Innovation, Change and Leadership

EXPLORATORY STUDY

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To my motivations, Maria Virginia, Fabiana, Federico, Abruzzo and the Wolf Team

Abstract

This paper provides an exploratory study about how sustainable innovation and change may be achieved, with insights and references to models, articles and other resources on creativity, innovation, change management, leadership.

It also includes experiences from the field from myself, with the aims to have an open discussion on how the existing models and theories can be used, improved or adapted to improve Companies performance and people day-to-day professional life.

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Figure 1 – Leadership – Source: Franco Angelosante

1. Innovation. A pillar for success or failure.

"How does a project get to be a year late? ...One day at a time..." - Frederic P. Brooks

1.1 DEFINITION

Innovation can have multiple definitions. In business context I refer to the definition provided by *Johnson et al. (2017):*

"Innovation involves the conversion of new knowledge into a new product, process or service and the putting of this new product, process or service into actual commercial use".

Innovation apply to products, servicers, organization models or lifestyle. An example of successful lifestyle innovation is provided by *Marie Kondo (2014).*

In contemporary times the open innovation tend to be more widespread respecting the closed innovation model *(Herzog, 2010). OpenSource (coar, 2006),* is an example of open innovation model, which contributed significantly to success of Google, Amazon, Apple and others. Most of these companies moved to a hybrid innovation model later, by closing the innovation for solutions that generate competitive advantage in the market.

1.2 MODELS AND THEORIES

"The computer is a spiritual machine". Umberto Eco

As common baseline, the successful companies implemented advanced, ever evolving, innovation models. Yet, in most of the cases, these model foundation starts from *Bush's Science: The Endless Frontier (1945),* further revisited and improved by *Rothwell (1994) "towards the Fifth-generation Innovation Process".* The basic phases are described as:

"Basic research → Applied research → Development → (Production and) Diffusion"

Over time several aspects have been improved from the *Bush*'s original model, like the 24 factors focused on increasing development speed and efficiency (Rothwell, 1994). However, points like *"High quality initial product specification (fewer unexpected changes)"* are inefficient for highly scalable and continuous changing environments. Innovation moved towards decentralized, adaptive planning and execution, with the *Sixth Innovation model,* described by *Marinova and Phillimore (2003).*

The Fifth and Sixth Innovation Models, have been the foundation of the most advanced Innovation strategies and decisions for several companies. Agile, which principles are described *by Jeff Sutherland et al. (2001)* in the *Agile Manifesto*, is a natural outcome from these models.

Innovation needs to be implemented following methodologies that can reduce the risk of company inefficiencies, keeping the employees and customers satisfied, by delivering incremental progress unit values. This is what Agile was made for, integrating the concept of "*smooth incremental change"* (*Grundy, 1993)* and in-line with the "*scale of change" (Dunphy and Stace, 1993)* model:

Fine-tuning Incremental adjustment Modular transformation Corporate transformation

Companies sometimes manage innovation as marketing labeling in order to please employees, rather than focusing on valuable outcome. Innovation needs to be a built-in factor for Companies and Institutions lifecycles and operations. *Senior and Stephen (2016)* remark the importance of Continuous assessment:

"If organizations responded continuously to the need for change, they would have no need for the periodic upheavals that become inevitable. In other words, through their continuous assessment of the environment, change should emerge almost 'naturally'".

How can continuous assessment be part of the normal Company activities?

SAFe methodology (Scaled Agile Framework) provides an effective strategy to organize the implementation and execution-focused activities during the first 2/3 of the delivery time-window (i.e. first two Sprints). Then, leaves the research, design, innovation and communication topic to support change management, to the last time slot (i.e. third Sprint). This can be an effective way of delivering operations and yet have allocated time and resources for innovation, creativity and change.

The following are the SAFe Lean Principles from © Scaled Agile Inc:

1. ***Take an economic view***
2. *Apply system thinking*
3. ***Assume variability, preserve options***
4. ***Build incrementally with fast integrated learning cycles***
5. *Base milestones on objective valuations of working systems*
6. *Visualize and limit WIP, reduce batch sizes, and manage queue lengths*
7. *Apply Cadence, synchronize with cross-domain planning*
8. ***Unlock the intrinsic motivation of knowledge workers***
9. ***Decentralize decision making***
10. ***Organize around value***

Those marked bold are in my personal experience the most relevant.

Management commitment is critical for the adoption of these methodologies. Authentic Leadership, Emotional Intelligence and other innovative management skills, models and tools can help the adoption of effectiv models.

1.3 TANGIBLE INNOVATION

"Plan to throw one away" – Frederick P. Brooks

Technologies are key enablers in Companies Innovation journey. However, it's not obvious, to determine which innovation provide value throughout the Company's lifecycle time.

Digital Transformation (DT) is one of the main drivers to help identifying and implementing the right Innovation. *Stolterman and Croon Foors (2004)* provide the following definition of DT:

"A set of mainly technological, cultural, organizational, social, creative and managerial changes, associated with digital technology applications, in all aspects of human society"

Frequently, the goal of DT is to provide a better, faster and stable user/customer experience, while reducing costs. How can it be translated to a Company reality? Possible answers are automation and testing.

Automation owns multiple perspectives. Examples of customer centric Automation are:

- Amazon One-Click buy
- Google and Amazon Web Services APIs
- Facebook Ads Manager and Automation Rules
- Google Ads Automation
- Fulfillment by Amazon and Merchant features to enable Retail Arbitrage
- Finance platforms with automated markets and stocks analysis to guide and support investors choices.
- LinkedIn Lead Gen Forms, Sales Navigator, LinkeLead

The following shows some automation common factors:

- Customers execute the least number of actions to achieve what he wants
- Enable customers to perform actions that would be time consuming if executed manually
- All of them are aggregator of different kind of information. Products, People, Jobs, etc.
- The information and data are aggregated and presented very efficiently
- The features work in a stable manner and meets or exceed the customers usability expectations

Companies achieves these goals at large scale through automation and testing, making the best use of Information Technology, System Engineering, Software Engineering and DevOps disciplines.

Automation is described as follow by *Lamb (2013):*

"Automation is the use of logical programming commands and mechanized equipment to replace the decision making and manual command-response activities of human beings."

One of the biggest at scale, first in kind, automation implementation was done by Henry Ford in the early part of 1900's, long before Internet or Computers.

How leading companies and entities, use automation to fulfill Customers and their own needs?

In most cases, Companies use models like Continuous Integration, Continuous Delivery, Continuous Deployment, Continuous Testing, Continuous Design, etc, to incorporate automation and innovations in their operations, product development, strategic thinking execution. The Agile model, specifically SAFe is a leading enabler model on these regards.

Microsoft and Google, amongst other Leading Companies, are top level examples of how Agile and Continuous Improvement led them to market lead levels. Google published several studies on their strategies for large scale Continuous Testing and how it relates to Agile. The following extract from *Krstic, Skorup, Lapcevic (2018),* shows the three key functions of Agile innovation:

"(1) Achieve maximum speed in innovative efforts. Agile innovations support the effective development of created ideas and their productive implementation, through a common innovation, from leadership to operation.

(2) Risk reduction. Agile innovation encourages the creation of a culture of innovation, and through increased collaboration between all actors in innovation, risk can be reduced (see section 1.9).

(3) Engaging the entire organization in creating and developing the best ideas, since agile innovation promotes the principles of integration. Effective innovation, as a rule, does not happen by chance, but it is the result of the deliberate design and improvement of the organization's innovation"

A relevant aspect of that paper, is how Agile can help in the innovation management process. The paper pointa to *Prasadi Lokuge (2015)* on impacts of Agile in Enterprise Companies across different industries. The following is a comparison between Agile, radical and incremental innovation:

Table 9: Comparison of innovation types

Incremental	Radical	Agile Innovation
Continuous (linear improvement in the value received by customers)	Discontinuous (with or without predecessor; substantial, non-linear improvement)	Ad-hoc
Based on old technology	Based on new technology	Based on both old and new technologies
Dominant design unchanged	Leads to new dominant design	Dominant design augmented
Does not lead to paradigm shift	Can lead to paradigm shift	Opposed to one-view, yet, the fundamentals are not changed. Thus, moderate paradigm shift
Involves low uncertainty	Involves great uncertainty	Moderately uncertain, less impact
Feature improvements	Entire new set of performance features	Extension of the features
Existing organisation and qualifications are sufficient	Need for re-education, new organisation and skills	Considering the qualities of digital technologies, less or no specialized skills required
Result of rational response, of necessity	Attributed to chance, not to necessity; might be influenced by R&D policy	Attributed to agility
Driven by market pull (important in late phase of technology)	Driven by technology push (important in early phase of technology)	Driven by market competition and technology advancements
To achieve economic short-term goals	To achieve economic long-term goals	To achieve quick returns

Figure 2 - Comparison of innovation types – Source: Prasadi Lokuge

Prasadi Lokuge (2015), provides also a summary definition of the innovation types with the related references:

Table 1: Definitions of innovation types		
Innovation Type	**Definition**	**Reference**
Radical Innovation	"…involving commercialisation of products based on significant leaps in technological development, with the potential for entirely new features and improvement in performance or cost, compared with the existing substitutes."	(Leifer et al. 2000) cited in (Chang et al. 2012, p. 442)
Incremental Innovation	"…involves the adaptation, refinement, and enhancement of existing products or/ and production and delivery systems."	(Song and Montoya-Weiss 1998, p. 126)
Product Innovation	"…new products or services introduced to meet an external user or market need."	(Damanpour 1991, p. 561)
Process Innovation	"…the efficient improvement of the production process." It leads to product innovation.	(Garcia and Calantone 2002, p. 112)
Technical Innovation	"…innovations that occur in the technical system of an organisation and are directly related to the primary work activity of the organisation."	(Damanpour and Evan 1984, p. 394)
Administrative Innovation	"…those that occur in the social system of an organisation. The social system here refers to the relationships among people who interact to accomplish a particular goal or task."	(Damanpour and Evan 1984, p. 394)

Figure 3 - Innovation Types – Source: Prasadi Lokuge

Table 1: Definitions of innovation types		
Innovation Type	**Definition**	**Reference**
Service Innovation	"…Re-bundling of diverse resources that create novel resources that are beneficial (i.e., value experiencing) to some actors in a given context; this almost always involves a network of actors, including the beneficiary."	(Lusch and Nambisan 2014, p. 162)
Organisational Innovation	"…the adoption of an idea or behaviour that is new to the organisation adopting it."	(Daft 1978, p. 197)
Architectural Innovation	"…forges new market linkages with new technology through the creation of new industries or the reformation of the existing ones."	(Garcia and Calantone 2002, p. 117)
Modular Innovation	"…involves the introduction of new technology that overturns the core design concepts of individual components while leaving the established linkages between components relatively untouched."	(Magnusson et al. 2003, p. 5)

Figure 4 - Innovation Types – Source: Prasadi Lokuge

Innovation frequency and speed are the key strengths of Agile Innovation. The quick returns model by continuously delivering minimal new features, is a strong enabler, using both top down (strategy) and bottom up (technology) approaches to increase market competition and technology advancements.

1.4 NO STABILITY, NO GAIN

Most innovation research topics focus on management innovation or automation for faster integration, delivery, deployments, or how to foster employees creativity to deliver new impacting features. An area where more research is needed is automated continuous testing which lead to stability and reliability. In Agile, where new features delivery is fast, automated testing needs to be part of the continuous delivery process, to minimize risks of negative impacts on customers.

In DevOps model, Continuous Testing assume a critical role on reducing (Tech) Ops efforts and focus on Dev, which leads to more Innovation, better quality and user experience.

Successful Companies invests in testing, as it lower risks of destructive impacts on customer. Innovation needs to solve all kind of painful issues, not only the trendy ones.

Figure 5 – Creativity – Source: Franco Angelosante

2. Creativity. The inner source

"If you have the right attitude, interesting problems will find you." (Raymond. 1999)

2.1 DEFINITION

Amabile et al (1996) provide the following definition of creativity and innovation*:*

"We define creativity as the production of novel and useful ideas in any domain. We define innovation as the successful implementation of creative ideas within an organization. In this view, creativity by individuals and teams is a starting point for innovation; the first is a necessary but not sufficient condition for the second. Successful innovation depends on other factors as well, and it can stem not only from creative ideas that originate within an organization but also from ideas that originate elsewhere (as in technology transfer)."

Creativity is the process where one or more people together use ideas to produce a meaningful outcome with the goal of solving an existing problem or improving an existing solution. This is the milestone of innovation.

The key challenge for companies is how to build environments where not only individuals are creative, but whole Teams.

2.2 THEORIES AND MODELS

If you have always done it that way, it is probably wrong." – Charles Kettering

From Neuroscience perspective, *Heilman, Nadeau and Beversdorf (2003)* consider creativity enabler as the follows:

- Stress-less environments
- REM sleep
- Calming and relaxing the mind for a period

In the paper, it is particularly interesting the information reported on the analysis done on Albert Einstein brain after his death:

"Geschwind and Galaburda (1985) suggested that the delay in development of the left hemisphere may allow the right hemisphere, that mediates spatial computations, to become highly specialized."

and

"according to Einstein his creativity was heavily dependent on spatial reasoning, and the abnormal development of his left hemisphere may have allowed his right hemisphere to become highly specialized for spatial computations." My deduction is that creativity is not related to cultural paradigms, nationalities or believes, therefore diverse, multicultural and inclusive Teams, can be highly creative.

Bronowski (1972), define creativity as intuition that connect and unify points from different topics, mostly unrelated between them. In accordance, *Heilman, Nadeau and Beversdorf (2003)* view*:*

"Many important scientific discoveries are made when a scientist perceives significance in apparently accidental occurrences. The scientists, however, who made these discoveries must be prepared to understand the importance of these accidents."

The creativity mind needs to be prepared and skilled to make the intuitions happen. Still, even when an idea is clear, it needs to be tested to be valid. This is consistent with more recent theories and studies like *"The Medici Effect"* from *Frans Johansson (2004)* regarding intersecting different disciplines as foundation of the creativity process.

In my experience a Team of highly skilled people together produce more effective ideas and innovation then the ones lowly skilled. However, these people skills are from different areas, even better, with different cultural background. This is a key point when building Teams with changes and innovation goals.

Agile, specifically SAFe (Scaled Agile Framework), provides an effective methodology to for Teams and Orgs to make sure people have enough working capacity and time for creativity, such as:

- Innovation weeks
- Dedicated recurrent time to Innovation like 1/3 of the available working time.
- Creativity and Innovation content are provided by specific Teams (Design, Strategy Teams and DevOps)

2.3 CREATIVITY ENABLERS

"No one will ever get anywhere in this world unless he becomes a teacher, one who can show others how to do things." (Henry Ford. 1928)

Amabile and Khaire (2008) provide the following advices to manager to increase creativity:

- *Remember you are not the sole fount of ideas*
- *Enable collaboration*
- *Enhance diversity*
- *Map the stages of creativity and trend to their different needs*
- *Accept the inevitability and utility of failure*
- *Motivate with intellectual challenge*

Easy said. Adding the following, from personal experience:

- Like the daily job
- Connect to a well understood purpose
- Likable working environment
- Effectively manage external dependencies and interruption
- Incremental progresses that lead to continuous small wins.
- Have time to think
- Like-minded people in the Team, in constant evolution, avoiding fixed set of ideas and believes.
- Scale out creativity

2.4 HOW TO MEASURE AND ASSESS CREATIVITY

Teresa Amabile define a Consensual Assessment Technique (CAT) (Amabile, 1982) to measure creativity. The following experiments causing CAT, made an important discovery, that she calls *"intrinsic motivation principle of creativity" (Amabile, 2013).*

The experiment shows empirical proof regarding the existence intrinsic and extrinsic motivation factors, where intrinsic motivation is a powerful vector for creativity improvement. Increase intrinsic and extrinsic motivation, is the job of the Innovation Leader.

2.4.1 The Amazon Case

In Amazon, the creativity starts from the hiring process, by using a structured, scientific processes to make sure the candidate hired is a change-agent and have solid multi-dimensional skills, including creativity. These Companies face first time challenges, for which there are not yet available known solutions. Creativity and innovation become a must have skills in these conditions.

The Amazon hiring process provide different interview sessions with the candidate with incremental level of complexity. After three remote interviews (one with a recruiter, two technical), the candidate is invited on site for about 5 hours interview marathon. During each hour, the candidate is assessed on a specific discipline related to the applied position. One hour is dedicated for the "Bar Raiser" which is a senior profile that make sure the candidate provides better skills than the 25% percent of the Team. This make sure the Team skills are always increased over time. Lunch happen with the hiring Manager, where soft skills are assessed.

The candidate is requested to provide solutions, insights and content to real-world problems where in most of the cases there's no public solution available yet. The interview complexity increases by adding new factors like scalability, geographic distributions and others. By placing a candidate in a position to solve an unknown problem, in relatively short time, with different complexity scenarios, the creativity skills can be assessed, tested, challenged and verified.

After the candidate become an employee, need to take a mandatory hiring training called "Making Great Hiring Decisions", where all the process details and insights are provided. Assess creativity during recruiting, is a key topic that needs more research and study.

2.5 MEDITATION. UNCONVENTIONAL CREATIVITY AMPLIFIER

"There's a way to do it better – find it." – Thomas A. Edison

In Google Scholar, keywords search "meditation creativity" return about 165.000 results.

Several studies and research found that meditation can increase at least the following points:

- Openness to new ideas
- Increase focus skills
- Increase mind resiliency

Colzato, L., Ozturk A., and Hommel B. (2012), provide an interesting experiment on this topic with different kind of meditations and how they affect cognitive skills.

New startups provides services on mindfulness and meditation, like Calm or Headspace. Companies like Google, SalesForce and others provide to the workforce perks, trainings and office spaces to practice meditation with the final goal to have happier employees with increase creativity.

Employees happiness is becoming a serious priority for the top performing Companies Worldwide.

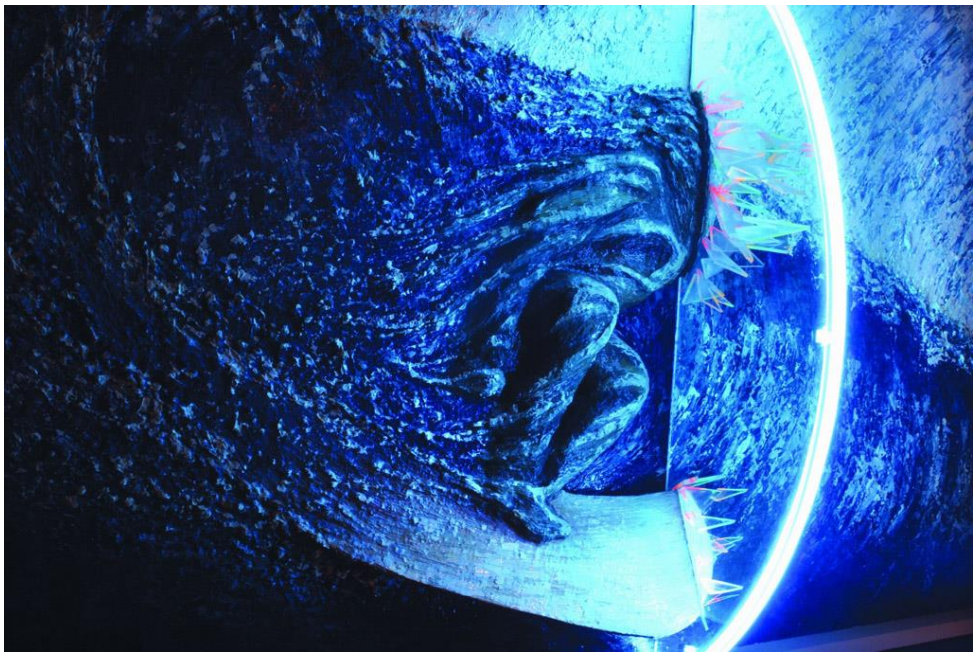

Figure 6 - Change Resistance - Source: Franco Angelosante

3. Change management in motion. When the abstract become tangible.

"Those who pretend that the same kind of change medicine can be applied no matter what the context are either are naïve or charlatans" (Strebel, 1996b, p.5)

3.1 DEFINITION

Is Change Management more an Art or a Science? Hard to say.

The definition of the change agent or change leader goes hand in hands with the definition of change management. The following description is from *Paton and McCalman (2008):*

1. *To help organization define the problem by asking for a definition of that it is*
2. *To help the organization examine what causes the problem and diagnose how this can be overcome*
3. *To assist in getting the organization to offer alternative solutions*
4. *To provide direction in the implementation of alternative solutions*
5. *To transmit the learning process that allows the client to deal with change on an ongoing basis by itself in the future*

Change Management is the implementation phase of innovation, where change management and change leaders or *"guiding coalitions" (Kotter, 1996)* makes a unified entity.

How the processes of creativity, innovation and change management starts?

Schein (2017) provide an interesting view:

All planned change starts with some recognition of a problem, as recognition that something is not going as expected […]. A desire for change, for doing something differently, for learning something new, always begins with some kind of pain or dissatisfaction.

A logic deduction from Schein view could be: Do people wants to know where change is needed? Look at the pains.

3.2 THEORIES AND MODELS

One of the most critical phases in Companies lifecycles, is to identify when a certain change is needed. Most successful companies use metrics to identify when a type of change is required to keep thriving (or stay alive).

In contemporary times, especially when technology is part of, or Companies core business, the organizational structure tend to be less bureaucratic and flatter. It depends also on the size of the Company and the development stage. *Mullins (2013), Drucker (1999), Rajan and Wulf (2006),* provide the following goals:

- *Reduce operating costs by removing layers of management*
- *Decentralized decision making*
- *Increase competition*
- *Improved corporate governance*
- *Information Technology*

Companies with strong focus on innovation and creativity frequently adopt models like *"Open Organization"* from *Whitehurst (2016)*, CEO of RedHat Inc.

The "Open Organization" follow a flatten model to structure Companies, with a bottom-up "enough" approach, where being inclusive with different stakeholder is critical.

A model to accelerate changes, is the strategy system from *John Kotte*r (2012), meant for modern, fast, changing environments. Kotter new strategy system expands his own original eight steps methods *(Kotter, 1996).* The new system focus on "accelerators" as main actions, rather than steps in the original model. Accelerators can be used in different orders, is more flexible then sequential steps and focus on building the largest involvement of people as possible to support the change.

Kotter remarks the need to have strategy and management working tightly together, calling it dual operating system. The following five principles are added to the classic ones, taken from *Kotter (2012) "Accelerate!":*

1. *"Get buy-in from more than 50% of the organization for the initiative."*
2. *"Create a "get-to" environment that generates an army of volunteers for your initiative."*
3. *"Involve people's hearts (not just heads). Their passion brings more power to the initiative."*
4. *"Invite, encourage, and promote many, many small acts of leadership."*
5. *"Ensure all those involved are in alignment"*

The following are the Eight Accelerators for strategy network:

1. *"Create a sense of urgency around a single big opportunity."*
2. *"Build and maintain a guiding coalition."*
3. *"Formulate a strategic vision and develop change initiatives designed to capitalize on the big opportunity."*
4. *"Communicate the vision and the strategy to create buy-in and attract a growing volunteer army."*
5. *"Accelerate movement toward the vision and the opportunity by ensuring that the network removes barriers."*

6. *"Celebrate visible, significant short-term wins."*
7. *"Never let up. Keep learning from experience. Don't declare victory too soon."*
8. *"Institutionalize strategic changes in the culture."*

I find Kotter "Dual Operating System" effective from a Leadership perspective. However, this system implies several assumptions and conditions already present in the Company such as:

- What to change is already identified, and the triggers are. There's nothing in this model regarding triggers.
- The sense of urgency doesn't work in all environments, especially in "Consensus" driven cultures, the sense of urgency linked to certain emotions, can be itself the source of opposition. There are cultures, companies and Countries, where people simply don't like to emotions the urgency generate or simply don't believe it effective.
- The change agent requires to have effective negotiations and communications skills already
- How to measure and communicate success is very important to have change institutionalized in the Company. There's no guidance on this in the model.

3.3 WHEN CHANGE IS NEEDED

The identification of triggers and breakpoints is critical to assess if a certain change is required. But triggers and breakpoints really depend on the environments, culture and change type. *Senior and Swailes (2016)* propose an approach of identification of internal and external triggers followed by the environment analysis:

Triggers:

- *Changing customer requirements and changing demand for products/services;*
- *Regulatory changes*
- *Trade union activity*
- *Actions by competitors*
- *Business performances (falling income or revenues)*
- *Economic climate*
- *Advances in technology that affect production systems or products*
- *Production costs (material, labor)*
- *The growth of e-commerce and use of the internet*
- *Competition from other Countries*

Environmental:

- *How the characteristics and experience of people filter information from the environment*
- *How organizational cultures influence the ways that managers and others have for interpreting events*
- *How organizational politics interpret signals from the environment*
- *How the organization has developed in the past and what has worked and not worked*
- *How the business sector as a whole interprets the information*

This critical thinking driven approach can help analyzing triggers and environments.

3.4 METRICS LOVERS

"What is now proved - was once only imagined." –William Blake

Agile provide an straightforward way to measure change, innovation and delivery achievements. The following table summarizes the metrics index used, from *Krstic, Skorup, Lapcevic (2018)* based on N*arasimhalu (2011):*

Goals	Indicators	Comment
Maximizing the efficiency of innovative management	Agile Innovation Management Index (AIMI)	Synthesized indicator of the agility of innovative management
The time needed to form an innovative team	Innovation Response Index (IRI)	A measure of how quickly a team for design and delivery of innovation can be formed
Minimizing the cycle time from idea to market (I2M)	Agile Innovation Development Index (AIDI)	The amount of time it takes for an innovative team to develop and deliver innovation

Figure 7 - Agile Indicators - Source: Narasimhalu

In "*Agile Innovation Management", Narasimhalu* provides a dive deep on indexes and other considerations when measuring innovation and change in Agile contexts.

3.5 WHEN A CHANGE IS SUCCESSFUL

"Premature optimization is the root of all evil" – Donald Knuth

There are several studies regarding criteria to define successful innovation and change. One of the most prominent is from *Gustafson et al. (2003).* I find these models to very complex and little usable by most of the manager in the business. The criteria and explanations should be simpler to understand and use.

Based on personal experience, companies need straightforward criteria, agreed and understood by the stakeholders, such as:

- The innovation outcome is used by the expected large enough number of people.
- Increased target revenues
- Products and services provide at least the features Customer expect
- Low turnaround of customer rotation
- Medium-High rate of new customers
- Low workforce turnaround
- Minimum major reorganization
- Define a minimum time frame before changing the strategy

3.6 APPRECIATIVE INQUIRY

Appreciative inquiry (AI) is a model proposed from *Cooperrider and Whitney (2005):*

"AI is a people engagement practice that drive change and innovation from a different angle, as it does start on the issue to solve, but rather from what is already exceptionally good and work together with as much as possible as possible to identify how to make the existing even greater."

I have the feeling that communication styles like "let's make it even better" or "make America Great again" use AI to make communication effective.

An example of AI could be a new Managing Director that during a Team with all the people in her/his organization, ask to share in a round from each person what are the one or two great achievement that person is proud off. Once the round is finished, people realize the many good things that happened in the Team. This generate a powerful environment. Next step would be to ask, what would you do, to keep this achievement progressing and improving further. After everybody provided their own inputs and there's a common action plan to work on.

AI is an incredibly powerful change methodology that match with servant and authentic leadership style, involving other people in plan definition, reducing change resistance and increasing empathy, foundation of Emotional Intelligence.

3.7 RESISTENCE TO CHANGE

"Anything's possible if you've got enough nerve." – J. K. Rowling

From *Verganti and Norman (2019) "Progress requires clashing and fusing — not compromising or postponing — different perspectives."*

Anyone must accept, that when something new or different is proposed, there will be objection and resistance. When constructive, challenging is positive to improve innovation and ideas. *Charlan Nemeth (2019)* in her study shows how consensus can underperform versus dissent when delivering innovation and change. I couldn't agree more with her.

Balogun et al. (2016) propose the following reasons for opposition (courtesy of *Boak "Reactions to Change"):*

- *"Self interest and politics – personal loss and/or cost*
- *Psychological reasons – fear of the unknown, fear of failure, or a low ability to cope with change*
- *Emotional reasons – eg lack of energy and motivation*
- *The approach to the change – such as lack of participation/consultation*
- *Recipient perceptions – to do with lack of understanding about why change is needed and its implications*
- *Cultural bias – may be conflict between proposed changes and existing values and beliefs*
- *Historical organizational factors"*

Elrod and Tippet (2002), represent in the following graph the reactions change curve (courtesy of *Boak "Reactions to Change"):*

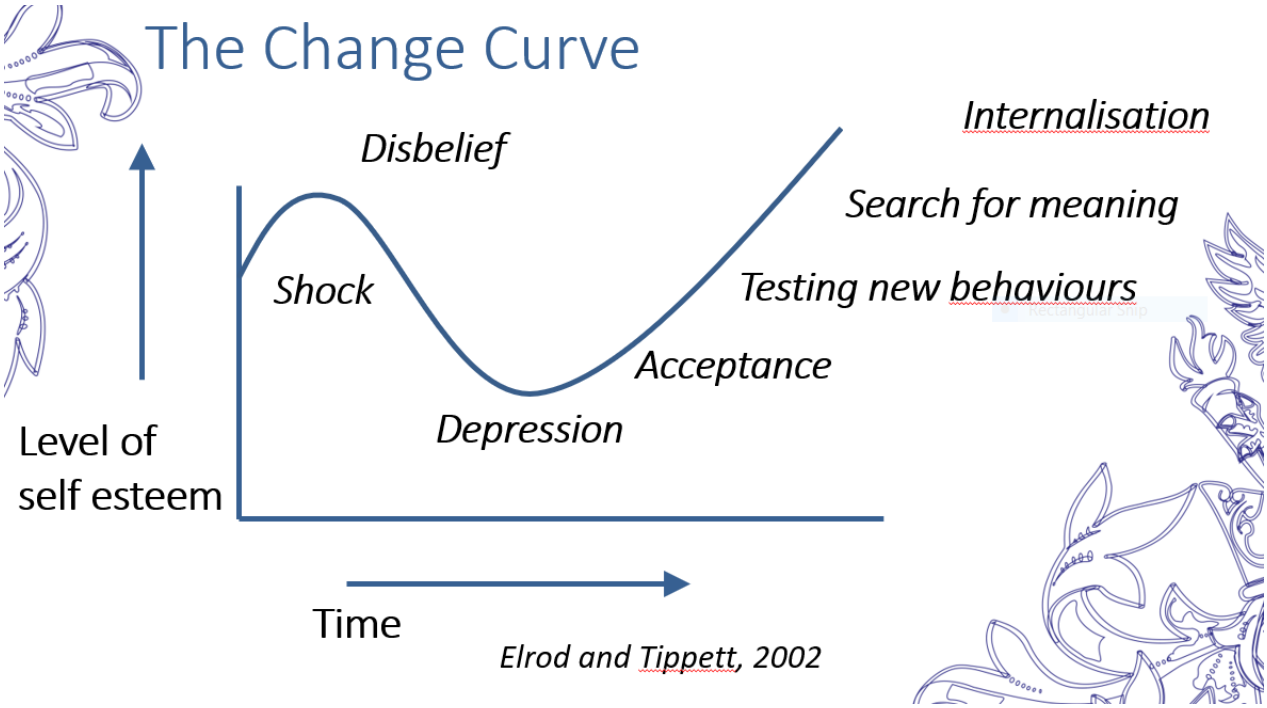

Figure 8 - Change resistance curve - Source: George Boak

Oreg (2003) extend with the following points:

- *"Reluctance to lose control*
- *Cognitive rigidity*
- *Lack of psychological resilience*
- *Intolerance to the adjustment period*
- *Preference for low levels of novelty*
- *Reluctance to give up old habits"*

Unfounded resistance, created important slowdown to evolution during history, an example of it is when the Church condemned to heresy Galileo Galilei to demonstrate the Earth move around the Sun. Leaders should identify and take actions on resistance when become not constructive.

Emotional Intelligence, appraisal inquiry and negotiations altogether can be an effective framework to be prepared when facing change resistance.

Figure 9 – Authentic Leadership - Source: Franco Angelosante

4. Innovative Leader. The way of authenticity

"Adding manpower to a late software project makes it later" – Brooks Law

Probably, one of the most important distinction to realize in company environments is the difference between Management and Leadership. *Kotter (1990)* provide an insightful view on this topic:

	Leadership functions	Management functions
Creating an agenda	Establishes direction: vision of the future, develops strategies for change to achieve goals	Pans and budgets: decides actions and timetables, allocates resources
Developing people	Aligning people: communicates vision and strategy, influences creation of teams which accept validity of goals	Organising and staffing: decides structure and allocates staff, develops policies, procedures and monitoring
Execution	Motivating and inspiring: energises people to overcome obstacles, satisfies human needs	Controlling, problem solving: monitors results against plan and takes corrective action
Outcomes	Produces positive and sometimes dramatic change	Produces order, consistency and predictability

Source Kotter J.P. A Force for Change: How Leadership Differs from Management, Free Press, New York, 1990

Figure 10 - Leadership vs Management - Source John Kotter

The line is, that Leaders lead, define and show the way, while Managers execute the way. Leaders can be Managers, and the other way around.

4.1 THEORIES AND MODELS

Which skills are needed and what should Leaders do to deliver successful innovation and change?

In Agile, the following traits defined by *Iacocca and Witney, (2007)* are critical for effective Leadership:

- *Ambiguity tolerance*
- *Curiosity*
- *Creativity*
- *Courage*
- *Conviction*
- *Emotional Resilience*
- *Critical Thinking*
- *Vision*
- *Flexibility*

Adding the following based on my experience:

- Negotiations skills
- Great listener
- Reduce change resistence
- Be her/him self
- Make great hiring decisions
- Promote Self-Managing

4.2 SERVANT LEADERSHIP

From *Senior and Swailes (2016):*

"The servant-leader is concerned with the needs to others [...], to desire to serve first (as opposed to lead first) and to build leadership capacity of others (Greenleaf, 1977)"

A possible issue with servant-leadership, is that it needs workforce full commitment to improve and give their best, or complacency could increase. This is not always the case, so results and achievements could languish, generating a short servant-leader lifecycle. Servant Leadership is highly effective to minimize change resistance.

4.3 AUTHENTIC LEADERSHIP

"In the end, cowards are those who follow the dark side." - Yoda

From *Sims and Manz (1988):*

"A SuperLeader is one who leads others to lead themselves"

For Leaders and Teams, can be exhausting to keep enduring empathy, listening, emotional intelligence, continuously improving and so on. It' hard for people sustain the pace of continuous change and innovation, without being them-self as a person in the professional environment.

From *Senior and Swailes (2016):*

"The authentic leader does not try to imitate or mimic some other person or model. They are true to themselves, are acutely aware of their values and beliefs (Avolio and Gardner, 2005)."

Truthiness to our-self is explained by *Ilies, Morgeson and Nahrgana (2005).*

Authentic Leadership (AL) and Agile methodology are the foundation of successful Companies. AL are better equipped to execute whatever it takes actions, with integrity, to make sure the environment they work is successful.

From *Coutu (2002):*

"Bricolage in the modern sense can be defined as a kind of inventiveness, an ability to improvise a solution to a problem without proper or obvious tools or materials."

AL at purest level.

4.4 EMOTIONAL INTELLIGENCE

"We were not made to live as brutes, but to follow virtue and knowledge." – Dante Alighieri

According to *Goleman, McKee, George and Ibarra (2019)* EI is an aggregate of at least the following topics:

- Mindfulness
- Resilience
- Influence and Persuasion
- Authentic Leadership
- Dealing with Difficult People
- Focus
- Self-Awareness
- Happiness
- Empathy

- Leadership Presence
- Purpose, Meaning, and Passion
- Confidence
- Mindful Listening
- Power and Impact

EI is a broad topic with focus on what happen to people within, and how Leaders deal with that. EI provide a framework to build skills and prepare people emotionally for challenges.

The main EI Leadership style is Authentic Leadership, but there's really no distinction between entrepreneur, manager, leader or other roles as in EI everybody is a Leader. From *Wilding (1999):*

"During Cranfield's research on agility one leading supermarket chain stated: "we do not want our store managers to be automatons, we want them to be entrepreneurs…." Entrepreneurs require a special set of skills that are not related directly to technical ability and intelligence."

Daniel Goleman is at forefront of EI, but scientists like Teresa Amabile provided content related to EI since decades in research papers and books on happiness at work, power of small wins, empathy, intrinsic and extrinsic motivations and how working environments impact creativity.

The concept behind EI is, happier the people, better the performances. EI improve the silver bullet, people.

5. Use Case Analysis Assignment – New CEO

Cheryl have a great vision for the Company growth. She applied strategic thinking to seize Bull's-Eye contract. She realized that "LakeLand Wonders" needs to scale out and apply similar market strategies than other multinational competitors (i.e. outsource production from cheaper labor Countries). Resistences started when she requested to execute her vision to other Company executives.

Issues with Cheryl approach:

- *According to Goleman, Boyatzis and McKee (2013),* Cheryl have a Pacesetting leadership style. She does not have the Team support and commitment, so Pacesetting is not the right style in this scenario.
- Lacks empathy and not mindful listening Mark at her first meeting and did not try to go deep understanding his reasons.
- She didn't use Appreciative Inquiry nor any change resistance analysis before engaging the Team and the Board.
- No follow up negotiations have been done with the Union nor with the other stack holders.
- Kotter "sense of urgency" was not achieved with the Board nor with the executive Team.
- Proposed to bring in new hires, rather trying to onboard existing ones.

What Cheryl could have done to reduce resistance:

- Involve the Team from the strategic thinking phase.
- Use appreciative inquiry to get feedback from the Team on how to achieve growth.
- Getting the inputs from the ex-CEO before talking to the Team, to get feedback and leverage his experience.
- Execute a risk assessment showing to the Team what could happen if Bull's-Eye contract was not seized.

- Apply Kotter accelerators since the beginning.
- Negotiate with the Board growth different terms, negotiate longer transformation time, discuss alternatives (i.e. outsourcing production, create a new company for non-made in US products, etc).

6. Use Case Analysis – New Innovation Team

6.1 ISSUE DESCRIPTION

The Customer was struggling with the following points:

- Unstable operations
- Excessive technical operations efforts
- Goal focus
- Team mood and turnaround

The change agent (me) was a Consultant from the provided Consultant Company (CC)

6.2 PROPOSED CHANGE AND EXECUTION STRATEGY

The change-agent (me) identified the improvement opportunity to create a new Team that would focus on Automation and Continuous testing. Steps taken by the change-agent:

- Identified the specific issues generated by lack of testing and automation, like environment inconsistencies, frequent outages, etc. **(Initial analysis)**
- Identified the key stakeholder and how was their interest related to the innovation. (**Collect data and set the scene for the negotiation and influence**)
- Built a business case (BC) including the solution for the major issues, including the resources needed**. (Provided a compelling argument sustained with data, using persuasion and**
- The BC included also innovation use cases that management always wanted to deliver but never happened **(Kotter building a vision)**
- The BC provided a view of the improvement of each sue case, including how the long term company goals were affected by the issues **(Kotter building a vision)**

The use case was proposed to the CC local management to build urgency and coalition group. **(Kotter building coalition)**

Once the BC was refined, the local CC management engaged the Customer Management counterpart informally to test the water. **(Kotter building coalition)**

After that, the BC was proposed the to the main stakeholder in wider audience meeting. **(Kotter communication)**

After couple of refinement meeting with the customer the BC was approved, and the new Team was created **(Kotter accelerate on change)**

The change-agent was the Manager of this new Team, and started focusing on the recruiting process, follow the same approach described in the Amazon use case. **(Kotter accelerate on change)**

After few months the Team was built and within the time frame all the use cases were delivered, as the resources allocation and the timeline in the BC was done realistically, using Agile SAFe and test it by involving the people that were doing the deliver.

6.3 CHALLENGES

The following challenges appeared during the process:

- Some Customer Managers were resistant to the innovation, as they preferred allocating the new resources to their Teams, keeping executing in the same way things were always done.
    - (Authentic Leadership and negotiations (EI) were used to show the value to the resistant managers. Managed expectation with *Elrod and Tippet (2002),*)
- In order to be effective, the new Team needed to have members with specific skills. The
    - Customer wanted to allocate existing resources with different view and sense or urgency regarding this new plan.
    - Negotiation (EI) with strong sense of urgency were used to build a Team with fresh skills and recruits.
- The Teams from the manager that were making oppositions, were reluctant on using the innovation to improve their live.
    - Empathy, focus and communication (EI). Managed resistance using *Elrod and Tippet (2002)*
- The resources for the new Team were not part of the initial budget, so efforts invested in the initial analysis to build the case were intense.
    - Negotiations (EI) and sense of urgency (Kotter) have been used.
- The Customer IT environment were very restrictive in terms of security for external contributors.
    - Negotiation (EI) skills were used to balance innovation costs vs restrictions.

6.4 KEY TAKEAWAYS

- I've been lucky, we are like minded with my Managing Director. Choose the manager wisely.
- Do not prepare incomplete content or analysis to an audience where you know there will be resistance
- Make sure to connect the operational low-level issue, with the company business goals, highlighting the risks
- Make the business case reasonable regarding time planning and resources needed.
- Build the coalition first with the people you know are like minded, then approach the rest
- Negotiation skills, empathy and timing to propose the solution are critical
- Work very hard to collect the data and the case content initially. There a limited time window to leverage existing issues to generate sense of urgency.

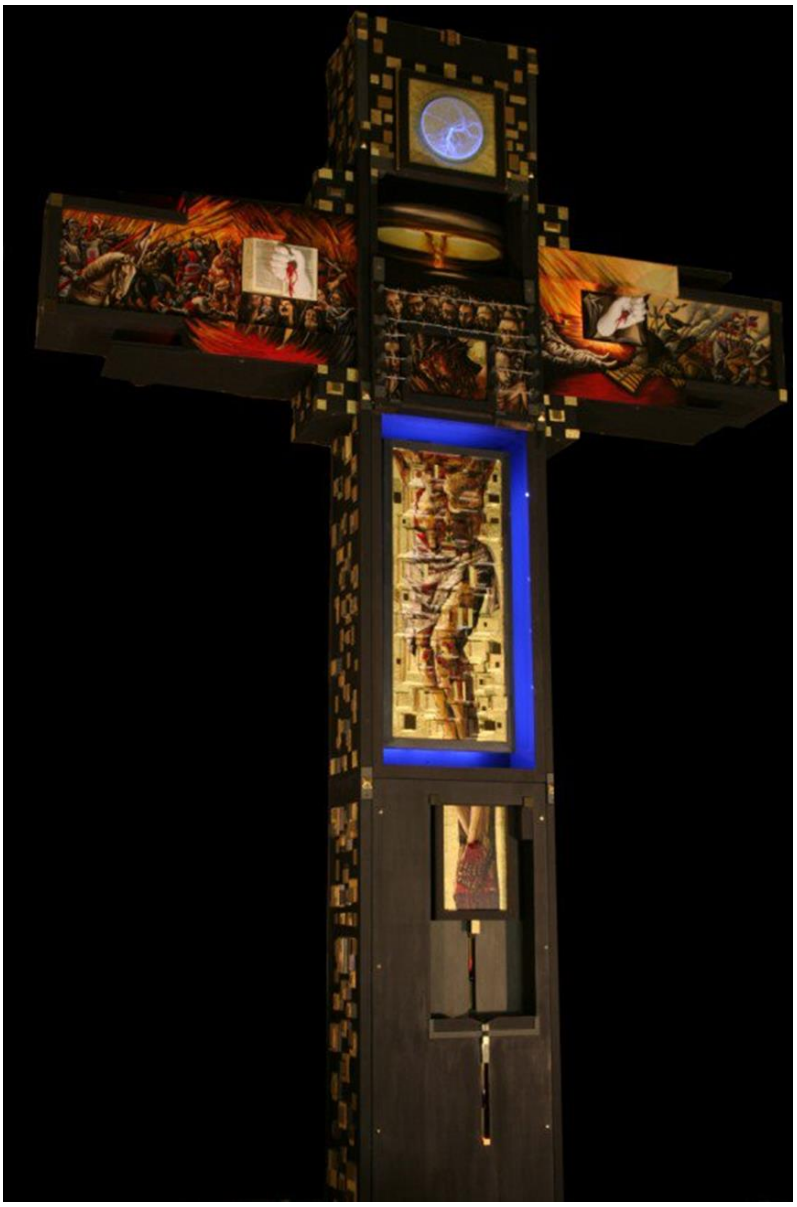

Figure 11 - Self Assessment - Source: Franco Angelosante

7. Self-Assessment

Domain	Rating	Description	Improvement Plan
Emotional Intelligence	Low	• Low on Mindful Listening, Mindfulness, Self-Awareness, leadership presence, • Medium on dealing with difficult people, focus, empathy, Influence and persuasion, Happiness • High on resilience, confidence, power and impact, purpose meaning and passion.	• Read more books, use applications like HeadSpace, Calm, meditate, slow down, take more holidays, let the other people talk first. Don't interrupt other when they talk. • Focus on breathing frequently during working hours.
Appreciative Enquiry	Low	I ask questions directly getting to the issue and always focusing on the negative part to improve, never start from the good	Mentalize myself on AI. Read more books and exercise practicing it during working hours.
Accelerators	Medium	• Low on build guiding coalitions, as tennd to do it only with management, rather involving all ranks. • Medium on building sense of urgency, accelerate movement, promote act of leadership, communicate leadership • High on never let up, formulate strategic vision, involve people's heart	• Start the innovation bottom up, so people from more ranks are involved and better critical mass is reached. Then engage management • Improve on communicating better the vision. Read books, focus my mind and allocate time for that.
Innovation and Change Agent	High	Active change agent, always striving on improving.	Read more books on Change Agent strategies and skills would beneficial
Agile SAFe	Medium	I'm not always following Agile, only when it generates a leverage to enforce some change.	• Read mode books on SAFe • Find different negotiation entry points for change rather leveraging SAFe.
Authentic Leadership	High	Pretty authentic when leading Teams, Innovation and changes.	Improve significantly on Self-Awareness. Reading books and test my ideas more with others would help.
Measure Innovation	Medium	• Not using SAFe metrics to measure how the innovation and changes are effective. • I don't institutionalize the metrics to measure innovation automation and testing to other stakeholders	Study models to institutionalize innovations.
Critical Thinking and Negotiation	High	• Critical Thinking process part of daily routine. • Reasonably good with Negotiation. I manage to find what to the other stakeholders need to move forward	• Reading more books.

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9. Resources

http://agilemanifesto.org/principles.html

http://www.scaledagileframework.com/safe-lean-agile-principles

https://econic.co/measuring-innovation/

https://ink.library.smu.edu.sg/sis_research/

https://sites.google.com/site/gjournalclub/

https://web.archive.org/web/20090319130652/http://neurology.med.ohio-state.edu/cognitivelab/CreativityMechanisms.pdf

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