Agile Critical Thinking: How to Cope with Change, Complexity and the Unexpected

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Abstract

A lot has been written about the challenges facing 21st century organizations: globalization, sustainability, web-based and social technologies, rapid pace of change, fierce competition, and diversity – including four generations in the workforce. Corporate executives and strategists aren't the only ones feeling squeezed from all sides – portfolio managers, project managers and project teams are at the center of this perfect storm.

This paper describes a new approach and practical tools that project leaders and teams can use to employ Agile Critical Thinking to deal with issues they routinely face that often result in churn, conflict, groupthink or stalled progress. Traditional methods for developing critical thinking come across as academic, overly simplistic or just not practical in the "real world" work environment. This approach works because it is flexible, addresses "human" and organizational realities, and can be incorporated into existing processes.

We will use three specific points where critical thinking can break down to illustrate some new tools project teams can use to cope with change complexity and the unexpected:

- At the beginning of the project - to make sure they really are off on the right start,
- During the project – to make decisions as issues arise or the landscape changes, and
- After a launch or iteration is released - to evaluate and deal with feedback in the face of competing interests and priorities.

Introduction

A lot has been written about the challenges facing 21st century organizations: globalization, sustainability, web-based and social technologies, rapid pace of change, fierce competition, and diversity – including four generations in the workforce. Business fundamentals of profit and loss remain – but corporate strategies and tactics to not just survive but thrive in this "new normal" are changing. Corporate leaders have put critical thinking at the top of the list of essential competencies needed by their workers to understand these challenges, explore opportunities and make good decisions in this new competitive environment.

Traditional methods of teaching critical thinking in courses on problem solving and decision making give the impression that the process is linear: understanding the core problem, gathering and evaluating data, generating and weighing alternatives, and choosing the best one. These tools are helpful, but they can fall short in a fast-paced, quickly changing environment or when the situation is complex or uncertain.

In this environment, critical thinking has to be taught as an agile, iterative process that incorporates feedback, learning and adjustment – even if it takes us back to our underlying definition of the problem, rethinking the assumptions, re-evaluating the data and reconsidering the conclusions.

What is Agile Critical Thinking

Put simply, critical thinking is a thought process that leads to a deep and accurate understanding – whether it's of a topic, a situation, problem, opportunity or anything else. Critical thinking uses logical reasoning that involves a number of different skills, like being able to distinguish fact from opinion or evaluate the relevance and accuracy of data presented.

You use critical thinking whenever you make a decision, even the most mundane – like deciding what to have for lunch. Project management involves far more complexity, unknowns and risk than what to have for lunch but the basic thought processes are the same.

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Agile Critical Thinking is a framework for applying critical thinking to decisions made in an organizational setting. It lays out a structure and a series of steps and tools designed to promote effective critical thinking of teams where factors other than logic play a big part in the decisions that are made.

The Framework includes three iterative stages as depicted in Exhibit 1.

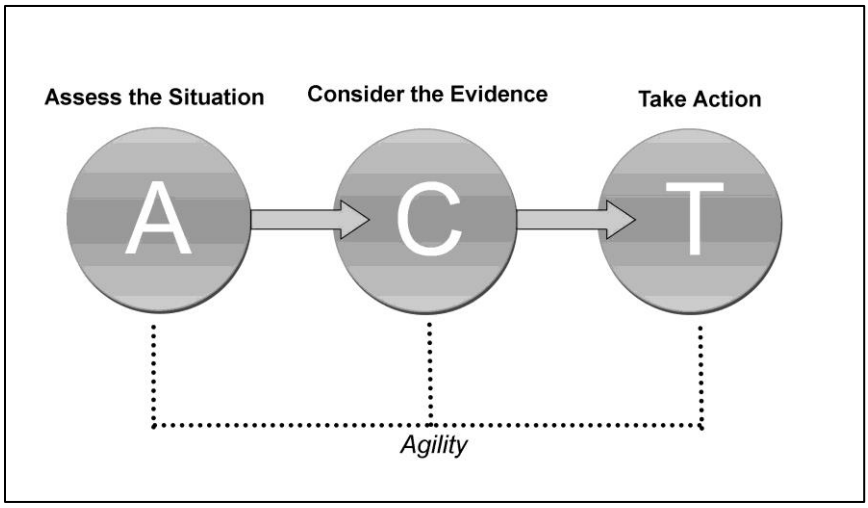

Exhibit 1 – Agile Critical Thinking Framework

Assessing the Situation incorporates tools that help you to deeply and accurately understand the context, stakeholders, risk, corporate culture and other relevant aspects of the project.

Considering the Evidence incorporates tools that help you to recognize assumptions, incorporate multiple perspectives; gather and evaluate information, account for bias, persuasion and risk and check for logic; and draw conclusions, consider alternatives that also make sense and look for unintended consequences.

Taking Action incorporates tools that help you to ensure that feedback loops work, evaluate metrics and consider when corrections might be warranted and how to make them.

Agility is built into each stage prompted, for example, by new information coming to light or a change in the situation.

Organizational Realities Work Against Critical Thinking

While deep understanding of a topic – learning for its own sake – is a worthy goal, the goal of critical thinking in an organization is about making a reasonable decision, given an accurate understanding of the situation, the data available, and the impact of the actions that will result.

Logic and reason are important but not everyone agrees on what's logical. The nature of organizational life is that people rarely make decisions in isolation, based on full, accurate or timely information. There are stakeholders to be considered, often with competing agendas and priorities.

Corporate culture plays a big part in how problems are shaped, how much information is available and to whom, which data is trusted and which is discounted. It affects which recommendations are considered and put forward and which are not. All of these decisions involve critical thinking in a group.

Anyone who has worked in an organization knows that decisions are not made by logic alone – and sometimes, it seems that logic had very little to do with the decision at all! Many successful companies were started by entrepreneurs who might say emotion, persuasion, bias or "going with your gut" shouldn't be discounted.

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Even people who feel that they are pretty good critical thinkers say that it's not easy to do during a typical day – which is over-scheduled, spent "putting out fires," or dealing with a constant flood of information, email, calls, electronic messages and lengthy videoconferences that can start very early in the morning or late at night.

The facts of organizational life: corporate culture, competing agendas, shifting priorities, limited resources, stress, bias and emotion, imperfect information and communication glitches - work against logic and reason, the core of critical thinking.

Agile Critical Thinking and Cross-Functional Project Teams

By design, diverse, cross-functional project teams are staffed to represent multiple perspectives, skills, talents and experiences. While a tremendous asset in terms of generating ideas, solving problems and coming up with creative solutions, this diversity virtually guarantees that members of the team bring different assumptions to the table, evaluate and value information differently and are likely to draw very different conclusions based on the same data.

No one knows better than a Project Manager how hard it can be to get cross-functional, diverse project teams "on the same" page and working together effectively over the life of a project. The realities of managing stakeholders, risk, scope, technology, imperfect information and the rapid pace of change are just a few of the huge and daunting challenges.

Here are just a few of the practical realities that make this job so hard, negatively impact critical thinking and can result in sub-optimal team decisions.

- Even when everyone speaks the same language and is in the same room face-to-face, the meaning is easily misinterpreted. When meetings are conducted via phone or videoconference, there is greater likelihood of misunderstanding.
- People think they do understand what is being said and do, in a general way. As the project takes shape and the details get fleshed out, it becomes clear that people had a very different mental image of what the end result would look like or how it would be achieved.
- When team members care about the outcome and are highly engaged, emotion is bound to enter the picture. Emotions like anger, fear or frustration - as well as enthusiasm and passion - can impair objectivity and judgment.
- Great minds do not always think alike. People in the same situation, faced with the same data often come to different conclusions. People believe their decision makes sense and is correct – and perhaps it is. It's also possible that there are unintended consequences that haven't been considered.
- Team members get worn out or distracted. Team meetings with virtual members from around the globe mean lengthy videoconferences with late night or early morning starts - and opportunities for multi-tasking.

These problems are often attributed to team dynamics or interpersonal relationships. And that may be true, in part. However, critical thinking techniques and tools can overcome many of these problems. Teams are generally very receptive to systematic, logical approaches that also give people an opportunity to voice disagreement, productively "push back" or offer an unpopular point of view.

Three specific ways that agile critical thinking techniques can help project teams to be more effective, save time and work together in a highly collaborative fashion are to:

- Clarify the situation, including the risks, challenges and stakeholder concerns as well as how decisions will be made over the course of the project.
- Recognize and systematically deal with the underlying cause of churn, conflict, groupthink, stalled progress and other issues that are often attributed to personality, style or corporate culture.
- Choose among two or more viable options, understand why their decisions are sound, articulate reasonable recommendations, and present the case for alternative paths in a way that is meaningful to various stakeholders.

Agile Critical Thinking provides Project Managers with insight and the tools they need to be able to more effectively communicate with and influence stakeholders as well as manage risk, urgency, project definition, scope and change – particularly when working on a cross-functional, cross-organizational, or geographical dispersed team.

When Critical Thinking Breaks Down

There are many points over the course of the project life cycle when critical thinking can break down.

Here are some examples.

Scenario One

At the beginning of a project, the team reviews the project mission statement and bullet points. They are eager to get started and quickly agree that they understand what the project is all about. They move to the project plan and delivery dates. When asked how they will make decisions, everyone laughs and says, "No problem. We have a good working relationship, so we should be able to work things out. This project is part of a key initiative for the company and management wants to see progress. We've got to keep things moving."

What might suggest a critical thinking breakdown in this scenario?

- The team members may believe that they accurately understand the project and the fuller context but it's more likely that they each understand it in a different way.
- The focus is on meeting milestones before understanding what's most important to the success of the project and to the various stakeholders, and how they will resolve conflicting priorities.

Scenario Two

At the next project meeting, several members of the team are eager to make headway toward meeting the first milestone. They throw out ideas about how the project should proceed and solutions they used on similar projects in the past. They become impatient with other members of the team who want to "slow things down" to understand what problems the project is intended to solve before coming to a quick solution. While they ask questions to try to get at the "root cause" that's behind the project, the "let's just get started" folks begin to lose interest. They busy themselves by checking email and messages waiting for the discussion to move to "next steps."

What might suggest a critical thinking breakdown in this scenario?

- The team members are not accommodating, encouraging or gaining value from multiple perspectives; neither approach is necessarily best.
- Team members may be making assumptions about the effectiveness of others whose approach differs from their own.
- The questions you ask, how you ask them and in what order affect the answers.
- Biases based on prior experiences influence how you think about the current situation.

Scenario Three

This is a complex project that involves many teams. As the project proceeds, the team gets information that reveals some assumptions that they may have missed earlier. As they begin to do some research, they learn that their original data may have had some serious gaps, leading them to underestimate some of the risks and issues involved. One or two strong-minded members of the team feel that the others are over-reacting. For one thing, the ball is already in motion and other teams have begun work based on the original information. It would be very hard to reverse gears at this point. They remind the team that management is expecting them to meet key dates since customers have already been told to expect "big things." Others suggest that the dates were overly optimistic to begin with and they need to scale back on "essential' requirements in the initial design document. No one wants to be the one to go back to change the schedule or suggest that management may have prematurely raised customer expectations.

What might suggest a critical thinking breakdown in this scenario?

- The team is reluctant to re-examine its assumptions and the data because doing so will interfere with other teams.
- The team is acting on assumptions, emotion and biases about how the other teams and management would respond.
- Team members are reluctant to "push back" on strong-minded, more vocal team members.
- Groupthink is beginning to set in as the team talks themselves into the probability that they can make the deadline and adjust the design in a way that no one will notice or care strongly about.

In each of these scenarios, .the hard part is recognizing clues that suggest that the critical thinking of the team is being compromised. Whether you are a project lead or a member of the team, there are tools and techniques you can use to calmly steer things back on track.

Tool: "Clarifying the Question"

The first stage in Agile Critical Thinking Framework is to Assess the Situation. One of the tools used to Assess the Situation is called "Clarifying the Question." We use it as early as possible in a project – at the very first project team meeting.

Purpose

The purpose of the tool is to be able to quickly get the team's "top of mind" thoughts on what this project is all about. The initial run through takes less than an hour – even with very complex projects. That's because the goal is not to brainstorm or get all the answers on the table in one setting.

The tool is intended to lead a rich discussion about the project and the context in which it is taking place.

How does it work?
Exhibit 2 depicts how the "Clarifying the Question" tool is designed. The full tool is a job aid that provides guidance on how to facilitate a team discussion to complete the form.

The team lead starts in the center, by writing down what this project is about in as few words as possible.

Then, starting with the "how" box and going counter-clockwise, the team lead captures the immediate response of the team members to fill in each box. This is not a brainstorming activity. Quickly get everyone's impressions down in a short-hand format, taking all responses without evaluating or discussing them.

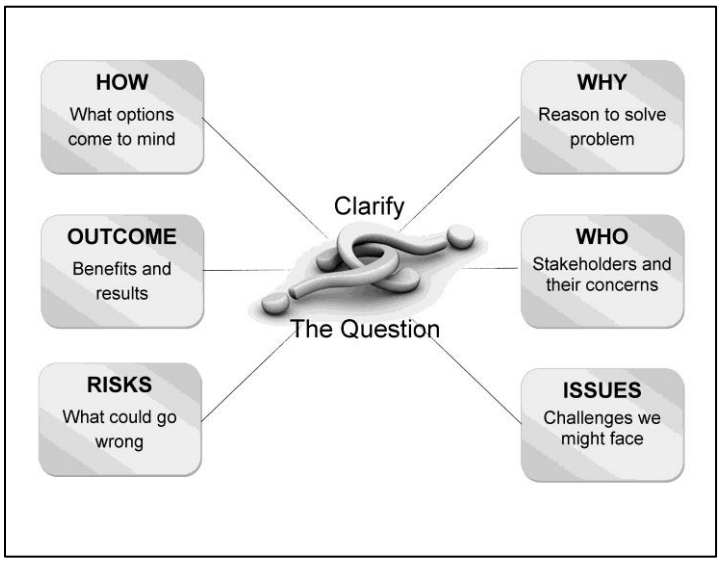

Exhibit 2 – Clarifying the Question

Writing down the answers in the order in which they are given indicates what's most important or "level of enthusiasm" for a particular answer. It is interesting to observe different answers to similar questions, for example, "risks" vs. "issues" or "outcomes" vs. "why."

It is important to go in order and to maintain the alignment of the boxes:

- The team can more quickly absorb the bulleted responses visually than they can in outline form.
- They will also be able to compare boxes that are visually aligned and see inconsistencies.
- This format is very useful to capture a one-page summary of the team's first impressions of the project that can be used as a starting point for further, deeper exploration.

Why we take this approach

The approach we use is counter-intuitive to many people who are highly analytical. They find it illogical to start a project without first understanding why it's being done and the root causes behind the problem or opportunity the project is intended to address.

That said, many operational or entrepreneurial people often start projects by diving in; they have lots of ideas about how to do it. They are eager to dig in and get started and are confident that they will refine the plan as they go along.

Both approaches have value. Just as a great strategy is only a dream without great execution, you can get mired down trying to understand all of the "why's" when you don't have enough of the big picture to know all the questions you should be asking.

We have found three benefits to the team in taking this approach.

- It can quickly suggest a new way of thinking or looking at the project purpose and possible approaches
- It provides a visual format so that people can "see" inconsistencies, for example, between benefits and "why" the project is being done or what's important to stakeholders
- It provides a quick way to document and present a one-page high level overview of the initial thoughts on how the project might be implemented, risks, issues and challenges, benefits, stakeholders, problems solved or opportunities met by implementing this project.

This tool can also help to develop an individual's critical thinking skills and to look at situations from multiple perspectives. Starting with questions others are eager to talk about rather than one's own agenda is not easy but can lead to insights that might otherwise be missed or discounted. "Meeting people where they are" is a critical thinking tool you can use if you want to be able to influence others.

"Thoughtful Candor"

Earlier, we mentioned the importance of setting a tone that promotes "thoughtful candor" to create an environment that promotes rather than constrains critical thinking in teams; a team norm that leverages multiple perspectives and diverse styles rather than shutting people down too quickly.

By "thoughtful candor" we mean providing the team with your honest views, insights and information. Rather than the negative connotation associated with being a "Devil's Advocate" who challenges ideas and conclusions, thoughtful candor is raising questions, issues, concerns or areas of disagreement that lead the conversation forward in a productive way.

We need to take the negative connotation of "negativity" out of "critical" thinking in favor of "insightful" and useful thinking that solves problems and explores possibilities.

Summary

This paper briefly described The Agile Critical Thinking Framework, some scenarios that illustrate when breakdowns in critical thinking commonly occur during the project lifecycle and an example of a tool that can help project teams apply critical thinking to either get off on the right foot or to get back on track.

Agile Critical Thinking combines agility (iterative cycles, with adjustments and improvements based on feedback and learning) with critical thinking (coming to a deep and accurate understanding) techniques to help cross-functional teams accurately Assess the Situation, Consider the Evidence and Take Action. It is particularly useful for cross-functional, diverse teams dealing with complexity, continual and rapid change, uncertainty, imperfect information and competing stakeholder agendas. Agility is hard to achieve, especially in large organizations or with very complex, long-term projects. Starting out with a structure that incorporate agile thinking into the current process goes a long way toward better team decisions.

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