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NATO Innovation Challenge Winner 2026

Beyond GPS

From Deep Strike to Counter-UAS Operations in Contested Airspace

Lessons from the Ukrainian battlefield

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Lessons from Ukraine

The battlefield has changed.

Contested airspace is the new operational reality.

Every future air operation must assume:

electromagnetic environment is working against you

Electronic warfare

Pervasive, adaptive EW across the entire front

GNSS jamming

Satellite navigation denied, degraded or spoofed

Limited connectivity

Continuous datalinks can no longer be assumed

Affordable mass

Numbers and cost per effect decide the outcome

GPS: An Option, Not a Dependency

What happens when the signal disappears?

GNSS-DEPENDENT	AUTONOMOUS BY DESIGN
Jammed: position lost	Navigates by what it sees
Spoofed: led off course	Nothing to spoof
Needs a continuous datalink	Mission executed on board
Vulnerability built in	Resilience built in

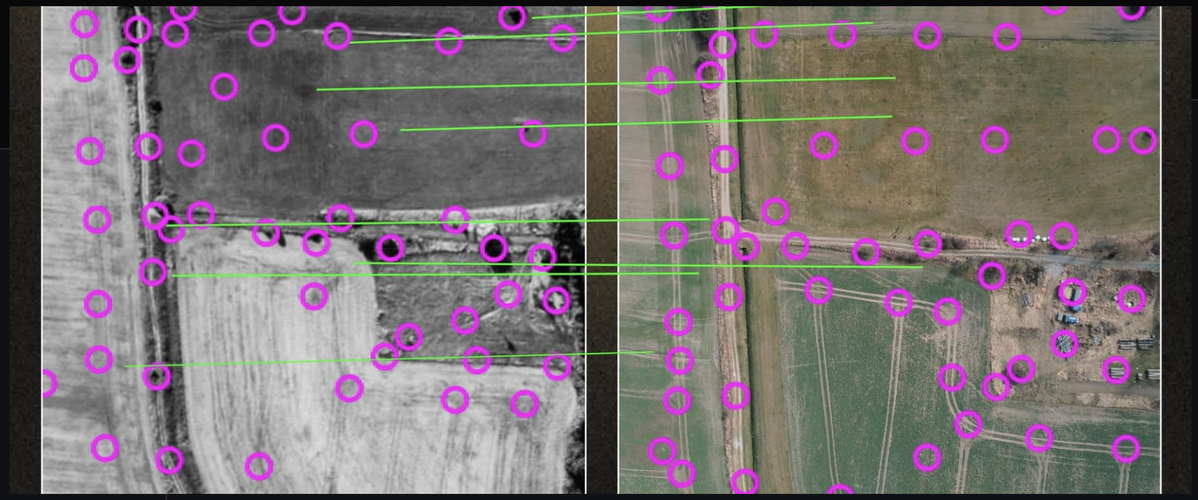


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solution: AI-Powered Visual Navigation

Software-based product — image segmentation and map matching. Autonomy without GNSS.





01 Capture

On-board camera images the terrain below

02 Segment

AI recognises roads, fields, buildings and water

03 Match

Features matched against pre-loaded reference maps

04 Navigate

Position fused with inertial sensors and autopilot — all on board

Deep Strike: Autonomy at Long Range

Precision and resilience at an affordable cost.

- Battle-proven: used operationally in Ukraine
- EW-resilient: visual navigation, no GNSS needed
- Long range: up to 650 km, fully autonomous
- Scalable: serial production on our own lines



650 km
MAX. RANGE (MTS-40)

1,200+
PLATFORMS DEPLOYED IN UKRAINE

10,000
ANNUAL CAPACITY WITHIN 12 MONTHS

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Persistent Airfield Denial

From operational problem to recognised innovation.

THE PROBLEM

Keep enemy airfields out of operation — persistently, even in GNSS-denied and heavily contested environments

OUR ANSWER

Waves of autonomous MTS UAVs: continuous disruption, not one-time destruction.

THE RESULT

LPP selected as winner — a recognised solution to a concrete operational need.

CHALLENGE REQUIREMENT		LPP SOLUTION
Range > 150 km	✓	600 km +
GNSS-denied operation	✓	Visual navigation
TRL 5 or above	✓	TRL 9
Autonomous operation	✓	Proven
Fieldable < 12 months	✓	Available now

Autonomous Counter-UAS



JWI-4000 up to 300 km/h · 4,000 m ceiling · 10 km range

The other side of autonomy. Different mission, shared technological foundation.

- **Fast autonomous decisions**

  Real-time on-board trajectory adjustment; thermal terminal guidance

- **Sensor integration**

  Works with existing radar and air-defence systems (ASTERIX-ready)

- **Cost-effective defence**

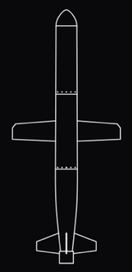
  Optimised against Shahed-type threats; few operators guard a long border

“Autonomy is not just about flying without a pilot. It is about maintaining mission capability when the environment is working against you.”

Affordable Precision at Scale

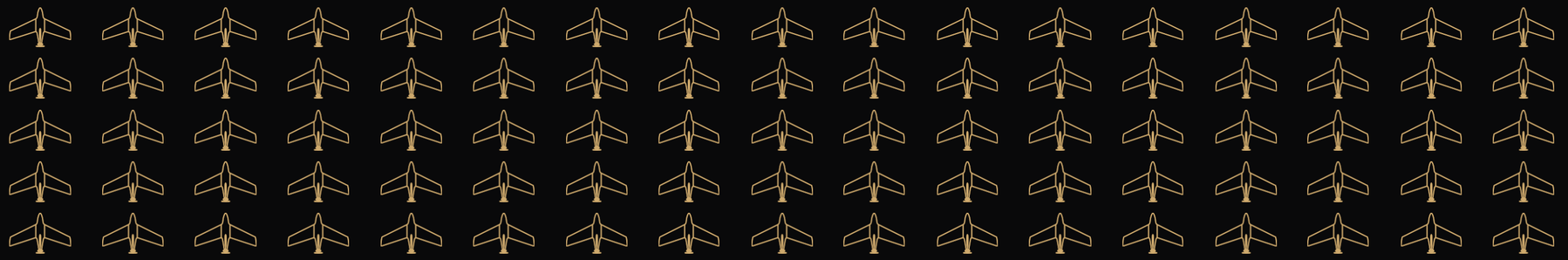
Mass matters. Cost matters. Resilience matters.

1 HIGH-END MISSILE



~85 AUTONOMOUS EFFECTORS

SAME BUDGET



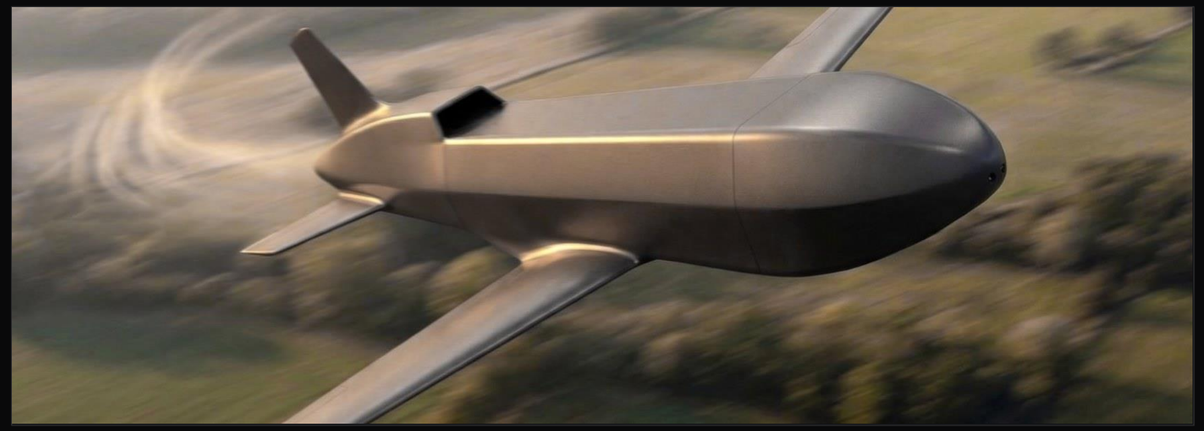
High-end assets remain essential — but they must be complemented by affordable, scalable mass.

3,000	6,000	10,000	500
MTS ANNUAL CAPACITY TODAY	WITHIN 6 MONTHS	WITHIN 12 MONTHS	DRONES PRODUCED MONTHLY

Our Next Jet-Powered Platforms

Faster platforms with the same DNA: autonomy, visual navigation, EW resistance.

Narwhal cruise missile



Up to 750 km/h · up to 772 km · up to 200 kg payload

Nightray low-observable flying wing



Up to 500 km/h · 400 km · up to 30 kg payload

- Battlefield → development, faster
- More open testing with industry
- Faster fielding of proven technology

What NATO Needs Next

From innovation to operational capability at higher speed.

Faster integration.

From a successful test to a fielded capability in months, not years.

Scalable procurement.

Affordable systems, ordered and produced at the scale operations demand.

LPP IS READY TO CONTRIBUTE

- Technologies
- Experience
- Industrial capacity

Let´s turn them into scalable Allied capability — together.



What our armed forces urgently need are affordable, resilient capabilities that can be deployed rapidly and at scale.

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Come and see us today or tomorrow at FFF

Hall 1 – Stand No. 160
PVA EXPO PRAGUE