



Delivering Stakeholder Value

Mastering Complexity Drives Higher Sustainable Performance

2013 North America Market Survey

Conducted by DuPont Sustainable Solutions

INTRODUCTION

Over the past five years, markets and global economies have shifted more quickly than previously thought possible. Most business leaders remember planning for various market scenarios in 2008, only to experience market realities that were much starker than their ‘worst case’. Today, while many economies show signs of recovery, leaders are facing market conditions that are extremely volatile, dependent on a wide set of factors. Executives managing global operations now struggle to interpret a vast amount of data in order to determine which of these factors are the most critical to their businesses. Compounding these complexities is the dramatic outflow of talent as key team members move into retirement.

DuPont Sustainable Solutions (DSS), a leading operations and sustainability consultancy, surveyed business leaders across a host of industries in North America to better understand the key opportunities and issues facing organizations today and to learn about the steps that each is taking to address them.

DSS believes that these opportunities and issues either add to or detract from the value that an organization delivers to its stakeholders in one or more of the following areas -

- ❖ **Value Protection** refers to protecting the organization’s reputation and ‘right to operate.’ This is done by identifying and mitigating operational risks faced by organizations through workplace safety and process safety management.
- ❖ **Value Extraction** aims at maximizing value from existing assets through operational efficiency and asset productivity initiatives, thus leading to quantifiable savings and, in many cases, added revenue from capacity release.
- ❖ **Value Creation** focuses at aligning societal and other stakeholder needs into the business strategy as a means to create shared value and achieve competitive advantage. It involves sustainability around environmental management, and capital project management.

DSS further explored the specific operational challenges and opportunities organizations face within these three “value categories.” Through these in-depth conversations, DSS uncovered issues that are distinct to the areas explored:

Value Protection

- Lack of appropriate safety focus
- Increasing complexity in contractor management

Value Extraction

- Asset reliability Issues - short-term considerations leading to adverse impacts in the long-run
- Not all “continuous improvement” programs are created equal

Value Creation

- Responding to the changing stakeholder expectations and tightening environmental regulations
- Capital projects - unable to deliver to promise

DSS also discovered several challenges common to all three areas:

- Bridging the talent gap
- Sustaining Operational Discipline
- Cultural Change Management

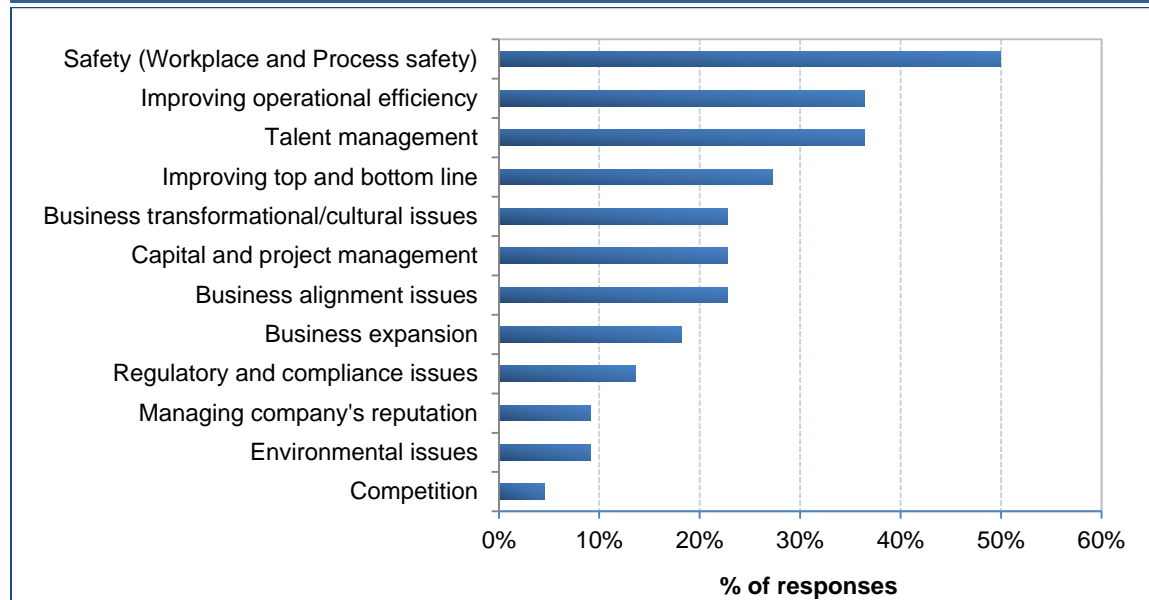
In the following sections, we will explore the specific challenges and offer a perspective on how businesses are addressing them.

VALUE PROTECTION

Failure to identify and mitigate risk not only impacts an organization's bottom line, but likely affects the organization's reputation and right to operate. Less than 40% of surveyed companies claimed to have a formal risk management system in place to identify and control operational risks, and only a quarter stated that they closely monitor and audit pre-defined risks.

Key Challenges

Chart 1: Top challenges faced by organizations



As many as 50% of the surveyed companies rated safety to be their top-most challenge

1. Lack of appropriate safety focus

Survey participants recognize that recent safety incidents in the U.S. and Canada (e.g., West Fertilizer Company in Texas, the Lac-Mégantic train derailment in Quebec, etc.), coupled with greater safety regulations and increased enforcement, has put safety management back in the spotlight. Fines for safety violations by pipeline operators have doubled in the U.S. In 2012, OSHA issued nearly 29,000 citations for the top 10 violations alone.¹ In Canada, the total costs of occupational injuries are estimated to be more than \$19 billion annually.²

Mitigating operational risks was one of the key challenges and concerns cited by most executives. While this is not surprising, given the need to 'see around corners' in today's very dynamic markets, many organizations are being compelled to identify, quantify and mitigate risks to a much higher standard by corporate boards or company owners. Even with this increased rigor, less than 40% of surveyed companies claim to have a formal risk management system to identify and control operational risks. Only 25% believe that they closely monitor and audit pre-defined risks. Those who struggle in this area indicated that the issues in identifying and controlling operational risks include determining appropriate risk tolerance benchmarks and establishing exhaustive risk assessment processes.

In addition, while higher cost (employee compensations, property losses) was cited as the most significant consequence of inadequate rigor in safety management, respondents also worry about the risk of a diminished corporate reputation as another major effect. One respondent from a top utility company described that their reputation “took a severe beating” after a process safety incident and acknowledged that rebuilding lost trust amongst stakeholders may take some time. Another executive from a top construction management company mentioned sustaining continuous emphasis on safety as critical area of focus, as poor performance will result in loss of future contracts.

Strategies and Best Practices Being Adopted

Companies are adopting various strategies to improve their safety performance. An auto component manufacturing company stated that it is implementing tools like safety perception surveys and executive leadership workshops to improve safety culture. An oil & gas company launched actions to work with contractors to drive performance against Mine Safety and Health Administration (MSHA) regulations. However, many companies continue to face challenges that prevent them from improving their safety performance.

DSS contends that management sets the tone for a safe work environment. Integrating safety into the organization’s business strategy, structure, and culture while also engaging employees at all levels serves to strengthen and sustain an organization’s safety and operational performance. “Value leadership” is the essence of felt leadership because it is about getting people aligned on the values of the organization. When organizations consider safety to be a critical business and life component and support it through the appropriate technologies and managing processes, performance improvements are more significant and sustainable.

2. Increasing complexity in contractor management

The Aberdeen Group, a research firm, states that enterprises lose around \$153 billion each year due to ineffective contractor management.³ This is not surprising, given that the processes, personnel, and controls in place at the inception of a contract will likely have changed by its expiration. According to the President of one engineering, procurement and construction (EPC) company that we interviewed, evolving contractual terms and conditions are exposing his company to increasing risks and financial liabilities.

Additionally, one third of surveyed companies who cited contractor management as a challenge fear the loss of intellectual property and competitive advantage as they rely more heavily on contracted workforce. In our survey, an Executive Vice President from a construction and infrastructure company revealed that it shares 90% of its labor from same pool of resources as its competition, thus posing a great threat to the company’s intellectual capital.

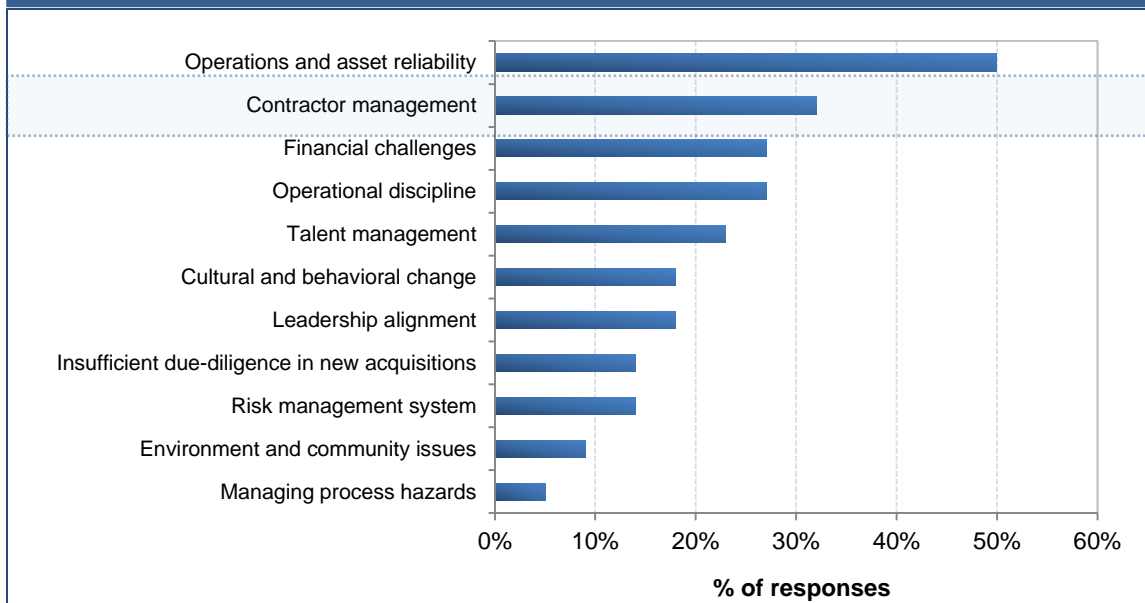
Contractor management is becoming more challenging. Shortage of skilled workers compels companies to increasingly rely on inexperienced workers and foreign labor. Currently, more than 330,000 workers live and work in Canada as part of the federal temporary foreign worker program — a number that has nearly tripled over the last 10 years.⁴ According to the Bureau of Labor Statistics (BLS), the U.S. experienced a shortage of 7 million skilled workers in 2010, a number that is expected to rise to 21 million by 2020.⁵ One CEO that we spoke with highlighted the continual challenge that his organization faces in managing inexperienced workers in remote sites. Aligning contract workers to the company’s culture and management direction has been extremely difficult.

Strategies and Best Practices Being Adopted

Companies are experimenting with a variety of strategies to deal with contractor management challenges. In one interview, a chemical manufacturing company stated that it has increased staff in order to more effectively monitor credit-worthiness of both suppliers and customers. A construction company shared that it is focusing on tightening its contractor hiring agreements, while another engineering and construction management company is concentrating on building an extensive internal contract review system to deal with contractor management issues.

We acknowledge there is no shortcut for managing the fundamentals. Contracts need to be precise and clearly communicated. The local contracted labor market should be researched and mined for skilled talent. Greater benefit can be derived by incorporating contractors' historical safety performance, past liabilities, and bottom line performance into the selection process. In addition, expectations for overall performance in areas such as safety-along with a clear understanding of the implications of not meeting these expectations-should also be explicitly outlined and agreed to during the contracting process to minimize risk.

Chart 2: Value Protection - Top Challenges in Managing Operational Risk



32% of respondents cited managing contractor as one of their top challenge in curtailing operational risks

VALUE EXTRACTION

In an increasingly competitive environment, organizations are striving to unlock hidden value in their businesses by emphasizing operational efficiency. Over 30% of the executives we spoke with described challenges they face in initiating and sustaining continuous improvement processes. Well-known operational excellence tools and techniques, such as Lean and Six Sigma, were highlighted by our respondents as part – but not all – of their efforts to identify and release hidden value from their operations.

Key Challenges

1. Asset reliability Issues - short-term considerations leading to adverse impacts in the long-run

Reliability and maintenance are vital to successful and profitable operations. However, maintenance is still viewed as a cost and, in most cases, is one of the first areas to experience budget scrutiny. Our survey responses reinforced that executives have an ongoing challenge to do more (and more) with less (and less). This “scarcity mentality,” as it was labeled by one of our interviewees, has created operating environments in which assets are being aggressively managed towards end of life and funds for capital improvement are often severely limited.

But trimming costs for short term gain can usher in a host of maintenance and reliability issues which negatively impact the bottom line over time. A leader from an oil and gas refinery shared that overall reliability can (and, in fact, often does) limit their volume – and ultimately profits. While the facility is currently making good profits, the resources are overtaxed and “burned out.” An executive from another manufacturer discussed significant downtime and production issues that resulted from previous underinvestment in maintaining assets. Now that the company is moving into a period of growth, high demand is highlighting the production issues that had remained unaddressed in slower times.

Strategies and Best Practices Being Adopted

In an increasingly competitive environment, many organizations attempt to improve their bottom line by emphasizing operational efficiency. Around one third of survey respondents rely on well-known operational excellence tools and techniques such as Lean and Six Sigma, and continuous improvement initiatives to identify and release hidden value from operations. Other respondents noted that their organizations are adopting a variety of strategies such as, utilizing external experts, optimizing production, and implementing ERP systems. One of the food processing companies, which currently spends \$1.7-1.8 billion per year on planned maintenance, is driving true predictive maintenance strategies in its operations.

We believe that maintenance and reliability systems should integrate functional disciplines, combining technology, work management systems, and change processes. An effective maintenance and reliability system can lower maintenance costs by 10% to 20%. This system leverages best practices such as reliability-focused maintenance, preventive/predictive maintenance strategies, and managing storeroom (MRO) supplies effectively.

While such systems can help to create efficiencies in operations, used alone, they will not be sufficient to unlock value and improve business performance. A combination of leadership, people engagement and collaboration defines the new “doing more with less.” Bringing about a culture change requires that an organization change the attitude and behavior of employees while also leveraging and improving its

internal capabilities. In order to unlock value through a strong maintenance and reliability system, leaders must engage employees, because employees must ultimately take ownership for creating a culture of high reliability and performance.

2. Not all “continuous improvement” programs are created equal

Continuous improvement is not a new concept. By promoting an intense focus on analytical and systematic change, continuous improvement processes were able to transform Japan’s manufacturing industry over the course of the second half of the 20th century, from one with a reputation for poor quality to one that delivered low-cost, high-quality products from electronics to automobiles.⁶ A recent study revealed that continuous improvement, now a corporate buzzword in manufacturing that one of our respondents dubbed as “consulting speak,” has been applied at approximately 76% of large companies globally.⁷ But does putting a continuous improvement program in place deliver significant and lasting results?

In reality, many of the business leaders that we spoke with highlighted their ongoing struggle to achieve real step-change advances in productivity from their continuous improvement efforts. One chemical company revealed that while its continuous improvement efforts had been delivering incremental benefits, no true transformational change was being achieved. As they expand globally and grow both organically and inorganically, many companies have found initiating a continuous improvement system with standardized processes to be virtually impossible over workforces distributed across the world at sites of vastly differing sizes and complexities. Furthermore, without organizational alignment and accountability of senior leadership, a company’s journey to “operational excellence” (another buzzword we heard in our interviews) can stall – or never get off the ground in the first place.

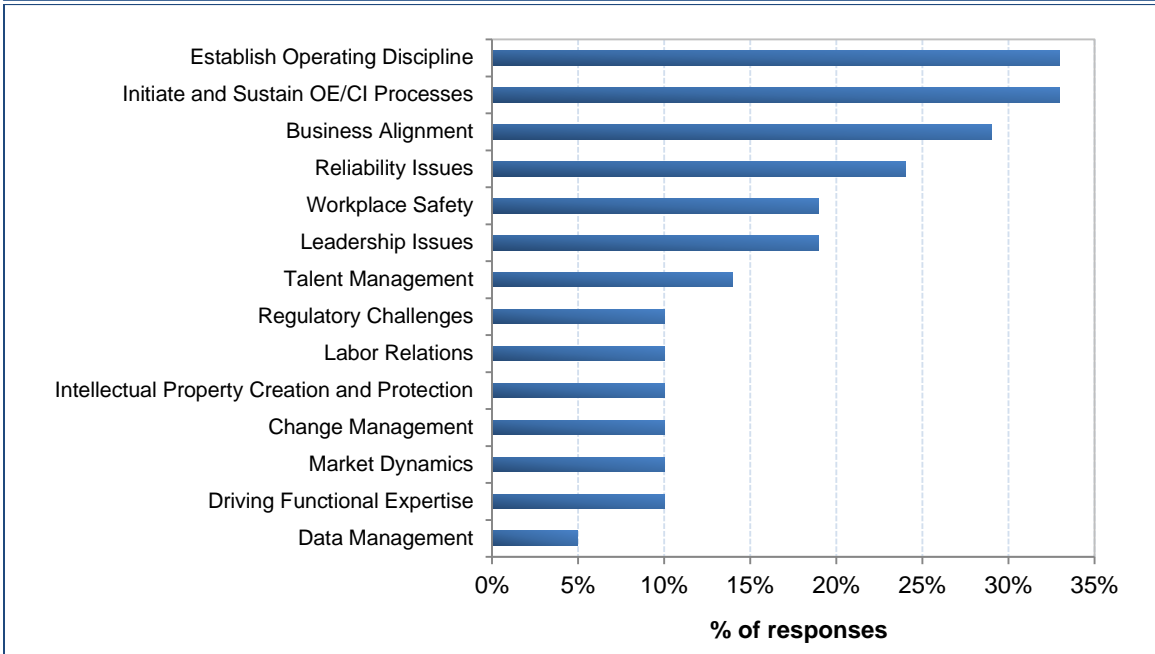
Strategies and Best Practices Being Adopted

One food processing company executive stated that his organization is embarking on a continuous improvement program that strives to save \$10-20 million each year in costs. The company has also been tracking its continuous improvement initiatives with an enterprise-wide program. The Vice President of another food processing major shared that the company has implemented a joint business review for all of operational improvement ideas.

Continuous improvement and asset productivity measures at DuPont have yielded a 3–5% yearly increase in cost productivity globally over a ten year period. Our experience highlights the need for an integrated management system that fully develops people and organizational capability for effectiveness and creativity in utilizing assets and eliminating all waste. Some best practices to ensure successful implementation include:

- Institution of a Project Management Office to ensure structured roll-out, impact measurement and communication.
- Creation of Centers of Competency to establish, leverage and ensure sustainable development of the competency.
- Initiating training for Operations Leadership.

Chart 3: Value Extraction – Top Challenges in Building and Sustaining Operational



More than 30% of respondents are also facing issues with initiating and sustaining continuous improvement processes, whereas 29% encountering business alignment challenges.

VALUE CREATION

Organizations can no longer be driven by profit and financial objectives alone. The impact that operations have on society and the environment is increasingly influencing how stakeholders measure and value organizational performance. This additional level of scrutiny affects the organization's reputation, its ability to garner investments and attract talent, and even its right to operate. The majority of the executives that we interviewed confirmed that they consider environmental and societal interests as key to their organizations' success and take various actions to address them.

Key Challenges

Chart 4: Value Creation – Top Challenges in Delivering Sustainable Growth



1. Responding to the changing stakeholder expectations and tightening environmental regulations

Organizations around the world now face stringent environmental regulations and increasing pressure from investors, communities and environmental activists. For instance, China's State Council released its Action Plan for Air Pollution Prevention and Control this past September, eight months after the widely-reported zero visibility due to an air pollution episode. The Chinese President Xi Jinping stated that "the country won't sacrifice the environment to ensure short-term economic growth."⁸ In June of this year, U.S. President Obama released a plan to help the country meet its goal to reduce air emissions by 17% by 2020.⁹ The COO of an energy company we interviewed acknowledged that the company has struggled to cope with complying to a myriad of EPA regulations such as the Clean Water Act, the Clean Air Act and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

According to Carbon Disclosure Project (CDP), an independent non-profit organization, a consortium of 722 investors worth \$87 trillion has called for businesses to report their greenhouse gas emissions and climate change plans. Our survey participants face similar demands from their stakeholders. An Executive Vice President from a construction company stated that failing to consider stakeholder needs can

jeopardize their 'right to operate.' The repercussions of recent oil spill incidents continue to impact the oil and gas industry around the world. Senior Executives of a leading oil and gas pipeline company underscored that effectively managing public reactions to environmental incidents remains a big challenge to the industry.

Strategies and Best Practices Being Adopted

The organizations that we surveyed are adopting various strategies to reduce their environmental footprint, such as forming specialized teams, shifting to alternate energy sources, and implementing software solutions for data reporting. One organization in the energy sector has implemented a comprehensive environmental management system. A food and beverage company is looking at green alternatives in its operations, such as hydroelectric power and compressed natural gas.

We contend that organizations can benefit from an environmental planning process that is clearly aligned with business goals. They should embrace a sustainability mindset and integrate social and environmental considerations into strategic decisions. DuPont has demonstrated that it is possible to decouple continuous business growth from increasing environmental footprint. For instance, after embarking on the sustainability journey two decades ago, DuPont has reduced its carbon footprint and energy consumption by 50% and 3% respectively, while simultaneously achieving a 47% rise in its production.

Companies with a focus on sustainability actually outperform their peers. A Harvard study revealed that over an eighteen year period, investments in a portfolio of high sustainability firms yielded 22 times return on investment, as compared to a portfolio of low sustainability firms which provided a return of 15 times.¹⁰

Leadership orientation to sustainability ranges, from one extreme (those who see the sustainability challenge as an opportunity and use it to innovate and generate value) to another (those leaders who delegate the responsibility for change to the government and external authorities). The former embraces the sustainability challenge and uses it as a platform to innovate, while the latter focuses solely on compliance.

For many businesses, environmental management starts with standards compliance, specifically complying with ISO 14001, an international standard that sets out the criteria for an environmental management system (EMS). DSS provides an additional perspective on developing an effective EMS. We believe that while ISO 14001 provides a good foundation from which to build an EMS, it is critical to include elements that will help your organization go beyond compliance to driving performance.

To drive excellent environmental performance, DSS overlays key cultural and behavioral elements onto the standard EMS template and looks at the soft elements that are critical to execution:

- Environmental Policy
- Planning (Environmental Aspects; Legal & Other Requirements; Objectives, Targets & Programs)
- Implementation and Operation
- Measuring and Monitoring
- Corrective and Preventive Action
- Management Review
- Strong Leadership
- Appropriate Organizational Structure
- Focused processes and action

Environmental management is a strategic decision and must be operationalized by leaders who see it (and the overall concept of sustainability) as a way to innovate and generate value for their organizations and the societies in which they operate. Setting an organization on the path towards sustainable growth requires business leaders who have the ability to mobilize their entire organization in a direction that can deliver on all aspects of the triple bottom line of people, planet and profit.

2. Capital projects - unable to deliver to promise

After a brief decline in capital spending during the economic downturn, capital investment has surged. The size and complexity of projects has grown, posing significant challenges in managing on-budget and on-schedule. A recent article in *Project Manager* magazine revealed that approximately 65% of all capital projects are either over budget or behind schedule (or both).¹¹

The CEO of a natural gas distribution company stated that the industry operates at a slim return on investment (ROI); efficient capital allocation consequently forms a critical part of the business. The company has high investment risk coupled with project delays, which further impacts margins. We also spoke to the Vice President of an energy company who cited that availability and access to capital forms a significant challenge in the area of capital project management. Furthermore, senior leaders of a leading oil and gas pipeline company explained that, although the company manages its brownfield projects effectively, it faces issues with managing green-field capital projects.

Strategies and Best Practices Being Adopted

Companies are adopting diverse strategies to effectively manage their capital projects. A natural gas company stated that it has been capitalizing on engineering techniques and talents. One of the surveyed food processing companies is addressing project management issues with stage gate processes and cross functional teams. Another survey respondent from the oil and gas pipeline industry mentioned that the company uses alliances with academic institutions and makes use of effective public relations techniques to manage stakeholder expectations.

We believe that early and broad stakeholder inclusion, increased levels of trust and shared risk are key to successful project outcomes. Our experience shows that effective capital management can provide a 10%-15% improvement on project performance. A stage-gated approach is one way to proactively plan for the potential risks that projects face, as well as to mitigate their impact on timelines and budgets.

Having an organized stage-gate process, however, does not by itself guarantee the successful outcome of a major capital project. Our experience shows that a narrow focus on short-term “on-time and on-budget construction” performance metrics allows for the underestimation and under-planning of the stage where the main economic and societal value is created: the long term operation of the asset. A complete asset lifecycle approach from the planning stages of a project, as well as a deliberate focus on the long term operability of the asset is therefore needed to enable a successful long-term outcome.

The true value of an asset under construction could never be realized without excellence in operability. If upon start up a capital project operates below expectations, then its value is minimized or destroyed regardless of whether it was built on-time and on-budget. The capital project owner bears the responsibility for both ensuring short-term success with an on-time, on-budget start up as well as enabling long-term success by “building in” the highest levels of operability.

To assist project owners with improving their capital projects performance, DSS has grouped several best practices into seven success factors:

- Front-End Loading vs. Long-term Goals
- Proactive Management of HSE
- Contracting Strategy & Contractors Management
- Staffing & Managing Teams for Success
- Technology/Equipment Confirmation
- Integrated Execution with NO CHANGES
- Minimization of Non-Value Added Investments

Broad Challenges

1. Bridging the talent gap

Despite high rates of prevailing unemployment, approximately one in three employers (34%) experiences difficulties in filling vacancies due to the lack of available talent. A recent study by Manpower Group revealed that in the Americas, 39% of employers are having difficulties filling vacancies; this is higher in Europe and Asia Pacific where 51% of employers struggle to fill jobs.¹² The Vice President of an energy company that we interviewed mentioned that they are facing talent shortage at all levels, and in particular at the mid-management level.

According to a report by HSBC Insurance and the Oxford Institute of Ageing, by 2020, every fifth North American worker is expected to be 55 years of age and older.¹³ By 2015, the Canadian government believes that 48% of people earning a living will be between the ages of 45 and 64.¹⁴ In our survey, the CEO of an engineering and utility services company shared that they are experiencing significant turnover in leadership due to retirement. The company is facing challenges to develop leadership skills from the foreman level up in a systemic, disciplined way. A top retail firm that we spoke to also voiced similar concerns.

With new hires being added rapidly, organizations are also feeling the pressure to onboard them effectively and invest in appropriate training. The President of one firm cited that they are encountering challenges in assimilating and onboarding new hires into the organization across all levels.

Strategies and Best Practices Being Adopted

Organizations are implementing diverse strategies to tackle talent management concerns. An energy company shared that they have extensive internship and development programs for interns across various subjects. They are also looking at revising compensation and incentives to retain experienced people. Another engineering and utility services company discussed that they are focusing on implementing appropriate performance management systems to address competency issues and drive decision-making to lower levels. One engineering, procurement and construction company cited that they are working with external parties to address talent management issues.

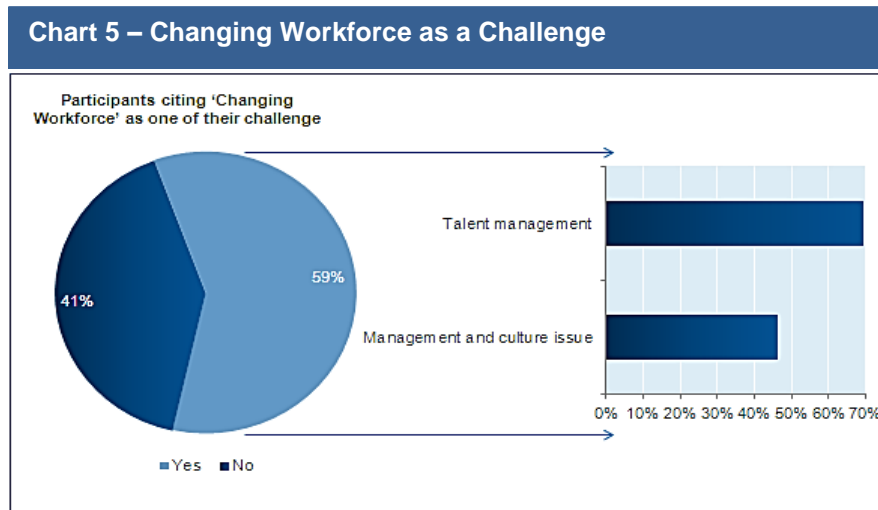
Impact of a changing workforce is showing up in increased recruiting costs, continual hiring from outside and more significant training and development investment. Further failure to address this issue in a timely manner is resulting in operational under performance and higher risk exposure. Despite this, very few organizations have analyzed their workforce demographics or retirement projections. Organizations have been more reactive than proactive on handling this issue.

A holistic approach to changing workforce and talent management should:

- Ensure workforce balance: Today most organizations seem to be working towards having a gender balance, but failing to consider a balanced representation in age and culture. In the context of a globalized operations and aging workforce it is important that organizations have a balanced mix of a talent pipeline.
- Customize strategies for recruitment and retention: Most organizations still follow the one size fits all approach to their benefits programs. While the younger work force may be attracted to greater compensation packages and to career development, the late career employee may be interested in healthcare and retirement benefits. When it comes to critical skills, retention of old workers and

encouraging late-career employees to work past the normal retirement age may be an effective talent management strategy to adopt.

- Catering to differing learning and development needs: A dynamic market requires organizations to adapt quickly. By not equipping employees at all levels to adapt, organizations are bound to face pockets of resistance and change management issues. More and more, we see that progressive companies are creating a culture of “lifelong learning” at the workplace that caters to the differing career development needs of a diverse workforce. To support this culture, they are adopting blended learning programs and designing knowledge transfer processes that enable institutional expertise to be captured and passed on.



2. Sustaining Operational Discipline

The journey towards operational excellence and sustainable business growth begins with a strong foundation of operational discipline. The need for clearly defined standards and procedures cannot be overemphasized as a starting point to establishing operational discipline. This is especially true for organizations that handle hazardous materials and/or perform hazardous operations. Written procedures ensure consistent operations and behaviors, and they serve as a vehicle for codifying technology, best practices and experience.

The President of an EPC company highlighted inconsistency in documented set of work practices as a key challenge in ensuring operational discipline. A Vice President of an energy company said that the lack of standardized processes and best practice sharing has led to inefficient execution of plans. We heard similar views of the need for building standardized processes, both within small teams and across multiple sites spread globally.

That said, the mere existence of standards and procedures does not ensure that they are followed. For instance, one of our surveyed respondents shared that, in spite of having procedures in place, the organization is facing challenges with getting data entered into systems in a correct manner, thereby leading to inaccurate analysis and conclusions. Various reasons for failure in operational discipline include lack of awareness of procedures, insufficient training, and inadequate enforcement.

Strategies and Best Practices Being Adopted

Surveyed participants are adopting various mechanisms to address the challenge of operational discipline, such as establishment of specialized teams, conducting specialized training programs, and emphasis on collaboration. While one energy company has created specialized teams to improve collaboration, along with focused training groups, another interview participant has strengthened its auditing process to enable better operational discipline.

Operational discipline is about “brilliance at the basics.” Regardless of the industry, operational discipline increases reliability and decreases the risk of a high consequence event occurring. We believe that it is deeply rooted in the dedication and commitment of every member of an organization to carry out each task the right way every time. When this spirit of operational discipline is instilled within an organization, it allows leaders and employees to tackle the things that are critical to the day-to-day operations of the business in a timely and efficient manner.

Our belief is that it is the responsibility of leadership to articulate a common purpose and prioritize operational discipline within the organization. This discipline must be extended throughout the organization by providing employees with proper tools and training as well as engaging them through clear communication of the rules, open dialogue and alignment. To achieve excellence, employees must consistently perform with operational discipline and have a passion for flawless execution.

3. Cultural Change Management

The challenges created by the rapid change that organizations experience today are further exacerbated by the presence of cultural inertia within a business. Recognizing the need for change and responding by creating an adaptable and flexible culture are critical to not only business survival, but also future growth.

As many as 75% of change initiatives fall short of expectations due to employee resistance, lack of clarity and absence of leadership support.¹⁵ A recent IBM study revealed that changing mindsets and attitudes as well as corporate culture are top challenges while implementing change projects.¹⁶

Similar concerns were voiced by the participants in the interviews that DSS conducted. The Senior Operations Manager of a chemical company stated that the company needs to shift from focusing on productivity (i.e., maximizing assets) to focusing on growth. He highlighted that this will require a significant mindset change and shared that the organization has not yet been able to transition effectively. The President of a food processing company explained that it is facing challenges to align the culture of recently acquired companies.

Strategies and Best Practices Being Adopted

One of our surveyed respondents from the energy sector stated that they are developing a cohesive way for managing change across the organization that includes outlining a vision, developing a strategic plan, tracking the change, and establishing performance metrics. A leading oil and gas pipeline company has been working towards building a High Reliability Organization (HRO) culture to address behavior-based issues in the workplace.

DuPont introduced the Bradley Curve to benchmark an organization’s current cultural maturity and relate it to operational performance. The model shows how a cultural transformation of moving employees from ‘reactive’ stage (compliance-driven) to ‘interdependent’ stage (unified and collaborative culture) results in improved operational results. According to the findings of a 2012 world-class safety survey, organizations in the interdependent state demonstrated safety performance seven times better than those in the reactive stage.

Final Summary

In summary, while organizations face a myriad challenges, they also have the opportunity to create competitive advantage by considering how to deliver stakeholder value from multiple angles.

Organizations that ***integrate people, planet and profit into their business strategies*** will not only realize short-term gains, but will lay the foundation for sustainable growth.

The various challenges that were articulated in this report are not to be viewed with a myopic lens or in silos. Across the industries studied, there is a common set of systemic and cultural barriers that prevent organizations from overcoming these challenges. Getting the right leadership focus, adopting integrated management systems, dealing with cultural change, equipping employees with the right skills through a learning environment, and sustaining through operational discipline are the mantras for success.

References

- ¹ OSHA Report
- ² Occupational Injuries and Diseases in Canada, 1996-2008, Government of Canada, July 04, 2013 – http://www.labour.gc.ca/eng/health_safety/pubs_hs/oidc.shtml
- ³ Tackling the Global Contract Management Challenge, Andrew K. Reese, Cygnus Business Media, July 30, 2008 - <http://www.sdexec.com/article/10289569/tackling-the-global-contract-management-challenge>
- ⁴ Is Canada becoming dependent on temporary foreign workers? CBC News, June 26, 2013 - <http://www.cbc.ca/news/canada/is-canada-becoming-dependent-on-temporary-foreign-workers-1.1367384>
- ⁵ Labor force projections to 2020: a more slowly growing workforce, Mitra Toossi, BLS, January, 2012 - <http://www.bls.gov/opub/mlr/2012/01/art3full.pdf>
- ⁶ Why Continuous Improvement May Need To Be Discontinued, Ron Ashkenas, Forbes.com, July 24, 2013 - <http://www.forbes.com/sites/ronashkenas/2013/07/24/why-continuous-improvement-may-need-to-be-discontinued/>
- ⁷ Is Your Continuous Improvement Program Delivering as Promised?, Accenture, 2010 - http://www.accenture.com/SiteCollectionDocuments/PDF/Accenture_Is_Your_Continuous_Improvement_Program_Delivering_as_Promised.pdf
- ⁸ China to Tackle Air Pollution with a New Action Plan, Clean Air Asia, 2013 - <http://cleanairinitiative.org/portal/node/12066>
- ⁹ The President's Climate Action Plan, June 2013 - <http://www.whitehouse.gov/sites/default/files/image/president27sclimateactionplan.pdf>
- ¹⁰ Sustainability-focused companies outperform their peers, Elsbeth Visser - <https://csr.pleio.nl/blog/view/7669912/harvard-sustainability-focused-companies-outperform-their-peers>
- ¹¹ Speed Kills, *Project Manager Magazine*, Ed Merrow, issue 11. January 2012, pp. 19 – 21.
- ¹² Talent Shortage Survey, Manpower Group, 2012 - http://www.manpowergroup.us/campaigns/talent-shortage-2012/pdf/2012_Talent_Shortage_Survey_Results_US_FINALFINAL.pdf
- ¹³ Ageing workforces, HSBC Insurance and the Oxford Institute of Ageing, 2008 - http://www.ageing.ox.ac.uk/files/brief_aw.pdf
- ¹⁴ Advanced Skills Shortages in Canada – Getting to the Root of the Problem, The Canadian Business Journal, March 2009 - http://www.cbj.ca/features/march_09_features/advanced_skills_shortages_in_canada_getting_to_the_root_of_the_p.html
- ¹⁵ Successfully drive change through the organization, PwC - <http://www.pwc.com/us/en/people-management/change-management.jhtml>
- ¹⁶ Making Change Work, IBM, 2008 - <ftp://public.dhe.ibm.com/common/ssi/ecm/en/gbe03100usen/GBE03100USEN.PDF>

About DuPont Sustainable Solutions

DSS is one of 12 DuPont businesses. Bringing customers the benefits of an integrated global consulting services and process technology enterprise, it applies DuPont's real-world experience, history of innovation, problem-solving success and strong brands to help organizations transform their workplaces and work cultures to become safer, more efficient and more environmentally sustainable.



Contacting DSS

Susan Sotiropoulos

Regional President- United States and Canada (USC)
 Susan leads DSS consulting business for the USC region
 Tel: +1- 302-892-1060
 Email: susan.u.sotiropoulos@dupont.com



Steven Morgan

Sub- Regional Director- United States and Canada (USC)
 Tel: +1- 804- 897-9651
 Email: steven.d.morgan@dupont.com



Visit our Website:

www.sustainablesolutions.dupont.com