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BUILDING THE COMBAT POWER OF TOMORROW'S AIR-LAND BATTLE FORCES

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CONTENTS

AIR-LAND COMBAT AND THE CHALLENGE OF HIGH INTENSITY

The French Ministry for the Armed Forces will be exhibiting at the 28th Eurosatory Exhibition, from Monday 17 to Friday 21 June, at Paris-Nord Villepinte Exhibition Centre, on the theme: 'Transforming the armed forces to win tomorrow's air-land battle'. Learn more.

Caesar gun firing in the desert.
© Alexandre SERPILLO/armées de Terre/Défense

The outbreak of war in Ukraine marked a major turning point in the intensification of the strategic and conflict context seen over the last decade. International law established at the end of World War II is today being undermined as never before in the last eighty years. Conflicts between states no longer take place in an alternation between war and peace, but in a situation of permanent tension, where competition can evolve into contestation and even confrontation. In response to this new strategic era, the French Army must adapt and demonstrate sufficient power and credibility to dissuade a rise to extremism on the part of our adversaries. Supported by an ambitious 2024-2030 LPM multiyear defence spending law, a transformation is under way to meet the demands of modern warfare, representing both an operational and capability challenge.

Operational challenge

In the operational sphere, the watchwords of the French Army's transformation are versatility, moral force, responsiveness and power. An analysis of recent conflicts has shown that victory in combat still depends primarily on human forces. Moral force and the determination to win are as crucial as ever. But alongside this intangible aspect, innovation is an increasingly important factor of operational superiority, accelerated by the digital revolution. It must enable us to understand, adapt, coordinate and take action faster than our adversary. And this means reconciling the most modern forms of combat with the most rustic.

In response to this dual objective, the Army must start by preserving the versatility and moral force which have been its greatest assets for three decades. It must consolidate these fundamentals by integrating more subsidiarity into the style of leadership and cultivating the values that underpin the 'warrior spirit'. But it must also build on this foundation by developing its responsiveness and combat power. With the Scorpion programme, the French Army has already moved into the era of collaborative, information-enhanced combat. This programme brings a major digital transformation aiming to connect soldiers and vehicles deployed in order to gather data and communicate it in real time to all units engaged. The effects of weapons and manoeuvres can thus be coordinated to dominate the battlefield. In addition, by 2027, the French Army's ambition for power and responsiveness will include the ability to deploy a division (19,000 men and 7,000 vehicles) in 30 days, compared with six months at present.

Capability challenge

The mission of the French Defence procurement and technology agency (DGA) is to provide the armed forces with sovereign equipment, prepare the future of defence systems, promote European cooperation and maintain the basis of nuclear deterrence.

For over a decade, DGA has been leading the Scorpion programme, which aims to renew and modernise the French Army's combat capabilities. The next-generation Griffon, Jaguar and Serval armoured vehicles are all equipped with a unique information system capable of sharing all battlefield data instantaneously. The enhanced accuracy of data and speed of transmission are moving the army into the era of collaborative, information-enhanced combat.

The detailed architecture development phase of the Scorpion programme was launched in 2010, with a view to its initial deployment in field operations in November 2021. Today, the 2024-2030 LPM multiyear defence spending law makes provision for the delivery of 1,345 Griffons, 200 Jaguars and 978 Servals to the French Army.

Scorpion forms the basis of the French Army's capability transformation over the coming decades. But beyond this key programme, DGA has also had to adapt to the new strategic context triggered by the war in Ukraine. For the past two years, it has been driving our defence industry's transition towards a war economy model. In addition to the need to invest in innovation to develop the most effective weapons systems, we now need to produce more, and produce it faster and at lower cost. We must meet the needs for mass production generated by high-intensity conflicts, by ensuring the utmost responsiveness and efficiency between the defence industry and the armed forces. A 'responsive procurement task force' (*Force d'acquisition réactive*, FAR) has been set up to speed up procurement procedures and meet the most urgent needs. For the French Army, the transition to a war economy model has enabled a significant acceleration in the production of Caesar gun systems and the intensification of its UAS segment.

The 28th Eurosatory Exhibition will therefore be an opportunity for the French Ministry for the Armed Forces to present the full range of modernised and renewed air-land capabilities developed by DGA for the French Army, thanks to which it will meet the challenges of war, today and in future.

Training session of the 3rd RPIMa (third regiment of the marine infantry paratroopers) after its Scorpion transformation, 2024.
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GENERAL PIERRE SCHILL: "A NEW ARMY FOR THE NEW WORLD"

A few hours before the start of the 28th Eurosatory Exhibition, General Pierre Schill gave an interview. Appointed Chief of the French Army on 22 July 2021, a few months before Russia's invasion of Ukraine, he analyses the strategic turning point marked by the return of war to Europe. He also speaks of the need to adapt the Army to meet the demands of modern warfare.

In the office of the Chief of the French Army, 9 April 2024.
© SCH Christian Hamilcaro/Dicod/Défense

At the time of your appointment, we were in yesterday's world, just before a major change in the strategic context.

General Pierre Schill : The change in the strategic context was in fact already underway. Which event will become symbolic of it remains to be seen. It may be the Russian attack on Ukraine on 24 February 2022, or the Hamas terrorist attack of 7 October 2023. We will see which date goes down in History in a few years' time. I was appointed Chief of Staff of the French Army in July 2021, following General Burkhard's appointment as Chief of the Defence Staff. It was he who set the French Army in motion, with the aim of achieving 'operational superiority' on the basis of the major reform known as 'In Contact' (*Au contact*), launched by his predecessor, General Bosser. The goal was to implement a thorough reorganisation in the wake of the 2015 terrorist attacks and the realisation that protecting our national territory was once again a priority. This was a radical departure from the world of field operations we had known for the past thirty years. General Burkhard placed the emphasis on the operational aspect. He developed a new concept: 'Win the war before the war'. He instigated this approach at a time when the Covid-19 crisis was raising awareness that major upheavals were underway. I continued the reforms in progress when Russia attacked Ukraine. As it soon became clear that this was a very profound change, I chose to focus on transformation. There is obviously no question of 'wiping out the past', but I felt it was vital to go a step further and underline the need to adapt. This is what I have called the 'combat Army'.

With this new slogan, are you defining a new priority?

Yes, because we are the land component of armed forces on permanent operations. We must give priority to the operational effects we produce. We have to understand that, when we are on manoeuvres, whether at home or abroad, we are sending a signal to our allies and our adversaries. This is an ongoing concern. We firmly believe that we are no longer in a situation of peace. We must manoeuvre in competition, contestation and confrontation, and show that we are sufficiently strong and credible to prevent our adversaries from rising to extremism. We must therefore produce effects every day, and be aware that everything matters.

The war in Ukraine provides a wealth of feedback for the Army. What lessons have you learned?

We must be modest in our analysis of the feedback from this conflict and strive to distinguish between the cyclical and structural aspects. To me, we can draw three important lessons. The first, and fundamental one, is the use of force. This conflict, like the one in Gaza, shows that the use of force has again become a reality, including in Europe. The international law that had been developed since World War II is being challenged. The principles of respect for sovereignty and resolving conflicts through multilateral negotiation are now being undermined. Today, a number of states regard the use of force as an acceptable way to resolve conflicts.

The second lesson is the fundamental nature of moral force. Human forces are the primary tool of combat; the most effective equipment and the best-managed strategies cannot produce the expected results unless soldiers demonstrate martial values, unless leaders of all ranks are determined to win, and unless the nation supports its troops. Moral force is also linked to the conviction that the action is legitimate. Today, our soldiers are more connected; they have better access to information. They must be convinced that their cause is just. In the Army, we cultivate these values which form a solid foundation; this is what we call the 'warrior spirit'. And it is an immense asset.

The third lesson I believe we can learn is more tactical. It concerns the capabilities that will be essential for future combat: Command and control (C2), battlefield transparency, lethality, protection against air threats. I would stress the importance of battlefield transparency. Technological advances, particularly in UASs and satellites, are making it more difficult to conceal intentions, dispositions and movements. Combined with the 'hyper-lethality' of firepower, this is changing tactical processes on the battlefield: concentrations of force are becoming more difficult; dispositions are more spaced out; fronts are more fixed; HQs and logistics zones are more vulnerable; mobility, stealth, dispersion and camouflage are back on the agenda.

So how can we win despite this transparency?

Dedicated, quality resources must be deployed, in sufficient quantities: satellites and UASs; artificial intelligence to analyse images; electronic warfare; special forces; and intelligence capabilities. Combining these resources provides a better understanding of the physical reality of the battlefield. We also need the means to exploit this transparency. Identifying a target is not enough; we must be able to strike it, even at long range, which requires powerful, precise munitions supported by a multi-sensor and multi-effector network. Finally, if we have transparency and lethality, our adversary is likely to have them too. Protection is therefore a major issue, particularly against the air threat, which ranges from small, commercially available UAVs carrying a grenade, to helicopters, combat aircraft, and ballistic and cruise missiles.

Visiting the armed forces in Cincu, Romania, on 22 May 2022.
© Didier Lauras/AFP

You often speak of the importance of leadership style. What do you mean by this?

We must move towards greater accountability and subsidiarity in our leadership. A subordinate who receives an order must clearly understand their superior's intention, so that they can think for themselves and give their own orders with the intelligence and initiative that will be the most effective at their particular level. Subordinates must fully understand the freedom they have in order to seize opportunities in line with their superior's intention. This is vital, because this style of leadership, which is historically very French, brings an operational advantage to the battlefield. And this trend, called for by the President of the Republic, is now gaining ground throughout the Ministry. With the directorates and departments, we are working to achieve greater autonomy and simplification, in peacetime as in wartime, and on a day-to-day basis as in combat.

In an article published in Le Monde, which struck a certain chord, you mentioned the goal of being capable of deploying a division within 30 days by 2027. Can you tell us more?

The objective is to have a modernised division, ready to be deployed within the specific framework of NATO, in order to demonstrate our strength and credibility as a means of deterring our potential adversaries and asserting our strategic solidarity with our allies, particularly in Europe.

By 2030, we aim to have consolidated the ability to command an army corps, i.e. to deploy a powerful operational command system with the necessary 'high-spectrum' capabilities – cyber, long-range firepower, intelligence, electronic warfare, air combat and logistics. This level of command will be capable of bringing together French and allied units, to become a key player in the defence of Europe. My aim is not to see army corps actually fighting on European soil. On the contrary, we need to be credible in order to deter our adversaries, to win the confidence of our allies, and to command as a framework nation in a coalition. And to be credible, we need three things: we must have the means to defend ourselves, we must know how to use those means effectively, and we must convince our allies and adversaries that we will not hesitate to use them. If these conditions are met, deterring our adversaries should work.

The French Army recruits 15,000 young people every year. This is a considerable number. What motivates these young people to join?

Young French people know that the French armed forces, particularly the army, is an army of employment, an army 'for real'. France is a permanent member of the United Nations Security Council, a founding member of NATO and a founding member of the European Union. It demonstrates its determination to use its powerful assets – including its armed forces – to influence global affairs. The young people who join us know this and are keen to get involved. We have ambitions as regards our sovereignty and the ability to take action in the world. I can see that our youngsters are clearly interested in defence issues and in the human adventure that joining up represents, and they know they are making a meaningful commitment.

Could the Army's involvement in ensuring security for the Olympic and Paralympic Games be a way of strengthening its ties with the nation, particularly with young people?

Yes, I think so. The French Army will be involved in all aspects of this exceptional event: participation of military athletes, security at the event; site protection by deploying specific capabilities such as helicopters, divers, bomb-disposal experts and dog-handlers; and the torch relay and flag raising during medal ceremonies. These are interesting and rewarding missions. The event will be an opportunity to experience the Olympic spirit with young French people, in the same way as the Terre Jeunesse challenge, which is taking place in all the Army's units. The Army will be there to contribute to the success of this global event.

In a few hours' time, the 28th Eurosatory Exhibition will open its doors. Why is this global land and air-land security event important for you and for the French Army?

France is a great industrial nation offering high-quality, efficient equipment that has been tried and tested by the French Army in operations.

To win, an army needs determined troops, a strategy and the right quantity and quality of equipment.

It is vital to support and build a trusting relationship with manufacturers in both major and smaller armaments programmes.

Building a solid defence industrial and technological base is a long-term process, in which each programme is a link in a chain deployed over several decades.

Nothing can be taken for granted forever. To remain responsive, powerful and versatile, the French Army needs to embrace innovation and new technologies. Superiority on the battlefield requires high-spectrum capabilities to outperform the adversary. The Eurosatory exhibition is a unique opportunity to bring together manufacturers, the military and everyone interested in defence issues and the future of air-land combat.

General Pierre Schill presiding over a ceremonial parade at Les Invalides, Paris, 7 June 2023.
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THE FOUR PILLARS OF THE ARMY'S TRANSFORMATION

To adapt to future missions and '*win the war before the war*', the French Army has initiated an in-depth transformation. Based on four pillars – Be and Last, Act, Protect, and Innovate – it aims to meet the needs for mass production and speed generated by high intensity.

The LYNX mission in Estonia demonstrates France's ability to fulfil its role as a NATO framework Nation. © Armée de Terre

Be and Last

Pierre Schill, Chief of the French Army, emphasises that "*Human forces are the primary tool of combat; the most effective equipment and the best-managed strategies cannot produce the expected results unless soldiers demonstrate martial values, unless leaders of all ranks are determined to win, and unless the nation supports its troops.*" To deal with the toughest forms of combat, the Army nurtures the warrior spirit of its soldiers who are united by shared values: loyalty, dedication, determination and daring. This unity creates the conditions for a fraternity of arms, which is essential when they actually engage in combat.

Far from being outdated, these values speak to the new generation. Young people today "*know that a military commitment is meaningful*", says General Pierre Schill, who has "*complete confidence*" in them. Every year, the French Army recruits 15,000 young people who "*are keen to get involved*", motivated by the idea of joining an army of "*employment*". Conscious that operational superiority cannot be achieved without the support of the nation's vital forces, the Army is stepping up its efforts to develop a spirit of defence in young people and boost their awareness of its values. One example is the '*Terre Jeunesse*' challenge organised as part of the Paris 2024 Olympic and Paralympic Games.

Act

Today, the normal framework for engaging the French armed forces outside national territory is that of collective action. France has a clear aim, that of asserting its role as a framework nation within NATO. To reinforce the country's status as a reliable and credible ally, the French Army has the ambition of deploying a 'high-intensity' division (19,000 men and 7,000 vehicles) within 30 days by 2027, compared with six months at present. "*The aim is to demonstrate our strength as a means of deterring our potential adversaries and asserting our strategic solidarity with our allies*," explains General Pierre Schill. This is the reasoning behind the 2024 creation of the Lille-based Land Forces and Operations Command. It aims to enhance the Army's power and responsiveness in order to engage organised, equipped and mission-ready units at the right time and over the long term.

Protect

The *Force opérationnelle terrestre* (FOT, operational land force) comprises 77,000 soldiers out of a total of 105,000 active military personnel. It forms the core of the Army's manpower. In order to give this armed wing the levers of action it needs to carry out its missions, and to empower and increase its autonomy, a new organisation has been adopted. The aim is to give FOT divisions responsibility for operational contracts in distinct areas of interest. These include France and its overseas territories, Europe and the Middle East, Africa and the Indo-Pacific region. Each division operates via its brigades, which cover the entire territory, in their respective strategic areas, for a three-year contract. This period allows them to truly adapt to their environment and become experts in it. This new approach, known as 'regionalisation', also applies to the national emergency echelon system. Each regiment now has a section capable of intervening within 0 to 6 hours.

Innovate

The change of scale in conflicts and the current acceleration in technology prompted the French Army to create the Future Combat Command in August 2023. One of its core missions is innovation: drone swarms, on-board systems, ground robotics, and simulation – integrating new technologies is crucial to maintaining operational superiority. Artificial intelligence (AI) ranks high among these new technologies. In January 2024, General Pierre Schill argued that the French Armed Forces must "*embrace artificial intelligence*", given that "*the integration of this technology into weapons systems*" and "*staff processes*" was "*vital to retain the initiative*". In particular, AI has been incorporated into the Scorpion collaborative combat system and its future capability extension, Titan 2040.

A Jaguar vehicle parade for 14 July 2023.
© Florian SZYJKA, Ministère des Armées

SCORPION: UNDERSTAND, DECIDE AND ACT FASTER THAN THE ENEMY

The DGA-led Scorpion programme is moving the French Army into the era of collaborative, information-enhanced combat. Thanks to a faster and more targeted flow of information between front line soldiers and their leaders, this enhanced connectivity saves precious seconds in combat. It contributes to a better understanding of the battlefield and facilitates tactical initiatives.

Light intervention team (ELI) of the 4th equipment regiment training on Griffon, 2024.
© Julien HUBERT / armée de Terre / Défense

To adapt to the new forms of combat arising as a result of advances in technology, the French armed forces have made equipment digitisation and immediate information-sharing in the field a priority. Today, and even less so tomorrow, operational superiority cannot be achieved without 'collaborative information-enhanced combat'. For the French Army, this new way of fighting is already a reality with the Scorpion programme, which stands for *Synergie du contact renforcée par la polyvalence et l'infovalorisation* (synergy of contact enhanced by versatility and information enhancement).

Scorpion aligns the capabilities of a joint battle group to turn it into a connected combat system, supported by a single application, the Scorpion Combat Information System (SICS). In practice, the application connects up all vehicles and men to ensure that all soldiers have the same information. Around ten former systems are thus being replaced. As a result, the flow of battlefield data is improved, thereby reducing response times on the ground. This new system also means better protection for crews and better knowledge of the field. Threats can be detected more effectively, and the risk of friendly fire is reduced.

The Scorpion programme also includes the development of three latest-generation armoured vehicles: Griffon, Jaguar and Serval, all equipped with SICS. Delivered to the French Army in 2019, the first connected Griffons were deployed for the first time in operations at the end of 2021. The advantages of this armoured vehicle are now widely recognised. Gunner exposition is reduced by the possibility of firing from inside the vehicle thanks to a remotely-operated turret. The SICS also allows soldiers to locate the enemy even before they disembark from the vehicle. Air-conditioned and silent, its interior is more comfortable for the ten men on board. Finally, there are no more long radio conversations to explain the situation and request and receive commands. A single click and a few seconds are all it now takes to shuttle information between the soldiers in contact with the enemy and the command at the rear, compared with five minutes previously.

With a view to preparing for the warfare of tomorrow, the French Defence Staff (EMA), DGA and the French Army Staff are already working on an extension of the Scorpion programme's capabilities. Titan should take over from Scorpion around 2040. The aim is to renew all existing connectivity and extend it to joint and interallied forces.

TRANSITION TO A WAR ECONOMY: DGA ON THE FRONT LINE

At the opening of the previous Eurosatory exhibition in 2022, Emmanuel Macron officially confirmed our transition to a 'war economy', under the leadership of France's DGA Defence procurement and technology agency. At the time, this decision was taken in response to a new international strategic context.

An employee at work on the 155mm Caesar gun in the Nexter armaments factory.
© Guillaume Souvant/AFP Photo

France has "*moved to a war economy which I believe will be shaping our organisation over the long term*," announced the French President on 13 June 2022, at the inauguration of the 27th Eurosatory exhibition. That was two years ago, just a few months after the outbreak of war in Ukraine.

Aware of the need to "*align resources with the threats*", the Head of State subsequently asked Sébastien Lecornu, Minister for the Armed Forces, to increase production capabilities. On 6 September 2022, the Minister initiated work with the defence industry, in the presence of the Chief of Defence Staff, the General Delegate for Armament and the Secretary General for Defence and National Security. The watchword was unambiguous: to maintain our strategic autonomy, we need to "*produce more and faster*", with a model that is "*sustainable for the State*". As set out in the National Strategic Review 2022, the industrial base must now be organised "*to support a war effort over the long term*".

To succeed in this ambitious venture, the DGA, in conjunction with the other entities of the Armed Forces Ministry and industry, set to work on five priority projects. They were unveiled in February 2023 by Alexandre Lahousse, head of the DGA's industrial affairs and economic intelligence department, at the Ministry's weekly press briefing:

Visibility for industry

"*The aim is to enable long-term industrial investment in production facilities*," said Alexandre Lahousse. And this has been made possible with the dedicated €413 billion in the 2024-2030 LPM multiyear defence spending law, which gives companies in the Defence Industrial and Technological Base (DITB) visibility over seven years.

Drastic simplification

"*What is simple is easier to produce*," said Alexandre Lahousse. The aim is to reduce the complexity of orders by 20% so as to simplify work for manufacturers. These provisions entail, de facto, fewer justifications and imply "*risk sharing between the State and industry*".

Securing supply chains

A number of levers have been put on the table to limit foreign dependency, including the creation of contingency stocks, particularly of raw materials, or multiplying foreign sources of supply when there is only one. Where this is not possible, relocating the relevant activities to France is the answer.

Recruiting talent

The emphasis is on communication with the younger generation and on critical skills. Dialogue with companies, training schools and the Ministry of Education is underway to win the battle for talent.

Financing the DITB

"*We must guarantee access to private funding for DITB companies*," explained Alexandre Lahousse. The Ministry for the Armed Forces has therefore worked on building a network of banking contacts to improve dialogue with financial institutions. In parallel, several initiatives have been launched to encourage investment in the defence sectors, including at European level.

Ramping up

In May 2024, a symposium on 'operational and industrial challenges in defence' was held at the *Ecole Militaire*. The seminar was an opportunity to review the progress made in implementing the war economy and to suggest some directions for the coming months. In particular, engineer Emmanuel Charpy (DGA) and Colonel Hervé Mermod (Defence Staff) presented the *Force d'acquisition réactive* (FAR, responsive procurement task force), jointly led by them. This new tool, created last year, aims to reduce equipment procurement lead-times for the armed forces, from the requirement specification to commissioning. The FAR has thus accelerated the procurement process of 15 different items of equipment and must continue in its successful efforts!

"*The war economy is not a fad, it's not a parenthesis*," said Sébastien Lecornu, Minister for the Armed Forces, at the closing of the symposium. "*The strategic context shows that there are very few situations which would not need responsive and flexible management between the manufacturers and users of these weapons.*"

The Minister for the Armed Forces has also tasked Emmanuel Chiva, the General Delegate for Armament, with proposing a "*drastic simplification*" for new programmes by September 2024 with the aim of reducing the many processes still slowing down project development.

AI ON THE BATTLEFIELD

The 28th Eurosatory exhibition opens on 17 June with a conference on artificial intelligence for defence. This event sets the tone for the 2024 exhibition, which places AI at the centre of its agenda.

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In the face of new threats, AI is emerging as a strategic tool, and is today the main focus of innovation for the armed forces. While the nature of combat remains the same, it is rendered more complex by AI. And the massive penetration of this technology into battlefields is forcing armies to speed up their transformation. In this 'AI race', the French Ministry for the Armed Forces will be investing more than €2 billion between now and 2030.

Creation of AMIAD in 2024 for sovereign use of AI

Following on from the initiatives taken in 2018, last March the Minister formalised the creation of the Ministerial Agency for Defence Artificial Intelligence (AMIAD). The purpose of this agency is to professionalise the use of AI in the armed forces and thus contribute to their transformation.

With the integration of this new agency, the Ministry will thus retain sovereignty over its databases, which are the real 'sinews of war' of AI. It is data that fuels the development of AI to meet the specific needs of the armed forces. By 2025, the Ministry will have the most powerful classified supercomputer in Europe.

Defence AI at EUROSATORY

At the French Ministry for the Armed Forces, defence AI is no longer just a focus of innovation, it is already an operational reality. Below, we take a look at some of the use cases now developed:

• Optical detection of military land vehicles

This innovation was entrusted to AMIAD, which was able to train its algorithm and successfully complete the first test campaign in April 2024. Thanks to AI, an operator can now immediately detect and identify vehicles hidden on the edge of a forest.

• Acoustic detection

The French naval force is already using AI to optimise the work of its 'golden ears' at the Acoustic Interpretation and Reconnaissance Centre (CIRA). By eliminating all spurious noise – noise from the sea, biological noise – AI speeds up sound detection by 30 seconds or even a minute.

• **Pilot training**

AI is also beneficial in aircraft pilot training. By analysing the data provided during real flights or on simulators, the programme identifies the learner's strengths and weaknesses and suggests directions for improvement. Learner pilots therefore know which areas to focus on, thereby maximising their chances of success.

• **Modernising land equipment maintenance**

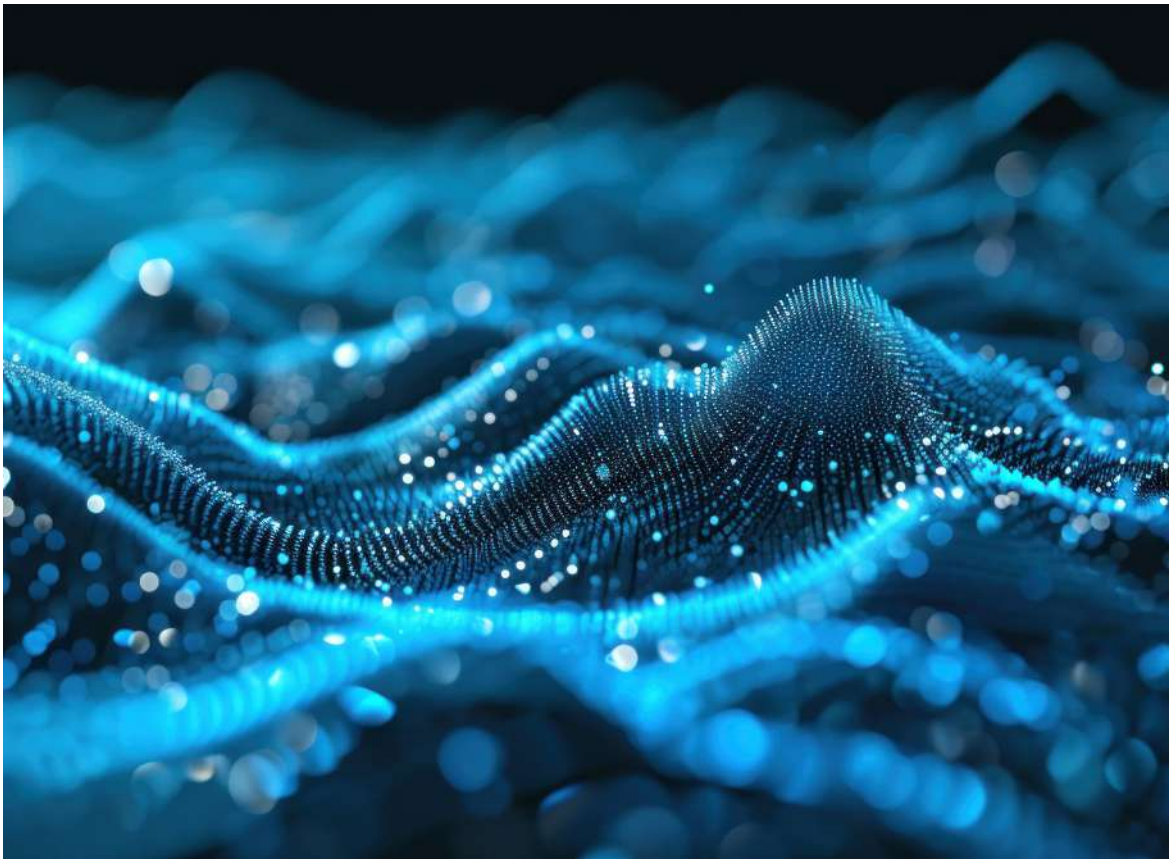
In a context of high-intensity combat, AI can contribute to the operational readiness of equipment – vehicles, weapons systems, armoured vehicles, etc. Using visual recognition, a programme is being developed to instantly identify spare parts requirements, which are often difficult to characterise. The programme, which can be used from a database and therefore without an Internet connection, will drastically reduce diagnosis, maintenance and procurement times close to the front.

• **The fight against misinformation**

The arrival of generative AI as a tool for manipulating information, particularly on social media networks generating fake news and deepfake, can be detrimental to the image of France and the French armed forces and is a threat to democracies. To fight this misinformation, the Ministry has developed AI software capable of detecting falsified audio recordings, videos and images. The tool is based on algorithmic processing that compares genuine images, videos or audio recordings with those that have been manipulated. This operational software enables human operators to reliably confirm an intuition by identifying the manipulated extracts. Blowing the whistle on manipulated information preserves the freedom of action of the French forces.

• **Translation**

A translation tool available on smartphones in 19 languages is provided to special forces and units. AI facilitates immediate communication with civilian populations. This tool can be used without a connection in order to reduce operator vulnerability. It is also attracting interest from government agencies.



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EUROSATORY 2024: EQUIPMENT ON DISPLAY AT THE FRENCH MINISTRY FOR THE ARMED FORCES' STAND

The Eurosatory international land and air-land defence exhibition opens its doors from 17 to 21 June 2024 at the Paris-Nord Villepinte Exhibition Centre. On this occasion, the French Ministry for the Armed Forces will be showcasing its range of air-land capabilities designed to meet the threats of today and tomorrow.

The 3rd RPIMa (third regiment of the marine infantry paratroopers) training on Griffon during the PRETS exercise (Scorpion transformation reporting period), 2024
© Laëtitia CARLIER/armée de Terre/Défense

The Scorpion programme, drones, helicopters, missiles, cyber security... Faced with evolving threats and geopolitical, social and industrial upheaval around the world, the French Army is undergoing a transformation to win future air-land battles.

At Eurosatory 2024, the French Ministry for the Armed Forces will be showcasing equipment currently in service with French Army units, as well as some of the equipment our forces will be using in the future. The aim is to illustrate how land forces are adapting to current challenges and to highlight significant developments in several key areas.

EQUIPMENT PRESENTED AT EUROSATORY

ARMOURED VEHICLES

Serval © A.Roiné/ecpad/EMA

Griffon

A multi-role armoured vehicle, the Griffon is the first Scorpion vehicle to be delivered. It replaces the VAB front-line armoured vehicle for support and transport of soldiers equipped with the Félin weapon system, and is available in several versions: troop transport (divided into sub-versions), Casevac, command post and artillery observation. The Griffon represents a real technological and operational leap forward for combined arms battlegroup (GTIA) vehicles, with significantly improved protection against ballistic threats, mines and improvised explosive devices (IEDs). Like all Scorpion vehicles, it is equipped with the combat information system (SCIS) and the new Contact radio.

Jaguar

The Jaguar armoured reconnaissance and combat vehicle's mission is to get as close as possible to the enemy, in complex environments such as urban or mountainous areas, to acquire intelligence while avoiding detection: mobile, discreet, agile, well-protected and well-armed, it has long-range vision, day and night. The Jaguar has a high level of ballistic protection, as well as protection against mines and IEDs. It has all the on-board electronics of the Scorpion programme, with latest-generation sensors (laser warning detection, acoustic localisation system). It features a stabilised turret with a 40mm cannon, a remotely-operated sub-turret, a 7.62mm machine gun as secondary armament, and a POD with 2 MMP medium-range missiles. Under the 2024-2030 LPM multiyear defence spending law, 35 Jaguar vehicles are scheduled for delivery in 2024.

Serval

A light multi-role armoured vehicle that complements the Griffon, the Serval is designed to replace the VAB front-line armoured vehicle in certain units. Designed to operate in the enemy contact zone, it is particularly manoeuvrable and is lighter and more compact than the Griffon. It is also designed to reinforce the support and back-up resources deployed within the land forces. A 4x4 armoured vehicle weighing between 15 and 17 tonnes, it is equipped with a remotely operated turret, threat detectors and the Scorpion Combat Information System (SCIS). In addition to two crew members, it can carry up to eight soldiers equipped with the Félin system. The Serval has a very high level of protection against mines and IEDs, and its interior layout (inter-visibility between infantrymen, low noise level, air conditioning) makes it highly resilient in combat. Part of the Scorpion programme, the Serval is available in four versions: VPB (armoured patrol vehicle), SA2R (support and ISR – intelligence, surveillance and reconnaissance), NCT (tactical communication node), and GE (electronic warfare). As with the Griffon VTT, the Serval VPB serves as the basis for various infantry vehicles, including command, support and Casevac versions. Ten additional vehicles were delivered to the French Army in May 2024, giving a total of 53 Serval vehicles out of the 103 expected in 2024. A total of 978 Servals will be delivered to the French Army by 2030.

Renovated Leclerc MBT

DGA, the French defence procurement and technology agency, launched the renovation of the Leclerc main battle tank (MBT) in order to integrate it into the Scorpion programme and adapt it to new threats. Equipped with Scorpion vetronics (on-board vehicle electronics), the Scorpion Combat Information System (SCIS) and the new Contact radio, it is also fitted with a BARAGE jammer optimised against improvised explosive devices (IEDs) and new armour, and its weapon system has been upgraded. The 20th renovated tank (XLR) was delivered to the French Army on 22 May 2024. According to the 2024-2030 LPM multiyear defence spending law, 130 Leclerc MBTs will be renovated by the end of 2030 and a further forty by the end of 2035. The first ten sets of hull underside protection kits against mines and IEDs, as well as side protection kits against rockets (anti RPG) were delivered in mid-April (50% of tanks will receive the kits).

MISSILES

Medium-range missile © Adrien COURANT/armée de Terre/Défense

SAMP/T: medium-range ground-based air defence system - MAMBA

The SAMP/T, currently in service with the French Air and Space Force and Italian Army, was developed under a cooperative programme between France and Italy. It provides a medium-range surface-to-air defence capability against aircraft, helicopters, high-performance UASs, cruise missiles and certain theatre ballistic missiles. It has been deployed in national and international operational theatres, the latter under the aegis of NATO. It comprises a fire control system (FCS) based on a multifunction radar, a ground launch system and Aster 30 B1 missiles. The SAMP/T NG programme was launched in 2021 by OCCAr (Organisation for Joint Armament Cooperation), on behalf of France's DGA defence procurement and technology agency and its Italian counterpart (SEGREDIFESA). This improved version offers enhanced performance, particularly against manoeuvring ballistic missiles. It has a range of over 100km. It has high firepower, with 8 Aster 30 Block 1 supersonic missiles ready to fire from each launcher, and requires only a streamlined crew. The SAMP/T is adapted to the ever-increasing number and performance of threats: integration of a new state-of-the-art radar (GF 300), rapid deployment, high mobility, improved ergonomics and compatibility with the Aster 30 B1NT (New Technology). Manufacturers: EUROSAM - Thales - MBDA.

Medium-range missile (MMP)

Produced as part of an armament programme for which the production contract was awarded to MBDA by the DGA in 2013, the MMP missile has been in service with the French Army and the special forces of the three services since 2018. The only latest-generation anti-tank missile in service, it enhances the superiority of dismounted combatants, enabling forces in the contact zone to neutralise the various types of targets encountered in all theatres of operation with great precision. The MMP will equip the Jaguar combat vehicle. It has already been selected by Belgium as part of the CAMO strategic partnership, as well as by Sweden, and is the subject of cooperation between DGA, Försvarets materielverke (FMV), MBDA and SAAB for future versions.

HELICOPTERS

Tiger helicopter © Basile PINEAU / armée de Terre

"Guépard" Joint Light Helicopter (HIL)

The preliminary phase of the Joint Light Helicopter (HIL) programme was launched by the French DGA defence procurement and technology agency in 2017. The programme aims to equip the three armed forces with a single helicopter model, replacing the five different models currently in service (Gazelle, Alouette III, Dauphin, Panther, and Fennec). Called the "Guépard" (Cheetah), it will be a military version of the Airbus Helicopters H160, chosen as the common platform for the French armed forces. The Guépard is capable of carrying out missions common to all three services, including Medevac and the transport of personnel and/or freight. It can also be adapted to each domain to carry out missions specific to the armed forces. The first Guépard will be delivered to the French Army in 2027. The French Navy will receive its first helicopter in 2029, followed by the French Air and Space Force in 2030.

NH90 Special Forces helicopter

The NH90 helicopter, known as the "Caïman", is being developed in cooperation with 10 other countries, including Germany, Belgium, Italy and the Netherlands. It is available in two versions: the TTH for the French Army and the NFH for the French Navy, to adapt to particularly hostile theatres of operation, due to environmental conditions (extreme temperatures (>50°C), sandstorms or snowstorms reducing visibility to zero and therefore severely limiting any aerial activity) or the diversity of threats faced by the armed forces. This new version will enable special forces to carry out their missions even more effectively and safely thanks to revolutionary new equipment designed to help the crew find their bearings and operate in very poor visibility conditions. Eight additional NH90 helicopters were ordered in December 2023, underlining the major role of French Army aviation combat operations and their tactical transport component. Valued at €305 million, this new order, which comes on top of the 10 aircraft previously ordered, will give the Special Forces 18 NH90 Caïman helicopters by 2030.

Tiger helicopter

The "RMV Tigre" mid-life upgrade (MLU) programme for the Tiger reconnaissance and attack helicopter is designed to extend the Tiger's operational service beyond 2050, while adapting it to the realities of the future battlefield. It is being carried out in cooperation with Spain and involves the refurbishment of 42 Tiger helicopters belonging to the French Army's Light Aviation unit (ALAT). The first deliveries are scheduled for 2030. The programme is led by OCCAr (Organisation for Joint Armament Cooperation) on behalf of the DGA for the French portion. The main French manufacturers involved in the programme are Airbus Helicopters, Thales and Safran Electronics & Defense. To meet the requirements of collaborative combat, major upgrades concern renovation of the avionics, including connection to the Scorpion Combat Information System (SCIS), drone-helicopter cooperation capability (MUM-T) and integration of the new Contact radio. It will be possible to use the European Galileo satellite navigation system to complement the American GPS.

ARTILLERY SYSTEM

Caesar self-propelled howitzer

An all-terrain truck equipped with a powerful 155mm ground-to-ground gun, the Caesar is a combat-proven showpiece of French artillery. Its development represented a real breakthrough in the field of self-propelled artillery, as it was the first 155mm gun to be mounted on a wheeled chassis instead of a tracked carrier. The Caesar has three major advantages: it is mobile, accurate and powerful. Capable of hitting a long-range target at 40km with excellent accuracy, and with a firing capacity of 6 rounds per minute, it has high tactical and strategic mobility (600km range, 80km/h speed, and ability to be airlifted by C-130 and A400M). The new MK II standard maintains the Caesar's projection capability, while enhancing its traction, ballistic protection and firing effectiveness. Equipped with a new compact 6x6 chassis to maintain its agility, an automatic gearbox and a 460hp engine, these improvements will give it enhanced obstacle-crossing and off-road capability, enabling it to keep pace with the manoeuvres of supported Scorpion units while improving its resilience in the face of enemy artillery fire. The Caesar NG will feature an improved armoured cabin that will optimise crew protection against improvised explosive devices (IEDs), mines, infantry fire and artillery fragments. The already remarkable accuracy of its artillery will be further enhanced by upgrading instrumentation essential for firing. The Caesar NG will remain compatible with current ammunition and will be able to use future precision ammunition.

COUNTER-UAS OPERATION

NEROD © armée de Terre

In February 2021, the Ministry for the Armed Forces launched the «Lutte anti-drones» (LAD) programme, led by the DGA, to respond specifically to the threat of mini and micro-UASs, which constitute a fast-evolving threat. They are more difficult to detect and neutralise than large unmanned vehicles, particularly because of their proximity to birds in terms of size and speed. The programme is based on the detection/identification/neutralisation triad. It is being pursued on an incremental basis in order to supplement the resources already in service, modernise existing systems, and then provide a long-term response that takes account of changes in the threat and technologies. This involves both capturing innovation and pursuing studies on new technologies. To this end, the DGA, in conjunction with the French Defence Innovation Agency (AID), is carrying out technological maturation work (laser directed energy weapons, interceptor drones) and is also giving French industry a central role in European cooperation studies (PEDID 2021 C-UAS project, which aims to carry out preliminary definition work on future counter-drone systems, their sensors, effectors and C2 systems). There are a variety of ways to counter UASs: jamming radio frequency links and satellite navigation systems, intercepting UASs or destroying them using directed energy weapons (DEWs) such as lasers. In April 2022, the DGA awarded the PARADE contract to Thales and CS Group, with the aim of providing the Ministry for the Armed Forces with new-generation systems to protect sensitive sites against mini and micro-UASs. These new systems also include:

NEROD: a gun to jam drone signals

The NEROD is a jammer gun capable of disrupting and neutralising communications between micro- and mini-drones and their remote controllers. Developed by French SME MC2 Technologies, NEROD is already being used in operations: 80 guns have already been delivered. NEROD has undergone numerous tests carried out by experts at the DGA Information Management Centre, including a study of the impact of jamming transmitters on equipment at several air bases.

HELMA-P: the C-UAS laser weapon

HELMA-P is a laser system capable of detecting, identifying, tracking and neutralising mini- and micro-UASs. It works by dazzling observation instruments or altering the structure of the drone. HELMA-P can be combined with various detection and surveillance sensors (optical, radar, sound, etc.). More precise and stealthier than any other current C-UAS system, requiring fewer logistics because it does not use munitions, HELMA-P is designed to deal with a moving target with extreme precision, in theatres of operation as well as in urban environments. The HELMA-P demonstrator, which was brought to maturity by the French Defence Innovation Agency (AID) in 2020-2021, is now part of the LAD C-UAS programme led by the DGA with a view to producing an operational prototype that will be part of the equipment deployed at the 2024 Olympic and Paralympic Games. Since initial developments carried out in 2017 under the aegis of the AID, HELMA-P has undergone evaluation in a land environment at the DGA missile testing and expertise centre in Biscarrosse in 2020 and 2021 with a 100% success rate, and in a naval environment on a surface ship in 2023 to assess the capabilities and constraints of integrating and using this weapon on a ship for C-UAS operations at sea.

UNMANNED AERIAL SYSTEMS (UASS)

Patroller © Philippe Wodka-Gallien / Safran

Patroller: a tactical unmanned aerial vehicle (TUAV) used for ISTAR (Intelligence, Surveillance, Target Acquisition and Reconnaissance) missions

The Patroller is a long-range tactical intelligence UAV that can detect, identify, monitor and designate targets, day and night. The first units will be delivered in 2024. The Patroller helps to protect troops on the ground. It provides data on the tactical situation, while carrying out EW operations. It features a wingspan of 18m, a length of 8.5m and a weight of 1.2 tonnes, with 14 hours endurance and a range of 150km. It is equipped with an EO/IR EUROFLIR 410 optronic system and SAR and GMTI radar. It has a multi-payload capacity of up to 250kg. Manufacturer: Safran.

RapidEagle interceptor drone

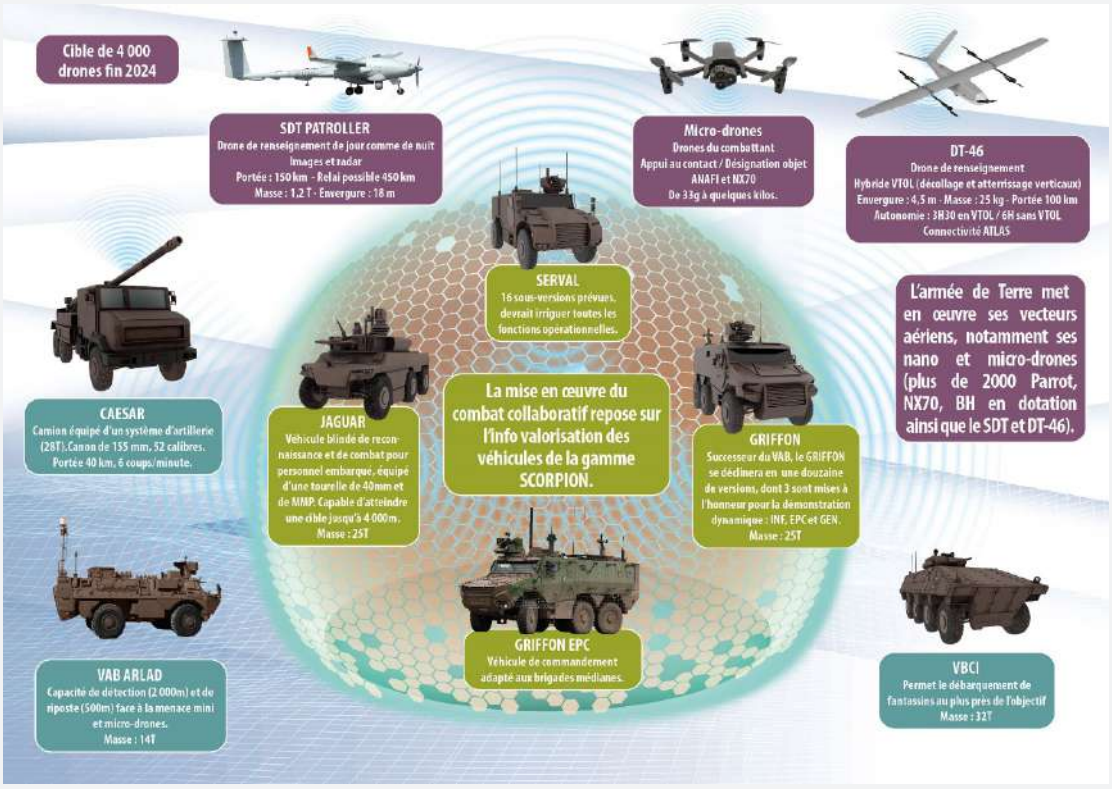
RapidEagle is a result of the "drone interceptor drone" call for projects published in 2021 by the French Defence Innovation Agency (AID), and aims to develop an autonomous, multi-mission, reusable and high-speed drone designed for C-UAS operations. Its aim is to detect the target, track its position and finally intercept it. Equipped with two long rods connected by a net, measuring 1.20 metres and capable of speeds up to 100km/h, the RapidEagle UAS is capable of intercepting another UAS of the same weight in flight and bringing it back to a safe zone on

land. The system uses various modules to automatically detect the target using a designation system, monitor its position, track the target and finally intercept it. Interception is achieved by deploying the net.

COMBAT EQUIPMENT

Centurion: the Soldier of the Future

Launched in 2018 by the French DGA defence procurement and technology agency and supported by Safran and Thales, the Centurion project is a support and funding ecosystem aimed at fostering innovations for the dismounted soldier by ensuring their rapid integration into the infantryman's equipment. These innovations may relate to soldier protection, camouflage, connectivity or the ergonomics of future equipment. They could eventually be integrated into the current Félin (integrated infantry soldier equipment and communications) programme and the future Scorpion programme. Centurion's aim is to stimulate innovation, accelerate maturation of the most promising technologies, and take advantage of short exploration, development and test cycles.



PROJECTS DEVELOPED BY THE DEFENCE INNOVATION AGENCY (AID)

Polaris Quad MV850 © Laëtitia CARLIER/armée de Terre/Défense

MISPOC, a solution for monitoring the integrity of ballistic protection

Protecting combatants and land or air vehicles against various threats requires integrated systems that can be composed of at least one ceramic plate and a polymer-matrix composite material. However, ceramic-based personal protection solutions for combatants are very fragile and can develop cracks that reduce their ballistic properties. These cracks are difficult to detect in the field, and existing techniques are cumbersome to implement, costly and not readily available for use in external operations. The aim of MISPOC is to monitor the extent of wear on ballistic protection ceramic plates used by infantrymen by adding a passive sensor to the ceramic structure, which would use a remote interrogation device to detect the presence of cracks. The innovation of the MISPOC project lies in the development of a minimally invasive, passive and connected sensor. It is capable of checking the integrity of ceramic-based protection solutions at any time (using wireless connectivity) and very quickly (checking time less than 10 seconds) with a dedicated interrogator on a smartphone or tablet. MISPOC could represent a real gain in terms of capability, with increased availability of plates, lower costs linked to the logistical footprint, increased reliability of protection and greater confidence among combatants.

NANOTRACK, secure and resilient global satellite connectivity

The satellite-based Internet of Things (IoT) sector is undergoing a major technological and commercial transformation. By 2030, several billion objects will be connected, generating several terabits of data every year. The Internet of Things will enable the development of innovative services for users and will provide businesses and administrations, both civil and military, with a vast amount of information to help them optimise their activities. Nanotrack's objective is to connect stealthy, compact, highly autonomous sensors and beacons directly to a satellite infrastructure in low Earth orbit (LEO). It meets a need for national sovereignty by establishing a French ecosystem for IoT via French satellites. Nanotrack connects secure, jamming-resistant, stealthy, compact and long-range sensors and beacons to a LEO satellite infrastructure. It provides hybridisation with existing terrestrial networks, with the possibility of extension to a network of geostationary Earth orbit (GEO) satellites. Based on a resilient technology, Nanotrack offers new capabilities to forces for Blue Force Tracking (BFT) applications without GNSS (global navigation and satellite system), surveillance of sensitive sites, deployment of abandoned sensors, for logistical tracking, tracking of aircraft fleets (UASs, microlights, helicopters), or for exchanging critical information and relaying other local communication networks.

XXII, AI ready to revolutionise your infrastructure and operations

With the proliferation of video sensors (cameras, drones, etc.), it is becoming increasingly complex to extract useful information in a reactive way in order to make the right decision. XXII's project aims to develop a solution for detecting and transmitting to decision-makers qualified information in real time from a large quantity of video streams using artificial intelligence. XXII's solution is a truly cutting-edge technology. Thanks to sovereign AI developed after 7 years of research and development, it can detect a multitude of objects (people, vehicles, abandoned objects, etc.) and situations of interest (groups of people, crowd movements, people on the ground, etc.). Easy to use and compatible with 100% of cameras, alerts can be sent to existing infrastructure without any need for change management. This solution enables operational teams to control and optimise their actions in the field, for faster, more effective decision-making.

RODIN, the permanent solution for hypodermal reconstruction

The hypodermis is the thickest and deepest layer of the skin and fulfils a number of functions, such as protecting the underlying structures and aesthetic appearance of the skin. At present, the treatment of trauma such as burns focuses mainly on repairing the cutaneous tissue without taking into account lesions on the hypodermis. Yet the after-effects (physical, aesthetic and emotional) can be reduced by repairing this soft tissue. The best-known and most widespread technique today is lipofilling or fat grafting. However, this technique has an unpredictable resorption rate of 30-70% within a year, which means that the volume is reduced and the operation has to be repeated before the desired volume is reached. The aim of the RODIN project is to develop an innovative solution that is quick and easy to use, enabling the deep lesion to be repaired in a single operation with reconstruction of autologous adipose tissue, thereby reconstructing the whole of the skin without making the surgical procedure or the patient's care process more cumbersome. RODIN is a 3D-printed bioresorbable implant for enhancing an autologous adipose tissue graft (lipofilling). It promotes cell survival and therefore the preservation of the injected volume, then resorbs to make way for a hypodermis made up entirely of the patient's own tissues.

RSM (Robotic Sensitive Minesweeper), to keep the ordnance disposal team away from the threat

Landmine clearance operations are particularly dangerous, especially as they are often carried out manually and are therefore high-risk. To date, the detection of mines with a low magnetic signature is still uncertain. The aim is to develop a dedicated system for multi-sensor detection of anti-personnel mines, using mechanical probing and AI-assisted identification. The project has resulted in the creation of a mobile, remotely-operated robotic platform that can be used to assess the capability of detecting buried mines (metallic and non-metallic). The robotic platform combines three detection methods: a camera system for vision capture (to detect sub-munitions that remain on the surface), a ground-penetrating radar system (to detect changes in density in the ground, map them and detect potential mines) and, finally, a robotic mechanical probing system in the form of a polyarticulated arm that reproduces the manual operations of ordnance disposal teams. All this information provides the operator with pre-analysed information to help him make the right decisions.

AMBRA (Active Multistatic Broadcast Radar), a cooperative radar for UAS detection in urban areas

Airspace surveillance is an issue of national sovereignty. As the number of mobile objects in the air increases, so does the need to detect these systems, which are perceived as being at best invasive and at worst destructive. In the defence sector, this means protecting sensitive areas from potential threats posed by UASs, to ensure the safety of military forces in the field of operations. The civilian sector is also affected, as there is a need to ensure national security and the safety of people and property, such as protecting sensitive areas (nuclear power plants, for example) or major events (marathons, football matches, etc.). The objective of the AMBRA project is to develop an airspace surveillance system capable of locating and identifying mobile objects by utilising the infrastructure and transmission mode of a digital terrestrial TV broadcast network in a cooperative manner. The project has made it possible to test the potential of a new «collaborative passive» and multistatic radar concept for airspace surveillance in sensitive areas at low altitude (up to around 200m) with a range of a few kilometres. The innovation is based on one patented by the French TDF digital infrastructure and network operator. This allows the (discrete) insertion of optimised radar signals into the DVD-T2 (Digital Video Broadcasting – Terrestrial 2) network in a cooperative manner. The innovations proposed as part of the AMBRA project involve allocating part of the time and the carrier signal to the radar mission, which will make localisation more secure and reliable and optimise its accuracy depending on the mission.

QRF, stealth intelligence quad

The QRF (*Quad de Renseignement Furtif*) was designed to meet the requirements of missions described by the 2nd Hussars Regiment, which was closely involved in the project team. The aim was to develop a vehicle that would enable infiltration and exfiltration undetected in the silence of the night for intelligence units equipped with quad bikes, and for special forces, for greater stealth and a smaller carbon footprint. The QRF is a stealth quad with a hybrid engine that is agile off-road. It is powered by three French electric motors, giving it a top speed of over 100km/h on a sandy track (limited to 80km/h for land forces). Its traction battery gives it a silent range of 30km. Fuelled by 4 tanks, two auxiliary power units (APUs) recharge the battery as the vehicle travels, giving it a total range of 200km. In addition, the QRF generates enough energy to explore the capability of carrying equipment such as operational information and communication systems and drones. To protect the environment, the QRF is based on the current Polaris MV850 chassis.

MANAGING AN ARMAMENT PROGRAMME

This is the subject of an interactive exhibit on the stand of the Ministry for the Armed Forces (video, touch screens, immersive exhibits, etc.).

The aim is to discover the different stages of an armament programme through interactive exhibits that illustrate the role of DGA and its test centres, in cooperation with military staff and manufacturers. From the definition of the requirement to the production of the equipment or weapon, the exhibit retraces all the stages of a programme.

- Designing and producing the equipment of tomorrow: an armament operation is the production of a weapon system to deal with a threat with an immediate military effect. It involves operational, capability, technological, industrial and financial studies over an extended period of time. The exhibit explains the reality of an armament operation based on the Griffon MEPAC vehicle programme.

- Testing and expertise: DGA is the expertise, testing and engineering arm of the French Ministry for the Armed Forces. Technical expertise is the responsibility of the Engineering and Testing Directorate (DIE). The DIE utilises engineering methods and a coherent set of test equipment (measurement bases, test platforms, etc.) to provide global expertise. The aim of the presentation is to explain DGA's technical expertise through its unique test equipment and the unfailing commitment of DGA's technical experts.

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EUROSATORY 2024: CONFERENCES AND LIVE DEMONSTRATION

Discover the must-attend conferences and round tables at Eurosatory 2024, the world's leading defence and security exhibition. Join experts and opinion leaders for in-depth discussions on the latest technological innovations, current geopolitical challenges and tomorrow's security strategies.

MINISTRY FOR THE ARMED FORCES CONFERENCES:

TaiDX: artificial intelligence for defence

Artificial intelligence (AI) has become a major issue for the French Ministry for the Armed Forces, with a clear ambition: to accelerate the maturation of AI initiatives and spread the adoption of AI within the Ministry. In 2024, the strategy adopted is based on an ambitious approach aimed at increasing the Ministry's digital sovereignty. By focusing on AI, the Ministry for the Armed Forces intends to position itself at the forefront of innovation and national defence.

Venue: Jean Thèves Amphitheatre
Date: 17/06/2024
Time: 16 to 17.30

ARMY CONFERENCE:

The theme chosen by the Chief of Staff of the French Army to illustrate the Army's participation in the show is: "Transforming forces to win tomorrow's air-land battle: reactivity and power".

RETEX CONFERENCES

SERVAL: a milestone in the Army's capability transformation

Date: 19/06/2024
Time: 12:00 to 12:30

SICS at BIA 23: the digital tool and its role in tactical superiority

Date: 19/06/2024
Time: 12:30 to 13:00

What kind of automation for tomorrow's French ground-to-ground artillery?

Date: 19/06/2024
Time: 15:00 to 15:30

The Army's RETEX process: how the AdT exploits feedback from exercises and operations

Date: 19/06/2024
Time: 15:30 to 16:00

The revival of camouflage in the Army: seeing before being seen

Date: 20/06/2024
Time: 11.00 to 11.30

Round table discussion on innovation in the French Army and the added value of open innovation partnerships through GAI4A

Date: 20/06/2024
Time: 11.30 to 12.30

3D printing: serving land-based MCO and international programmes

Date: 20/06/2024
Time: 12:30 to 13:00

CONFERENCES FOCUSED ON THE FUTURE:

Combined multi-domain effects in high intensity operations thanks to TITAN

Date: 18/06/2024
Time: 12:00 to 12:30

Vulcan: robotising the ground forces, or how to integrate these new weapons in good time without hampering the fighter in tougher battles.

Date: 18/06/2024
Time: 12:30 to 13:00

The Synergie project: connectivity for collaborative combat

Date: 18/06/2024
Time: 14:00 to 14:30

The transformation of the French Army (education on the LPM multiyear defence spending law): To strengthen its operational superiority, the Army is undergoing a transformation

Date: 18/06/2024
Time: 14:30 to 15:00

Understand, decide and act faster than the enemy: Scorpion collaborative combat

Date: 18/06/2024
Time: 15:00 to 15:30

Effectiveness in depth: complementarity of fire support (remotely-operated munitions and FLP-T long-range strike)

Date: 19/06/2024
Time: 11:00 to 11:30

Shaping the future of rotary wing combat systems

Date: 19/06/2024
Time: 11:30 to 12:00

ALAT CONFERENCES:

Concept of employment for high-intensity rotary wing combat

Date: 19/06/2024
Time: 10:00 to 10:30

Operational feedback on the use of helicopters in the Sahel

Date: 19/06/2024
Time: 10:30 to 11:00

FRENCH ARMY LIVE DEMONSTRATION

The live presentation by the French Army illustrates a major operational commitment. The presentation highlights the vehicles in the Scorpion programme, the densification of drone capabilities and data exploitation, the beginnings of collaborative combat. The scenario retraces the course of an air-land operation through a sequence of phases: intelligence gathering, action in depth, delivery of fires and conquest. Around 90 soldiers from French Army units will be demonstrating some twenty pieces of equipment and a dozen drones currently in service.

Timetable

The two live demonstrations will take place on Wednesday 19 June 2024 from 11:30 to 12:00 and from 14:30 to 15:00.

They are open to the public without prior reservation.

The dress rehearsal on Sunday 16/06 at 14:00 is open to the media with accreditation.

Contacts

Captain Adeline Delarue - SIRPA TERRE media section

adeline.delarue@intradef.gouv.fr // sirpat.medias@gmail.com

Tel.: +33 9 88 67 27 34 / Mob.: +33 6 23 14 44 94

Second Lieutenant Vincent Le Van Gong - SIRPA TERRE media section

vincent.le-van-gong@intradef.gouv.fr

Tel.: +33 6 26 75 18 16

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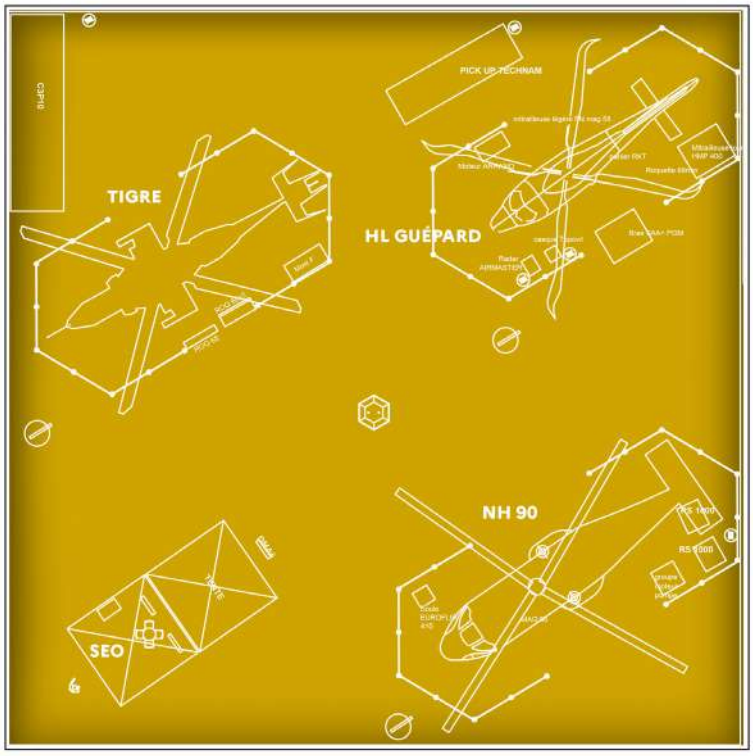

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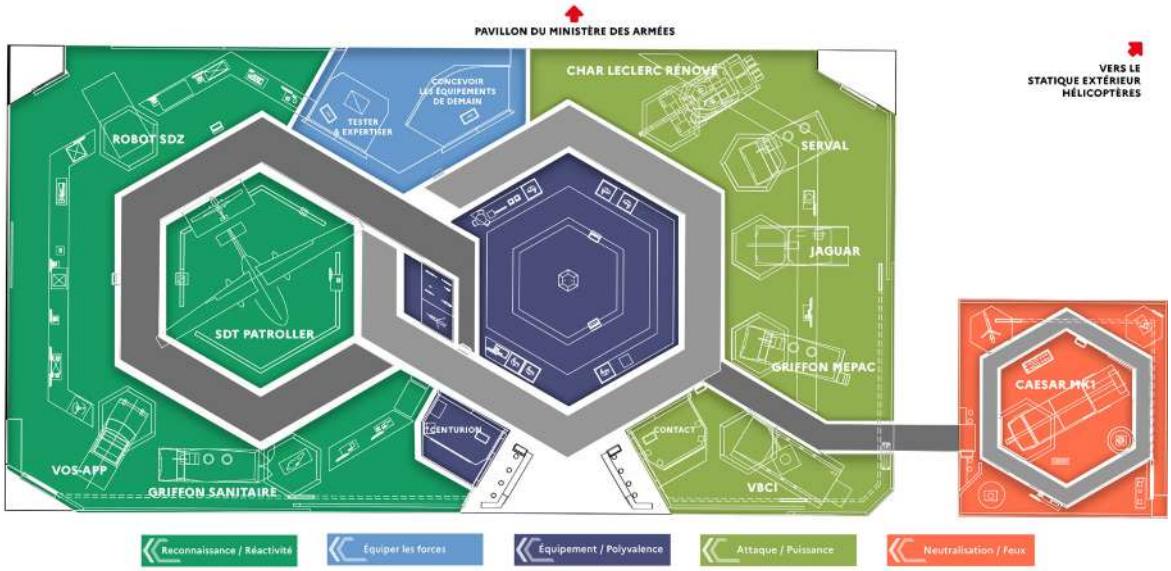

“ BUILDING THE COMBAT POWER OF TOMORROW’S AIR-LAND BATTLE FORCES “

Centre media du ministère des Armées

Tél. : 09 88 67 33 33

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