



Improving Productivity From Demand Planning and KPI's: An Electrical Power Utilities Company Case Study

July 2020





About Kelmic

Kelmic Consulting helps organizations capture opportunities and dramatically improve their operations.

Helping our clients improve their operations since 2002

We partner with our clients to drive bottom-line impact by addressing and dramatically improving efficiencies in People, Processes, and Property. Our exceptional people draw upon more than 100 years of combined experience to bring you the right perspectives and expertise to help you tackle complex challenges and realize your strategic ambitions.



Background

About the Client

- Fossil power plant for a major electrical utility operating fossil, nuclear and hydro generation facilities
- Government owned private corporation with over 12,000 employees
- Over 170 billion kwh of annual sales
- Largest facility in state with 3 generators
- Highly unionized workforce

“Corporate management was frustrated with a lack of metrics or measures of business performance.”

This major electrical utility business unit was struggling with useful data to manage and steer operations. Data was often late and its accuracy questionable.

Demand forecasting was wildly inaccurate leading to excessive stockpiling of coal and price fluctuations driven by emergency call-offs.

Data was abundant, but useful metrics were poor or non-existent with management reviews focused on financial results using data often more than two months old.

Corporate management was frustrated with a lack of metrics or appropriate measures of business performance.

Daily activities of staff were poorly planned. Reviews were either poor or non-existent. No performance standards existed.

Maintenance crews often failed to complete work assigned. Budgets were constantly exceeded and a moratorium on recruitment led to excessive use of contractors to complete basic tasks.

Demand forecasting was simple and driven from a centralized planning department. Forecast accuracy was extremely poor leading to significant over stocking of coal. No adjustments to demand forecasts were made based on actual performances or demand. Long term supply contracts based on forecasts were driving coal delivery to maintain pricing and alleviate penalties, however this was causing increased stock losses, fire risks and increasing inventories.

The demand plans also did not adjust for blend variation, leading to some coal types being stock piled at faster rates resulting in blend adjustments that drove inefficient generation and cost over runs.

Implemented Solution

A streamlined communication method was established between site and central procurement and planning. This allowed for efficient daily and weekly adjustments to demand plans and changes to call-offs on long term coal supply contracts.

Forecasting of demand was significantly improved and continually modified based on actual performance. This allowed for improved coal requirements planning.

Work output standards were set, KPIs were established and management operating systems were developed and installed.

Daily and weekly plans based on priorities were established with daily review meetings.

Maintenance teams reported against plans in terms of activities and time-to-complete. This allowed for work standards to be reduced to more accurately represent time requirements resulting in a 19% increase in overall productivity. As a result, backlog was significantly reduced on most critical items.

The utilization rate of contractor crews was also reduced by 6%.

A management flash report was generated weekly and projecting expected performance where key focus areas were highlighted and addressed.

19%

increase in productivity



Key Results Achieved

- Labour productivity increased by over 19%
- Significantly reduced work backlog, specifically in urgent and critical items
- Improved forecasting and head office and site communication led to reduced coal stockpiles and improved coal type balance
- Array of KPIs allowed focused management
- Project ROI > 3:1 within 12 months

ROI



3:1

19%

Improvement in
productivity

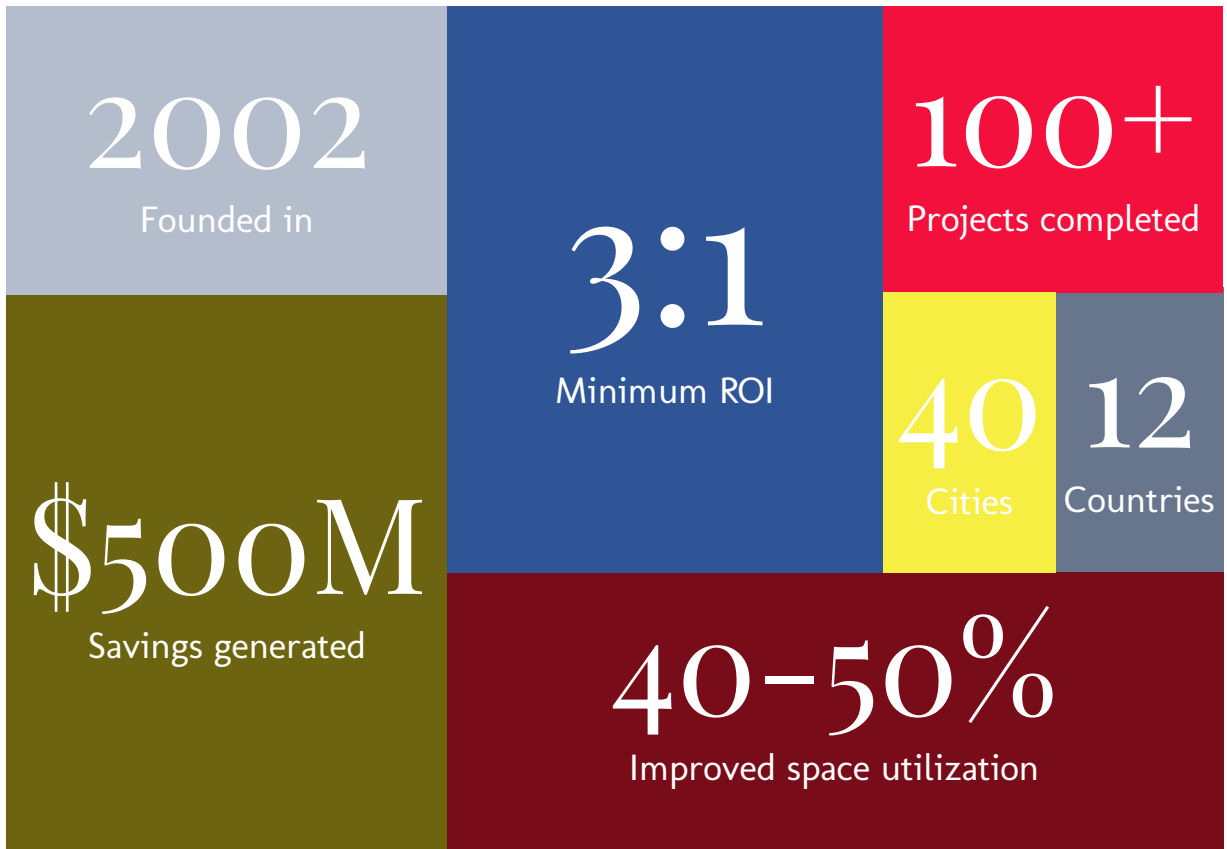
Improved

Performance visibility

Improved

Demand planning

Kelmic at a Glance





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