

USING INTERNATIONAL BENCHMARKING & BEST PRACTICES AS A MEANS OF ENHANCING REVENUE LOSS MANAGEMENT

1. Introduction

In his 2001 publication, entitled Good to Great, Jim Collins highlights,

- Best Management Practices as gleaned from research on hundreds of companies, and
- Set simple measures and work towards them,

as two of the fundamental drivers of top performing companies. In the quest to establish best practices and appropriate measures, benchmarking performance against other similar businesses can provide some insights. Even in instances where the classic argument against Benchmarking of 'I am unique' may be relevant, performance measures and best practice insights used by others will still offer some insights that may be applicable. In fact, the nature of the SARPA institution points to a degree of commonality and hence opportunity to learn from each other, at least negating the uniqueness argument to some extent. While the focus of this paper reflects an approach used within the electricity utility industry, the benchmarking principles and the application of best practices has some relevance to revenue protection programmes in a range of industries.

2. A Benchmarking and Best Practices Approach as Applied Internationally in the Utility Industry

Top performing businesses manage their performance through:

- Business and Strategic Objectives
- Measured and Tracked Performance Levels
- Rigorous Performance Management
- Identification and implementation of industry best practices that may be appropriate to a particular company and helpful in improving performance

The typical Benchmark process usually includes the following steps:

- Decide Critical Subject Areas
- Establish Questions
- Clear Definitions and Develop Questionnaires

- Verify Data Accuracy
- Confirm All Question Interpretations
- Validate Data
- Resubmit Incorrect Data
- Present and Discuss Key Findings
- Best Practices and Idea Interchange
- Management Engagement
- Communication of Critical Results
- Highlight Key Opportunity Areas

While the benchmarking process deals with hard measures and metrics, the interpretation thereof for appropriate business application should be viewed more as an art than a science taking due cognizance of local relevance, business drivers, appropriateness of the approach and implications of implementation. In addition, benchmarking must be viewed as just one tool in a suite of business support mechanisms that drive the achievement of business goals.

Gregory Watson's Strategic Benchmarking study of 1993 provides an encompassing definition of the process:

“Superior performance within an activity, regardless of industry, leadership, management, or operational approaches, or methods that lead to exceptional performance; a relative term that usually indicates innovative or interesting business practices that have been *identified* during a particular benchmarking study as contributing to improved performance at the leading organizations.”

The selection of best practices involves looking for emerging practices which have potential advantage, but are not yet fully adopted. Best practices become standard practice over time, requiring constant reassessment to stay ahead of the competition in business performance.

In summary then,

- The use of Best Practices as an insight on how to improve business performance makes good business sense.
- The use of Best Practices to establish performance expectations is not advisable, as the solution may not fit a particular business environment.
- Performance Metrics that focus on results rather than activity, and metrics that have a clear line of sight from the executive level to the field manager should be the preferred approach.

- The performance metrics should be balanced so as to avoid sub-optimization, i.e. balance cost goals/metrics with customer goals (reliability, service levels and restoration efforts).

3. Revenue Protection Best Practice Learnings from International Benchmark Programmes

All Utilities experience an element of revenue loss, primarily as a consequence of system related losses and non technical losses which are generally attributed to either theft, both from within or external to the company and inefficiencies in the management of the revenue management value chain, primarily as a consequence of customer default or non payment.

Typical international proven best practices, which are merely listed for the purposes of this brief paper to give a flavour of utility focus, include:

- Toll free number for public reports – A number is publicised where reports can be made anonymously or otherwise by witnesses to theft directly to the utility/authorities. There needs to be a process in place to deal effectively with this information.
- Statistical reports – Reports generated by the billing and metering systems, which balance energy in, and energy paid for, highlighting imbalances in areas where theft could be occurring.
- Site inspections of both meter installation and customer premises to view appliances and equipment – Physical on-site inspections of both the meter installation and customer premises (commercial/industrial/agricultural/residential) to detect possible inconsistencies between consumption and usage patterns.
- Effective revenue protection program – Deliberate focus on all aspects of revenue protection including theft, non-payment, delinquent accounts, technical losses, billing efficiency and accuracy, metering accuracy, unmetered energy, mail and postage processes, receipting accuracy and processes for the discreet sectors where theft is apparent.
- Move meters out of houses to external locations – Physical relocation of meters out of the customer premises to a location where these can more easily be monitored and controlled by the utility and access cannot be withheld by the occupant of the premises.
- Legislation and legislative reform regarding energy theft to ensure penalties for theft as a deterrent. An approach which attempts through punitive legislation, to enforce the appropriate customer behavior. Impose heavy fines

and jail for convictions. Used extensively as a remedy in areas where electricity has become politicised as a commodity.

- Extensive study to understand practices, trends and methods used – Studies including benchmarking and practices in other environments to isolate and discover effective practices to implement.
- Commercial and Industrial customers, often supplied by three-phase service connections, have the greatest motivation and means to steal electricity. They consume very large amounts of electricity, have the most to gain by accessing electricity illegally, and have the means to devise and implement sophisticated methods of theft. As a result, electricity theft by commercial and industrial customers can inflict significant financial losses on the utility company.
- Use of army personnel in monitoring/surveillance teams – Use in highly volatile and politicised environments of military personnel to protect utility staff so they can perform their required activities and also to monitor customer illegal practices and detect and stop them pro-actively.
- Metering of all transformers on Distribution network – Statistical metering systems measuring outgoing energy so that systems can be implemented to balance what is purchased against what is delivered and to detect shrinkage or theft and excessive technical energy losses.
- Removing illegal connections – Physically removing illegal connections made by customers to avoid paying for their consumption, usually by-passing the meters thereby also avoiding being classified as legal customers.
- Community based management of sales – Systems whereby electricity billing is franchised and the accountability for revenue collection is devolved to the lowest level in the community. The system depends on the acceptability of the appointed agents by the customers and the willingness of customers to make such a process effective. Usually such measures are largely ineffective in highly politicised environments.
- Survey system for third-party reports – A process of independent audit of energy delivery and revenue collection systems whereby a third party trusted by both the customers and the utility inspect all systems, sites and installations and report any irregularities impartially to the utility.
- Personnel Training – Training provided by the utility to their staff in all aspects of revenue management including metering, revenue systems, theft detection techniques etc.
- AMR/AMI Implementation – The implementation of more automated metering has the potential of increasing risk because of loss of feet on the ground.

Introduce public awareness programmes to replace meter reader feet with customer feet. Additional technological enhancements such as filters and multi factor analysis capability provide insights as to potential high risk areas for further investigation.

- Balance of Revenue Protection cost and potential benefit – The revenue protection programme should be a self funding operation and regular assessment of cost vs results should point towards optimal investment levels. Typical measure used is revenue collected as a percent of revenue protection expense.

These examples reflect a sample of best practices for consideration and possible application. Success ultimately lies in the consistent application of a rigorous programme that includes a combination of theft and fraud protection, along with superior process controls for all parts of the revenue stream.

4. Implications for the South African context

This paper has only just scratched the surface of a multi faceted topic. Clearly there are opportunities to embrace a number of the best practices within methodological constraints as an interim step in the process of moving towards a comprehensive revenue protection programme. A successful approach to revenue protection is a combination of careful planning, customer policy development, effective processes, access to new tools and best practices, and the ability to put these all together in a holistic manner. Benchmarking exposure in utilities, points to the following three characteristics as particularly important to a successful revenue protection programme:

- Customer policies are designed to help recover losses and change customer behavior toward meter tampering and energy diversion.
- Processes are in place to leverage internal and external resources effectively.
- The utility strives to build public awareness about the safety, ethical, and criminal aspects of energy theft.

The following table provides a structured approach to the deployment of a revenue protection programme which could help to further the success of your own programme in meeting the needs of your company and customers.

PHASES OF AN ENERGY PROTECTION PROGRAMME

START	DEPLOY	MAINTAIN
<p>PURPOSE</p> <ul style="list-style-type: none"> ✓ Launch pilot program ✓ Mobilize resources ✓ Implement processes and practices ✓ Create awareness 	<p>PURPOSE</p> <ul style="list-style-type: none"> ✓ Fully implement programme ✓ Establish goal, policies, practices ✓ Dedicate resources ✓ Communicate results 	<p>PURPOSE</p> <ul style="list-style-type: none"> ✓ Continue to improve programme effectiveness ✓ Transition to a prevent and maintain focus
<p>ACTIVITIES</p> <ul style="list-style-type: none"> ✓ Staff and train resources ✓ Develop energy diversion policies ✓ Develop processes and practices ✓ Design performance management system ✓ Design awareness programme 	<p>ACTIVITIES</p> <ul style="list-style-type: none"> ✓ Refine policies, processes and practices as needed ✓ Leverage IT support ✓ Begin to use customer analytics and predictive modeling ✓ Modify awareness programme as needed ✓ Manage customers and regulators 	<p>ACTIVITIES</p> <ul style="list-style-type: none"> ✓ Use predictive modeling as a main driver of energy diversion lead generation ✓ Increase focus on commercial and industrial energy diversion ✓ Enhance awareness programmes ✓ Customer communication

5. Conclusion

A number of best practices have been highlighted in this paper. No one method or approach is sufficient. Rather, any revenue protection effort must develop a repertoire of tools and techniques as well as the perseverance and analytical mindset to apply and adapt them appropriately. A successful fight against electricity theft requires dedication to the programme's goals at all levels of the organization and a near tireless effort by investigators. In addition, an anti-theft programme cannot be static. While the programme goals must be constant, the methods and field strategies must continue to evolve in order to stay abreast of ever-developing innovations devised by individuals and enterprises intent on gaining unauthorised use of electricity.

The opportunities for sharing of information, best practices, successes and methodologies are significant. The real test ultimately is in the successful application of this wealth of knowledge in improving the bottom line financial performance of each company with such a programme.

Acknowledgements:

1. PA Consulting International Utility Benchmarking Programme.
2. Navigant Consulting Revenue Protection Model.
3. EDI Holdings RED Creation Operational Model.

Author: Nigel Waters (2007)