

Enterprise Excellence: Oil and Gas

Oil and Gas:

For over 20 years, our team has been learning, applying and adapting lean *manufacturing* principles and techniques to manufacturers around the world. As with most lean practitioners, we too had our initial experiences within a specific subset of *Lean manufacturing*. Whether our initial learnings were high volume, low volume, engineer to order, products or integrated systems, we had primarily learned *lean* within the construx of the businesses and business models in which we worked.

Our hands on experience (dating back to 2006) using *Lean* methodologies to improve business level metrics has been cornerstone to our work in Oil and Gas. From exploration to mobilization to drilling to casing to completions, our experience in the exploration of an oilfield or completion of a new oil and/or gas well is second to none in the industry. Our work includes both strategic and operational projects with numerous large and small companies servicing this sector including: M-I SWACO (drilling fluids), Smith Services (downhole tools, completions, directional drilling, decommissioning), Smith Bits, Schlumberger (wire logging, directional drilling), Wilson products (oilfield services), @Balance (managed pressure drilling), Tesco (top drives), Transocean and LTR (rental equipment) in nearly all major drilling operations around the world.

Our work includes:

- **Global, Regional and Country level Strategy:** Led strategy development and strategy deployment activities with 12 countries and 2 Geomarkets in North America, Africa and Europe. Strategic goals included: revenue, growth (expended services with existing customers and targeted growth with non customers), cost (labor and material), working capital (inventory and receivables), speed to market (new technologies), new product introduction (market and strategic customer acceptance of new technologies) and strategic accounts.
- **Global and Regional Supply Chain:** Designed, led and implemented both global and regional supply chain strategies for a \$5billion drilling and completion fluids company. Supply chain strategy included suppliers located around the world with global supply and distribution points in all markets. Supply chain strategies reduced working capital (\$127mm), reduced landed cost (-12%), reduced product obsolescence (-22%) and improved inventory turns (+36%).

Supply chain work also included design and development of regional and district level materials strategies to support 12-60 wells around a warehouse/service center (including rig materials and inventory strategies) increasing district and rig inventory turns, reducing job costs (freight) and minimizing product obsolescence and product returns from the rig.

- **Sales:** Worked with land and offshore Sales teams in numerous sectors to build processes to increase the effectiveness of corporate, field and district level sales teams around the world. *Sales Knowledge Transfer* process resulted in direct increases of sales of \$25mm in the Rockies. Focus and approach emphasized the *process* of sales onboarding and the transfer of knowledge (best practices) amongst widely dispersed sales teams.

- **Engineering:** Worked with both product and services design teams in reducing product development time (40+%), increasing capacity (75+%), accelerating speed to market (-50%) and improving the effectiveness of product launches (Sales +\$25mm)
- **QHSE:** Worked with both independent locations, manufacturing operations, service centers, warehouses and major onshore bases in developing QHSE strategies (and supporting processes) and improving safety performance.
- **Manufacturing:** Worked with numerous manufacturing locations to improve productivity (18%), increase capacity (200+%), reduce lead times (-65%) and improve quality. Techniques included *lean manufacturing*, implementation of global *Demand Planning*, materials management and lean product development.
- **Service Centers:** Worked with service centers around the world (supporting both land and offshore operations) to increase capacity (+55%), increase productivity (+26%), improve Inventory turns/utilization (+52%) and increase revenue (300+%)
- **Finance:** Worked with finance teams around the world implementing global month end close process (96 countries), improving DSO (\$87mm), improving North America asset tracking (90% improvement in audit accuracy)
- **Human Resources:** Experience with numerous HR teams (district, country, regional and corporate) improving performance of processes ranging from 'attract, acquire, hire to onboard' to development of a global skills competency program for field service technicians. Improvements included *time to fill* (-47%), 12-18-24 month retention rate (+36%).

Having worked in all Geomarkets around the world including: the United States (land and offshore), Canada (western and eastern), Mexico, South America (Brazil, Argentina, Columbia, Trinidad), North Sea/Europe (UK, Norway, Denmark, Netherlands, Germany, Italy, Austria, Hungary), Middle East (Egypt, Dubai, Saudi Arabia), Africa (Congo, South Africa, Equatorial New Guinea, Angola, Nigeria), Eastern Europe (Azerbaijan, Kazakhstan), Russia, Asia (Malaysia, Indonesia, China) and Australia, our team has the breadth and depth of developing, documenting, implementing and deploying processes around the world in multiple sectors, cultures and business scenarios.

Our experience includes the nuances of rig operations, drilling fluids, coordination of mud plants, challenges with land wells, offshore wells,, drill bits, services/technologies, casing/liner hangers/fishing tools, top drive systems/spares/service, product development (and product commercialization), seasonal drilling , etc. Our experience with this wide array of land and offshore based products and services enables our team to provide a unique perspective to strategies and solutions developed around the world.

Having specialized in the rapid cycle development, documentation and *scalability* of processes, JKA has been able to introduce a model for performance improvement (via identification and improvement of key processes) that has impacted key financial (revenue, EBIT, cost, working capital, cash) and QHSE metrics at the Global, Geomarket, Region, Country and warehouse/service center levels at numerous oilfield services and drilling contractor companies.

Global Results:

- ↑ Revenue \$200mm ('06-'09)
- ↓ Global DSO 32%
- ↓ Global Inventory \$122mm

Regional Results:

- * ↑ Revenue \$29mm ('09)
- * ↓ DSO from 83 days to 56 days
- * ↓ Rockies Inventory \$27mm

District/Country

- * ↑ Inv Turns 58%
- * ↓ DSO from 106 days to 43 days
- * ↑ EBIT from 8.6% to 16.9%