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Asset intensive firms turn to IT to squeeze more value

BY VIRENDER AGGARWAL

THE proposed major overhaul of the Singapore bus services sector has thrown into sharp focus the critical issue of how corporations, whether in the private sector or in the government, optimise heavy assets.

In recent decades, significant sums have been invested in enterprise resource planning to improve productivity and cash flow. But many organisations have until now not zeroed in on possibly the last mile of corporate efficiency - how to squeeze more value out of physical assets such as infrastructure and heavy equipment.

As being played out in the proposed Singapore bus sector revamp, traditional roles have been upended - a government which had long kept ownership of these assets at arm's length now suddenly finds itself as its steward. Similarly, the bus operator has to relook at remaining assets differently while seeking to protect or enhance shareholder value.

Post-war economic history had seen governments kick-starting public enterprises only to embark on wave upon wave of privatisation in the decades that followed.

As roles change, new owners of asset-intensive enterprises must re-look at how to manage the life-cycle of each asset, when to recapitalise, and how to incentivise asset efficiency. And clear and measurable models are needed to ensure reliable and sustained operations to meet or exceed expectations.

At the execution level, it is vital to collect and analyse data to support decision making while implementing measures such as condition monitoring and operational energy efficiency of assets. In sectors such as energy and transportation, sustained and efficient asset management is the core business activity as asset downtime or impaired asset performance is not an option.

Mere stock-taking of inventory of assets or spares will no longer suffice. For CEOs of airlines, power plants and transportation networks, decisions affecting income, balance sheet and cash flow need to be calibrated and managed carefully.

Such decision making requires complete visibility on all aspects of costs including the manpower required to maintain them, and not just their useful economic lives. In other words, the total cost of ownership (TCO).

Clients of Ramco Systems have found that apart from improving upon traditional financial management and asset-intensive enterprises, they also need to consider the following factors:

- First, there is increasing awareness of the need to deploy advanced process control systems. Data must be carefully collected to measure power usage and how well each component functions and delivers the desired outcome, in order to extract further improvements. More and more sensors are being attached to heavy equipment as part of the growing adoption of machine-to-machine connectivity.

- Second, the IT deployed to optimise assets must be directly linked to the asset's existing operational technology in order to capture detailed data points in near real-time

As speed is increasingly critical, decision-makers down the line - from the CEO to the head of operations and further to the line manager - can analyse the data and make decisions instantaneously.

- Third, the solutions from process control to detailed financial analysis must be easy to use. Increasingly, the solutions are being implemented from the commissioning phase right to final disposal of the asset.

This means that different technical and non-technical staff having different levels of approval need to be familiar with using and interpreting the data. The solution has to be implemented easily and quickly. It should take weeks, not months, to plot life cycle management and asset performance using IT tools.

- Fourth, the application being available anytime, anywhere is key. Maintenance engineers need to see the data on mobile devices while they are on the move. This will also cater to the Gen Y workforce as it will provide them an easy user experience.
- Fifth, decision makers are turning to advanced analytics to help them improve efficiency. Such Big Data algorithms must be able to predict potential malfunction, when certain spares may be needed, the possibility of human error, and even calculate the right time to dispose the assets so as to maximise returns or reduce the total cost of ownership.
- Finally, amidst greater consciousness about corporate social responsibility, operators and asset owners need to be increasingly mindful of "green" issues.

While such issues do not traditionally feature in asset optimisation, more and more decision makers are starting to factor how to "price in" the potential costs associated with pollution, carbon footprint and the possible social impact that the operation of a heavy asset may have on society.

The writer is the CEO of Ramco Systems, a software products and services provider that offers cloud-based enterprise applications