Business Constraint Analysis

Overview

Velocity Pointe's Business Constraint Analysis (BCA) is a comprehensive analysis of a business to locate barriers to success using a fresh set of "outside eyes." For a P&L center in a business, success is measured in profits. For internal cost centers, success is maximizing the output for a given staffing level.

The underlying principal of BCA is to identify the primary constraints of the business and to develop surgically precise strategies and tactics to deal with them. The analysis begins with examining the cash flow through the business. Businesses can be viewed as a highly interacting set of processes that through organizational structure are almost always independently managed. The Business Constraints Analysis concentrates on finding the root constraints which limit revenue, growth, throughput and net income.

The goal of the BCA is to examine the business with the purpose of leveraging existing success. This is achieved by analyzing the past activities which have produced the best revenue growth. The overall business is then modeled to detect the barriers or constraints limiting future and larger successes.

Businesses can be modeled as a series of actions that build upon each other to create the final revenue generating output. These individual actions can be thought of as links in a chain. The strength of the chain is limited by the weakest link. This is defined as the constraint of the system.

Strengthening any of the strong links has no effect on the weakest (the constraint) link. Improving capabilities in non-constrained areas does not improve the revenue of the organization. In contrast, strengthening the weakest link has immediate positive impact on the strength of the chain. The effect of this in a business is to increase capacity which can be applied to revenues, throughput and profits. Identifying the weakest link and developing a strategy to improve it is the heart of Velocity Pointe's BCA process.

Theory states that all systems are constrained or else their output will move to infinity or to zero. In product or service business, constraints limit the overall monetary contribution derived from sales. In internal cost centers, constraints limit the output of that enterprise. It is impossible to remove all of the constraints from a business. However, it is possible to ensure that a given constraint is the right one and that its output is leveraged for optimum throughput of the business. Managing to the constraint determines where the application of resources should be applied to generate the greatest profit.

Performance gains are often sought by addressing expenses that are simply additive and easily modeled. Addressing them creates an immediate impact on cash flow. This is why so many "business improvement" programs focus on controlling costs. Most

businesses have already trimmed expenses so tightly that there are rarely any remaining areas to address. For most businesses cost cutting strategies have reached a point of diminishing return and further pursuit of these strategies risk damaging the business' ability to function and compete.

Growing revenues (or increasing throughput of an internal group) is the hardest task facing most businesses today, yet they are almost never achieved through cost cutting.

While constraints are a fundamental phenomenon not all processes which are constrained should be. These constraints are defined as "improper." When this occurs the ideal solution is to remove the constraint altogether. Even when the "improper" constraints are removed "proper" constraints must remain.

The remaining "proper" constraint will continue to be the rate limiting process of the business. Because of this it is necessary to structure the business so that every piece of output from the constraint is leveraged to its highest benefit. Optimization occurs when the constrained process, and ONLY the constrained process is running at 100% efficiency. To have non-constrained processes run at 100% efficiency is wasteful and only creates work-in-progress that cannot be used by the constrained process.

For example in product development, when burden costs for an engineer and his/her technician might be over $200K per year. In this situation should a $15K piece of equipment be the limiting constraint on development? This is an example of an "improper" constraint that can be easily removed.

An example of proper constraints in product development are those resources, people or equipment that are extremely expensive, limited in quantity, or of an experience level that cannot be readily duplicated.

Once the business constraint is identified and determined to be proper the rest of the organization is examined to determine how the output of the constraint can be used to the fullest extent. Improving systems and throughput in unconstrained areas does not improve the output of the constraint. Thus it quickly becomes apparent where business improvement efforts should be focused – at the constraints and their supporting functions.

The Process

The overall BCA process involves a data collection step, analysis, and reporting to senior management. The analysis starts with the business financials of the unit. These are recast as Revenue, Variable Cost, Operating Expense, and Profit.

The fundamental business processes are examined and include when appropriate:

- Management processes
- Overall business/revenue model
- Infrastructure
- Examination of the current marketplace
- New product creation process
- Project portfolio management

- Enterprise project management process
- Manufacturing
- Customer service
- Marketing and sales
- Supply chain
- Fact finding about the industry in general

During the on-site visit, the lead investigator checks in with the Velocity Pointe team by phone at mid-day to review the first findings of the business so that any missing needed detail can be identified.

As an example of additional needed detail, one service provider was locked into a standard contract because "it was how they did business." The contract structure was one of the key constraints of the business and needed to be re-examined. A set of sample contracts was added to the data collection. At the completion of the analysis, the proposed solution was to modify some of the terms and conditions to benefit the customers while increasing the profitability of the vendor.

It is surprising to the first time user of BCA that every detail of the business does not require in-depth examination – only the primary proper constraint areas. This makes the tool very tractable; resulting in high information content with a reasonable amount of data collection and analysis which can be quickly executed. This gives fast turnaround which effectively limits the cost of the study.

Statement of Work

The activities include:

- Initial phone conversation
- One day of on-site research. This usually consists of reviewing the requested financial information and detailed interviews of the senior staff.
- Off-site analysis
- Report to senior staff – written report, and a detailed briefing

The initial phone conversation is usually with our analysis team leader, the senior executive of the business unit, and an internal advocate if other than the senior

executive. The goal of the discussion is to verify the actions and deliverables for the analysis, and to develop an estimate for the overall scope of the exercise. Usually the 100% at-risk fee can be determined during this conversation.

The on-site interviews must include the senior manager who owns the overall unit being analyzed. This interview typically starts the day of on-site research. It allows the senior manager the chance to resolve any remaining concerns and to brief the analyst on the executives to be interviewed. Velocity Pointe agrees to execute a NDA prior to the interviews.

Sometimes follow-up information is requested as it becomes obvious that it is required for completion of the analysis.

The guaranteed portion of this engagement is the travel and living expenses of the interviewer and the reporting team plus reasonable out-of-pocket expenses. The interviewer typically spends one day on-site, and the review team (1 to 3 people depending upon the size and complexity of the organization) spends one day to report and discuss the findings. The review team is available for the full day of which a portion is spent delivering the analysis presentation.

The Output

The deliverables of the BCA are a brief report and a detailed briefing for senior management. The report consists of a review of the findings: highlights of the business processes which have been examined, and details concerning the identified strengths and constrained areas of the business.

Valuable information results from the discovery of constraints which span more than one business process. When these are occur they often offer unusually large potential benefits to the business. This is caused by a fundamental limitation found in all businesses - rarely do any of the managers who share a process have the authority to change it for the group. These processes are often managed in an ad hoc manner because of the organizational structure. BCA hands these large business levers to senior management for their use in increasing profitability.

The detailed briefing allows the senior management team to carefully examine and question the data and the analysis. This is often a learning process for all and typically results in a short list of high leverage actions which can affect the bottom line in a rapid positive manner. The BCA assumes that the senior management team will commit to acting upon the results thereby achieving the profit potential and avoiding the disappointment of creating awareness and the subsequent disappointment of inaction.

The BCA is a first step in the business improvement process. It is intended to focus the team on the areas of the business that offer the maximum chance of improvement to the bottom line. The analysis identifies specific strategies and tactics and where possible subject matter experts who can assist in their deployment.