

TRANSFORMATION NEWS

Issue 2

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How do we help our clients quickly achieve business results and a leadership position in their industries . . .

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2. Our Client-Led Approach, which allows self-direction and ownership of change initiatives
3. Our team of consultants, who are the most senior seasoned and experience professionals
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▶ STRATEGIES THAT WORK

Process Mining

Your Chance To Effect Your Most Significant Cost Reductions To Date

By Lesley Steer, Principal Consultant, Bywater

How many Quality Managers out there would like to be able to go to their company President and say, “I know how we can meet ISO 9000:2000 requirements and, at the same time, make a significant contribution to cost reduction?”

For many, including senior managers, *cost reduction* and *quality management* are mutually exclusive concepts, due to the fact that their organizations may not have experienced the savings that they had hoped their management systems implementation would bring.

A growing number of organizations, however, have found a way to make their quality management system a powerful vehicle to effect a reduction in costs, not just one time, but on a sustainable basis.

Most organizations today have little opportunity for cost reduction in the “easy-to-do” areas. They focused on and exhausted these opportunities during the first wave of cost-reduction activities. The present reality is that the next level of sustainable cost reduction will actually come from reviewing and changing many of your employees’ routine activities. In other words, by revising business processes in order to transform customer requirements into actual satisfied customers.

Finding Savings in Processes

The Cost Reduction Potential of a Process Based Management System

Possibly one of the most difficult concepts for companies and managers to come to terms with is the reality of where the potential for new savings actually lies. In most organizations, the next level of savings exist within the heart of day-to-day operations, in other words, buried in the routine of existing business processes.

The key to making **Process Mining** a reality is an absolute understanding of how the day-to-day processes in the organization work and how the people in these processes expend their time and effort.

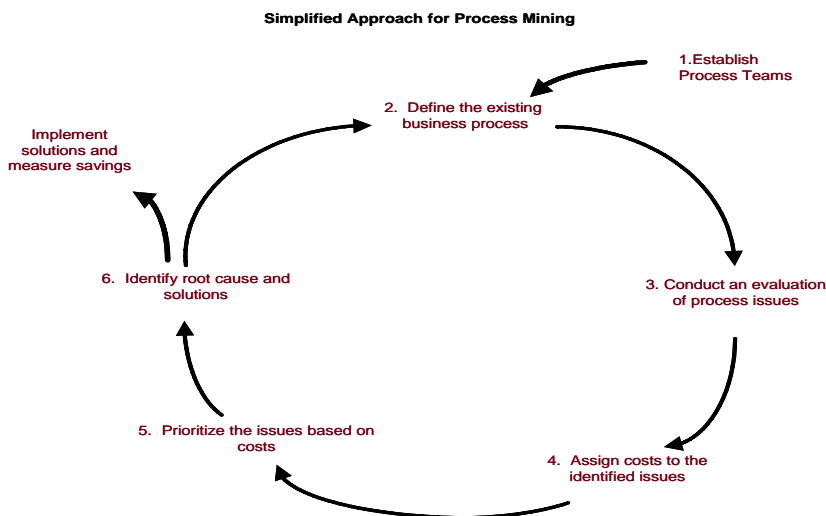
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The power of leveraging small changes at this level creates a multiplying effect further up the organization in terms of efficiencies and ultimately, cost.

The key to making *Process Mining* a reality is an absolute understanding of how the day-to-day processes in the organization work and how the people in these processes expend their time and effort.

Having a clear view of processes is the first step towards this understanding. The secret then is in securing the active involvement of the people in the processes who experience the every day problems and know how to help devise solutions.

A Process Mining initiative might take the following approach:



An evaluation of processes in this way can often yield surprising results. This was the case at a major oil company when managers set about using this approach to reduce the number of costly shutdowns in their production facilities.

A team of technicians had been recommending the use of a new type of electrical connection in control cabinets for years, but no action had been taken. The technicians understood that connecting pins eroded over time and wore down slightly. This occasionally caused a spike sufficient to trip an alarm to shut down all or part of the drilling platform. A priorities program to replace the connectors, along with several other low-level changes, generated a saving of 4,800 barrels of oil per day.

Process Mining reveals frequencies, costs and priorities.

Process Issues	Frequency	Cost Per Event	Value Impact
1. Telemetry false alarms	25	\$500	\$12,500 (4)
2. False alarms in CCR	14	\$18,000	\$252,000 (1)
3. Waiting for isolations	12	\$4,000	\$48,000 (2)
4. Searching for equipment	8	\$2,000	\$16,000 (5)
5. Restricted access delays	3	\$7,200	\$21,600 (3)
6. No work allocated	2	\$1,800	\$3,600 (6)
7. Operator error shut down	1	\$27,000	\$27,000 (4)

The value of Process Mining is that it provides a different view of the problems based on their cost impact. Often this view puts a different priority on what may otherwise be considered minor irritants. Costs of lost production or output are just the tip of the iceberg. Process Mining reveals the true cost of recurring problems by assigning costs to such items as:

- ✓ Loss of production or output
- ✓ Loss of materials
- ✓ People's time used to correct problems
- ✓ People's time to appraise output to mitigate against potential problems
- ✓ Loss of use of equipment

Process Mining is a simple concept that can result in significant cost reduction opportunities if some simple rules are adhered to:

- ✓ Define the organization's business processes first
- ✓ Involve the people in the process in examining each step
- ✓ Build a "cost model" as a basis for assigning costs
- ✓ Include all the activities and items that contribute to the cost of an issue
- ✓ Capture the impact on related or downstream processes

We introduced this article by linking ISO 9000:2000 and cost reduction. At first glance, there is no obvious link between Process Mining and the new version of the standard. But suppose that we take an approach to ISO 9000:2000 that does more than just reshuffle our quality manual and procedures. Suppose that instead we take a strategic approach that uses business processes as the fundamental framework around building a quality system. The result is a quality system that:

- ✓ Is designed around the organization's process framework (not the clauses of a Standard)
- ✓ Integrates process performance measurements

Now we have a framework for cost reduction through Process Mining that reveals numerous opportunities for significant cost savings. □

Telecommunications Provider Saves Dollars Through The Use of Process Mining

Case Study - What Leading Companies Are Doing To Stay On Top



Background

This major provider of telephone service to business and residential customers had experienced several spurts in growth in recent years. Historically, its position in the market had allowed it to maintain profits and increase market share. Now increasing competitive and legislative pressure meant that the business environment was changing and fast. The company very quickly found itself in a situation where it could not increase prices without the loss of market share.

A major downsizing contained existing costs at the expense of service. It was acknowledged that the company could not sustain another round of people losses as a way to contain costs: Resources were needed to service anticipated growth.

The executive team acknowledged that the company had grown without much deliberate thought to processes and people. Customer (internal and external) feedback confirmed that many processes were neither efficient nor effective. Costs were rising even as service levels fell. Another round of cost cutting “across the board” was considered unsustainable and would have dented the morale of people even further.

What to do?

The executive team determined a strategy

Another round of cost cutting “across the board” was considered unsustainable and would have dented the morale of people even further.

that sought to improve the main service delivery processes by removing costs associated with recurring problems and wasted resources. By doing so they anticipated being able to improve service levels without adding resources or overhead.

The strategy had several elements associated with it:

1. **Development of a Core Team**
This team of 6 to 8 people was trained and coached in the use of Process Mining tools and techniques and became the focus and catalyst in the implementation of the strategy.
2. **Involvement of people**
Information about what was happening in various processes was gathered from the people who work in the processes. Since the potential number of people was high, it was decided to use a focus group approach to represent the population while keeping the number of interviews at a manageable level.

The focus groups were asked:

What are the activities in the process associated with the following:

- ◆ Fixing or responding to complaints, errors or inaccuracies noticed by customers?
- ◆ Fixing problems or correcting activities that we noticed went wrong?
- ◆ Doing anything more than once ?
- ◆ Checking, inspecting or measuring to detect errors?
- ◆ Performing anything (automated or not) to control things that can prevent things from going wrong?
- ◆ Doing activities that should be unnecessary in the first place?

What other non-value added activities or inefficiencies are recognizable?

- ◆ Activities that do not change the form, fit or function of the product or service?
- ◆ Activities that consume more resources or time than they apply to the product or service in the process?

3. The development of a Cost Model to assign values to each activity associated with addressing a particular problem or issue

The cost model incorporated a number of factors:

- φ human resource costs
- φ material costs
- φ equipment costs

A simple analysis sheet was used to capture and analyze the information provided by the focus groups. Since this data provided information about how frequently a particular problem occurred and its impact on immediate or downstream activities, it was possible to develop an annual extrapolation of the costs.

The cost model was then used to answer the question:

“Each time a particular problem occurs, what does it cost us each year to address it?”

4. The use of Process Mining results to prioritize potential improvements

The information obtained provided a basis for determining which problems were having the most impact on the organization in terms of cost. This information enabled the executive team to focus improvement efforts on those problems that would have the highest payback.

5. The use of Process Teams to develop and implement solutions

Small teams consisting of representatives from each department involved in the processes were established and trained in process improvement methodology. Their mandate, approved and sponsored by the executive team, was to define and implement solutions for the high cost problems.

Using the Process Mining approach, this organization was able to uncover some \$9M worth of potential improvements in one critical process alone.

The executive team determined the potential improvements that they considered would have the most impact on both cost reduction and customer service improvement. As a result, the identified improvements amounted to \$1.8M in one process.

Process Mining is a simple concept that is relatively easy to implement and which can provide a fresh look at the problems that occur every day, and that companies learn to live with. Find the hidden dollars in your everyday problems. □

Problem Cost Analysis										
Work Order Management Process										
Problem Area	Resulting Activity and/or Resource Used	Activity Type	# of people/performing activity	frequency of performing activity (act/per)	Time Interval/Unit	time assoc w/ frequency of activity (hrs/act)		Total Hours Per Time Interval	Annual Time (Hrs)	Total Cost
1	Review work order	A	12	1	daily	10	min	1.00	260.00	\$ 21,908
2	Incorrect facilities allocation	N	12	1	daily	20	min	2.50	650.00	\$ 54,770
3	Sales order wrong (address, directions, etc.)	N	12	1	daily	45	min	4.00	1,040.00	\$ 87,630
4	Insufficient equipment	N	12	1	daily	30	min	5.00	1,300.00	\$ 109,538
5	Incomplete access customer data	N	12	1	daily	10	min	2.00	520.00	\$ 43,815
6	Solution correction made by customer after implementation starts	P	12	1	daily	16	min	3.20	832.00	\$ 70,104
7	Test solution	A	NA	450	ins per mo	30	min	225.00	2,700.00	\$ 112,320
8	Total Cost of Process Issues/Problems								7,302.00	\$ 500,085
9										

Note: where number of people and/or frequencies are not identified, participants answered using total time and/or occurrences for entire group for the indicated time interval.

Variables

450	Number of solutions delivered per month
040 490	Employee Level
\$ 45.10	Payroll Rate
\$ 12.00	Materials & Supply Rate
\$ 0.45	Motor Vehicle & Tool Rate
\$ 0.21	Systems & Other Fixed Costs Rate
\$ 26.50	Overhead & Miscellaneous Cost Rate
\$ 84.26	Total Rate

The Information You Need at a Click

Bywater's Executive Briefings and Summaries are designed to explore and share insights about the pressing concerns of today's business leaders.

Each briefing and summary looks at a specific challenge, defines the problems encountered when trying to meet the challenge, and provides discussion and practical applications to succeed.

Visit our website for immediate access to a list of briefings and summaries designed to help individuals and organizations succeed as leaders in their industry.

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- Creating Integrated Management Systems
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FEATURED BRIEFING

Fundamental Cost Reduction

Impossible or Imperative?

Radical cost reduction in the 1990's was achieved primarily through head-count reduction and elimination of up to 30% in 'excess fat', which existed for decades in many companies. As such major cost reduction activities drew to a close, experts predicted that innovation and new product development had become the priorities for leaner, more focused organizations.

However, as the global economy continues to grow and new competitors emerge, cost is back on the corporate agenda. But, since so much has already been cut, talk of more cost reduction is being met with heavy resistance.

Is it possible to cut more? Where will the second generation of cost reduction take

place? Are there new approaches to cost reduction strategy, and what are the best ones? How can they be successfully implemented?

Bywater's Executive Briefing, *Fundamental Cost Reduction*, asks the questions and supplies the answers relative to cost reduction in the new business era.

Be informed. Be Briefed.

Call us at (203) 973-0344 to receive a complimentary copy of "*Fundamental Cost Reduction - Impossible or Imperative*", or visit our website at www.bywater-consulting.com to download a copy today.

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Creating Competitive Advantage
Bywater

▶ ON THE HORIZON

AUTO-TECH 2001

August 28-30, 2001 ♦ COBO Center ♦
Detroit, MI

Sponsored by the AIAG, AUTO-TECH is an annual conference and exhibition geared toward improving trading partner relationships, while helping companies improve cost, quality and business practices through the adoption of new technologies, standards and industry best practices.

Join Bywater as we present “[How To Transform Your Quality System Into An Improvement Powerhouse](#)”, Thursday, August 30 at 9:30 AM.

To find out more about the conference and how to register contact the AIAG at (248) 358-3570, or log on to:

www.aiag.org/autotech/index.html

[HACCP, A Strategy To Reduce Cost, Not Just A Compliance.](#)

As you may know, the FDA recently made it compulsory for producers of fruit and vegetable juices to improve food safety management by adopting HACCP.

For some in the industry, compliance is required as early as December 2001.

Typically, when implementing HACCP, organizations tend to do so without a clear strategy. This results in higher overhead cost with little ongoing benefit. *However, the adoption of HACCP does not have to be a non-value adding exercise.*

Companies that take a strategic approach to implementing HACCP are able to [improve processes, reduce costs and create additional value.](#)

To find out more about implementing HACCP and strategies for cost reduction and process improvement call [Bywater](#) at (203) 973-0344, or email us at info@bywater-consulting.com.