

6σ & Lean in Health, Safety, Security & Environmental



HSSE Business Process Excellence

HSSE costs & impact are often considered to be just burdens that have to be carried by businesses and sometimes very little is done to understand them and control them. Lean Six Sigma deployments driven top-down identify key drivers for the business and for most businesses these include cost, revenue growth, safety and working capital. HSEE impacts all these drivers and represents great opportunity in a deployment, yet are often glossed over.

Consider the following HSSE impacts on the four drivers:

Safety		
<ul style="list-style-type: none"> ■ Fatalities ■ Days away from work 	<ul style="list-style-type: none"> ■ Reputation ■ Reduced company morale 	<ul style="list-style-type: none"> ■ Injuries
Cost		
<ul style="list-style-type: none"> ■ Cost of capital ■ Annual compliance spend ■ Prevention programs ■ Lawsuits ■ Equipment control technologies ■ Waste material costs ■ Reserve management (balance sheet liability) 	<ul style="list-style-type: none"> ■ Utility and water usage ■ HSSE staff costs and overhead ■ Fines and penalties ■ Training ■ Regulatory permitting and disposal costs/fees ■ Lost production ■ Litigation (3rd party) 	<ul style="list-style-type: none"> ■ Annual remediation spending ■ Operations HSSE staff ■ Insurance claims management ■ Equipment downtime ■ Product liability ■ Packaging waste ■ Workers compensation
Growth		
<ul style="list-style-type: none"> ■ Due diligence for acquisition (don't acquire liabilities) ■ New market regulation & requirements ■ Loss of contracts 	<ul style="list-style-type: none"> ■ Social responsibility ■ Total lifecycle of product ■ New product (sourcing, impacts, competing product advantages, etc.) 	<ul style="list-style-type: none"> ■ Sustainability- balancing environmental, social- environmental performance for the future
Cash / Working Capital		
<ul style="list-style-type: none"> ■ Capital deployed on environmental projects ■ Surplus properties that can't be sold due to environmental liability (brownfields) 	<ul style="list-style-type: none"> ■ High chemical/waste inventory or storage ■ Reimbursement of remediation spending through state funds for storage tank clean-up 	<ul style="list-style-type: none"> ■ Waste water treatment facilities ■ Escrow management ■ Cost recovery through insurance claims, lawsuit recovery

Historically, the challenge of reducing HSSE cost and working capital while improving safety and generating growth seemed insurmountable with traditional approaches. In a Lean Six Sigma deployment these are reasonably straightforward goals, provided that the right tools are used for the right issues.

SBTI's HSSE Offerings

SBTI and Inogen have developed a systematic approach to revitalizing the HSSE function in your company. The tiered approach of Perform, Optimize, Transform can take an HSSE group that lacks resources, skills or performance and is perceived as a mere cost to a business, to one that brings true value to the future growth of the company.

Perform

By transitioning HSSE activities to Inogen's global resource pool of skilled resources, the client's organization frees up it's valuable internal resources to work on other projects. This ensures that valuable client resources are not under utilized on activities best done by other available resources. Inogen's global HSSE resource pool gains economies of scale for most clients. By outsourcing HSSE activities, the costs are pay-as-you-go versus the overhead of expensive internal HSSE resources. Thus client costs are reduced, while increasing the quality of work undertaken.

Optimize

Inogen's HSSE expertise, coupled with SBTI's Lean and Six Sigma process improvement methodologies drive down the waste and cost in the HSSE processes in your business. Lean processes are nimble and responsive with minimal non-value added activities. Process lead times are reduced, with less resource needed and lower costs. Six Sigma ensures each process is bullet-proof, running right the first time and every time. In an environment where defects can mean death or serious injury, what better than a methodology that can drive incidents down to near-zero level!

Transform

The majority of HSSE costs are not in the HSSE function but hidden in the Operations of the business. Inogen's HSSE expertise, coupled with SBTI's Six sigma process improvement methodology drive down the impact of HSSE related issues on the larger company infrastructure. The Six Sigma approach of identifying, minimizing and controlling the root-cause of problems works to lower the company's environmental reserve, lower costs, reduce safety related issues and create potential for future growth previously impossible due to HSSE related issues.