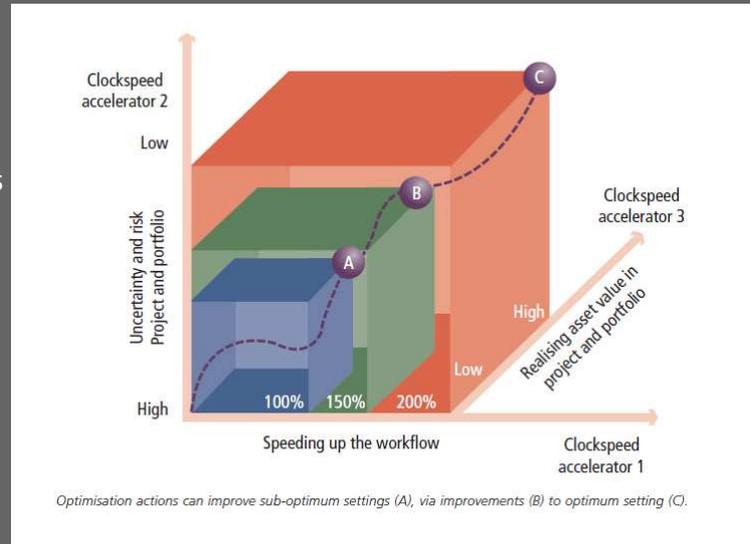


Energy Strategy Value Series



Clockspeed Analysis & Benchmarking

For optimum performance, your corporate clockspeed must adapt to, and synchronize with, the speed of change in the external business environment. Your company's corporate clockspeed settings can be benchmarked relative to your peer group competitors using **Clockspeed Accelerators™**. Our clockspeed benchmark reveals which corporate levers need adjustment to enhance your performance. The three levers that control your corporate clockspeed are productivity, reliability, and profitability.



Clockspeed Accelerators™ is based on research published and validated in the peer-reviewed scholarly domain. It has been applied successfully to benchmark the relative performance of Oil Majors, Independents, National Oil Companies, Natural Gas Transmission Companies and Energy Utilities.

1. Competitive Advantage from an E&P Clockspeed Accelerator

First Break, 2009, Vol. 27 (June), pages 87-94.

The industry needs to improve and optimize their modus operandi in order to maintain a leading and competitive position in the energy sector for years to come. Through a detailed analysis of the four major players in the sector, the international oil companies, the national oil companies, the public-private partnerships, and the service companies, the conclusion is that most of them can greatly benefit from improving their clockspeed in three areas: workflow speed, risk mitigation, and accrual rate of the portfolio value. For each groups of E&P actors, the analysis shows where shortcomings occur, where opportunities lie, and where improvements are needed. Recommendations are formulated in a matrix of accelerators versus E&P players, from where it becomes evident that numerous well-defined opportunities emerge that let upper management in these companies streamline their E&P activities, optimize their portfolios, and team up with suitable partners from other groups to maximize synergy all the while speeding up the clockspeed.

2. Critical Drivers of Exploration and Production Clockspeed

Exploration and Production: Oil and Gas Review, 2011, Vol., Issue 1, pages 12-17.

The performance of oil and gas companies takes place in a highly competitive market where everything is related to timing. In a bull market, companies that respond the fastest to internal and external signals of growth opportunities can take measures to further accelerate their growth. In a recessionary market, companies can prevent overly steep deceleration of their business size by taking adequate action to adjust

the company to the changed outlook without undue delay. Response time and timely measures are crucial for best-in-class performance, which is the result of supreme clockspeed management. Individual companies can perform better than others by monitoring the critical settings of their clockspeed and by rapidly synchronising their accelerators with the business environment when appropriate. In this article, the critical drivers of exploration and production (E&P) clockspeed and specific actions for clockspeed synchronisation and optimisation at individual companies are outlined.

Examples of Clockspeed Benchmarks

3. Accelerating the three dimensions of E&P Clockspeed - A novel strategy for optimizing utility in the Oil & Gas industry

Applied Energy, 2009, Vol. 86, Issue 10, pages 2222-2243.

Abstract: This study provides a framework through which an E&P company can critically assess its capability in accelerating lag-time between exploration and production. The acceleration of E&P clockspeed can help to optimize production levels of conventional and unconventional oil, and includes diversification strategies that replace non-renewables with renewables. In summary, E&P Clockspeed Accelerators provide the gearshift instruments that enable the energy industry to better meet the required demand/supply ratios.

The following practical deliverables useful to Oil & Gas professionals follow from this study: insight into the concept of clockspeed in E&P industry setting, use of Clockspeed Accelerators™ as gearshift lever tools for monitoring and directing E&P clockspeed, a template for benchmarking and scaling the cardinal axes of E&P Clockspeed Accelerators™ for companies in time-series analysis and cross-sectional analysis, insight in the critical drivers of E&P clockspeed acceleration based on the companies studied, a set of recommendations to support and speed up the optimization of the individual Clockspeed Accelerators™ for Oil & Gas companies. The three Clockspeed Accelerators™ are: workflow speed, improvement rate of Uncertainty Mitigation and accrual speed of portfolio value.

The study includes an empirical analysis of the E&P clockspeed performance of two peer groups (IOC supermajors and public private partnership NOCs) comprising six companies each.

Clockspeed Leaders among Private Oils are: Exxon, Shell, and Chevron. Laggards in this peer group of Private Oils are: Total, ConocoPhillips, and BP. For the world's Top 6 PPP Oil companies, clockspeed leaders are: ENI, ONGC, and Statoil. Laggards in the PPP Oil peer group are: OMV, Gazprom, and Petrobras.

What marks out industry leaders in this study is not just superior technology, but superior technology applied in support of optimization of the workflow speed, risk mitigation and value accrual.

4. Guidelines for Clockspeed Acceleration in the US natural gas transmission industry

Applied Energy, 2010, Vol. 87, Issue 8, pages 2455-2466.

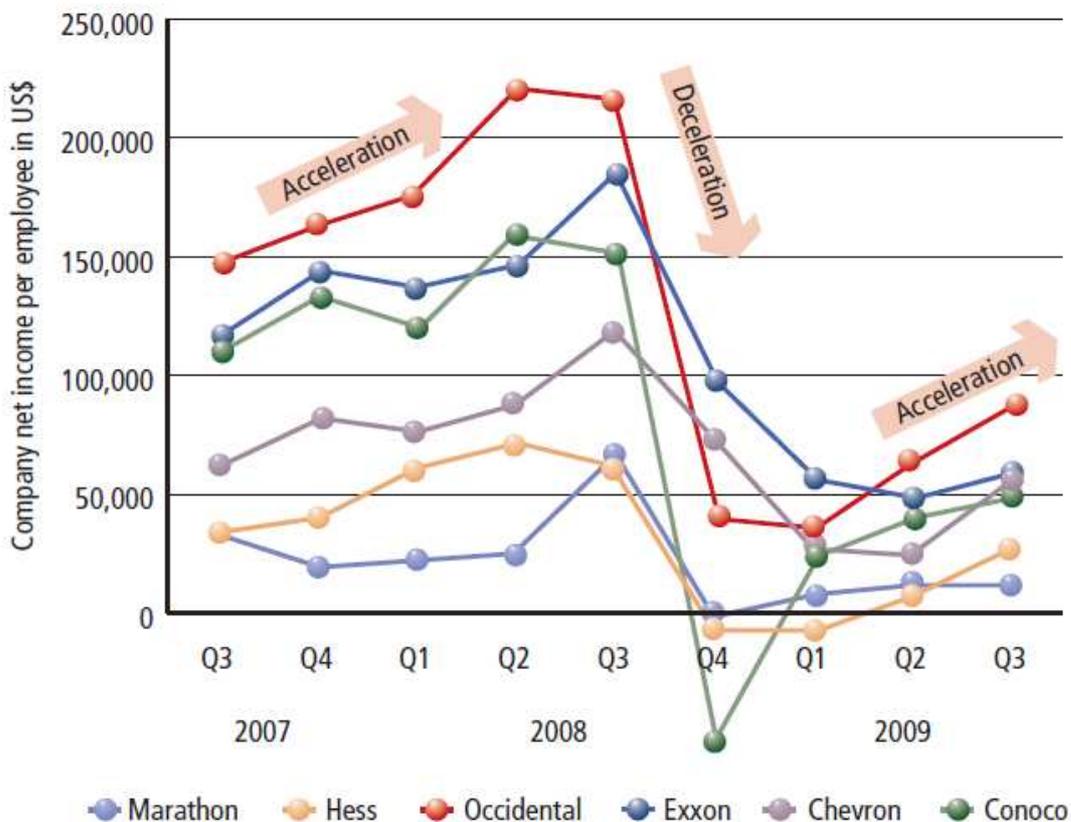
Abstract: Practical recommendations are formulated for achieving competitive clockspeed optimization in the US gas transmission industry. Although the US natural gas market is subject to specific regulations and its own geographical dynamics, this study also provides hints for improving the competitive clockspeed performance of gas transmission companies elsewhere, in other world regions.

This study includes a detailed clockspeed analysis and benchmark of six major integrated US energy companies with substantial US interstate natural gas pipeline business activities: El Paso, Williams, NiSource, Kinder Morgan, MidAmerican and CMS Energy. For this peer group, the three clockspeed accelerators have been benchmarked at both corporate level and gas transmission business level, using time-series analysis and cross-sectional analysis over a 6-year period (2002-2007). The results are visualized in so-called clockspeed radargraphs.

Overall corporate clockspeed winners - over the performance period studied - are: Williams, El Paso and Kinder Morgan; MidAmerican is a close follower. Corporate clockspeed laggards are: CMS Energy and NiSource. The peer group ranking for the natural gas transmission business segment shows similar clockspeed winners, but with different ranking in the following order: Kinder Morgan, MidAmerican and El Paso; Williams is a close follower.

Clockspeed laggards for the natural gas transmission segments coincide with the corporate clockspeed laggards of the peer group: CMS Energy and NiSource (over the performance period studied); laggards of the past may become clockspeed leaders of the future if adjustments are made.

Four tactical instruments emerge key in improving clockspeed accelerator settings at individual companies. These four tactical instruments are: Bound versus unbound Merger & Acquisition options, portfolio balancing of low and high margin assets, rigorous management accounting to optimize return on investment (ROI) in spite of strong regulation, and corporate restructuring to reap equity return by leveraging equity and debt in the weighted average capital cost (WACC) of subsidiaries in favor of the mother company.



We are delighted to provide additional information on our services.

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