The agile approach in armies. How to optimize transformation projects?

military-Earth thinking notebook

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The agile approach, by reinforcing the adaptability of projects in companies, has also improved their efficiency. The adoption of its values in the many army transformation projects could be an opportunity to better drive change.

Start-up of a few dozen employees in 1981, Dassault Systèmes built its success on its ability to innovate. Today at the head of nearly ten thousand employees, Bernard Charles explains how he has managed to preserve this capacity for innovation despite the growth of his company, which is inevitably a source of inertia. According to him, it is above all the adaptability of Dassault Systèmes as an organization that has enabled it to retain the assets of a start-up and become the leader in its 3D software market today.

Transformation and adaptation to change are also a necessity for armies, which have been undergoing permanent reform since the first of its modern military refoundations in 1815 [1]. This transformation is reflected in several hundred projects that are carried out on a daily basis by administrations and staffs. It is therefore essential to ask ourselves what are the keys to the success of these inherently risky projects. One of them could be the use of the agile approach.

Armies are a model of agility in operation, as demonstrated, for example, by their ability to carry out combat and population assistance missions in the same space-time framework or their ability to project themselves without warning into the heart of Africa to carry out a long-term mission. Several strategy consulting firms[2], particularly those interested in "agile enterprise", recognise this quality and seek to learn from modern armies by identifying the sources of their operational agility. Conversely, it is interesting for armies to understand the principles of agility promoted in the enterprise because they contribute to the success of transformation projects. The aim here is therefore not to deal with operational agility but to consider ways to improve the agility of projects conducted within armies.

The implementation of the principles of the agile approach could improve the effectiveness of armed forces transformation projects and thus guarantee the success of a now permanent change within defence. In an unstable and constrained environment, the adaptability of these projects is a major challenge.

The agile approach: a collaborative approach based on intermediate objectives

The agile approach brings together project management practices that place adaptability as a fundamental vector of success. More pragmatic than traditional methods, they were born in the world of computer engineering and are in strong development in all industrial sectors. As early as the 1990s, the observation is indeed that the majority of IT projects are at least partially failures, whether in terms of results [3] or resource control [4]. The causes of these aberrations are numerous, but project management methods are at the root of most of them. The traditional "cascade" cycles indeed consist in taking a global decision with the customer at a stage of project design where still many uncertainties remain (preliminary project), then in carrying out a long period of execution during which the initial requirements are fixed. The return to the customer only occurs at the end of the project during the acceptance phase. There is a great risk of the "tunnel effect" in this classical method: a project team, focused on itself, can design a solution that does not adapt to changes in the environment and user needs [5]. Even in the exceptional case of stable conditions, a poor initial understanding of the requirements leads to an incorrect expression of requirements. Succeeding in a project with this classical approach therefore presupposes that one can define and master all the issues from the very beginning of the design. "The future cannot be predicted, it has to be prepared" [6]; making such a prediction on long and complex transformation projects seems illusory.

Between 1986[7] and 2001, several theorists from the world of computer science succeeded one another in inventing new project management techniques, culminating in the Agile Manifesto[8]. Taking up the metaphor of rugby, this manifesto defends a holistic vision of the project where the group takes charge of the problem and moves it forward collectively - in a scrum - and in an iterative way: Set an initial short-term goal and start implementing it without delay; once this first goal has been reached, pause briefly and adapt the next steps according to the current situation. These agile methods are now being extended to projects of all types. They have met with some success in companies that adopt a collaborative approach to first define the mission, the desired target and the governance, and then adjust the trajectory during project execution thanks to continuous user feedback and thus adapt to a moving target. The term "agile" thus defines today a project management approach that goes against traditional predictive and sequential approaches.

Ten years of practice prove the relevance of adopting the four values of the agile approach [9] for projects of a certain complexity. The aim is to understand them in order to adapt them to army transformation projects.

Adapting to change rather than following a plan

General Elrick Irastorza, when he was Chief of Staff of the Army, used to chant the phrase "during the works the sale continues". Beyond the reference to the operational permanence that must characterise the armies, he also recalled that the course of events did not stop during the period of transformation that was then incumbent on the Army. It is understood that this transformation will henceforth be permanent; it is therefore illusory

to consider that the conditions identified at the beginning of the change project and which motivated the initial choices will be valid until its completion. The first value of the agile approach is to favour adaptation during the execution phase rather than strict adherence to the letter of the initial project master plan. To do this, it is a question of operating in an iterative manner. A first cycle of teamwork will always aim to reflect on the issues, the goals sought and the means agreed upon. Thereafter, in contrast to the tunnel effect mentioned above, the execution of the project will be made up of implementation cycles of a few weeks each, all ending with a presentation of partial results to the Project Authorising Officer [10]. The advantage is twofold: on the one hand, the project team focuses on the essentials, as it must very quickly produce presentable partial results that can be presented and analysed in a timely manner, and, on the other hand, the project team is able to focus on the essentials.On the other hand, the project is 'realigned' by the client to its objectives in the very near future. The change is nevertheless controlled and thought through: issued at the time of the demonstration, it is requalified and prioritised during the next iteration. For a transformation project, the client can thus check the adequacy of the initial needs and especially the new parameters that will not fail to appear. In return, the project team must be able to accept the change and adapt the plan.

Collaboration with the customer rather than compliance with a contract

The customer, whether he is the client for a product or the customer for a transformation, is the one whose need must be satisfied: the final result of the project must meet his requirements while respecting his constraints. This type of customer-oriented project management is not very well developed in France; it is almost non-existent in public services in general and in the armed forces in particular. The legal framework for public projects requires that particular importance be attached to the contractual documentation, including for an internal transformation project. The agile approach, in a logic of adaptability to changing conditions, calls for a return to the client at the end of each iteration and therefore for a potential adjustment of the requirements set out in the initial contract. Customer orientation, which is opposed to a bureaucratic vision, does not seem, at first glance, to be part of the armed forces' culture. However, the notion of service, of common good, is a military value that is close to the logic of end-user satisfaction: satisfying the needs of operational units in an armament or doctrine project, satisfying the needs of the client in a transformation project.

End product that works, rather than exhaustive documentation

The writer and moralist Jean Rostand believed that "to wait until we know enough to act is to condemn ourselves to inaction". This phase of inaction is often blamed on classical approaches to project management, which devote a lot of time in the pre-project phase to reflection, analysis, information gathering and the production of exhaustive documentation. The third value of the agile approach is on the contrary to provide as quickly as possible a viable or partially viable solution for the project client. By concentrating on the essential, the aim is to offer the client a visible and comprehensible result at the end of each intermediate stage without the immediate need for exhaustive documentation. In a transformation project, it would be a matter of proposing intermediate results that are global drafts rather than small finalized parts that, in fact, do not suggest what the final result will be[11]. [11] The role of subordinates is therefore crucial in order to provide rapid feedback during the project that can guide the work. For

example, in the case of a feedback project, journalist Julien Mathonnière[12] observes that "the meticulous recording of accumulated experiences12] observes that "the meticulous recording of accumulated experience in a given theatre of operation is less important than the rapid emergence of functional solutions that can be immediately applied in the field". He emphasizes here the primacy of the final product meeting a specific need over exhaustive documentation. In La chair et l'acier [13], Michel Goya also underlines the effectiveness of the most pragmatic development and adaptation methods coming from the lowest hierarchical levels and from the field, which have enabled the French army to become the most modern army in the world in 1918, while it was still fighting in 1914 following patterns close to those of the armies of the First Empire.

People and interactions rather than processes and tools

"What makes man is his great adaptability" [14], which is why the agile approach identifies individuals as the true source of adaptability of projects. This is the fourth value of an agile approach: within the project, interactions rather than fixed processes must be favoured, the team is much more important than processes and materials. This applies firstly to the interactions between the project team and the customer, as we saw earlier, but also to the interaction between employees, because this is where innovation is born. In industries, it is thus interesting to note that the best ideas for cost optimization on machines and maintenance come from the field [15]. In the armed forces, the diversity of recruitment favours a great wealth of personalities, which represents a strong potential for innovation in projects. Participatory innovation is on the rise, it is true, with the institutional support of several competitions (the Ministry of Defence's "audacity prize" for example). This collaborative logic, favouring empiricism over a predictive or even dogmatic approach, could be extended to transformation projects.

Drawing reasonable inspiration from this approach by identifying its limits

"Intelligence is the faculty of adaptation" [16]; it is not a question of considering the agile approach as a miracle solution, but of reflecting on its limits in order to adapt its principles.

First of all, there is a framework for the use of agile methods: they only concern projects of a certain complexity. Simple projects are carried out efficiently with traditional methods. At the other end of the spectrum, business agility theorists exclude what they call the "zone of anarchy". In this we can consider that the agile approach does not concern operational applications of the Clausewitzian "fog of war".

Secondly, customer orientation has its limits: certain control, audit and security functions must remain strictly procedural, if only for legal issues (compliance with laws and regulations, respect for the rights of individuals). A project has a commercial dimension structured by contracts, but also a social dimension structured by rules, ethics and a culture aimed at satisfying a general interest. These elements cannot all be overshadowed for the sole benefit of agility.

Moreover, "agilists" still recognise shortcomings in the application to large projects. The link between micro and macro decision-making remains a major challenge for agile programmes and very often a perceived difficulty. Making and succeeding in a small agile project is easy. Coordinating a set of agile projects and making sure that they all go in the

same direction is much more complex.

Finally, in a project, it is important not to confuse pragmatism and lack of method. On the contrary, the agile approach is strongly structured in rituals that allow to master change. The agilemanifesto does not deny the value of processes, plans, contracts and documentation. To use the analogy of the agility rugby, what may seem like a "fifteen-person mess on a muddy pitch".... is in fact the result of hours of training, rehearsal of game combinations and tactical thinking by the coach. Using the agile approach thus requires an indispensable conceptualization, formalization and modeling phase, the more complex the project is.

The agile approach in armies, to turn a constraint into an opportunity

The operational adaptability of French armies is a recognized quality. The use of the agile approach developed in companies could make it possible to transpose this agility to organic functions subject to bureaucratic constraints. The aim would be to increase agility in processes, transformation and innovation. The ultimate stage of agility is to apply it to the organisation itself: what the army calls modularity to compose forces adapted to operations could be envisaged for organic structures. The results obtained in companies prove the relevance of such methods: Forrester[17] has analysed the results obtained by companies using agile techniques and found that 93% of them improved productivity, 88% significantly improved quality, and 83% increased customer satisfaction.

In terms of financial resources, the company - armed forces analogy finds its relevance in the new context which imposes an economic vision of the defence tool. Indeed, in a changing world, armies are also required to constantly transform themselves. Efficiency, or more prosaically resource saving, is a major input in this transformation. This constraint could become an opportunity to become more pragmatic by requiring everyone to focus on the essential, i.e. on the relevance of the project's outcome and not on the processes, documentation and contract that make it possible to achieve it.

In terms of human resources, the declining number of armed forces could be the trigger for a shift towards the agile approach: a tighter organisation is all the more manageable. Dassault Systèmes has retained the agility of a start-up by preserving a structure capable of producing and accepting innovation. Two levels of action have thus been identified. Firstly, an annual "3 O" review (objectives, organization, operations) aims to realign structures, management, resource allocation and operating systems in relation to strategic objectives. This is an opportunity for innovation because everyone knows that, whatever their level, they can propose an improvement that will be studied. Secondly, the company's management philosophy is centred around the notions of interaction and ecosystem (partners and customers). Controlling the links with the ecosystem allows, in particular, to unblock the top of the pyramid of managers by "diffusing" to client companies those who could not progress within Dassault Systèmes due to lack of space. This makes it possible to recruit young engineers capable of making generational leaps. The aim is comparable to that sought by depyramidization in the armed forces, but the means are different: instead of a bonus, it is a promotion in a partner structure that encourages departure. Permanent reorganisation is not a sign of instability: it is not imposed but chosen for greater agility, it allows alignment with the strategic objective whatever the context.

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This agility would indeed lead to a focus on the essential by allocating human resources to major projects, a greater adaptation to the need and a catalyst for innovation and creativity by promoting new projects without delay. This would mean overcoming the pitfalls that stand in the way of adopting these agile approaches, the most important of which is the impact on administrative functions (which have a planned vision of change).

The adoption of the planned agile approach certainly represents a cultural change, but it allows an extremely rapid redeployment of resources, which are now counted on priority objectives. To paraphrase Saint-Exupéry [18], it would be a matter of foreseeing the future less, but rather of enabling it by focusing on adaptation. This requires great rigour and particular managerial sensitivity, qualities that are rightly recognised in the military, who could thus be excellent users of these approaches.

Undoubtedly, the French armed forces could draw inspiration from this agile approach to transform themselves and thus capitalise on the operational agility already acquired and cultivated. The latter is of great interest to companies in their quest for agility [19]. 19] The concept of major effect, understood as the indispensable result to be obtained in order to fulfil the mission, can thus be considered as a mark of agility in French military thought, which sacrifices the letter to the spirit of the mission, the means to the end.

1] See "La victoire en changeant, deux siècles de transformations militaires" by M. Goya in Inflexions n°21 .

2] CGI business consulting has an Agile Enterprise department that develops these concepts.

3] In 1996, only 27% of projects were totally successful, while 40% were complete failures, Chaos report from the Standish Group .

4] 53% of the projects cost at least 200% of their initial estimate, Chaos report of the Standish Group, 1995.

5] 64% of the functions of a completed product are never or rarely used by the end user, Standish Group, 2002.

6] Quote from the philosopher Maurice Blondel.

7] "TheNew New Product Development Game" - Takeuchi, Hirotaka and Nonaka, Ikujiro - Harvard Business Review, 1986 .

8] Agile Manifesto - Kent Beck, Mike Beedle, Arie van Bennekum, Alistair Cockburn, Ward Cunningham, Martin Fowler, James Grenning, Jim Highsmith, Andrew Hunt, Ron Jeffries, Jon Kern, Brian Marick, Robert C. Martin, Steve Mellor, Ken Schwaber, Jeff Sutherland, Dave Thomas - August 2001.

9] Complete success for 14% of projects with classical methods and 42% with agile methods - Standish Group, 2011.

10] The agile method presented here is the Scrum method, which is the best known and most widely used.

[11] Note here the notion of minimum viable product which is the objective to be provided at the end of each iteration.

12] "Agility as an engine of change", Julien Mathonnière in blog http://lavoiedelepee.blogspot.fr.

[13] « Flesh and steel: the French army and the invention of modern warfare", Michel Goya, éditions Tallandier.

14] Socrates, a teaching reported by his disciple Xenophon in The Memorable .

15] Principle conceptualized in the Lean Managementapproach.

16] André Gide, Diary (1889-1939), excerpt.

17] "Totaleconomic impact studies," Cabinet Forrester, 2007.

18] "The future, you do not have to foresee it but to allow it" in "[18]".Citadel" - Antoine de Saint-Exupéry, 1948.

19] The "agile methods" of modern armies that can be transposed to business projects will soon be the subject of an article by the consulting firm CGI Business Consulting with the participation of the author.

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