Skunk Works: An Innovation Incubator Assessment

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Abstract

This article will present an organizational structure assessment of the Skunk Works model of innovation. Skunk Works innovation incubators have been in existence for more than seven decades. It is the innovation model that has been duplicated by many companies over these years, even the United States of America has depended on Skunk Works for air power innovation and superiority. Meanwhile, how does a Skunk Works model function within an organization? There exists an enormous amount of uncertainty, chaos, disruption, and disorganization within this model. These environmental elements must exist for the leaders and followers to be creative and innovative. Some may sense a hint of disorder given these environmental elements. But there is a deliberate existence of order in an innovation incubator. As a result, an organizational structure and design assessment can be done revealing a mechanistic and organic designed dynamic that functions as a Skunk Works model. Key organizational structure concepts are offered in this assessment, which can be introduced to senior executives, managers, frontline supervisors, and line workers of any organization working in a traditional or nontraditional innovation framework; assessments like this can contribute to the dialogue in the innovation and entrepreneurship community.

Skunk Works is the original model of the innovation incubators. In the 1940s, Lockheed Martin launched a secretive, special, internal unit specifically identified for innovation. Its goal was to disrupt and cause chaos with weaponry that would win wars and influence global diplomacy for the United States of America. In their revealing book, *Skunk Works*, Ben R. Rich and Leo Janos write about this special unit that became known as Skunk Works. They tell us it was the creative idea of Clarence "Kelly" Johnson who founded it in 1943, and it contributed to the United States' involvement in World War II and the Cold War, which were critical times for the country and the world.

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While Lockheed Martin was mechanistic in structure, Skunk Works was organic in structure and decentralized from its parent organization, Lockheed Martin. Kelly Johnson believed this was necessary for the very beginning. Rich and Janos wrote that Kelly wanted "…to keep the Skunk Works as free as possible from bureaucratic interlopers or the imperious wills of overbearing generals." Johnson staffed the secretive arm of Lockheed Martin with their followers who created innovations that were revolutionary, fresh, new, and original masterpieces that have evolved over time.

This article will present an organizational structure and design model assessment of an innovation incubator. Traditional innovation within organizations occurs daily. However, innovation is often interrupted by the daily course of business. As a result, some organizations today have activated innovation incubators tailored as a Skunk Works model. How does an innovation incubator concept thrive in today's traditional organization structured in a mechanistic design? The article will address this question discussing the implications of organizational structure, design, culture, emotional intelligence, a preferred style of leadership, and an innovation framework.

Organizational Structure

Within an innovation incubator environment, what does organizational structure look like? This environment is one that insights disruption, chaos, and creativity. It offers a company the ability to change direction when a new idea rises to the surface. If the idea offers an overwhelming abundance of high promises of being a *big idea*, then, the innovation incubator and its company will launch into the realm of greater market share, increased competitive advantage, and revenue.

Meanwhile, in this fast-paced environment, there is a clear organizational development structure in place in the inception of any innovation incubator. Establishing structure at onset is the wise approach to take when implementing an innovation incubator model. In fact, in his book, *Organization Theory & Design*, renowned management scholar, Dr. Richard L. Daft, elaborated how "managers create the conditions that are conducive to both the creation of new ideas and their implementation. Organizing to sustain innovation is as important as an organization to spur creativity." Considering that, this assessment into the organizational structure of an innovation incubator will present how it can thrive in an organization structured in a mechanistic design.

Sustaining innovation in the twenty-first century is a huge undertaking, especially in an innovation incubator environment dynamic. But, from an organizational structure perspective, understanding the concepts of organic and mechanistic design helps to establish the boundaries they create which allow the innovation incubator to flourish. Conversely,

understanding the concepts can alert you to disruptions in the boundaries that can cause the innovation incubator dynamic to decline.

Organizational Design

Traditional and nontraditional innovation are important distinctions for this assessment. Mechanistic design falls under the traditional category, while organic design falls under nontraditional. Mechanistic and Organic design are terms first used by Tom Burns and G. M. Stalker in their 1961 book titled, *The Management of Innovation First*, and resulted from observing industrial firms in England. Dr. Daft gave descriptions for both saying, the mechanistic design is when an "…organization is characterized by machine-like standard rules, procedures, and a clear hierarchy of authority." Within this design, "organizations are highly formalized and are also centralized, with most decisions made at the top." Organic design is quite the opposite. Dr. Daft stated an "…organization is much looser, free-flowing, and adaptive. Rules and regulations often are not written down or, if written down, are flexibly applied. People may have to find their own way through the system to figure out what to do. The hierarchy of authority is looser and not clear-cut, decision-making authority is decentralized." Both designs are accompanied by their own contrasting sets of contingency factors that will influence whether an organization will function mainly mechanistic or mainly organic.

The mechanistic design factors find a large organization that is efficient in its operation and strategic planning. It offers a stable environment defined and managed by a culture under strict governance that operates from manufacturing technology realm. By contrast, organic design favors complete autonomy, the freedom to create, innovate, and develop new ideas. The culture is fluid in adherence to rules they create but maintain awareness and respect for necessary rules, especially if structured within a mechanistic design. It is a culture that must be quick to adapt to change as this is the impetus for its existence. While both designs' contingency factors are relevant in their respective dynamic, they must function respecting their distinct differences. This is key, as Dr. Daft pointed out "organizations are still imprinted with the hierarchical, formalized, mechanistic approach that arose in the nineteenth century with Frederick Taylor. Yet current challengers require greater flexibility for most organizations." Allowing and trusting flexibility is a challenge for organizations today. Meanwhile, organizational culture is at work that allows for an organic, innovation incubator to thrive within a mechanistic design.

Organizational Culture

An incubator's organizational culture must be ready, willing and able to bear the tension that will certainly occur when these two design elements are merged. Dr. Daft accentuates the latter asserting that "the way in which people and departments are arranged into a whole, and

the degree of flexibility and autonomy people have, tells a lot about which cultural values are emphasized in the organization." Therefore, within an innovation incubator, it is imperative to assess and maintain the incubator's culture based on its rites and ceremonies, stories and sayings, symbols, and the structures, control systems, and power relationships. The Skunk Works model discussed earlier immediately comes to mind when you consider the latter cultural elements. These elements are just as important in the incubator's organic design as it is in its' parent organization's mechanistic design.

However, given the contrasting designs, some cultural differences will emerge within the incubator given its autonomy, decentralized authority, and informal systems. Dr. Daft supported the idea "cultures can be assessed along many dimensions, such as the extent of collaboration versus isolation among people and departments, the importance of control and where control is concentrated, or whether the organization's time orientation is sort range or long range." In an innovation incubator, its culture would demand collaboration, a sense of control amid the disruption, and chaos that occurs while keeping in mind any long or short-term factors that are project objectives.

An adaptability culture is a well suited, cultural description for an innovation incubator. It is a culture description developed by Dr. Daft which "encourages entrepreneurial values, norms and beliefs that support the capacity of the organization to detect, interpret, and translate signals from the environment into new behavior responses." This is key for an organic culture because it allows for the incubator participants to react to environmental change events which are the essence for the existence of innovation incubators. An innovation incubator dynamic can be compared to switching structures. Edward F. McDonough III and Richard Leifer (as cited in Daft, 2016) discussed switching structures in their paper published in the *Academy of Management Journal* and explained how "an organization creates an organic structure when such a structure is needed for the initiation of new ideas." Micheal L. Tushman, Wendy K. Smith, and Andy Binns give an example of switching structures in their *Harvard Business Review* paper. They describe how Mike Lawrie, CEO of the London-based software company Misys, created a separate unit for Misys Open Source Solutions, a venture aimed at creating a potentially disruptive innovation in the healthcare industry. Lawrie wanted creative people to have the time and resources they needed to work on new software that holds the promise of seamless data exchange among hospitals, physicians, insurers, and others involved in the healthcare system. After creation in the new venture, implementation of the new ideas, where routine and precision are important, occurs within the more mechanistic, regular organization.

This example is an answer to the question, can an innovation incubator concept thrive in any organization today structured in a mechanistic design? Misys Open Source Solution presents an innovation incubator dynamic in a mechanistic designed organization. For an organic designed innovation incubator concept to thrive successfully within a mechanistic design, several things to need be understood and occur simultaneously; emotional intelligence must be grounded in incubation leaders and followers, and the innovation process and framework must be communicated.

Emotional Intelligence

Within some innovation incubators, emotions surely run high for followers and incubator leaders. The pressures of innovating, creating new ideas, products, systems, and processes and trigger lots of good and bad emotions. Understanding individual and group emotions are important to manage because it aids mission accomplishment. Therefore, it is necessary to have some sense of what emotional intelligence (EQ) is. In their bestselling book, *Emotional Intelligence 2.0*, Dr. Travis Bradberry and Dr. Jean Greaves concluded after testing over 500,000 people, "only 35 percent of the people…tested are able to accurately identify their emotions as they happen. As a result, only two-thirds of people are controlled by emotions and not equipped to spot them and benefit from them." Emotional intelligence is a significant force and influence in an innovation incubator environment where leaders and followers engage daily to accomplish the mission they were assigned.

Psychologist and other researchers have concluded, according to Dr. Daft, that emotional intelligence is more critically important than cognitive ability, or IQ, and suggest that emotional intelligence, more than cognitive ability, drives our thinking and decision-making, as well as our interpersonal relationships. Dr. Bradberry and Dr. Greaves described emotional intelligence as a person's ability to recognize, identify, and understand the emotions in themselves and others. EQ, according to Dr. Bradberry and Dr. Greaves, "is the foundation for an array of critical skills found in leaders and followers. Skills like decision-making, change tolerance, time management, assertiveness, empathy, communications, stress tolerance, presentation skills, social skills, customer service, anger management, accountability, flexibility, and trust." All these skills are actively engaged in an innovation incubator environment. In fact, the leaders of the incubator have the unique responsibility of controlling the emotional intelligence of themselves and their followers.

The challenge for leaders with emotional intelligence is their ability to direct emotions, a key indicator of success in an innovation incubator environment. Dr. Daft implied that "leaders who harness and direct the power of emotions to improve followers' satisfaction, morale, and motivation get better results and enhance overall organizational effectiveness." Emotional intelligence requires a more prominent focus organizationally because it shows its influence in an innovation incubator environment. Meanwhile, the role and style of leadership within an innovation incubator certainly holds a prominent place in terms of influencing the emotional intelligence of followers.

Preferred Style of Leadership

It would be remiss not to identify a conducive style of leadership for an innovation incubator model. Yes, we can argue that one style does not fit all innovation incubator models. But, we can ask, what style of leadership would best allow for EQ to influence the leader and followers in an incubator dynamic? What style would best allow for precise organizational development and culture management in an environment that is purposeful in efforts to bring

change? The situational leadership approach is a good fit for the demands presented in an innovation incubator environment. In the seventh edition of his book, *Leadership: Theory and Practice*, scholar and author, Dr. Peter G. Northouse, elaborated how "different situations demand different kinds of leadership." The flexibility and awareness of this leadership approach would benefit this kind of environment which presents lots of uncertainty. This approach offers directive and support behavior styles which are conducive to the EQ skills discussed earlier; they address a leader's impact on follower behavior and the emotional support required to meet the demand of the incubator.

Therefore, this kind of an approach fits in an organic innovation incubator that operates in a mechanistic designed organization. Dr. Northouse stressed that the situational leadership approach can be applied across different fronts of an organization. The approach contributes added benefits, according to Dr. Northouse, like implementation in "the initial stages of a project, when idea formation is important, and during the various subsequent phases of a project." All the benefits fit the uncertainty dynamics in an incubator. Meanwhile, to maintain some sense of order in the organizational development of an innovation incubator, an innovation framework must be created and communicated to everyone involved.

Innovation Framework

While the expanse of innovation and creativity are limitless, and often without boundaries, there still must be some sense of order given the limited resources available to incubators. Professors of innovation and entrepreneurship, Dr. John Bessant and Dr. Joe Tidd recognized the benefits of innovation incubators and the entrepreneurial spirit of the people involved in them. They asserted that organizations must be "…careful not to fall into the chaos trap – not all innovation works in organic, loose, informal environments or 'skunk work', and these types of organization can sometimes act against the interests of successful innovation." They offer a framework that facilitates innovation order. The framework consists of a shared vision and structure identification, key individual recognition, encourages teamwork and individual development, effective communication, intense innovation environment, external focus, and creative influence in a learning organization environment.

In conclusion, this brief assessment of innovation incubators explained how they thrive in today's traditional organization structured in a mechanistic design. While the organic design of an incubator does present uncertainty, disruption, and chaos, that is what fuels creativity and innovation. As a result, incubators can potentially produce greater market share, increased competitive advantage, and increased revenue. The implementation of organizational structure and design concepts, organizational culture awareness, emotional intelligence education, style of leadership, and innovation framework are a few of many other concepts one could consider in this kind of assessment. Meanwhile, this assessment offers some direction and vision for how a successful innovation incubator is structured as a Skunk Works model.

About the Author

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