Innovation – digital transformation
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Valeurs de l'Armée de Terre

Innovation seems to have become a particularly important theme in recent statements by the authorities of the Ministry of the Armed Forces: the speeches made illustrate both a strong ambition and a will to move the lines. Rightly so, because it is the primary condition for change, for questioning and for progress to be made in order to remain able to fulfil the missions entrusted to us in an environment that is constantly changing.

Innovation is not simply synonymous with technological evolution; for technology is neither the only vector nor the only object of the innovative transformation of armies.

Innovation is much more than that: it is a **state of mind, a culture, whose** objective is increased performance in all areas. It is based on questioning, curiosity, imagination, ingenuity and practicality. It deals with equipment, organizations, processes, tools... It addresses areas as varied as military capabilities, support, human resources, infrastructure, health or command organization.

High technology is certainly one of its major axes. High technology is sometimes presented as a fatality suffered or as a form of costly overkill. It is in fact driven by the need for force effectiveness: to perceive better, to understand better, to decide faster, to be more precise, to move more quickly, to have more power of aggression, to be better protected.

As a general rule, it aims to give a decisive advantage, on the **ground, in each** tactical duel. Knowing that these advantages are always only relative and temporary. This leads to a constant desire to explore new avenues, to maintain a significant gap with the opponent.

The **digital transformation**, for its part, is probably the main driver of innovation in the years to come. All sectors of activity in our country are affected and all have understood

that it is essential to remain competitive.

First of all, it is important to say what it is not: it is not simply a matter of digitizing existing processes or methods; it is not a matter of replacing paper and pencil with the computer to perform identical tasks; because this has already been done. It is about taking advantage of the opportunities offered by digital technology to transform our methods and gain efficiency. It is not a revolution of tools, it is a revolution of mentalities, of ways of doing things; it is a transformation of the armed forces in depth and in the making.

It must be applied in **two directions**:

- **Organic**, to make everyday tasks in all areas (HR, support, organization...) more fluid;
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- **Operational, because** it is likely to bring about a real transformation of warfare, particularly at the tactical level.

It is based on four now well-known pillars:

- **Connectivity: it** will make it possible to generalise the Internet of Things, including in the field, with the eventual establishment of a real network of "connected battlefield objects". These "objects" will be platforms, sensors and weapons, but also the men who serve them;

- **Artificial intelligence** : Artificial intelligence: its two major applications for armies are decision support and robotics; it allows to go towards real time to conduct both tactical thinking and execution tasks, accepting automated modes when the tempo of the maneuver requires it;
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- Big Data Analytics" : it is a technology that aims to facilitate the processing of the masses of data produced; its expectations are essential for operational situation management and intelligence: to understand more quickly, to have a clearer vision of the situation, to extract weak signals, to synthesize and merge relevant information...
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- **Cyber technologies** : these are essential because without them the other three pillars can become fragile. They must be considered both in defensive mode, to ensure the resilience of our forces, and in "active" mode, to intervene on the adversary's command capabilities.

Collaborative combat" is the expected outcome of this transformation. It could be argued that combat has always been collective... This notion must therefore be clarified. It must therefore be clarified. It must aim to transform various elementary tactical acts into "reflex" acts, facilitated by the proper use of digital technologies (mutual protection, monitoring of friendly situations, reaction to situations that have been resolved, etc.).partitioning of objectives or support between different effectors...) in order to allow leaders to focus their thinking on what is the essence of their manoeuvre and the achievement of its major effect.

The innovation to be implemented over the next fifteen or twenty years, for the benefit of the army, must be based on digital transformation to make it an amplifier of warrior efficiency, in order to maintain an advantage over the opponents who will be opposed to it. It is a transformation that will revolve around the notions of real time,

collaboration, tactical flexibility, increased reactivity... It will not be able to free itself from a profound reflection on the transformation of operational command.

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