

Marching ahead with technology absorption

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Marching ahead with technology absorption Premium

The Indian military is moving in the right direction, but the challenge lies in sustaining technology absorption with a nuanced understanding of the requirements

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'The Indian Army is observing the year 2024 as the 'Year of Technology Absorption' | Photo Credit: R.V. MOORTHY

The Indian Army is observing the year 2024 as the 'Year of Technology Absorption'. This theme underscores the Army's steadfast focus on embracing technology to transform itself so as to keep ahead of adversaries in the context of the evolving character of warfare. The means and end in this regard are visualised under the umbrella of Atmanirbharta.

The absorption will be mainly in terms of disruptive technology (DT) comprising artificial intelligence, autonomous weapon systems such as drones, sensors, robotics, space technology, and hypersonic weapon systems. Several nations, led by the United States and China, have remarkable accomplishments in the field of DTs. The strategic competition and engagements in the future are going to be inevitably decided by the edge a nation possesses in absorbing these technologies.

In military parlance, absorption implies the acquisition, adaptation and integration of technologies into existing structures called legacy systems. These cover various nuances that are usually not apparent to the uninitiated. In addition, a few misnomers prevail vis-à-vis the absorption of DTs. Certain facets are enumerated below for a nuanced understanding of the issue.

To begin with, time-tested weapon platforms and tactics are here to stay, even with the induction of DTs. It is more about discovering a practical use of the new discoveries rather than about the discovery per se. As said, integration as part of absorption wherein the new DTs complement existing platforms is crucial. Discarding the prevailing systems to be substituted by the new will not necessarily be the way ahead.

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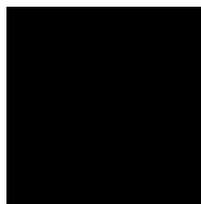
Complimenting legacy systems

Although the new technologies could significantly alter the character of future wars we must still refrain from being lulled into complacency because of the mere acquisition of technology. The strategies that military organisations use to employ technologies will be critical in understanding their effects on the battlefield.

Analysts who see a military revolution in technology, usually argue that new technologies have made the modern battlefield more lethal. However, it is brought out that 'realised lethality', as opposed to the visualised 'potential lethality' in recent wars such as Russia-Ukraine and Armenia-Azerbaijan (Nagorno-Karabakh), is not very much different from that seen in wars of an earlier era. This corroborates the fact that technological advances will not be the sole determinative in war and are only a part of what shapes outcomes.

Also, as we have seen in the ongoing Russia-Ukraine war, the initial benefits that Ukraine could muster no longer gained traction as the war progressed. One of the reasons behind 'advantage Russia' on the battlefield now is in the Russian army employing traditional methodologies to fight the war. Aspects such as consolidating traditional defence lines and a stronger military industrial base are what matter finally. The Indian military by focusing on DTs and indigenous upgrades in defence manufacture in tandem, is certainly striking the way ahead.

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Adapting to new conditions is crucial

Technical countermeasures in wars quickly limit the performance of new technology-enabled weapons employed by an adversary. The most important adaptations are often not technological but operational and tactical, i.e., how a military fights at various levels. They

involve changes in the way armies use the tools at their disposal. Over a century ago, armies developed tactics that reduced their exposure to enemy fire by exploiting dispersion, cover and concealment. Such practices hold even more importance in the current era.

In present battle conditions, weapon platforms such as tanks must adapt to become more survivable. This will require a change in tactics and a greater integration of different types of capabilities. With a plethora of sensors on the battlefield, it has become almost impossible to hide. Tanks, for example, will have to operate widely dispersed, accompanied by electronic warfare units to detect and jam aerial platforms of the enemy. Similarly, the infantry on the battlefield, while operating dispersed will need an excellent standard of junior leadership to lead men in compartmentalised and high-tech battles.

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Planning ahead

Rather than discarding conventional platforms in favour of purely digital solutions, the technology and its attributes need to be at the centre of planning for future plans. This will be a process that starts with the acknowledgement of vulnerabilities and sensitivities and the gap between them.

An understanding of the latest technologies, their potential, and the context in which they can be utilised are essential. The absorption will have to visibly manifest itself at the unit levels, as against being controlled only at the higher levels. This democratisation in employing technology at cutting-edge levels is an imperative to usher in true transformation.

Technology absorption will also necessarily include several macro level aspects such as organisational restructuring, the management of human resources and cultivating specialists not merely at the higher levels but also decentralised at execution levels, civil military fusion, having a structure and policies to ensure data integrity, and having a procurement policy that is applicable to DTs.

The Indian military is moving in the desired direction but the challenge will be to sustain this with a nuanced understanding of the requirements as applicable. In this context, there are many lessons from recent and ongoing wars, and should not be lost sight of.

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