency Preparedness & Response Program



Why Seek EH&S Excellence?

- Achieving EH&S excellence contributes to profitability and benefits employees and communities
- EH&S excellence is the result of effective Management Systems
- EH&S is an investment with a strong return

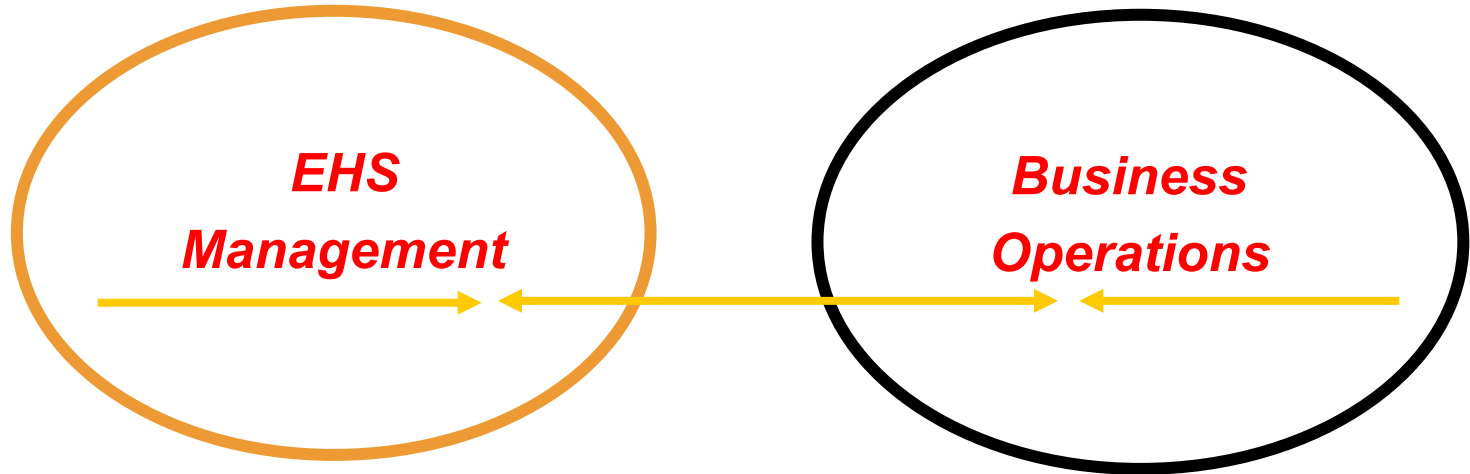
**For every \$1 invested in safety
there is a \$3 to \$6 return on investment***

**According to Liberty Mutual Research Institute for Safety*

http://www.asse.org/practicespecialties/bosc/docs/F2_Huangetal_0409.pdf

Premise for EH&S Excellence

**Continuous
Improvement**



**Sustaining
Excellence**

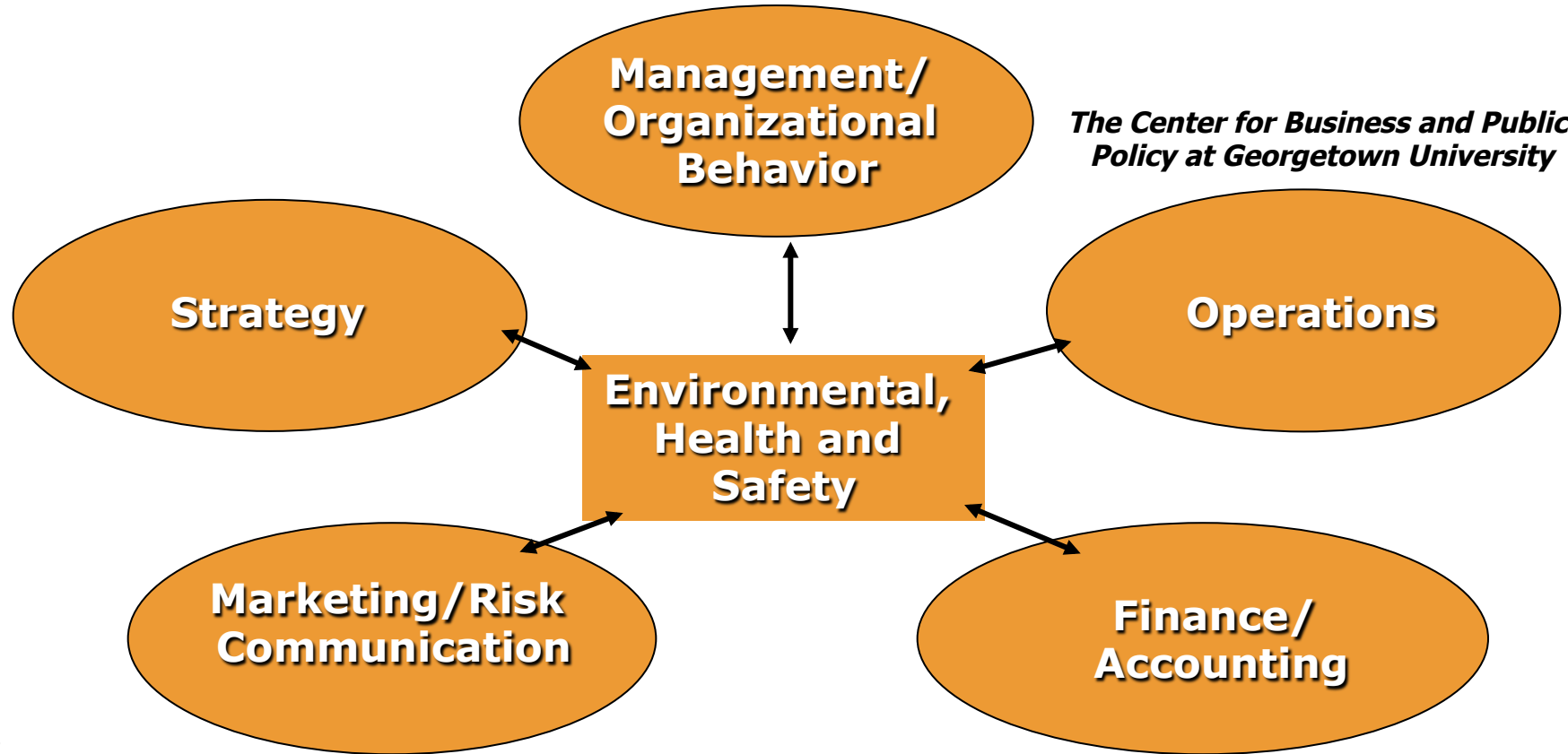
Ask Yourself: Is EH&S a Key Business Value?

- Importance of recognizing the multi-faceted impact of EH&S on overall enterprise performance
 - Operational excellence
 - Human performance
 - Public relations
 - Community vitality
 - Environmental sustainability



EHS's Role in Business Functions

The Center for Business and Public Policy at Georgetown University



EH&S Management System as Solution

- A business-like approach to EH&S
- A systematic, explicit, and comprehensive process for managing EH&S risks
- An EH&S management system provides for goal setting, planning, and measuring performance
- An EH&S management system is woven into the fabric of an organization
 - Engaged management that understands EH&S leads to this topics becoming part of the culture, the way people do their jobs

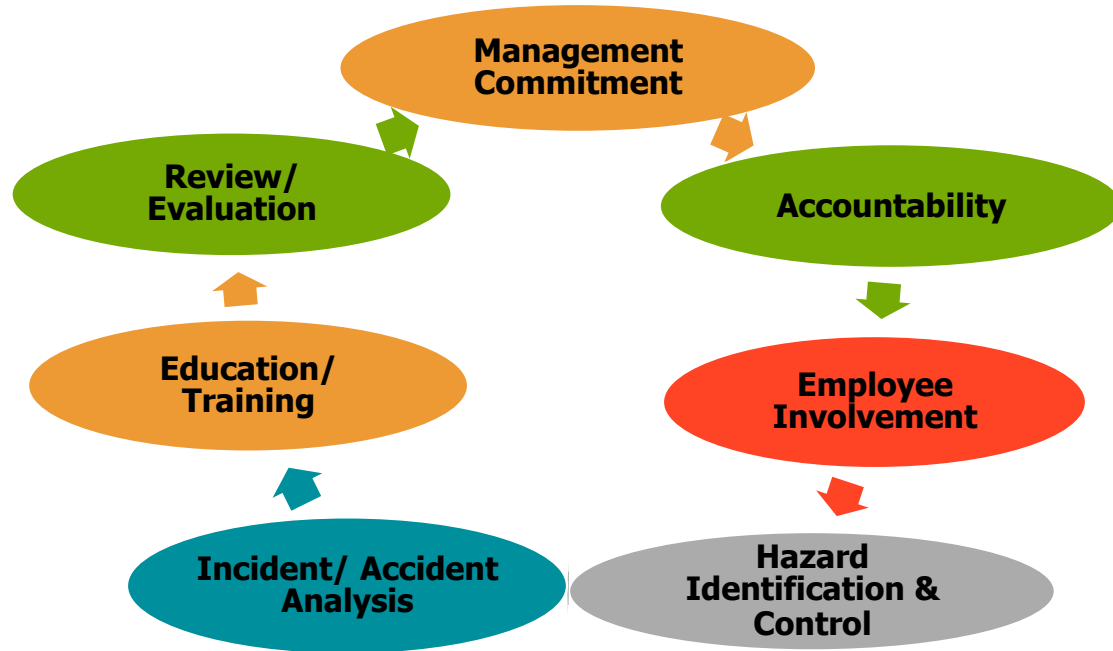


Characteristics of Effective EH&S Management Systems

- Corporate EH&S Policy
- Appropriate programs & procedures under EH&S policy
- Programs implemented, requirements communicated, employees trained, regularly audited, redeveloped as required & documented
- Effective Emergency Response/ Incident Management
- All levels of management (most importantly the CEO/ President) involved in EH&S system
- Training, Training, Training!



Seven Element Oregon OSHA Safety and Health Program Model



EHS Integrated Into the Business...

Business Value

- Corporate image
- Ability to compete
- Access to global markets
- Employee morale
- Efficiency and productivity
- Product and service quality
- Cost and risk reduction

Linking steps

- Senior management commitment and involvement
- Employee active participation
- Shared goals and accountability
- Defined roles and responsibilities
- Common language
- Effective communication
- Right resources
- Balanced performance measures
- Knowledge sharing and information transfer

EHS Principles

- EHS is a core value of the company's culture
- A systems approach is taken toward EHS
- EHS is integrated throughout the company
- Employees participate at all levels

An Environmental, Health and Safety System for Your Business

- **As an employer, it is your responsibility to maintain a safe and healthy workplace.** Effective EHS programs can help you focus your efforts at reducing environmental risks, and prevent injuries and illnesses at your workplace.
- Your organization will have its own unique system:
 - Small businesses in a low-risk industry may simply involve listening to your employees' concerns and responding to them
 - Mid-sized businesses in a hazardous industry may have numerous written policies and procedures and a full-time EHS Manager
 - **What's most important is that your system works for your organization**

So, Why Isn't the Value of EH&S Obvious to Small to Mid-Sized Businesses?

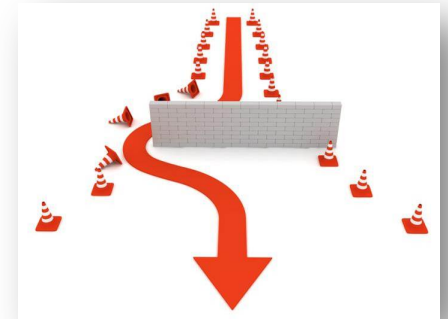
- SMEs Tend:
 - To employ fewer people
 - To be younger (newer) organizations
 - To be owner-managed
 - To have fewer internal EHS resources/less expertise



Barriers to EHS Integration

Too often:

- Management has a reactive rather than proactive focus
- Lack of understanding (vocabulary and requirements)
- Risks & hazards are poorly communicated
- Safety is considered a cost...not an investment
- **Cost/benefit analysis is rarely applied to justify the EHS business case**
- **Retrofitting is never as cost-effective as designing it right initially**



Make a business case!

Tips for a Successful EHS Program

- Successful environmental, safety and health programs have the following in place:
 - Managers and C-Suite committed to making the program work
 - Employees involved in the program (Safety Committee, inspections, monitoring, training)
 - A system to identify and control hazards and reduce “at risk behaviors”
 - Compliance with state, federal, local environmental and state/federal OSHA regulations
 - Training on safe work practices
 - Mutual respect, caring, and open communication in a climate conducive to EHS
 - Continuous improvement

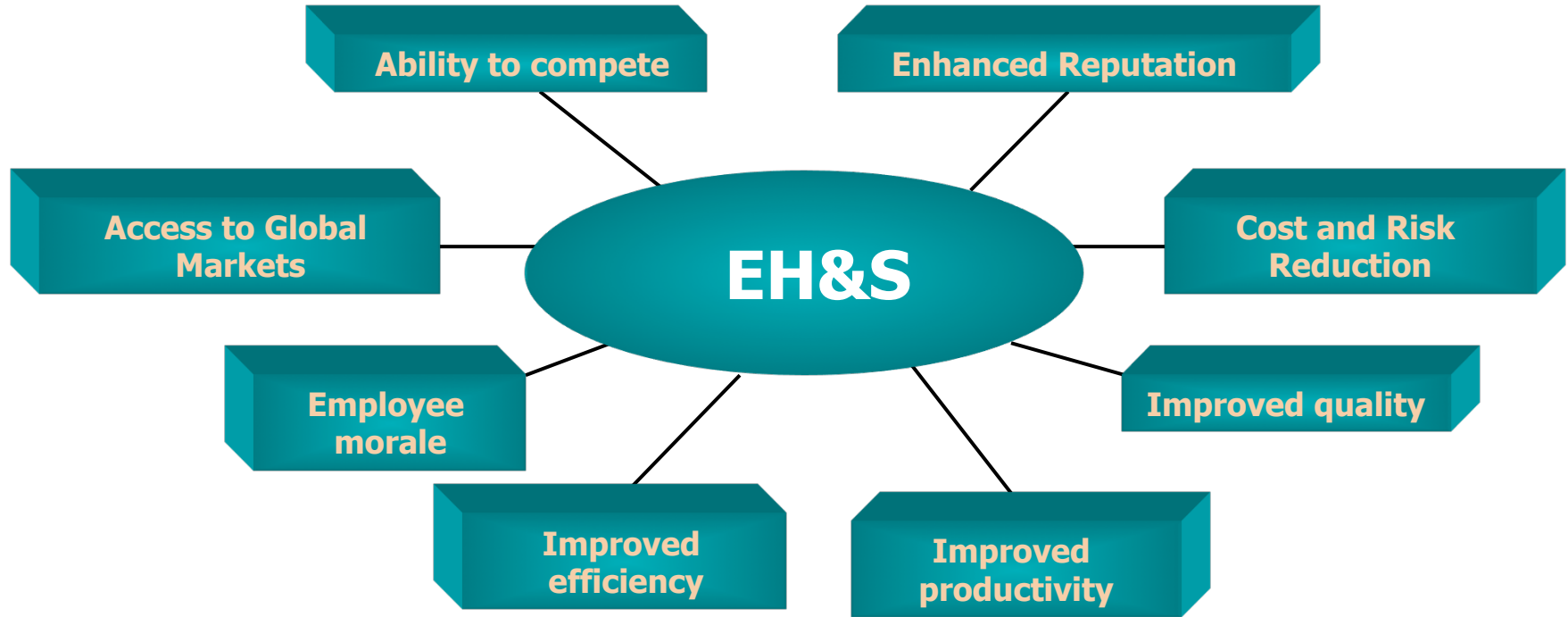
New Startup – Questions/Issues to Manage

EHS Program	Operational Start-up EHS Requirements	Applicable to what areas or activities/tasks?	Action Item	Owner
Lock Out Tag Out Program	Ensure equipment-specific lockout/tagout procedures are developed for all equipment that requires maintenance			
	Ensure all authorized employees are trained on the equipment-specific procedures			
	Communicate all equipment-specific lockout/tagout procedures to all contractors			
	Ensure all procedures are audited annually by an authorized employee			
Electrical Safety Program	Inform office workers on safe use of outlets, power strips, restrictions on space heaters, etc.			
	Perform periodic office area inspections to enforce restrictions			
	Provide the minimum knowledge of safety and recommended practices necessary to protect against electrical shock or burns and hazard awareness information to personnel who use electrical equipment in non-office environments			
	Ensure qualified and authorized workers are identified and trained			
	Equipment safety listing requirements – communicate acceptable listing types of components, field labeling; enforce equipment sign-off requirements			
	Hazard labeling – ensure accuracy and adequacy of labeling			
	Interlocks and safeguarding – ensure testing and maintenance is performed			
	Define training requirements for various employee populations and ensure completion			

New Startup – Questions/Issues to Manage

EHS Program	Operational Start-up EHS Requirements	Applicable to what areas or activities/tasks?	Action Item	Owner
Hazardous Waste Program	If solid wastes are characterized as hazardous (RCRA) wastes, obtain EPA ID number for the facility			
	Determine Waste Generator Status (Small Quantity Generators [SQGs], Medium Quantity Generators [MQGs], and Large Quantity Generators [LQGs])			
	Identify and create profiles for all waste streams at the facility; designate "dangerous waste" codes			
	Designate specific employees and train according to responsibilities			
	Ensure DOT training and certification for all Hazwaste transport across property lines and public roadways – or designate waste contractor			
	Provide carts, etc. for intra-site waste movement			
	Locate spill kits in appropriate locations			
	Procure and distributed appropriate waste containers throughout the facility			
	Designate accumulation areas and Hazardous Waste Storage Area in the facility			
	Affix signage and labeling on all areas and waste containers			
	Perform periodic inspections as required			
	Track Waste minimization goals, efforts and quantities (if applicable based on generator status)			

Excellence in EHS Adds Business Value and Competitive Advantage ...



Conclusions

- Business landscape is changing – supply chain issues
- EH&S rules and regulations changing all the time
- Not managing EH&S hazards can negatively affect company risk
- Effective EH&S programs leverage financial, personnel, and reputational risk



Who is Responsible for Environmental, Health & Safety?

EVERYONE is
responsible for EH&S



Resources and Contact Information

How to Go Beyond Compliance (OSHA) <https://www.osha.gov/employers/>

Safety and Health management Systems eTool (OSHA)
https://www.osha.gov/SLTC/etools/safetyhealth/mod2_sample_sh_program.html

Small Business Handbook (OSHA)
<https://www.osha.gov/Publications/smallbusiness/small-business.html>

Consult your State Environmental Agency or State OSHA webpages

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