

Why Do We Need Innovation?

*It's all about the money;
unresolved problems = financial losses and lost opportunities*

By Dana W. Clarke, Paul Nobels and Peter Ulan

"Innovation is the most vital factor in shaping a corporation's success throughout the coming years. For several decades, corporations have optimized products, processes and services for efficiency and quality; without losing control of quality, it is now time to innovate. Today's corporate challenge is to unshackle its innovation capacity to control growth and profitability while achieving leadership in its targeted markets. Global-economic forces and financial constraints have made innovation-driven growth more essential than at any other time in history. Corporations face an unprecedented need to stay ahead of continuously accelerating global changes, unyielding pressure for rapid results, and fierce competition from corporations that are aggressively pursuing their own innovation-driven futures."

Dana W. Clarke, Sr.

The tougher the challenge the more we need to think like one of the most innovative geniuses of all time, Albert Einstein. When once asked how he would spend his time if he only had one hour to solve a problem that was required to save the world, his response, "fifty-five minutes defining the problem and only five minutes finding the solution".

His rationale was based on the need to analyze the situation before synthesizing a solution; he instinctively recognized that these two steps are the foundation of structuring how we develop innovative solutions. Historically, we have known "what we need to do", innovate; today we know "how"; by using structured approaches to innovation but there is another question that we need to consider; "why?" So let's look at the roots of why we need to structure and manage the way we innovate in business.

In all walks of an organization's activities, interactions, functions, et al, there lies the inherent need to step back and apply structured approaches to get better results. Organizations around the world have learned to do this with quality, cash flow management, inventory control, project management, product development, customer relations and more, but few have transferred lessons learned to the identification, tracking, analyzing and solving of complex challenges beyond incremental improvements and optimization.

As organizations strive to survive, they can no longer afford the costs associated with hidden and unresolved problems. These problems impact every level of an organization; they are problems that prevent organizations from delivering the elevated results that go beyond survival to thriving. As a result, it has become increasingly important for organizations of all types (for-profit, non-profit and governmental) to reveal, identify, track, prioritize and deal with problems by delivering effective, value-added solutions. The days of waiting for solutions to pop up and living with half-solutions are over.

The Cost of Problems

Historically, organizations have selectively measured problems against a timeline, for example, publicly visible losses such as warranty issues or problems that are causing excessive delays and waste. The cost and/or lost opportunity associated with these situations are so highly visible and painful that they are often referred to as “bleeding”. The pain is a result of known but unsolved problems that are directly affecting the organization’s bottom line. Synonymous with the visibility and pain associated with top line losses such as diminishing revenue or a reduction in market share, these types of problems have the ability to severely cripple and even destroy the future of an organization. Known problems get leadership’s attention because they are highly visible and costly, and the impact on the organization is not only visible through financial statements but threatening to the organization. Beyond the visible, known problems, there are problems of equal importance but less evident and as a general rule are often written off, ignored or band-aided. In most cases, these less visible problems are only indirectly exposed in financial statements but the reality is that they are without question “cash equivalents” and there is a cost or value and lost opportunity associated with each problem.

Types of Problems

Within any given industry problems can be defined within the following six categories:

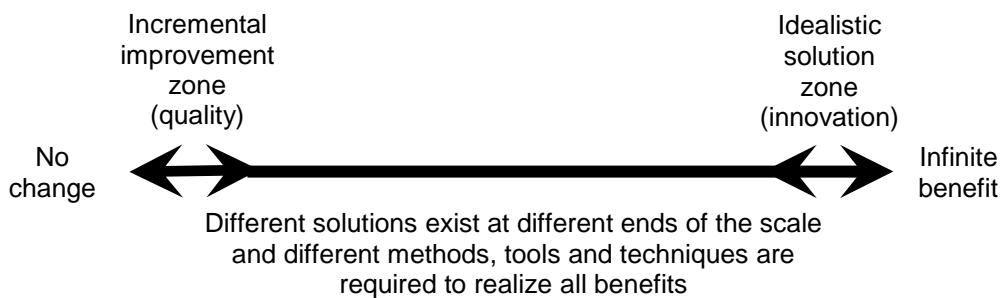
1. **Unidentified:** cost, or value of unsolved problem is hidden
2. **Identified and ignored:** opportunity exists; cost or value is not visible
3. **Identified and attacked but unsolved:** opportunity has been written off; cost is not reduced, value is not realized and there is no expectation that this will change
4. **Identified and solved but not implemented:** the result of a low-value solution, excessive complexity of solution, failure to meet all criteria, changing priorities, et al; effort wasted and cost benefit is lost
5. **Identified, solved and implemented but not delivering the desired results:** poor ROI, continued irritation, dissatisfaction and losses
6. **Identified, solved and implemented:** cost is eliminated and/or value is realized.

Of the six categories, the last (#6) is the only one that delivers the desired ROI value; *but what about the other five?* Although all problems do not show up as line items on financial documents it does not mean that they are not important; they are actually no different than inventory or account receivables; problems are cash equivalents and should be treated as such. No different than the importance of counting dollars or parts (cash or inventory), the first five categories of problems should be made visible and their cost or potential value documented, tracked, prioritized and as appropriate, managed to the point of delivering an appropriate return. These categories of problems should be accounted for and measured in terms of aging of problems and the time to the desired solution using existing financial models; the longer the problems go unresolved, the more costly the problems become or the greater the lost opportunity.

Moving Toward Higher Value Solutions

When it comes to solving problems, there is a distinct pattern that has been observed over and over, e.g. with the implementation of statistical process control in manufacturing, quality was improved; simple tracking resulted in improvements. There is no reason to expect that efficiently tracking the aging of problems, their cost, potential value and time to resolution will not have the same impact. While some problems will be solved because they are made visible, there is another level of problems that require innovation. The more challenging the problem, the more demand there is for in-depth analysis and synthesis of ideas into concepts that deliver the required value.

No different than other organizational functions: finance, operations, quality, etc., individuals and teams need increasingly structured approaches to deal with complex situations and problems to deliver the desired results.



This is especially true in situations where:

- long hidden problems are revealed and need to be solved
- problems that have been known but ignored need to be solved
- solving was tried and failed but renewed attempts can lead to dramatic value
- previous solutions were insufficient
- previous solutions were not worthy of implementation but renewed efforts can deliver results beyond expectations

For these more challenging situations there is a greater need to increase the degree of applied structure. The more complex the problem the more important it is to 1) analyze and 2) synthesize higher value solutions.

Summary

Hidden and unsolved problems are no different than cash or inventory. The primary difference is that cash and inventory are directly visible in financials. Problems are also the foundation of poor financials. Revealing and tracking problems is a first step, synthesizing and implementing high-value solutions completes the process. While the application of structured approaches such as those found in the world of quality yield significant benefits, based on the authors' experience targeted innovation has been seen to yield an order of magnitude greater results.



Dana W. Clarke, Sr. is the President/CEO of Applied Innovation Alliance (AIA). AIA is focused on the advancement and application of structured approaches to innovation. Dana's work with innovation has led to the development of unique approaches to solving complex problems and the development of professional innovators. His expertise encompasses practical application, consulting, facilitation and training of such methodologies as: TRIZ (The Theory of Inventive Problem Solving), Competitive Opportunity Management, Paradigm Shifting Innovation™, Strategic Planning, Innovation in R&D and Product Development, and Business Process Innovation.

In 1995, Dana became the 1st person in the Western Hemisphere to become certified as a TRIZ Specialist by a TRIZ Master. In March 2001, he became the first natural born American to become recognized as a TRIZ Specialist by the International Association of TRIZ.

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