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Agile Transition - What you Need to Know Before Starting

About the Authors

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Many international companies of all industries trust his strategic advice to implement agile change in their organization. In 2010 he was the leading strategic coach for one of the biggest agile transitions worldwide with more than 2000 people for an international telecommunications provider.

Martin Kearns is one for the first Certified Scrum Coaches in the world, he enjoys leading the development of an enterprise agile capability within organizations to support the business strategies of a diverse set of clients. Martin's forte is in the coaching of individuals and organizations to improve their application of the agile process and to build high performance teams. He has an infectious passion for his training styles in assisting others learn agile / scrum (also a CST) and is heavily involved with the community.

Martin has over 18 years of industry experience, with a programming background ranging from good old fashioned mainframes to Java and C#. Since the beginning of 2009 Martin has been working with agile42.

Foreword

The target is in sight, the safety catch is unlocked, the silver bullet with "Let's implement agile" firmly engraved is loaded. You are now sitting there confident that this idea will provide the promised success you were wanting. With many leading the way to adopt a new way of working, the decision to embrace agile is no longer as fearful as it used to be thanks to years of empirical experiences and potential risk documented.

However, don't underestimate the complexity of change you may be considering. Though documented successes now exist and can be easily found on the web — please do not make your decision lightly, and in particular do not think you can simply "buy" it; it will never be an easy purchase. The dangers of late projects, loss of delivery confidence and low morale are real and not always resolved even with agile.

Hard work is still required!

If you are still interested, before pulling up your sleeves and starting the hard work, continue reading the first of our articles, we are sure it will be worth it.

Our goal in this paper is to share some fundamental knowledge to support many of the observations and conclusions that we have identified within organizations who have transitioned to a more agile approach to work. We will share our failures and learnings in organizations transitioning to embrace agile and will share our experiences of what is required to succeed. This is the first of a series of white-papers about agile transformations by agile42[1].

Andrea Tomasini, Martin Kearns

Understanding Agile

In truth, agile is not a well qualified term as it is mostly misused as a cool synonym for "reacting fast to changes". In fact a visual that people use to represent something agile, is a rabbit bouncing across a field effortlessly, but when we associate the term with software development it has become synonymous with a more disciplined way to work together.

Understanding Agile

Throughout our agile journeys we have seen the term "Agile" used to a point where it is a form of avoidance of due-diligence, while for others it represents a catalyst for innovation. Each situation is unique and must be appreciated without presumption.

Our original goal for agile transformations was to design a set of reusable approaches and practices that determine a methodology to cover every scenario. We tried to define a technique to cater for everyone's individual perspective, that finds the "right" balance in approach, is scalable, reusable etc. without having the need to start from the beginning every time.

Instead we realized that effectiveness was achieved by starting each engagement without presumption, by listening carefully and identifying the solution to suit a unique scenario. Approaching each scenario with such an open mindset resulted in far greater success for organizations embracing the agile change.

Because of this, while providing guidance, we are intentionally leaving room for readers to apply their own interpretations. We firmly believe that to understand Agile you need to appreciate in which conditions - both historical and environmental - this new "approach to work" emerged. We identified four important knowledge areas, following this paragraph, which aim to establish a deeper understanding about why agile is different. Once this foundation is established, we will go deeper on how to transform an organization into an agile one.

The Agile Manifesto

Agile has much to do with focus, adaptability, discipline, and... yes, also a readiness and a will to challenge the status quo. While almost everybody starting this journey seems to know what agile means, we keep encountering people who often ignore the existence of the Agile Manifesto. Published on February 12, 2001, the Agile Manifesto — through its declaration of intent — gave "Agile" a more substantial meaning (at least in the context of Software Development). A common learning experience which brought the Agile Manifesto signers together was: complexity could not be tackled by some simple adaptation to what they were already doing. There was the need to think of something radically different. A stronger focus on customer value, and collaboration to achieve it,

sparked most of the initiatives that today we know as Agile Methods.

The power of the manifesto was that it provided a set of values and principles that were capable of converging thought-leaders in software development methods together to a point of identification. Through defining a value-based set of principles, people were empowered and encouraged to identify the most appropriate way to practice the principles of agile in their organizations.

In this context, some frameworks were developed: Crystal, Feature Driven Development, eXtreme Programming (XP) and, probably most widespread Scrum, including many more recent ones, not least of which is Kanban. Unfortunately, too many times, the interpretation of these frameworks reverted to just another form of prescription instead of a basic foundation toward continuous improvement, and the faint glimmer of hope in agile was lost.

It is important to identify that while Scrum is agile, the contrary is not true, even if commonly mistaken. Agile is not an entity, not a framework, and less than everything a methodology [2]; it is a collection of values and principles that encourages a certain type of behavior.

Let's start by observing the four value statements which emphasize the balance that all agile-like approaches should share:

- **People and interactions** over processes and tool
- **Working Software** over comprehensive documentation
- **Customer collaboration** over contract negotiation
- **Responding to change** over following a plan

Let's try to appreciate the value of these four simple sentences. As expressed previously these statements of intent help in clarifying the balance between two — often in tension — valuable assets. Emphasizing that an agile mindset would prefer the items on the left over the ones on the right, while still recognizing their importance. Despite the manifesto being very clear (at least to those who read it in the right mindset) it has created some significant misunderstanding in the past decade. It is not seldom to hear statements such as: "… agile teams do what they want, they do not follow any process, they are not controllable…" or "… agile only works with small projects with not much complexity, where you can allow yourself to work without documentation, a plan or a process…".

Another element of the manifesto people seem unable to identify with, is that the word "over" was used to separate alternative views, for us this also represents a trade off in values. The need to balance the alternative viewpoints instead of complete zealotry to the left hand side of the manifesto, is a core element in finding an approach to coexist in a complex environment.

So being agile does not mean to chose the left side over the right side, but rather understand how to balance the two different views.

Without going too deep in the clarification of what complexity means, let's try to agree on the following simplification: "in a complex system[3], all parts involved are interdependent leading to an emergent set of properties existing, that are not properties of any individual part (one being the behavior)". The lack of understanding of the environmental conditions, caused many people interpreting the manifesto to fail to identify themselves with the problems the manifesto's authors were trying to solve.

Empirical vs. Defined Process Control

All agile frameworks rely on *Empirical Process Control*. Traditional frameworks and most current management approaches rely heavily on *Defined Process Control*. The difference between the two ways of controlling the processes are significant:

Defined Process Control is based on the definition of an activity chain (e.g. **Input ➟ Activity ➟ Output**) requiring a specific set of **Skills** — bound to an organizational **Role** — to successfully transform the input into an expected output. As every activity might require different durations in time to complete, control is exercised in the measurement of the "time passed" against the "time estimated". The assumption that the flow is pre-defined drives to the conclusion that once the execution is started, progress and predictability

are assured at any given time. This works well in situations where there are limited variations in the transformation and the flow is repetitive and mechanic, thus predictable. For this to happen, the outcome of the process must be known and well defined (i.e. it has been already achieved at least one time).

Defined Process Control
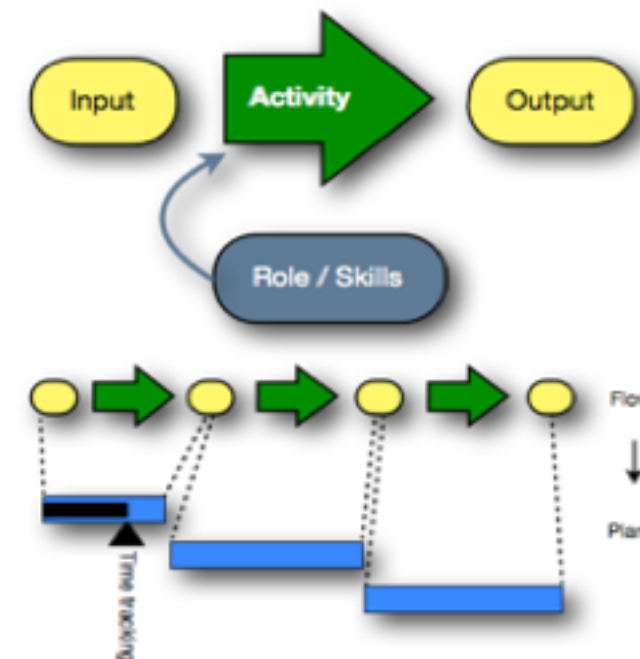
Another key feature of this method is that a transfer of ownership of a work-in-progress product occurs through hand-over, with responsibility for acceptance resting on the recipient. This type of process control works well with ordered systems in simple or complicated domains [4].

Empirical Process Control on the other hand is based on empirical measurement [5] of the outcome produced in a defined interval of time.

"It is typical to adopt the theoretical modeling approach when the underlying mechanisms by which a process operates are reasonably well understood. When the process is too complicated for the theoretical [defined] approach, the empirical approach is the appropriate choice" (from Process Dynamics, Modeling and Control) [6].

Control over flow and status of progress is exercised by measuring the outcome incrementally.
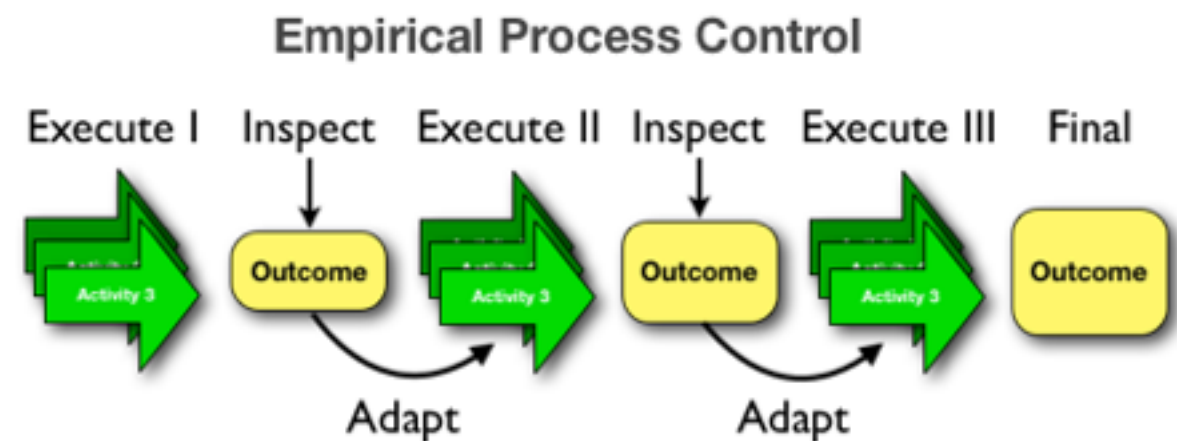
The manipulation of the constraints in which the process exists (environmental) allows for constant stabilization and optimization, while improving the outcome iteratively and incrementally.

By keeping the interval of time — in Scrum there is a 24h cycle called Daily Scrum, and a 1 to 4 weeks cycle called Sprint — small enough and constant, the control can be fairly granular.

This type of process control has proven effective with unordered systems in the complex domain [7]. These types of system are characterized by emergent behavior that can't be predicted, while it can be retro-spectively analyzed, allowing to identify patterns and conditions which caused that behavior.

Individuals within an environment where an empirical process is adopted, reach a point of realization with their roles.

Empirical Process Control

Execute I   Inspect   Execute II   Inspect   Execute III   Final

Outcome → Adapt → Outcome → Adapt → Outcome

Rather than being perceived as independent entities, they change their perspective to seeing themselves as individuals, within an interdependent cell, who can only achieve success together. As all parts in the process are equally important (i.e: with one missing part no business value can be achieved) individuals join into teams, and begin to take more responsibility.

Teams can focus on what is required and what information needs to be pulled in to achieve success — rather than concerning themselves with defensive mechanisms [8] typical of handover processing.

Pull vs. Push System

All agile approaches are implementing a pull system instead of the more common push system.

Push System

Push systems are usually making use of defined process control, where processes are defined as well as the roles, which are needed to perform defined activities and manage delivery. In particular the forming of a hierarchy is required, stating the level of responsibility, accountability and decision-making power.

Strict hierarchy is tightly bound to a defined process where every activity:

1. needs to be coordinated from a higher level of control and responsibility (management) and

2. executed at the lower level of the system (workers) to save costs.

Defining such a top-down organizational model, where activities are pre-defined, goals, deadlines and milestones are set (with appropriated KPI's), results in a defined control system. Those who have the responsibility for the ongoing work — mostly not the "workers" themselves — are exercising the control.

Structure and organizations working with a push system are a legacy of the 19th century when the vast amount of corporations needed to compete with economies of scale. At that time an approach that could reduce production costs by employing a large

amount of semi-skilled workers was necessary, who in turn needed to be coordinated by a manager retaining

the whole knowledge necessary to accomplish the job.

This approach worked very well in the context of simple and pretty much mechanical activities, mostly related to simple physical tasks.

So push systems work by enforcing compliance to processes, measuring individuals' performance and controlling decision-making at the highest possible level in the organizational hierarchy.

Pull System

Already by the second half of the 20th century *Peter Drucker* was talking about a "Knowledge workers age"[9] which would radically revolutionize the current conception of the working organization. Given the increasing complexity of business challenges, it was no longer possible to rely on semi-skilled workers.

This also required radical rethinking the organization. We have reached a pivotal moment in organizational adaptation where the problems of today require high levels of sophistication and specialized skills and the conventional wisdom of management is no longer the critical element of successful delivery. The core con-

cept of a pull system stems from the belief that the required knowledge and skill to deliver lies within the "workers" and are no longer limited to the decision-makers controlling the system.

Given the high diversity of skills necessary to achieve today's business outcome, focus has shifted to a team container rather then single individuals.

Teams of diversely skilled individual are more successful as they pull information from one another through questioning and collaboration, thereby improving the overall feedback loop.

A team can pull whenever required, to progress further in their work to achieve a business outcome, following a shared common direction (sometime represented by a vision).

To support such thinking, agile encourages the formation of empowered, self-organizing teams who are allowed - and expected - to identify what is required to achieve success. The following elements are necessary:

- Support mechanisms are established to request additional information, change existing processes and behavioral norms.

- Allowance to adapt team work methods to maintain pace in a changing environment.
- Communicate what is required and what constraints exist, support team requests for more information and modify organization structures where required.
- Reverse the role of a manager from dictating individual activities to serving teams' requests (known as *Servant Leadership*).

Such adaptations enable members to consider the holistic environment rather than focus on their individual problem, thus increasing the cognitive awareness of everyone. Recently a new school of management is retaking that concept and enlarging its scope by redefining the entire workplace based on these principles[10].

Lean Thinking: Mura, Muri & Muda

Towards the end of the 50's Taiichi Ohno[11] created the first version of the Toyota Production System (TPS) and in several texts he describes the evolution of that system over the years. Arguably this approach to production inspired most of the innovation by many other car manufacturers since. In 1990 the ideas developed by Taiichi Ohno were incorporated into what we know today as *Lean Manufacturing*[12] which stemmed from the experience of the joint venture (between Toyota and General Motors) NUMMI in north California. At the core of TPS there is the attention to the identification of the three types of waste, that Ohno classified with the three Japanese words: Mura, Muri and Muda.

These three concepts played a significant role in starting many of the thoughts that inspired the creation of some of the agile frameworks we know today, and reflect the principles of the Agile Manifesto.

More inspiration probably came from the less known Toyota Product Development System (TPDS) which focused much more on delivering value to the customers by developing simple yet effective products fulfilling fundamental customer's need. The first principle of TPDS: "Establish Customer-Defined Value to separate Value-Added Activity from Waste" clearly focuses on finding the minimal and simplest possible way to allow the customer to express what is valuable, and thus allow development to tune all activities towards that collaboratively defined purpose.

The idea behind Mura, Muri and Muda is rather simple: when building and operating a system, careful attention should be placed in avoiding *unnecessary variations* (Mura) in the flow, in preventing *overburden* (Muri) of any resource and person working in the system, and finally in identifying *wasteful activities* (Muda).

This continuous attention to the system allows for and expects the empowerment of every person within a process flow to intervene and improve the work environment whenever any of the above situations are identified. By doing so, Toyota started shifting the

weight of responsibility from management to each individual, focusing on reducing costs without compromising quality. Everything that is not adding value to the customer can and should, be eliminated.

An agile team is formed from a similar premise, where every member of the team is equally responsible for quality and for improving the product flow. The creators of the Scrum Framework - Sutherland and Schwaber[13] - were inspired by similar approaches to new product development[14].

Why is this Relevant for an Agile Transition?

The whole point of agile is to focus on customer value by delivering what is needed with a high level of quality and fast. Through customer collaboration it is possible to achieve higher level of customer satisfaction as well as higher productivity.

As stated before, agile approaches are based on **Empirical Process Control** because it is not possible to predict precisely what is the customers need or indeed the full extent of their needs. So instead of focusing on productivity as "output", all agile approaches focus on *outcome* measured in customer satisfaction usually expressed in terms of fulfillment of expectations. However, as those expectations cannot be easily expressed by the customer upfront, due to problems the customer is trying to solve are not well understood and probably not fully conceptualized. An *Iterative and Incremental* approach based on a **Pull System** allows both an organization and its customers to incrementally select what next step to make.

A pull system encourages the collaboration between a team and its customers, allowing a peer-to-peer exchange of information and a collective learning. A pull system also supports a "collective responsibility" model, where individuals are equally responsible for reaching a shared goal and instead of competing for their survival, they are collaborating to support each other towards a common success.

Agile teams use the concepts of **Lean Thinking** to improve their efficiency and effectiveness at every increment:

- by learning how to keep focus on value;
- by removing non valuable activities;
- by optimizing the workflow, the information flow and other necessary exchanges to achieve the shared business goal; and
- by paying attention to symptoms of *overburden* which will inevitably introduce rework and dysfunctions later in the process. The emphasis on respecting peoples own rhythm and capacity, while allowing for greater learning and a creative tension, drives agile teams' motivation and success

The Art of Balancing Freedom with Guidance

All this can be achieved by encouraging a paradigm shift in the many structures — that we have learned to take for granted — that reveal **themselves** as not supportive of the new mindset. Understanding the fundamentals of agile helps expose an anti-pattern that unfortunately emerges way too often in many of those organizations who claim to have started an "Agile Transition".

We are referring in particular to those aspects related to *enforcement* of agility, by making it part of a wider *change program* that must be *managed* and which intrinsically undermines those values and principle which are at the core of agile. Any form of imposition or enforcement is not supportive of the new values and principles that true empowerment requires, and often cause opposition through withdrawal or, even worse, silence. By imposing predefined solutions, implicitly we won't allow the best adaptations to emerge from the people actually going through the transformation, which may lead to sub-optimal or ineffective solutions.

On the other hand we are well aware that, there is sometimes a need to be explicit about the required changes and monitor their implementation, and for this we support and encourage the use of the aforementioned experiences to support the transition. A change management program can be based on principles and values, and can share a very clear direction and goals, without having to become prescriptive. The balance between *prescriptive* and *emergent* depends on the level of trust and confidence an organization has developed in terms of controlling and managing change, which is independent from the objective of the change itself.

Unfortunately, too often the transition to agile — mostly by the introduction of a framework such as Scrum — reduces itself to the adoption of some new *roles' definition* or some new *practices and tools* which inevitably[15] end up being misused.

Without a deeper understanding of how and why Scrum deals with certain practices and roles, the risk of failure in creating the environmental conditions to support the behaviors we need to emerge, is very high.

Examples of such failures are often difficult to identify from inside an organization. A certain degree of expertise is required to expose anti-patterns and replace with healthier and sustainable solutions. If we take the Scrum framework as an example, it is not uncommon to come across situations in which the roles of the framework have been redefined to better match existing *organizational roles*. For example many organizations try to match their existing *Project Management* or *Product Management* roles with either the ScrumMaster or the Product Owner roles of the Scrum framework. While this is not an absolute mistake — as in some realities it might reflect the required distribution of responsibilities — it is not the right way to approach an agile transformation. If we understand that agile requires deep changes: in the mindset, in the approach to work, in the focus to deliver value for the customer, as well as many other dimensions — most likely the reasons why agile is appealing to an organization in the first place — we must avoid tailoring it to what is already in place, without first understanding the implications.

Even if we assume there is courage to start the journey with the right foot, the need to compromise to appease personalities within an organization is often stronger. As a result of all these misinterpretations we meet Product Owners — who used to be Project Managers — who renamed their Work Breakdown Structure (WBS) into Product Backlog, who meet with their teams every two weeks at a Sprint Planning Meeting and assign them the work for the next Sprint based on their time availability and estimates. They "help" the team creating the Sprint Backlog — instead of making a Gantt chart — and they control the development during the sprint by tracking the time — actual vs estimated — maybe by inspecting a Burndown Chart. At the end of a Sprint, the Review Meeting is used to assess how much of the work committed by the individuals has also been completed, in particular the "Product Owner" compares estimates, and actuals to identify poor performers.

These simple example contradicts all the fundamentals that we explained before, and is in fact a form of micro management: the core behavior is still a form of

command and control, and ownership is not shared because it remains pre-determined by hierarchy. There is no real self-organization and individuals are still not behaving as a member of a true agile team would do. There remains more focus on compliance to process within the organization, and conformance to the plan, than on value delivered.

To succeed in this transformation it is necessary to understand the principles and reasoning behind the simple mechanics and elements of the framework. Remembering where Agile comes from is of tremendous help in supporting teams inspect and adapt their way towards excellence.

Understanding where you are, and what you want to be - somewhere in the future.

The unique environment, culture, relationship, maturity and market situation of your organization determine the focus and effort you must put into an agile transition to be successful.
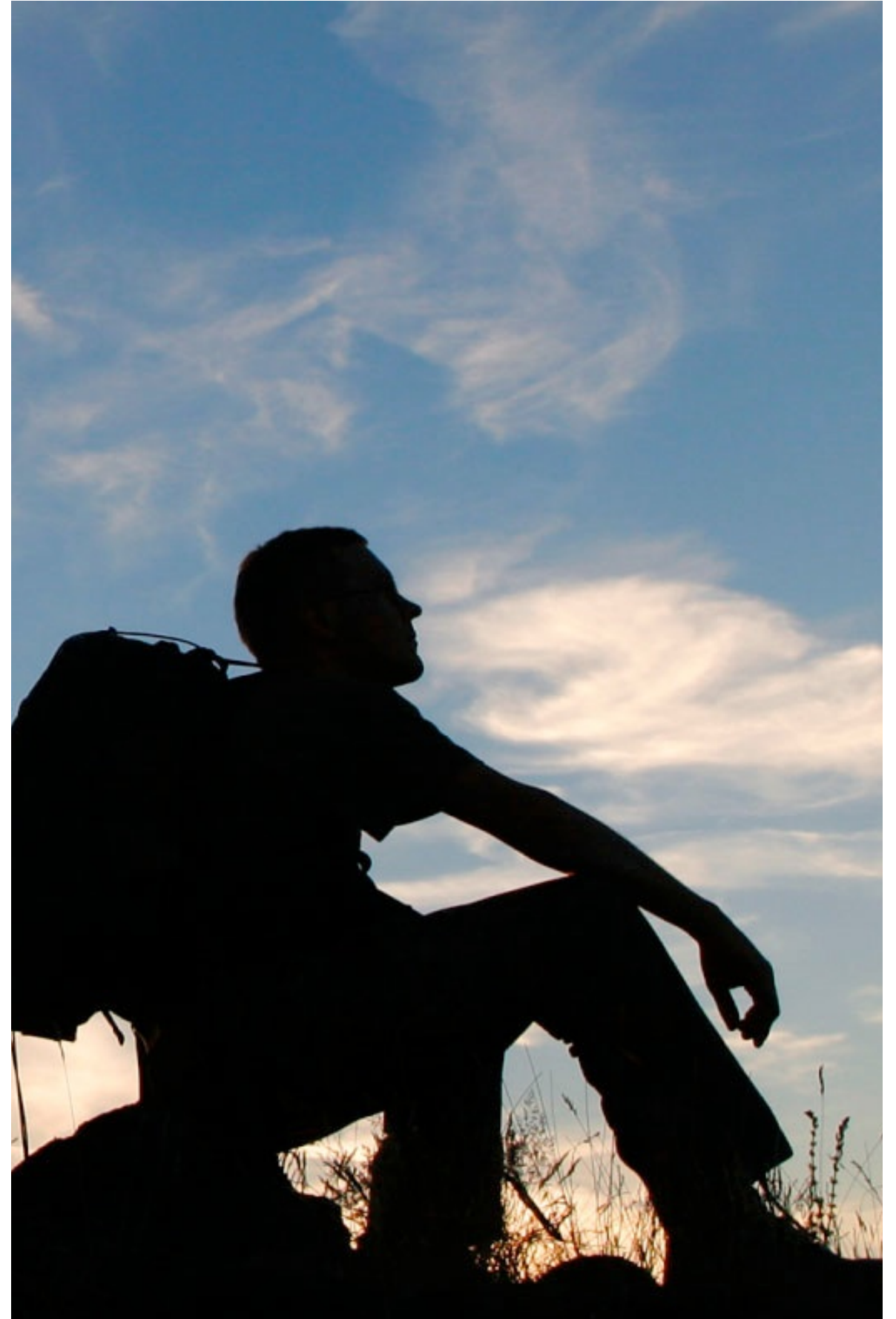
Management Changes Required

The difficulty with agile transformations is that they affect all forms of management within an organization. This is because, due to an evolution of work design, there is an inevitable need to redefine the existing responsibilities of leadership functions. The creation of new roles to support the agile paradigm, (such as ScrumMaster or Product Owner), requires management changes and a different understanding of leadership. Agile frameworks challenge the preconceived ideas of traditional management, beginning with project management, portfolio management and eventually strategic management.

The point in time where an organization realizes this, is the exact moment when the success of your agile transformation is determined. Either it is reduced to the mechanics of standup meetings and sprints, or you embrace the changes, pull up your sleeves and start the hard work to take your organization into the future.

Transitioning a company towards becoming an agile company requires altering the DNA of the organization and doesn't end with the adoption of an agile framework, and the successful product development change implementation. For an agile approach to work, stronger focus on the customer, the need to react to change and collating valuable feedback to learn what are the "right things" to do, should go far beyond Product Development[16].

The understanding that complex challenges cannot be controlled by using a Defined Process Control approach, and progress can not be forecast by estimating time to complete activities (without making dangerous assumptions and taking on considerable risk) is beginning to resonate in the business world, as well as the acceptance of the fact that traditional structures such as a Project are becoming obsolete.

An Agile Strategy Map™

An Agile Strategy Map develops around a defined Goal. Ideally the Goal should be such that its achievement wouldn't depend too much on factors out of the control of the subject creating the map.

As an example consider the following for yourself: To win the New York Marathon in 2013

While this Goal might look good, it has some drawbacks: the fact that you will achieve it, depends on you, but also on all the other runners. With such goals obtaining buy-in it is hard, and people in an organization might not feel at all that such a goal is reachable. It would be much more valuable to focus on what you think is needed for yourself to perform at your best at the marathon, so that you might have a better chance to win it. It ultimately boils down to defining something "you" can achieve, measuring it against your current state — which naturally leads to setting out towards continuous improvement.

A better goal could be formulated as:

To run a Marathon, in fair weather conditions, in less than 3h30m by the end of 2013

In this case the intent is clear, and can be measured against your own baseline. Aiming at an ambitious goal will motivate you, moreover you can measure yourself against the goal iteratively, and tune it if it feels unrealistic.
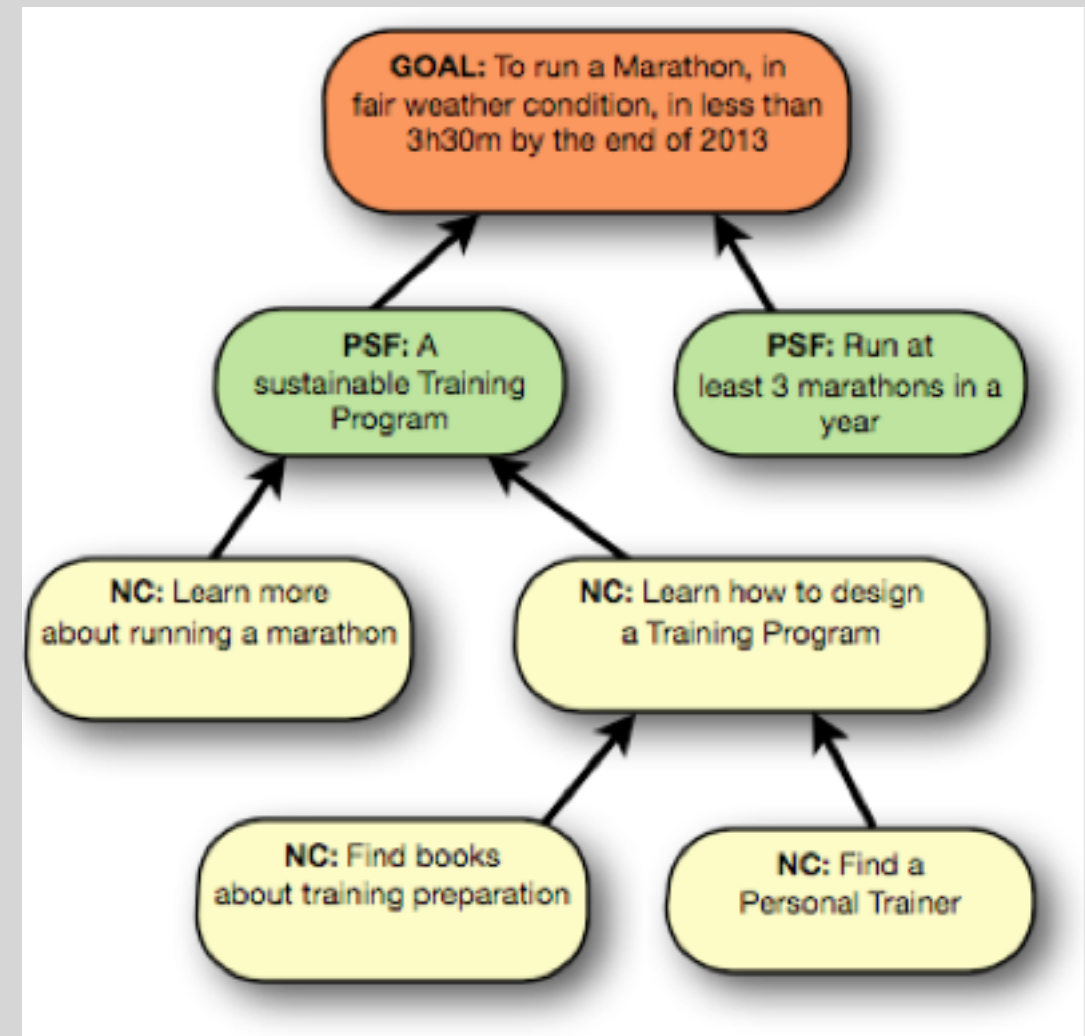
Now that you have a goal, the Strategy will develop by identifying all the Possible Success Factors (PSF) that would serve as Leading Indicators to measure your path toward the Goal. Bear in mind that "possible" im-

plies that you are not yet aware if that factor will actually bring you closer to the goal, but it is a fair assumption to make. The PSFs should help you find as many ways as possible that could realistically bring you closer to the goal.

You can draw a circle around your Goal and consider the area inside the circle the area where your thinking is following "Possibility Logic" thus driving you toward whatever possible factors that might help you achieve the Goal.

For example:

- **A sustainable Training Program**
- **Run at least 3 marathon in a year**
- **Have the right gear**
- **Find a sparing partner who runs with me**

You can define as many as you want, ideally though the number should exceed the dozen, or the risk that you will loose focus will increase. Now that you have thought about all those factors which would increase your success to reach the goal you defined, it is time to think on how you will be able to achieve those factors. At this point you need to switch your logic approach to "Necessity Logic" and start to focus on

those things which are necessary to achieve each of the PSFs you identified. For example, to move in the direction of having "A sustainable Training Program" you might need:

- **To learn more about running a marathon**
- **To learn how to design a Training Program**

The two objects we just defined are called Necessary Conditions (NC). Now the focus should switch in analyzing all the NCs defined for this PSF and challenge the fact that they are really necessary.
From this point on, you can keep on defining additional NCs in cascade, until the point that you reach something which can be executed upon. In the effort to challenge the conditions, you will have to make decision (which are at a strategic level) and chose the direction in which makes more sense to advance. Remember that we are designing a strategy and not making a plan, all operational concerns and scheduling are not in focus at this point. Once you will start acting upon the more external NCs of your map you will have to adapt to the situation at hand, and react to changes, member also to accordingly update the strategy map.

Start by Assessing the Current Situation

With such inevitable change, it is important that managers have the maturity in their roles to introspect on the real status of an organization's processes and products. They must accept that the existing levels of command and structure — which have been instrumental to the growth of the organization — are now the cause of many of the organizational dysfunctions[17]. They must also accept that they have reached the critical point for an agile transformation.

This might not be easy to realize, as self defensive mechanisms established within organizations silence the ability to receive feedback, recalibrate current approaches and don't provide the necessary level of funding to incorporate the next level of change.

To achieve the right level of empathy and understanding for the need to be agile, there are some core concepts that need to be understood:

The organization itself must develop an acceptance that the current methodologies, and the established control structures, are no longer supportive of the business goals and that the organization needs to change.

Identify examples, and rationales, within your own organization for an investment in an agile transformation. This is required to achieve the right mental connections with individuals. Among members of your organization, some might be very comfortable with the status quo and deny the need for change, justified by false past success.

Moving to agile will agitate existing tensions further mainly because of the shift in responsibility and the higher level of commitment. Establishing support structures for individuals to identify with agile is an essential ingredient to any successful transition.

An objective evaluation of the status quo within the organization is important. This may require significant effort to escape the large amount of assumptions that

have matured to be part of the system, as well as cultural aspects which are impeding a clear insight.

Taking the time to appreciate why you are introducing the change and set a baseline against which you will be able to measure your progress over time is fundamental to success. Consider also asking for professional help in this phase as an independent outsider perspective would enrich your own findings and allow you to challenge them.

Setting a common direction for the change, and defining a goal, is best achieved through the visualisation of the shared image in a future state. To tackle the negative impact of a continuous change program that will never end, build support structures that would allow regular feedback, without which, agile initiatives will inevitably fail.

Define a High Level Strategy to Set a Clear Direction

Agile transitions cannot rely on the charisma of individuals alone to influence the necessary change required in an organization. This is true for both internal "agile champions" and external agile coaches[18]. The need for a "shared vision" of how agile will be achieved which encourages the necessary commitment and reasoning to support large scale change, is necessary. Achieving the right level of purpose to initiate the paradigm shift in individuals' mind is also important, so that the solutions can be developed from within the organization rather than pushed down the organization — note that this can happen from the top of the organization itself, as well as from external agents. Agile is not a goal and should never be the reason for implementing an agile framework. Each organization has its own reason to become agile and needs to find its own special way to do so.

The definition of a *Strategy*, helps identify a common path toward successful factors as well as to keep together all those aspects which make an organization different and, in its uniqueness, successful. **Remember that changing does not mean to give away everything you have achieved, nor does it mean to transform all at once**. On the contrary, to successfully transform an organization, caution is required, as there are mechanisms within agile that can easily break and generate subtle and often difficult to find malfunctions.

Empathy needs to be encouraged at every step of the change journey, coercion has to be avoided, and everyone allowed time to assimilate and internalize why such radical change is required. For this reason impediments will emerge, exposing dysfunction, and serve as a shield mechanism for individuals who are not ready to fully embrace change.

In such a situation, the risk to end up running frantically after every single fire alert is very high, and consequently also the likelihood to spread your transitioning team too thin and disperse an important amount of energy on "solving" the wrong problems. Using a strategy model to rationalize and correlate all feedback

coming from the organization will enable better informed decision making as to where energy should be invested.

In an agile context, any strategy needs to provide direction while remaining adaptive to change, and shared throughout the organization. It must provide direction by defining clear goals and environment conditions allowing for new structures and processes to emerge[19]. Jumping into a transformation in *reaction to change* led many companies becoming trapped in chaos and incapable of assessing any progression or regression. It is not uncommon to see whole management teams reverting to their preferred role of *problem solvers* and start fixing issues as they arise, thus impeding people from understanding and learning, and taking over responsibility of guiding the change approach. Consider now, as a comparison, a software product. Would you trust developing the product further just by fixing defects?

Would you like defects to be the only driver to further change in your product? If not, why would you allow your own organization to evolve only by removing impediments? As for a healthy product development, you need a *Vision,* a *Strategy* and a clear *Goal* for your transition. You must prepare a strategy that will support the coordination of change activities, encourage challenging of existing processes, supports alignment and continuous improvement of the approach. All this can be achieved by the drive and desire for a cohesive and meaningful change initiative towards a common goal.

Knowing that a large number of dysfunctions will emerge, "impediments reported" is an important fact to consider as a good outcome. The reason has less to do with agile itself, but it is the first sign of people taking charge and starting to care about compromises and issues which have been tolerated within an organization and are now being challenged. Encouraging transparency and individual participation within your organization will lead to a higher level of engagement. The culture of compliance to complete a task within the given time changes to focus on delivering as much value as possible at regular intervals. All previous cover-ups which worked well in a world driven by compliance, will cease to be effective in protecting people from their mistakes. Functioning agile teams will no longer accept malfunctioning processes that impede their progress towards agreed-upon goals.

Why Agile Cannot Be Bought

Agile doesn't have a form of its own, but requires behavioral change that goes beyond the surface and requires time and empathy. It is not as simple as buying a new dress or a new television, it is more like learning to speak a new language or practicing proficiently an art — it requires discipline and dedication. In some agile circles the level of understanding and proficiency with agile is compared to the three stages of evolution to reach mastery, when practicing the martial art *Aikido*, known as *shu-ha-ri*:

"It is known that, when we learn or train in something, we pass through the stages of shu, ha, and ri. These stages are explained as follows. In shu, we repeat the forms and discipline ourselves so that our bodies absorb the forms that our forebears created. We remain faithful to the forms with no deviation. Next, in the stage of ha, once we have disciplined ourselves to acquire the forms and movements, we make innovations. In this process the forms may be broken and discarded. Finally, in ri, we completely depart from the forms, open the door to creative technique, and arrive in a place where we act in accordance with what our heart/mind desires, unhindered while not overstepping laws." — Aikido master Endō Seishirō shihan

Mastering agile requires a lot of time, many things need to be unlearned, and much effort has to be invested in accepting to start anew, avoid being influenced by existing constraints, compromises and habits that are part of the culture in every organization. External help, in initiating the change can be very valuable, as well as support to learn the new *forms:* that in the case of agile also go far beyond mechanics, but like martial arts, require proficiency on the mechanics to be fully understood.

Once deeply understood, the process of true transformation reveals a capability of blending an organization's own genetic code with agile DNA, thus allowing for the evolution of a new species of organization. Further learning can be stimulated through the use of external coaching to reach the levels of self-awareness required in an

organization to achieve higher levels of efficiency and innovation. Remember that external coaches will not solve problems for you, but will most likely help your organization by exposing dysfunctions and allowing for corrective and improvement actions.

Focus on People

One thing that becomes apparent for managers is that although the technical practices and support infrastructure (i.e. coaching, training etc…) are important factors to the transition, the highest impact of the transformation is on people, who become the number one success factor. The ability to achieve internalisation of the agile values, practices and associated behaviors is extremely important.

In traditional change initiatives the ability to prescribe in detail the change requirement up front, identify the training syllabus and implementation plan was somewhat straight forward. To achieve success conventional wisdom dictated the creation of strategic metrics and governing compliance, and required the use of authority to dictate the change.

While agile prescription up front is not possible, a good coach can explain that any agile solution and set of practices to support your organization will require customization, it will need to be unique to your set of constraints and drivers. It is important to understand that Agile was never meant to be a prescriptive methodology, and there are good reasons for this. An organization, driven by a clear transition strategy, needs to appreciate the necessity of creating a transition backlog tailored to the organizations current state.

Once we have a change initiative that requires customization to an organization's situation, the transition initiative must achieve high levels of identification as to why change is required and finally then, create the supporting mechanics / frameworks. None of this is possible without the buy-in of staff. The main role of agile coaches is to facilitate the conversations and identify where the core needs for the agile transformation are not anymore in focus. To think you can lock yourself and your leadership team in a room with an agile consultant and solve the problems of your organization is a false reality.

Another complication to the agile world is that part of the responsibility of becoming agile is placed on teams, where there is an expectation that the team is empowered to make internal choices and are encouraged to articulate the changed expectations of their leaders. This can also be a very difficult transition, especially in organizations where strong command and control structures exist. Team membership can manifest in a child-parent relationship[20] within tight managerial controls: *"You tell me what to do and I will do it, if I do the wrong thing then I will blame you for giving me incorrect information"*.

Agile encourages individuals to articulate their needs and what support is needed to complete their activities by pulling information and developing behaviors from within. This requires a relationship type of peer-to-peer where the elements of change and evolution in the organization are co-created, where people want to work towards a common image of success. Cohesive-

ness in goal, empowered people, trust and collaborative work gives high probability for a successful outcome. Complete transparency in progress is needed for agile to survive in an organization, rather than the shielding / filtering of information in commanding organizations. The problem occurs when individuals do not want to take any responsibility in the development of the organization, but want to be directed. Agile will not support such behavior and will continually call out for shared responsibility and engagement to the delivery of business success. The roles of managers, or better leading functions in this scenario is of fundamental importance: alignment to a common vision, supporting a strategy and enabling local adaptation on a tactical level, facilitate teams and individuals struggling with understanding to understand the new paradigm… without this a transformation will not be successful.

The positive pressure for individuals to cooperate and converge on an agreed approach, while allowing divergent opinions, challenges the emotions and preconceived ideas as to how to run a business. Achieving a set of shared objectives, agreement to individual responsibility and management's ability to accept direction from direct reports can be challenging. The level of change and stressors introduced to the organization require support from people experienced and sensitive to these environmental pressures.

Embrace Change, but Avoid Chaos

At this point we hope that your appreciation of what an agile transformation entails has grown, and we would like to make one more point, before summarizing. In one sentence we believe that:

"agile is about maintaining a continuous and dynamic balance between anticipation (the need to predict, define and prepare oneself for the coming change) and adaptation (the capability to react to unexpected changes and adapt one's course of action)".

We have learnt that organizations are *complex* mixtures of structures, people and goals, supported by strategy, tactics and technology, where effectiveness relies in coherent and effective communication between individuals. By understanding complexity we can believe that the best way to improve organizations is by allowing behaviors to emerge and retrospectively understand how to replicate success stories across the organization. We respect and appreciate that the amount of perceived risk in changing cultural norms is high, especially when it is replaced with ideas which we still may not fully comprehend.

Embracing change and uncertainty is an essential component in adopting a more agile culture. At the same time, we know that there is a limit to the amount of uncertainty and change the organization can tolerate. The fear of the unknown, a feeling of lack of direction and clear goals might overwhelm many during an agile transition, it is thus important to allow everybody to overcome their fears with an even pace to change. A stronger focus on teams rather than individuals is of primary importance, as much as the individuality of every single team member is a key ingredient in the development of a high functioning team. Equilibrium is key to avoid falling into chaos in every dimension, mak-

ing small steps and achieving stability before starting with new steps is very important. All along, remember that driving, providing direction and encouragement, enabling and supporting change, are not synonyms of defining, imposing and coercing to new behaviors.

In our experience, the best way to avoid falling into chaos (whilst encouraging change and accepting uncertainty) is to establish consistent learning cycles inside an organization. This can be best achieved by seeing a transformation to agile in small incremental steps. Identifying a pace at which emergent changes are evaluated collectively in relation to the defined goals; in time both leading and lagging indicators are realized through experience, assisting in understanding the necessary evolution of change required in order to achieve a common goal. Failing to learn from experience, while seeking patterns and possibly reproducible successful behaviors will eventually lead to chaos. *Peter Senge* extensively reminded us about organization which failed to learn[21], as learning requires the acceptance of the unknown and the willingness to move together in a common journey with the rest of the organization. This type of situation can be very hard to accept in a culture where success is expected and failure is punished—leading to silence being ap-

preciated over the attempt to challenge one's own knowledge / norms. Failing to learn in an organization leads to more dysfunctional behaviors as the result of investigation efforts aims at solving symptoms of a problem rather than the root cause. Courage, and a willingness to admit our own failures, is required to undertake such a radical change journey.

Conclusions

Agile is a means not your goal, focus on your business and what makes you unique. Understand the value of the organization and the manner in which growth / success must be achieved to survive in a globally competitive world. Once you have an appreciation of the strategy and tactics that your organization must adopt, you will then be aware of the necessary attributes to consider if agile is to be a business enabler. Once this connection has been made the organization as a whole can embrace the idea of a transformation and work together to support the change initiative.

The moment of realization occurs when the DNA of the organization recognizes elements that have achieved past successes can no longer be leveraged to achieve success in the future, and now see where radical change is required to evolve from the status quo which is now hindering success.

Appendix

Useful information and further reading...

Citations

1) agile42 (http://agile42.com) "the agile coaching company" operates worldwide and has assisted various companies in successfully starting their agile transition and sustainably growing their own capability to support that transformation indefinitely. With head-quarters in Berlin, Germany, agile42 developed as a network across the whole of Europe and North America, providing unique support for "globalocal" transformations, guaranteeing consistency of approach, while embracing different cultures and languages.

2) Methodology means a system of methods to perform some specific activity, and Method means a specific form of a procedure to accomplish something, especially a systematic and established one. For many ways this definition contrasts most of what agile stands for, in particular falsely transmitting a sense of locking into a specific, defined and systematic approach. So our position is not to use "method" in conjunction with Agile.

3) Strong appreciation for identifying the complexity in our environments has been well documented by Gharajedaghi in "Systems Thinking, Managing Chaos and Complexity: A Platform for Designing Business Architecture".

4) The domains Simple and Complicated are the two domains of the Ordered type. These domains are characterized by dependency between cause and effect that can either be obvious to all parties involved in the system or require some investigation or expert opinion to be identified, but still possible [1].

5) Statistical Process Control was first mentioned informally by Deming [2], and subsequently dscribed in the essay by Oakland [3].

6) Babatunde A. Oggunaike and W. Harmon Ray [11] spent a significant portion of their research on process dynamic and mathematical models to support them.

Their research based on many empirical samples and processes from various branches: chemical, mechanical, design… presents repeatable behavioral patterns that seem to be independent from the branch itself. Interesting to note that even for processes which are representable with mathematical equations, the usage of empirical data for validation is required. Empirical Control is used to deduct through observation, the approximation needed to represent a process transition in a set of meaningful cases. According to Schwaber [12] the same conditions are true for software development processes, which entails a significant number of unknowns and are thus not suited to be represented by a theoretical model, as the number of exceptions to rule out would make that model too complex to effectively exercise control.

7) The Complex domain is characterized by the impossibility of predetermining the relationship between cause and effect, which is only understandable retrospectively i.e. It belongs to the unordered type. These types of conditions are often encountered in product development challenges, where innovation is very strong and creativity and problem solving are performed in rapid sequences by groups of individuals [1].

8) In organizations where accountability is a primary way to enforce rules, we see very often that people abuse the processes and rules to their advantage. In particular requiring the compliance of specific artifacts during the process execution is a way of defending ones own responsibility and avoiding being blamed. So behaviors such as withdrawing, delaying, ignoring are common in processes which stress the handover of accountability at specific defined streps.

9) The term was first coined by Peter Drucker ca. 1959, as one who works primarily with information or one who develops and uses knowledge in the workplace. It was mentioned as a working category by the same Drucker in 1973 in his famous paper on Management [4].

10) In particular Steve Denning in one of his last books renames it "Radical Management" taking a significant stance against the ideas of traditional hierarchical management and the corporate structure [5].

11) Taiichi Ohno (February 29, 1912 – May 28, 1990) was a Japanese business man, recognized as the father of the Toyota Production System and, as a chief engineer in Toyota, devoted a significant part of his career to describe techniques to identify and remove inefficiencies from the production processes. He is known for the "5 Whys" — a techniques to perform root-cause analysis — and the classification of the seven forms of waste that can be identified in manufacturing: transportation, inventory, motion, waiting, over-processing, over-production, defects [6], [7]

12) Most notably Lean Manufacturing was coined in the famous book "The Machine that changed the world" co-authored by: James Womack, Daniel T. Jones and Daniel Roos (1990), even if the first appearance of the word Lean

dates two years back: Krafcik, John F. (1988) "Triumph of the lean production system", Sloan Management Review.

13) Jeff Sutherland and Ken Schwaber together with Mike Beedle, Martine Devos and Yonat Sharon documented Scrum for the first time through a "paper" entitled: "SCRUM: An extension pattern language for hyperproductive software development" (1998). Officially the Scrum Framework was presented at the OOPSALA conference in 1995, through empirical results of its adoption in some companies. the ideas of traditional hierarchical management and the corporate structure [5].

14) Jeff Sutherland payed particular attention to the paper "The new 'new' product development game" (1986) publish by Hirotaka Takeuchi and Ikujiro Nonaka on the Harvard Business Review (HBR). In this paper he found the idea of the self-organizing teams as well as the idea of subtle control which inspired much of the creation of the Scrum Framework as we know it today.

15) Without a deeper understanding on the why agile practices have been defined in certain way, the risk that they will be tailored or changed before being understood is very high. The existence of a stand-up meeting alone is not an evidence of a team doing Scrum, there is much more to it, as well as having job titles named Scrum Master or Product Owner doesn't make it either.

16) Eric Ries, author of "The Lean Startup" provides good examples of this approach, which goes beyond product development. Even before starting producing a product, the attitude is to find the fastest possible way to prove if a business model is sustainable, and then decide to invest in building a product that support it.

17) Steve Denning conveys that the hierarchical structure of an organization and the command and control type of management are responsible for what he calls the "Spiral to self-destruction" [5]

18) Even if external coaches can be change initiators, they can't be responsible to carry on a whole transformation themselves. Reasons are multiple, among those the fact that they will inevitably influence the equilibrium of the "transforming" organization, by becoming reference point and "go to person" in many cases. Even embedded coaches won't be able to bring an organization to an agility which is self-sustainable, without leaving the time to the organization to learn agile by inspecting and adapting their own models to the new paradigm. As transformation will support a cultural change, coaches need to remain observers, and do not influence directly new emerging structures. Be aware though, that active observation and measuring are influencing behavior.

19) A strategy highlights the possible significant success factors to achieve an identified goal, and helps in understanding the dependencies, the conditions and the possible actions to be taken to get there. For more information about the Agile Strategy Map™ have a look at agile42 website http://agile42.com/en/blog/2011/10/14/agile-strategy-mapping-accus/

20) According to Transactional Analysis and Attachment Theory, studying the long term relationship between humans, from different perspectives, the relationship between children and parents develops in specific ways driven by the need of children to have a specific person as caretaker. For this reason this type of relationship is hierarchical, and delegates most of the power and control on the adult side, which at the same time overtakes most of the responsibility, and by the growing of the child into an adult, will have to face increasing challenges in authority. Adults to adults relationship develops instead on a peer-to-peer level, by encouraging this type of relationship more attention to goals and shared responsibility will arise [8].

21) Peter Senge the author of "The Fifth Discipline: the art and practice of the learning organization" is a scientist and director of the Center for Organizational Learning at the MIT Sloan School of Management. According to Senge, Learning Organizations are the ones where people constantly expand their knowledge following the need to attain success in what they desire, through collective aspiration, sharing of intent and constant nurturing of new and expansive patterns of learning [9].References

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