

Patria LVC

Live Virtual Constructive concept - Bridging real world and virtual training



Through Life Capability

Protected Mobility and Defence Systems



Through Life Capability



Battlefield and Critical Systems



EXTREME SURVIVABILITY

Finland is known for high technology and extreme resilience. The harsh nature and limited resources have pushed us to learn and innovate efficiently. Thorough preparation for the future is the backbone of our culture.

Patria has grown from its Finnish heritage to a modern and international defence and technology company with over 100 years of experience. We use resources wisely, create innovative solutions and build intelligent systems that provide extreme survivability in any condition. We work with our customers throughout the entire lifecycle to ensure maximum value. Honest and straightforward co-operation is at the core of our work.

We build exceptional partnerships that last through critical operations. That's what it takes when you stand for your sovereignty.

Trust us, we have been there.

ULTIMATE AVAILABILITY

Optimize and extend your fleet availability with our digital solutions and new advanced capabilities. We have the widest experience of the market from different platforms in all domains.

Our commitment to your fleet on land, in the air and at sea means that we are with you throughout the entire lifecycle. We lead platform-independent, large-scale integration and upgrade programmes.

Your personnel are always well prepared with our systematic training. Seamless collaboration with your organization and partners creates the best price and quality ratio and ultimate fleet availability for you.

We know what is needed to keep your fleets fully optimized and operational.

Patria - Extreme conditions embedded.



In the core of Patria's training system is blending of synthetic and live training entities. In Patria's LVC concept we offer customers a possibility to choose daily how they optimize the use of available assets to current training. To facilitate the optimal training missions Patria offers tools to combine and blend simulator and live training with computer generated forces in synthetic environment.

Patria LVC is a system designed to allow fighter pilots to log multiple hours of training in both live and virtual environments. And it begins with being able to expand, shrink, diversify and complexify at will both the real world and threat training environment.

In addition to savings in exercise costs, Patria LVC enables simulation of new sensors and weapon systems and training of complex tactical scenarios without the risk of being exposed to outside espionage.

The increasing breadth, variety and speed of threats in the battlefield today requires fighter pilots to be highly trained. It is not just a matter of logging in hundreds of flight hours to develop and hone manoeuvring and tactical skills. It is also a matter of training to be able to take in the considerable cognitive load now placed on them by the presence of a multitude of sensors and screens. Because as threats develop so do sensors and information, and fighter pilots must be able to process such information and make decisions in fast-paced, high-pressure situations.

Yet training for such levels of complexity can be resource intense, both in terms of flight jets' and trainers' availability. That is why over the past decade Patria has been working closely with its customer, the Finnish Airforce (FINAF), to develop the LVC training system.

Originally designed in 2010 as a synthetic training environment on two screens, the LVC has evolved to become a dome-like, fully networked experience. Since 2019 it provides fighter pilots with the look and feel of a real jet cockpit during their training without, however, the associated considerable drain on resources and platform operational availability.

Just as importantly, LVC can also function as a augmented reality training experience. By integrating live training fighter jets in a virtual environment, it allows pilots to simultaneously train together both onboard jets and at base.

Capable of also including CGF in the synthetic environment, LVC creates the opportunity to develop multiple, complex scenarios reflecting real theatres of operations' challenges.

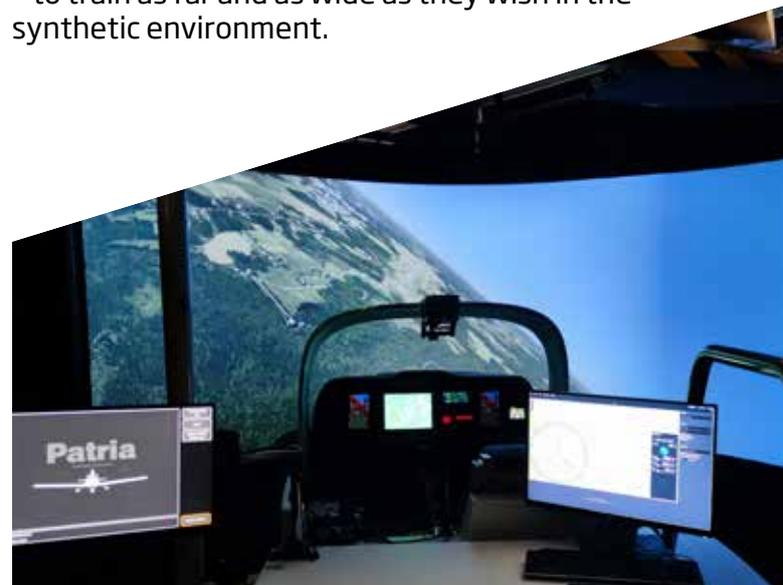
Patria's datalink products, such as the CANDL, enable the integration of live jets with the synthetic LVC environment via dedicated ground stations. In other words, what happens in the LVC shows on jets' screens and what happens in the air is reflected in the LVC.

Now you see me, now you don't

Training is important, but so is the necessity to keep tactical development and manoeuvres hidden from prying eyes, especially an adversary's. Yet some countries do not necessarily have a choice if they want to train within their own airspace. Geography can at times be very constraining.

The LVC training system allows customers to 'hide' into the synthetic environment. Away from the eyes and ears of a potential adversary, they can practice any number of scenarios, drills and manoeuvres. And even if the training also includes live fighter jets - e.g., blue forces - what appears on their screen and how they evade and/or shoot virtual and CGF red forces remains within the synthetic environment.

Additionally, the LVC allows countries with limited available airspace - whether due to geographical constraints or commercial traffic - to train as far and as wide as they wish in the synthetic environment.



Multi-domain and - platform training

Complexity in a theatre of operations is not just about the amount of information one has to process in a very short period of time. In a world where multi-domain operations have come to dominate the warfighting narrative, being able to successfully work across armed services - and platforms - can present a challenge in and of itself.

Patria's LVC training system has been developed to facilitate training also in those contexts. All types of platforms - vehicles, ships, fighter jets - can be networked into the synthetic environment in order to create a realistic scenario of multi-domain operations.

Additionally, because LVC can be connected to Patria TADS, Tactical Debriefing System, for Joint Forces, it allows armed services to review after action together, across multiple locations.

Finally, LVC has been designed to integrate UAVs. As such, it allows not only the training of UAV operators, but it also enables joint training across multiple platforms and sensors, thus enhancing Man-Unmanned Teaming (MUM-T) skills and operations.



Patria

When if is not an option.

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