



## "Let's dare LEAN possible" military-Earth thinking notebook

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**Brutally placing leaders in an unknown, very uncomfortable context, to force them to "face up", is not exclusive to armies. The author gives us a very instructive account of a factory school that implements a pragmatic and innovative crisis management learning method that the institution should draw inspiration from.**

In a demanding operational and budgetary context, preparing its cadres to respond to the unexpected in the best possible way remains a vital necessity for the armed forces. Indeed, the military institution has known for a long time that the best preparation for surprise, for the "fog of war", a concept dear to Clausewitz[1], remains that of the mind and that the best way to prepare is to be prepared by the mind.1], remains that of the mind and that it involves learning problem-solving methods where teamwork, strength of character and behaviour are paramount.

However, **brutally placing leaders in an unknown, very uncomfortable context, to force them to "face" [2], is not exclusive** to armies. Thus, following the example of the training courses [3] offered by the Army for future civilian managers, there is an industrial training centre that knows how to reproduce real conditions of stress and uncertainty in order to train the future decision-maker to "cope". This is the Institute for Operational Excellence (INEXO). This training facility, created in 2009 within the ECAM [4] Lyon, has trained hundreds of trainees - future industrial executives - in problem-solving using a method that is both pragmatic and original, which could be very useful in addition to the training of our military executives.

**"Marc, you are the plant's general manager. In one hour, your production unit has to produce 20 clocks in 10 minutes".**

After the initial shock of the announcement (which I was expecting anyway given my "old"

profile), I take a quick look around.

In front of me, my instructor, whose face is crossed out with an amused smile, shows a certain satisfaction with the effect obtained.

With me is my "team", made up of men and women, engineers by training, current or future managers in the industry, whose facial expressions oscillate between perplexity, mistrust and questioning.

Around me, the sober building of the factory-school is as unknown to me as the neighbourhood where I did my classes in 1997. In the vast hangar, workstations, shelves, tools, parts, a milling machine and a few machines face me, but they are all inert bodies that do not answer my problem.

I do the trick. None of my codes, none of my references, none of the standards patiently built over the years allow me to quickly, almost by reflex, solve the problem. The "playground" that is now mine is unknown to me, which makes it complex and uncertain, almost hostile... It's a real nonconforming case for my mind, prepared for the things of war for many years. I must quickly change perspective and adapt.

I'm thinking. I'm not an engineer. I've never worked in a workshop before. Finally, what resources can I mobilize to win and make win? It doesn't matter what the context is! Ordering and managing crisis situations is what I know how to do. You have to take a step back and apply the fundamentals of management: solve the problem collectively and exercise appropriate leadership, because the real wealth is my team! I validate the objective and unite "my troop" around its achievement. Little by little, thanks to a work that is more collaborative than directive (where I was expected), the team progresses, improves and becomes more efficient. I find solutions to reach the "grail" at the end of the day, almost astonished but proud to have found the resources to surpass itself.

Yet I ask myself: what exactly happened? How did we manage to get out of this bad situation? Looking back, I can recall similar cases from my operational experience, my "bottom line", where we had to improvise. What psychological and intellectual resources enabled me to overcome this new ordeal?

Once again, I decided to bring my team together to ask them how they felt. In their own words, they gave me some interesting leads.

- "We listened to each other and you understood us."

The method used in the factory-school, LEAN management[5], puts the human being back at the heart, imposes a global vision by relying on collective intelligence. In fact, before acting, the team leader must imperatively take into account his sociological and psychological environment, i.e. individual differences with their brakes and strengths, the different technical skills available, experience and emotional criteria. To do this, the pedagogy adopted must focus on "cognitive" flexibility, which consists in changing one's point of view or approach to an issue according to the situation, in other words, adapting.

One of the specificities of problem solving, linked to the complexity and interaction of the processes involved, is the significant variability of behaviour observed between individuals. Indeed, if the context of the problems determines their difficulty and makes it more or less difficult to express cognitive flexibility, it turns out that it does not have the same effects on all individuals and especially on leaders. This is why the manager's

obsession should not be to ensure that the best decisions in the world are made, but to ensure that the effort of each team member is focused on the right issues.

- "We've progressed step by step together by first spotting the real problems."

As Zahir Messaoudène, a lecturer-researcher at ECAM and expert in Lean management, points out, "People must remain at the heart of operational performance. He is the one who is able to react to the unexpected, which no machine can do in his place". The case studies at INEXO engage the trainees in solving problems in uncertain and complex situations. Uncertainty comes from the fact that teams are set objectives but cannot immediately find the optimal path to reach them. Complexity is not only due to the "technicality" of the problems to be solved, but also to the difficulty of collectively identifying the real problems and thus the root causes.

Far from relying on rigorous and fixed models, trainees are led, through trial and error and continuous learning, to be flexible and innovative. Learning is accelerated by the application of the pedagogical triptych: "observing, listening, doing", because learning by doing [6] in a very concrete environment, here industrial, enables 65% of information to be retained after three months, as opposed to only 10% in the case of only "bookish" or academic learning [7]. What is sought is the implementation of a working method which, by acting on the behaviour of the actors, enables them to adapt effectively to a crisis situation by developing their strength of character and team spirit.

- "You set us the course and then you trusted us, it was motivating."

In these problem-solving scenarios, the team progresses in its search not for the absolute achievement of the goal (or the objective imposed by the facilitator), but by building the team's learning in the face of problems. The leader's problem is no longer to solve technical problems but to build a learning organization where learning becomes the indicator of resilience.

Finally, it is essential that leaders first have a clear and shared vision of the right issues, and then accompany and help their staff to participate in a cycle of continuous improvement. The manager can closely monitor what is happening in terms of direction and speed of resolution, while letting the teams take the detailed technical positions that are within their purview. This is called the PDCA [8] cycle in Lean management jargon. This process of "cognitive flexibility" is acquired through repetitive training, through the study of one's successes and failures by capitalizing on one's experiences.

### **What lessons can be drawn from this anecdotal account?**

- The first observation is that, like the military unit, a company applies the same values: leadership, team spirit and crisis management methods.
- The second observation, and here again a confirmation, whatever the field, whatever the purpose, there is nothing better to prepare the manager for the surprise than to plunge him or her into a context of stress and uncertainty on neutral ground. By taking him away from his points of reference, by forcing him to change his perspective, he must adapt by engaging in a problem-solving process based on collective work and on taking into account the human diversity of the players.
- The third observation, more original, is that the plant-school, **presented above,**

**through its pragmatism and original approach, appears to be a tool for preparing for crisis management that our executive training schools could judiciously draw on (in the form of a partnership, for example)**. Indeed, if the official objective of this school plant is to train managers or future managers of companies in the mastery and practice of the principles of operational excellence based on Lean management, it can be also and above all considered as a real managerial track of audacity<sup>[9]</sup> where leadership, stress management, method and group cohesion are truly put to the test. The factory-school certainly trains in the operational tools of Lean, but also and above all trains and prepares the trainees for a real culture of change in methods and behaviour which should enable them to adapt and overcome obstacles.

Let's broaden the debate based on this example. Indeed, as we discussed in the preamble, the French Armed Forces, which can be proud of their operational record, must now find innovative solutions in terms of resource management and training to do better with less, in other words to generate performance gains. Why not draw inspiration from the best in the business world? Aware of the specificities but also of the potentialities, let's not be afraid, let's dare "LEAN possible", not by audacity or ideology, but by pragmatism. As Didier Desplanché, the director of ECAM, assures us, "France is very late in taking into account these principles of operational excellence". Let's be aware of this delay and let's move forward.

1) Carl von Clausewitz, Prussian officer and theorist (1780-1831), author of a major treatise on strategy in which, among other things, he theorized the uncertainty and incredible complexity of warfare through the concepts of "fog" or "friction" of war.

2) Motto of George Guynemer (1894-1917), French fighter ace during the First World War, taken over by the Air Force Academy, based in Salon de Provence, whose mission is to train Air Force pilots since 1933.

3) Example: Saint-Cyr formation continue (SCYFCO) in Guer-Coëtquidan.

4) École catholique des arts et métiers

5) Native to Japan, LEAN, which could be translated as "lean" or "defatted" in English, is a management method implemented after a company has been established. It is a management method implemented after 1945 by Toyota MC (known as TPS), which aims to achieve performance through continuous improvement of processes or organizations by reducing waste as much as possible. These practices propose a systemic approach to improving performance through problem-solving training at all hierarchical levels.

6) "Learning by doing" concept

7) Source: ECAM/INEXO Fact Sheet 2013

[8] PDCA: Plan, Do, Check, Act

9) Daring path: individual or collective paths that the French army's commando training centres have at their disposal for the acquisition or evaluation of the know-how used during training in commando techniques. The collective courses are real command schools where the role of each individual is essential to the success of the group.

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