

# Asset Velocity is Cycle Time

## Key Metrics for Understanding Performance

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A Kaufman Global White Paper

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ACCELERATING PERFORMANCE

## Basic Concept

- The oil industry is asset intensive.
- Cycle time<sup>1</sup> is the most fundamental indicator of competitiveness in the world.
- Lean is the elimination of waste inside the cycle.
- Asset velocity is a measure of the number of cycles completed during a given period of time.
- Asset velocity naturally drives efficiency and service quality.
- Cycle time is a unifying metric.

**Getting things out of the ground is asset intensive.** If ever there were a business involving assets, it is the Oil and Gas industry where assets include trucks, ships, tools, pumps, bits, materials, and people. Technology is important, but the delivery of that technology is accomplished with physical assets and the people who provide services.

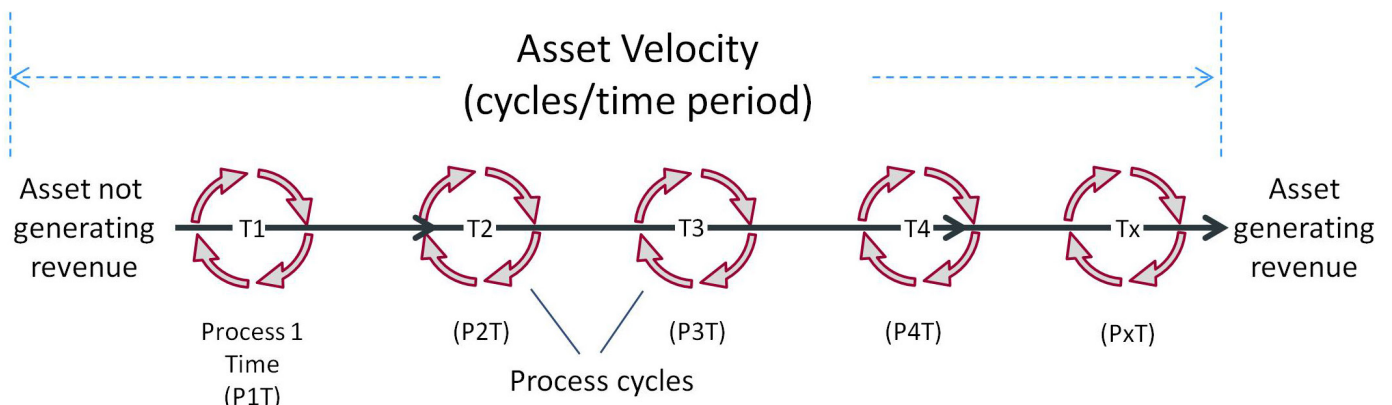
**Cycle time is the most fundamental indicator of competitiveness in the world.** Imagine a world where an idea for a product or service is generated and then, instantly, a customer pays for that product or service. Between the idea and the money there are two things: value and waste. The time for value and the time for waste come together to make cycle time — see **Figure 1**. Simply put, the organization that is best at managing cycle time is... best.

## Focus on eliminating the waste inside the cycle.

Studies have shown that over 90% of even the best process is wasteful. In the end, companies need to preserve value — those things the customer is willing to pay for, such as service quality, form, fit, function, utility, etc. However, that value is surrounded by waste. This is where energies should be focused. When waste elimination is placed in the spotlight, cycle time speeds up, assets are more used for more productive purposes, and money comes in faster.

**Asset velocity naturally drives efficiency and service quality.** Sometimes deciding where to focus can be difficult. Businesses often feel compelled to choose between asset velocity OR productivity. Yet, it's not one or the other; productivity is simply one of many factors that determine asset velocity. True productive labor inside any process is adding value, while non-productive labor inside a process is waste. The objective is to eliminate waste.

Service quality means effectively delivering value and reducing non-productive time. In the Oil and Gas industry, reducing time from discovery through well production is a critical return on investment factor. However, accelerating assets does not mean “speed-up” and cut corners on service quality. On the contrary, companies must preserve those actions that make products or services safe, functional and



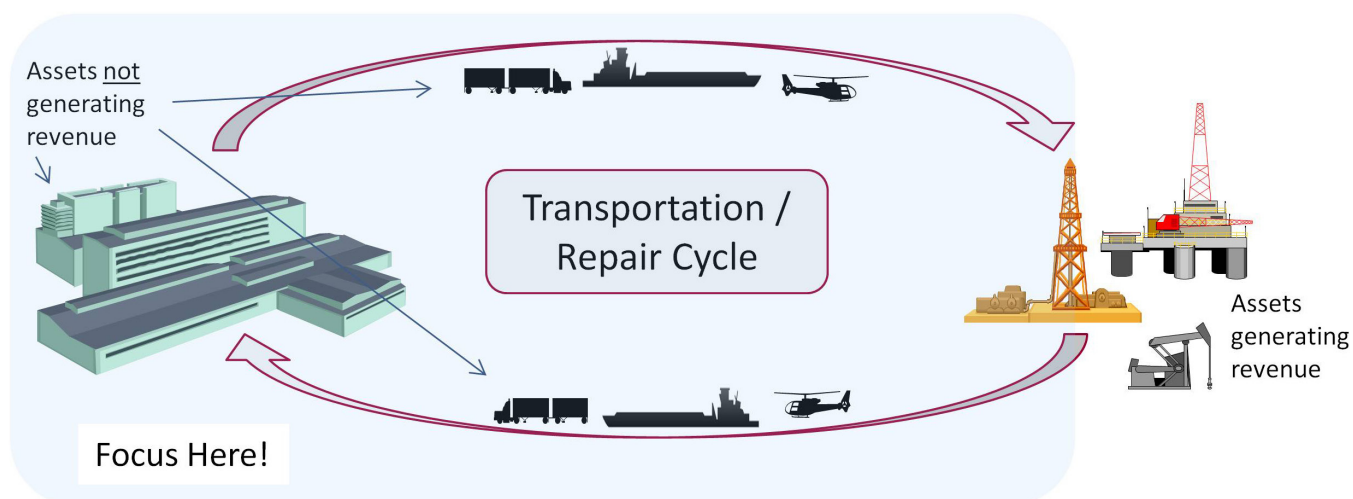
**Figure 1** - Asset velocity means taking less time to move through any series of processes to free cash flow for other uses.

delivered on time. These are all the things a customer is willing to pay for, and therefore they are of value. When waste is eliminated, cycle time improves, and service quality also improves — see **Figure 2**.

**Asset velocity is a unifying metric.** There is plenty of proof that asset velocity yields significant returns. Pick anything that generates revenue, for example: downhole tools, trucks, pumps, control units, etc. When the velocity of the asset increases and moves

The list of excuses goes on and on. This is all nonsense. Tools are an asset. Trucks are an asset. Inventory is an asset. People who deliver services are an asset. These assets can only be used and applied if they are available. The faster the cycle time... the more available the asset.

And let's not let the functional areas off the hook. Every business process that exists contributes to the cycle time equation. It's not just about waste



**Figure 2** - The transportation repair cycle inside the Oil and Gas industry's upstream operations is surrounded by business processes (e.g., supply chain, logistics, finance, sales, finance, etc.) that directly impact cycle time.

more quickly through its entire cycle, it has more time to be used for additional revenue generation. Or, if there is not a revenue opportunity, the need for additional capital expenditures goes down. These are only the “big bucket” and most quantifiable benefits. Other benefits include customer retention, inventory management, transportation accuracy, cost, etc. Arguments often remain, including:

- “We’re not like other businesses; we don’t use those kind of assets.”
- “We don’t use the asset in the same way; our cycle is shorter.”
- “We rent products continuously.”
- “We sell services.”

within the function, such as waiting time related to misaligned priorities or quality issues related to information accuracy. Functional redundancy also affects cycle time, where the level of waste resulting from duplicity of support functions between business units and geographies is staggering. Supply chain is a profound example and opportunity. A standard waste elimination philosophy and focus on cycle time within and across the functions will yield substantial returns. When everyone focuses on cycle time within the area they control, fundamental, deep and lasting improvement follows.

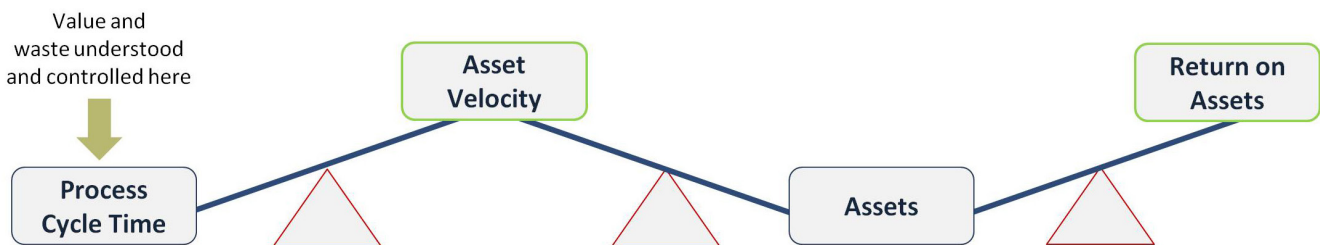
**What’s an ideal metric?** Technology and more sales are not the only answer to competitiveness.

Operational performance is rightly recognized as a major component. But exactly how to measure operational performance is a bit of a conundrum for most organizations. Metrics related to revenue, safety, quality, productivity, etc. abound. Unfortunately, for assessing operational performance, these metrics present some problems, such as:

- They are mostly lagging indicators of improvement and are subject to extraneous factors such as market conditions, regulation, sales, catastrophic events, etc.
- It is often difficult to gain consensus. The degree to which each of these metrics interact, how other variables affect them, and how they connect the bottom to the top of the organization

**Who understands value?** Value is best understood in two places - where it is created and where it is consumed. The person or team working directly on a product or service understands the most about what is valuable and what is wasteful inside their effort. The customer consumes the value and is the ultimate judge.

Cycle time allows us to measure performance at the place where value is created — by the individual or workgroup performing a task. Cycle time is “stackable,” meaning that the build-up of task-based, sub-process cycle times within a larger value stream provides an overall measure of value stream performance.



**Figure 3** -The figure above shows the relationship between process cycle improvement and the large return on assets.

are the subject of vigorous opinions and debate. When companies try to use these measures early on in the implementation of a true, structured operational improvement, they often fail to tell the story. Conflict resolution around the metric gets much of the Oil and Gas.

- The measures are too broad in scope. Fundamental operational shifts that affect traditional existing metrics often take several years of focused effort before cause and effect relationships are recognized. During this lull, top leadership may become disenfranchised and begin to attack the initiative as “not delivering results.”

With these constraints in mind, cycle time of a company’s value streams becomes an ideal operational performance metric.

For example, when a pump undergoes maintenance, it goes through several process steps, each with its own cycle time. The net result of the pump repair process can only be evaluated and improved when the workgroups doing the work understand each step thoroughly. They must have a method and impetus to measure process step cycle times. Sub-processes that affect value stream performance are not only those that touch the pump directly, but also those that feed into the value stream such as parts availability (stores / inventory), business processes (documentation / certification) and prioritization (scheduling / planning).

For a big picture view of how the cycle time of an individual process affects the metrics that are being watched at headquarters, see **Figure 3**.

## Conclusion

Cycle time across any value stream for any asset is the most fundamental metric for the measure of operational effectiveness and improvement. It can be effectively applied as a local, line of sight, time-now measure. The exact thing to measure can only be determined by those who understand the most about value and waste along their piece of the value stream. Leadership has a fundamental role to play and that is to push the organization to focus on cycle time, accept no arguments for exemption and require the structured, standard means by which individual workgroups can actually understand, measure and improve the processes they affect.

## End Notes

<sup>1</sup> Not to confuse “lead time” with “cycle time,” Kaufman Global defines “cycle time” within this white paper as the time between successive deliveries of a product or service.

## About Kaufman Global

Kaufman Global is a proven implementation partner that focuses on accelerating performance. For 20 years we have worked with clients around the world to drive enterprise-wide change initiatives and cultural transformations. Leveraging Lean, Six Sigma and proprietary change management techniques, Kaufman Global delivers structured implementation and transformation projects that enable sustainable operational and financial results.

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