



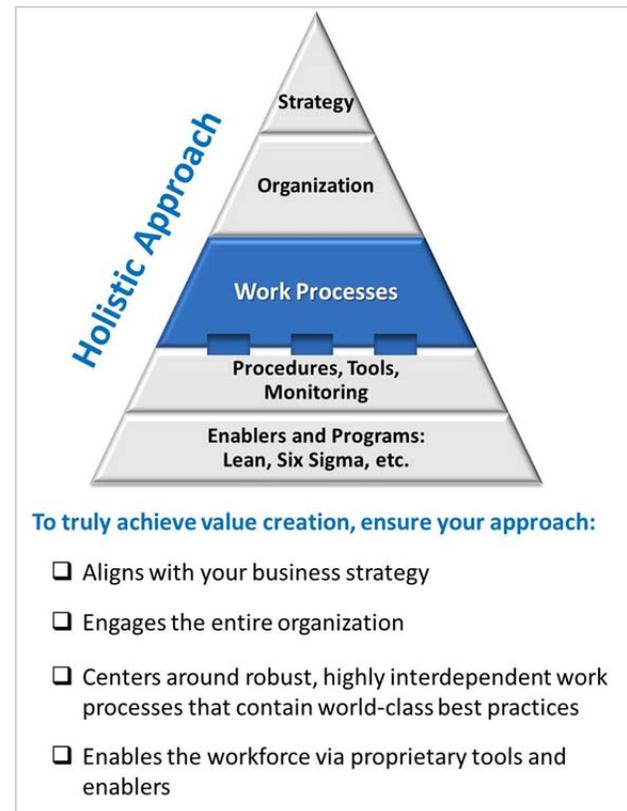
## Creating Value During an Economic Downturn – Oil & Gas

Most companies in the petroleum industry have or are going through the process of significant cost reduction in their operations in response to lower crude prices. But prior to the current downturn, many upstream companies already had sub-optimal levels of operational excellence, and are still struggling to create sustainable value through improved supply chains, asset utilization, capital effectiveness, etc. Additionally, some are not focused on preparing their companies for the ultimate recovery in the oil and gas industry.

As we have seen, cutting costs does not solve all ills within a down market. There must be a new vision of what value creation means. Shown in Figure 1 is the approach for creating operational excellence that integrates your company's strategy and organization with highly interdependent work processes aligned with procedures and enablers committed to improved company performance. It is sustainable, and allows you to focus on actions that will create value for your company. Addressing organizational and operational issues independent of this integrated approach will typically result in minimal value creation.

Think of it this way: **What value creation would be possible in your company if you ran your lowest-performing asset (i.e. producing field, plant, rig, frack spread, etc.) like your best one?** What if you ran all your assets this way? The impact on your bottom line would be significant!

**Figure 1. Sinclair Group Model for Operational Excellence**



In any business environment there are opportunities to implement steps that result in value creation. One of the most impactful ways to create profit is through the minimization of variability. Variability destroys value. In fact, **variability is the enemy of economic profit**. To combat variability the need for discipline and standardization must be understood and applied consistently to the value creation process.

It is important to have a proper perspective on the impact of variability, and how operators, service providers, drilling contractors and

manufacturers can mitigate the adverse effects of variability. There are several important drivers for this approach:

- Upstream companies today are confronted with very competitive markets, and increasing business complexity.
- Companies are striving to optimize globally, business-by-business. They work hard to allocate their capital, particularly in times of low market activity, and make investments that provide the greatest opportunity for long-term value growth.
- Dramatic performance improvements are being made by increasing leverage from this knowledge through standardization and work process discipline, even in the current oilfield market environment.

For optimal results it's important to understand that virtually every aspect of a business is connected; in fact, all functions are interdependent. They must be aligned unambiguously and focused on creating value for the business. The main objective is the integration of all functions working collaboratively driven by a strategy to "optimize the whole" and to increase economic profit for the business.

## The Foundation for Economic Profit

It is important to provide a definition of what is meant by the term value creation. To truly create value requires that economic profit be increased across an entire business. It is a primary measure of financial performance.

Economic profit equals profit after tax minus a charge for capital. For a company, this is the net operating profit generated by the business taking into account all expenses including depreciation and taxes and then subtracting the cost of the capital, both debt and equity, used by the business. The cost of capital is the minimum return that investors expect for providing capital to the company. Therefore economic profit gives investors a measure of the incremental gain they receive by investing in a business over what they would receive

from leaving their money safely deposited in a bank.

Basically, employees have little to no impact on most of the factors in determining economic profit. However, employees have a major impact on expense and capital as well as significant effect on volume by improving asset availability.

Value creation is only driven positive when individuals, teams and functions within the business align well enough that they do not negate each other's cost reductions.

Several examples of misalignment that can degrade business unit cohesion, thereby decreasing cost efficiency:

- Engineering should not reduce capital by specifying equipment that drives maintenance expense upward or results in poor reliability.
- Procurement should not purchase materials that may be less expensive but fail to meet the process, service or manufacturing technical requirements of the company.
- Manufacturing should not spend capital to expand or increase production when the knowledge is in place to do so with existing assets, or if it's not economically justifiable.

"Variability" applies to what is redundant, unnecessarily different, or continually reinvented. It does not apply to what is inherently different. It destroys value by needlessly driving up both capital and expense spending. To combat variability, the need for discipline and standardization must be understood and applied consistently to create value (e.g. reduce costs).

"Variable" means:

- Subject to change or likely to change
- Capable of assuming any of a range of outcomes
- Inconsistent use of what is already known
- Redundant solutions to the same problem

Variability has a direct, measurable impact on value creation and economic profit. Its impact is generally detrimental. Variability can drive up both expense and capital costs, thereby destroying value. Variability is created by individuals, groups and whole functions as they pursue their separate, independent efforts to bring value to the business.

Variability can be managed and its detrimental impact reduced using standardization and discipline. This reduction can greatly enhance value creation and economic profit. It is important to re-state that addressing variability within your company can be particularly important during slow business cycles. In the current upstream market environment, significant potential for creating value exists even though oil prices are depressed and may continue to be for some time to come.

### The Importance of Standardization

Standardization is a mechanism to use and leverage what is known to bring value (e.g. reduce cost and/or increase asset availability). Three points are worth mentioning:

- Standards identify “best” or “most effective” knowledge based on objective criteria and valid data.
- Standardization in itself is never the objective; value creation and economic profit are the objectives.
- Disciplined and consistent application of best practice and technology standards is required for standardization to deliver its full potential value to the business.

### Discipline Removes Variability

Discipline is a means to ensure that complex tasks, procedures, and work processes are executed properly and consistently in order to deliver value. This is true whether operating an oil field in Ecuador, providing completion services in North America, or manufacturing downhole technology in Asia. A discipline documents the “best” or “most effective” how, based on data and past experience in reducing

costs. (And many “best practices” in use throughout the upstream sector actually originated in the downstream or chemical businesses.)

Discipline is sometimes confused with bureaucracy. Discipline delivers value by removing variability and ensuring correct execution every time a task is performed. Bureaucracy impedes efficient execution by imposing value-destroying activity, i.e. unneeded steps in a process or procedure.

Management of change is a form of discipline which ensures that potential improvements and innovations are evaluated, selectively accepted and then rapidly leveraged as most effective technology.

Several Sinclair Group examples are insightful:

- A large operator with multiple assets in its major producing area came to understand that each field was being operated in a different manner, and destroying considerable value within its operations. Challenges also existed within their organization, which did not foster a commitment-based workforce that understood their roles and responsibilities, and had no common goal for the future. By addressing their operational and organization issues the company was able to make significant and sustainable changes that streamlined their work processes and created considerable value.
- New process technology was to be installed in a company with 13 different facilities. The project was driven by a single project team to maximize utilization of the most effective technology and minimize duplication of engineering and procurement effort, thereby significantly reducing capital and increasing value.
- Another company with numerous manufacturing facilities making the same technology improved its production capability by revising its process control strategy in one plant and then rapidly duplicating the improvement in the other plants (increasing value by improving production from existing assets). This project required instilling knowledge

capture and knowledge sharing skills within the client company.

- A company decided to establish technology discipline teams to identify and document technology standards for piping, rotating machinery, electrical equipment, instrument technology, etc. Once the standards were established, the experts defined the best available technology for procurement to negotiate commercial contracts. Procurement was able to aggregate and leverage the company’s purchasing power to reduce suppliers and negotiate contracts that significantly reduced prices on a global basis. The company challenged the discipline teams to establish a Management of Change process to ensure that improvements were made based on economic analysis of valid field data.

These operational and organizational excellence skills can be applied at any level within a company. To increase economic profit for an entire business there are several fundamentals:

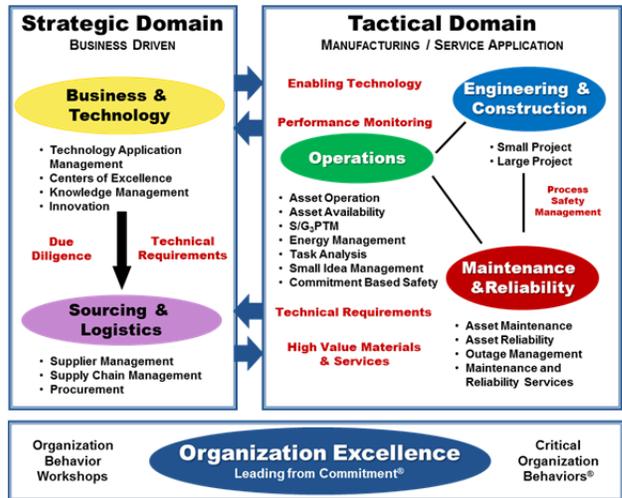
- Align and focus all functions of the organization on creating value for the entire business.
- Consistently leverage knowledge through standardization and work process discipline to optimize the whole.
- Couple technology with well-defined, integrated and streamlined work processes.
- Avoid value destruction that needlessly drives up costs and underutilizes existing assets.

Optimization requires consistently leveraging knowledge through standardization and work process discipline. Knowledge must be validated by field data to become “best available know-how.” Technology (“What we know”) must be coupled with well-defined, integrated and streamlined work processes (“How we use what we know”).

As shown in Figure 2, the Sinclair Group view of operational excellence consists of two

domains – one strategic and one more tactical. At a high level, the strategic domain is more specifically “business driven” whereas the tactical domain is more manufacturing / service driven. Interestingly, North American shale plays are quite similar to a manufacturing environment and can enhance value creation through adherence to these principals.

Figure 2. Operational Excellence Components



In Figure 2, Operations applies technology to provide services or manufacture products to meet the demands of the marketplace as defined by the business. Procurement and materials management provide equipment and supplies that conform to the technical requirements dictated by the most effective technology and validated by plant, equipment and service performance data.

In summary, there are a number of modifications that can be made within upstream companies to address current operational and organizational issues, as well as strengthen future market position for the impending recovery. Through proper focus on developing an integrated organization, it is possible to create significant value, overcome the inefficiencies complicated by layoffs and to add value to the organization even in a down market. While we have little control over the price of oil, **there are impactful steps you can take today to build a better organization and add more to the bottom line.**