# The Management of Leadership and Innovation

Allison Arnold[1], Samantha Melroy[2], James E. Smith[3]
West Virginia University, USA
James.Smith@mail.wvu.edu

**Abstract-** *The conceptualization, nourishment and propagation of new technologies, as a key, active component in the accelerated growth of a technologically advanced or industrialized society, relies on the understanding and development of two individual but highly interconnected competencies: leadership and innovation. These are the two fundamental attributes that have encouraged the successful development of most major technologies in production today. They are also the source for most of the highly successful commercial and industrial organizations currently operating globally. It is the state of health of these two linked competencies that often determines the longevity and profitability of these organizations and, to a large extent, the societies that spawn and house them. It is also through their successful integration that those same technologies are encouraged to evolve and to fuel the imaginations of the next set of great leaders and innovators. It can thus be postulated that the stewardship of innovation and leadership determines the potential success and the rate of advancement of a modern society and, as a corollary, the lack thereof its decay, or at best its stagnation. This discussion is directed to the two characteristics of leadership and innovation and how they create value through integration and how we as a society gain from this successful union.*

*This article is, therefore, dedicated to anything, or anyone, that might lead us to innovation, in all of its forms, along with the leadership that is often the springboard, or tipping point, in making it all happen. It is through the innovative process where we all get the chance to generate creative thought. It should therefore become our common goal to encourage others to pursue their own personal view, or quest, for the future, while in other cases, to simply get out of the way of those who are trying to do the same. Change, while often uncomfortable, and habitually avoided or ignored, is the nature of any progressive system. Staying ahead of the problems created by change while jumping even farther ahead is a prerequisite to success and continued growth. The result of this constant requirement to advance the elements of a modern society, while scary, also forces the participants to live at the edge of their comfort zones. An innovative change, in any form will bring you to that edge. Therefore, it has become clear that innovators, and their dedicated leadership, will continue to add to the excitement in all of our lives, whether we are ready for it or not.*

**Keywords-** *Leadership; Management; Innovation*

## 1. OBJECTIVE

This paper will first provide a definition of what a modern society looks like, followed by a detailed description of key terms and their definitions for this paper. Finally it will provide the relational importance between the two primary characteristics in this discussion, innovation and leadership. It will then attempt to show how these two essential characteristics function together and how they become linked by necessity if society as a modern enterprise is to grow and succeed.

## 2. INTRODUCTION

In order to properly present the relationship between leadership and innovation there is a need to first define the stage from which these components interact and operate, the concept referred to as society. Society is often defined for a variety of applications. These can range from a community of like-minded individuals who agree to abide by a series of governance rules, to an open arrangement of individuals gaining strength in numbers or through the aggregate of capabilities and resources.

In each case we find members organized in reaction to a similar purpose or response. Whether these are open arrangements or sub-sets of larger or even more diverse groupings their intent, for the most part, is to gain value, in whatever tangible form, from the created association or affiliation. It is through the establishment of these social orders that leadership and managerial positions develop. The complexity and sophistication of these in turn are in response to pressures created by social and economic growth coupled with the organizational complexities that naturally result from that growth.

It is when the leaders and managers of these groups step up to the evolving challenges, possibly resulting from a new concept, new invention or a change in survival requirements that we begin to witness the true development and fostering of innovation. Innovation is naturally spontaneous often resulting from imaginative breakthroughs. Due to this, the fostering of the correct creative environment, along with the shared influences of other innovators, often determines the long-term ability of a social system to reward, stimulate, and distinguish when to just get out of the way of truly innovative ground swells. Historically, societies have been identified and defined by their inherent underlying characteristics, in direct

relationship with their abilities to enhance survivability. From one standpoint, some have been deemed successful merely due to their size, longevity, and/or their contributions to the arts or sciences.  For a society in today's era the strength in innovation and leadership propels its industrial and technical abilities, where the base quality of life is improved, which then results in growing acceptance and anticipation of future change.

It should be noted that internal success alone of a social order does not guarantee an elongated span for existence. External influences may arise from not only the environment, but also from competing social orders in their immediate vicinity that possess a greater need, desire, or power. In all of these circumstances there exists the need to identify and record the characteristics that enhanced personal and social survivability and to use this information to improve the future.

Fortunately, while we are still apt to re-invent the wheel, an ever-increasing amount of the knowledge and wisdom that has been gathered through application in these earlier social experiments has filtered down and become some of the better foundations for our current social orders. They can be regarded as experiments mainly because there are still countless social models available throughout the globe that are believed to be the best for their current environmental and political constraints. The assertion could be made that once we have "mastered' the environmental challenges of this diverse planet and managed to create a balance of people versus resources that there will become a blending of all of these social orders.  In other words, as these societies reach successful stability they will begin to reach beyond their own necessities and seek out knowledge, technological advancement plus the good will of others.  Where growth and prosperity are measures of personal contribution, and where fear and need are no longer the driving force for survival, these societies will learn to thrive through their combined innovative strength. It is with regards to the society's investments into innovative growth where this paper bears its stance.  It is the premise of this paper that we as a world community are trying, often unconsciously, to achieve some sort of social and environmental balance. This may translate, at the very least, into a tolerance between the parties that will in turn encourage the integration of a more orderly social environment and the development of a critical mass in creative innovation.

Environmental impositions themselves can also be the root cause for generating innovation, noting that there are always new problems and newly identified environmental crises.  For example global integration of innovative capabilities is currently being forced upon society as a result of the over-use of the very environmental wealth that is used to affect our quality of life.  The solutions being considered are generated to stay ahead of the environmental and quality of life problems that are destined to come as a result of the normal actions of an advancing society.

**It is through the application of appropriate leadership**

skills that allows for the accelerated creation of innovations, which translates into advanced technological developments followed then by the associated advances in societal growth.

Where previous innovations were the great fixes of their day, the current innovations are a need response to fix the recent problems left over from those past revelations.  It would appear that this is a never-ending cycle with little or no hope for ultimate mastery of the situation, but through the ability to learn from past endeavors there is evidence of the acceleration in the rate of cures in contrast to the creation of new ills.

**Table 1: Summary Definitions**

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| The Innovative Need | Though innovation is a much sought after approach towards the creation and implementation of new technologies, it is often found that organizations lack a thorough enough understanding of its underlying concepts and, hence, are unaware of the true innovations happening all around them. |
| Breakthrough or Game-Changing Technologies and Their Creators | Breakthrough innovators who are often referred to as "visionary troublemakers" are those who opt to propose radical change.  Though these efforts often lead to remarkable societal and economic growth, early in their development these efforts can be misunderstood causing setbacks as a side effect due its more demanding nature and need for resources. |
| The Leadership Need | A well-established business structure features a balance between the management and leadership core, which is often reflected in the same essential balance in the development and educational programs for each and more importantly in the recognized need for a balance in the recruitment for the same. |
| Societal Survival | Successful acknowledgment and information transfer has allowed us to become an enduring and advanced species. The instincts associated with self-sufficiency have led us to further value an established and innovative leadership core. These leaders have pushed us towards new technological creations allowing the social order to become more defined and responsive to the needs of its participants. |

It is through what can often be referred to as the innovation phenomenon that allows us, as a community, to leap frog our current social and environmental limitations and to see

an even quicker path to a prosperous and more cooperative cultural future. Without leadership though, the other key ingredient in this mix, innovation often has little hope in getting into the marketplace with enough authority to have a lasting impact.

## 3. THE INNOVATION NEED

Innovation is the deliberate application of information, imagination, and initiative in deriving greater or different value from available resources. It encompasses all processes by which new ideas are generated and converted into useful products [1]. Most decision-makers in an organization speak to the need for innovation. It is through innovation that most companies ensure their growth and profitability. Because of this need to prosper most of the metrics for success in a for-profit company are easily recognized; increased revenue, greater profits and larger market share. Even the not-for-profits tend to use these types of metrics to help guarantee longevity and enhanced customer value.

Clearly, if the path to innovation is well defined and developed then the potential for the rest of the process to become successful is greatly improved. In a growing number of cases, though, it is often the undefined or under-defined path to innovation that leads to eventual problems. The lack of appropriate leadership or the need for additional resources, often accompanied by inadequate or miss-used resources including essential personnel, can disenfranchise or distinguish innovation. "Fortunately, there are always a few leaders and innovators seeded throughout society who do see the bigger picture" [2]



**Figure 1: Designing an Innovation Network (McKinsey) [4]**

More specifically the term innovation itself implies a new way of doing something, typically resulting in incremental, radical, or revolutionary changes in thinking, products or processes within organizations [3]. The diagram shows an example of an innovation network. While there are numbers of processes being developed and used to ensure the generation of innovative processes and products, there is still the needed buy-in from the leadership core to make

the innovation become manifest. Note the greater the change potential, often called a game changer, the greater the buy-in that is required.

As illustrated in the figure there are four primary thrusts to designing an innovative network. First, you must find the right people with the correct mind-set. Insure there is a diverse set of personality and skill-set characteristics in the balance. Second, define the role and expectations for the group along with internal use of resources. Third, define the network availability for information and leadership. Finally, manage the overall effort with appropriate acknowledgement and recognition. Also, track and determine course and personnel changes and how it affects the original objective. [4]Though innovation is typically in response to the environment it survives in, it is generated and thrives through the creativity of those who decide to innovate. As stated by the *journal of Leadership & Organizational Studies:* "The interactionist perspective of organizational creativity (Woodman, Sawyer, & Griffin, 1993) stresses that creativity is a complex interaction between the individual and his or her work situation at different levels of organization" [5].Creativity can evolve from group or individual means. The individual level of analysis, for example, derives from; individual factors, traits, goal orientation, values, thinking styles, self concepts and identity, knowledge and abilities, psychological states, as well as motivation and other factors such as strain or trust [6].Because of innovations obvious value, some organizations will even try to build their organizational structures around said concepts, often treating the effort as a sought-after quest. But though they say they strive for it, and agree to reward it, it is typical that these same organizations are oblivious to the creative environment trying to happen all around them. As a result, and as is often the case, if you can't truly define it, then measuring innovation is rather problematic and creating and stimulating it - well that becomes the all-elusive pot of gold at the end of the rainbow.

Furthermore, if the leadership is not prepared to go the distance with what may become counter-intuitive or counter-indicated concepts and products then the innovator is most likely destined to give up or move to a better and more responsive and open-minded environment. This last event is less random and more frequent than is comfortable to measure. Possibly it is just another form of the innovation process since these innovators on their own may have a better chance to push their creations when unencumbered by the daily requirements of their previous employment. It would also be interesting to measure the number of technologies that are eventually bought by the same organizations that originally ostracized them while they were employees.

Arguably, innovation normally occurs amidst the "outside of the box" realm of thought. Truly innovative people and the companies they habitat, along with their leadership core, are often radical in their composition. They contain people with contrasting personalities and skill sets that work for and around each other, sometimes leaving chaos

at every turn.  The innovators in these teams, which can occur at all levels in the organization, are often regarded as visionary troublemakers, with incalculable creative attributes who take risks every day, often because they don't realize or understand the consequences and definition of risk.   As a related example according to the article *The Innovation Imperative,* innovation is needed to reinvent public services for the recession and beyond. [7].

The one common element in all innovative initiators is their steadfast drive.  You might call this the much sought-after "fire in their belly" that compels them forward to see something to the end, all the while sporting a set of blinders that prevents them from being hampered by the resisting realities around them.  They only see what can and should be - in contrast to what is and has been - if they could only push just a little harder and get others too leave them alone.

Drivers of innovation do not stop with the conceptualization of the new technology; rather, they work through its application into societal practice.  Henceforth these innovators are not just inventors.  Invention is the conceptualization of an idea, while innovation invokes the application of these inventions for consumer use.  Anyone can invent, but few can innovate.  Since new ideas are a "dime-a-dozen", the individual or organization that can make inventive ideas manifest evolve into the "innovation leaders."  It is what this innovation then does to an economy and how leadership uses it to chart a future course that, in turn, creates the ultimate and genuine long-term success that has been the much sought after goal of this process.

**It is what innovation does to an economy and how leadership uses it to chart a future course that creates the ultimate, and genuine, long-term success.**

## 4.  THE LEADERSHIP NEED

The more established and larger organizations are likely to have a formal well-developed, and thoroughly defined organizational structure and management style. If these same organizations are fortunate to have a well-developed balance of leaders and managers then, in most cases, success and growth are achievable goals.Leadership skills have an impact on the overall business structure and the implementation of change especially that which is caused by advanced technologies.

Even within smaller or newly formed organizations there is early incentive to establish sound order and to follow a sturdy set of business rules proven by common business practices.  There is also a necessity for the consideration of the overall needs of the society that house these organizations, along with the treatment of the participants, along with the overall environment affected by the activity.  By training the organizational leaders' and managers' to recognize these key necessities the opportunity to recognize substantial benefits can be redeemed through their respective program applications.

**The stewardship of innovation and leadership determines the rate of advancement of a society, the lack thereof its decay.**

As stated by the *British Journal of Management*, "Transformational leadership influences fundamental attitudes and assumptions of an organization's members in order to attain the company's goals" [8]. Not only this, such leadership also acts to guide and motivate members of said organization towards their common goal, hence a clear vision must be established. [9] By motivating workers to create and share knowledge, along with the implementation of innovative learning, these leaders are building and strengthening their company's leadership foundations [10].

Scott and Bruce (1994) found that leader's behavior did indeed predict climate for innovation within organizations through the Leader Member Exchange Theory (LMX). Their study, among others, have shown that the higher the level of interaction between leaders and subordinates, the higher the perceived climate for innovation [11].  Reiter-Palmon and Illies (2004) found it was unlikely that creative outcomes could be achieved without a large amount of support from organizations and, primarily, the organizational leaders [11].  Therefore, in order to attain their goals, companies often seek measures to ensure the development of leadership skills within their hierarchy.  Therefore, there are programs out there to improve leadership skills.  Some curriculums emphasize how to stay away from the underlying causes of innovation market failure.   There are also other programs, such as *Entreleadership,* that teaches leadership how to interrelate with change and employees.  [12] [13]

Considerable resources are expended to maintain order in these organizations through the training and development of the recognized leadership core.  In most cases, though, those efforts boil down to providing management directives where the status quo is the standard, noting of course the always-expected healthy marginal growth requirements. All of this of course requires a stern focus on the mitigation of potential liabilities and, of late, a mandated focus on bottom-line quarterly returns.

The tendency now seems to be on ringing the last bit of value out of existing projects through a focus on the day-to-day details of the established business practice.  While this should be a critical focus of all well-managed organizations it should not come at the expense of a visionary future.  Note that this current focus on today can also be reflected in considerations of the liquidation of "unneeded" assets and "un-profitable" R&D efforts both of which, if not handled judiciously, can ham-string the future growth of an organization or its ability to respond to changing market conditions.

**"Decisions made at higher levels are likely to be mediated by local leadership behaviors [11]."**

The consulting firm CSC surveyed 497 firms in the US and 1,245 firms in Europe that undertook reengineering methods surrounding two distinct schemes. Of those surveyed 85% reported little to no gain from these efforts.

The few that did report successful growth, companies such as Motorola, Compaq, and General Electric, did so with effective leaders guiding their management of the process [14]. The second schematic followed was "Total Quality Management" (TQM) initiatives, or downsizing [14]. It was found that most of these groups failed [14]. Further support from Rath and Strong, a consulting firm, research efforts surveyed Fortune 500 companies. They found that those who had implemented TQM techniques achieved merely 20% of their initial objectives [14]. Furthermore, a survey from the American Management Association found that less than 45% of downsized companies in the last decade reported any increase in profits [14]. Such a collection supports the notion that management tools alone cannot ensure organizational creativity that leads to innovation [14]. Organizations need creative and effective leadership to help the management tools work [14]. Thus, we have identified a path to success through the development of a well-trained and educated management team, not necessarily focused on leadership or innovation development. It is easy at this point to contrast the leaders from the managers where the status quo is as easily differentiated from visions of the future. Additionally we seem to celebrate and reward that same management team for their ability and commitment to keeping order in the seemingly endless chaos of the normal business environment in opposition to the chaos needed to create future landscapes.

Clearly if you are affiliated with these operations or gain value from their activities then having a sense of confidence in that orderly management is justified and normal. Reality though can shake that confidence on more than an infrequent basis. The business landscape is ever changing and the needs of society are always in flux. Just having a competent management core is never enough, especially if your competition isn't working from the same rulebook.

**Leadership is here to create a vision and to solve the "big problems."**

It is also possible that some up-start decides to introduce a game-changer that can't be handled by increasing the current operational effectiveness. As stated in the journal article *Regional Energy Play Creates Potential Global Impact*; "the medium, energy, and the driving force, innovation, have allowed for the robust human infiltration and alteration of the planet" [15]. It is through the utilization of energy in collaboration with the pursuit of innovation that we, as a species, have been able to provide the current generation with technological advancements, luxuries, and security [15].

The environment and the laws we enact to protect it can also have a significant impact on our operational effectiveness, particularly once we are forced to deal with the consequences of our current, and often past, activities. By acting efficiently, as a self-sufficient race, we have developed creatively, rewarding innovation, and utilizing what energy our environment has granted us [15].

While a competent manage team is essential for a well-developed operation this well-financed asset is often not enough. What we recognize in some cases, sometimes too late, is the need for an adequate measure of leadership in combination with said competent management core. For example, Barsh, Capozzi, and Davidson (2008) utilized a survey for a McKinsey study and found that 70% of senior executives identified innovation as one of their top three strategic drivers for their companies [11]. It is here where our society is lacking in its education and production of an effective innovative team. Despite the fact that we currently provide significant resources for the development of effective managers, the same cannot be said for the development of similar competencies within our leadership. The truly effective organizations have recognized this need and many have attempted to provide the needed leadership program development.

Leadership placement must also be addressed within the hierarchy of the company. While those leaders and their skill sets need to be sprinkled throughout the organization, it is often key for the success of the organization that leadership capabilities be placed at the top of the organizational ladder. Not only this, the proper implementation of leadership throughout each tier of this chain of command is also of paramount importance. Failure to accurately allot representative leadership in senior positions can inadvertently result in the lower ranked individuals with leadership skills to become frustrated - often resulting in their leaving to look elsewhere to satisfy their needs to contribute.

This discussion is not intended to denigrate one capability over another. Instead the intent here is to point out that it takes a complete set of competencies to create an effective and long-lasting organization. One that is responsive to the needs of its participants and to the society that it serves. Therefore, while management may drive the wheels of progress, leadership chooses the direction and, as part of this discussion, innovation populates the future landscape.

**Management May Drive the Wheels of Progress but Leadership Chooses the Direction, Where Innovation Populates the Future Landscape.**

## 5. SOCIETAL SURVIVAL

One of the primary reasons we as a species have been so successful, in addition to our opposing thumbs, is our ability to learn and to take advantage of accumulated knowledge to create a stronger social order. This also allows us to aggressively protect ourselves from the varied and changing environment we choose to live in and amidst the others that we choose to live around. It is in the success of that information and knowledge transfer, along with the ability to accelerate that process, which has made us so remarkably successful, even if it has put our environment at risk at times.It should be noted that self-sufficiency is also an essential ingredient in this mix that has allowed us to stand on our own and to reach towards

ever-increasing heights.  All of this further emphasizes the need and value of our leadership core, along with the innovation that it enables. It is through our advancements in technology and the freedom and security that its creation permits that has allowed us to develop creatively and intellectually along with immeasurable advances in our social order.Can we, in fact, overstress the value of innovation and leadership and the role they play when combined for the benefit of mankind and nature? There are many who don't think so. It turns out we are the most successful macro-species on the planet.  This is in a large part because we are inventive, innovative, and, in our best state, self-sufficient with the leadership driven vision to push through to the end. We rise to the occasion when threatened and we continuously help to generate a pool of creative, intelligent, and consciously driven decision-makers, who in turn become the next generation of leaders and innovators.

**When threatened we rise to the occasion to continuously generate a pool of creative, intelligent, and consciously driven decision-makers to solve tomorrow's problems.**

## 6.  LEADERSHIP WITH INNOVATION

There is a lot of rhetoric posited on the role of innovation within the progress, and success, of a new opportunity. Whether it is a new technology, product, process, or service one trend becomes apparent to the authors of such literature.   That is; the novelty, uniqueness, or responsiveness to an identified need and its solution does not necessarily spell long-term success. What will prove a critical element to the mix will be the realization and implementation of strong, capable leadership, leadership that understands and embraces innovation and the innovative spirit.

As important, and quite possibly even more important, will be the acceptance of the leadership role by the innovator. These innovators, along with their passions, need the driving forces that leaders provide them with in the competitive realm of the marketplace [2].  Both parties are essential, and their cooperative acceptance is crucial if change is to continue at a pace in keeping with the needs of society.  They become even more decisive if growth is to be responsive to game-changing discoveries.One of the postulates of this discussion is that our current society and its needs are evolving at an ever-increasing rate. A rate that is relational with, if not driven by, technological advancements. As an example, what used to be generational problems - those recognized in time for the youth to be educated about and to then spend their careers into retirement solving - are now problems that need to be fixed by sometime next week, just in time for the next crisis. We no longer have the luxury of waiting for either the visionary leaders or innovators, or both, to arrive to save the day.  We now need to seek out these futurists in order to provide these pioneering leaders and innovators with the tools, plus the rewards, to encourage their growth

and productivity. All the while we will need to stay out of their way, remaining ready to catch their next revolutionary idea, and then help drive it into the marketplace.

For most of the needs of modern society the solutions, and the resulting products and services, will come from the technical arena created and nurtured by the people who generate them. It is with the creatively inclined that a significant number of the technological successes become manifest, which most likely will occur due to a strong leadership involvement.  It is due to leadership's relentless devotion towards the implementation of innovation that these innovative leaders become the rare and much sought after symbols of growth within a business or society. It is to these individuals and their skills, motivation, and attributes that most long-term technological successes can now be attributed.  It is with this belief that our society must recognize this relationship between innovation and leadership.  For without leadership, innovation remains stagnant as merely another inventive idea.

## 7.  CONCLUSION

This paper was developed to offer one description of the importance recognizing the essential value that the combination of leadership and innovation bring to the continued and successful development of today's modern society.   Innovation from invention with the correct leadership provides the required elements to foster and advance innovation; in particular advanced concepts and technologies. It takes a special individual to assume the role of leader.  It also takes an individual with a unique mind-set to be an innovator.  Both of these individuals, rarely in one person, must have resounding attitudes, featuring a steadfast sense of purpose, and an ironclad focus on the intent of their actions.  Leadership seeks goals that managers cannot see, while it relies on the innovative process to produce a sense of feedback for purposeful meaning and action.   Leadership without innovation provides for refinements of the status quo, a short-term improvement in an investment, and a false sense of security for future progress.  This, in turn, would slowly spiral into mediocrity.

Likewise, innovation relies on leadership skills to generate efficient progress.  Innovation without leadership creates initial optimism, the miss-use of core resources and, most often, a disillusion and loss of confidence in the stakeholders. It is only with both innovation and leadership that you build for the future, balance the short term with the long, and guarantee the growth and prosperity of the organization and society.

**Leadership Enabled Innovation**

- Leadership without innovation provides for refinements of the status quo, a short term improvement in an investment, and a false sense of security for future progress; a slow spiral into mediocrity.

- Innovation without leadership creates initial optimism, the miss-use of core resources and most often a disillusion and loss of confidence in the stakeholders.
- Only with both do you build for the future, balance the short term with the long, and guarantee the growth and prosperity of the organization and society.

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