

INTERoperability Standards for Unmanned Armed ForCes SysTems

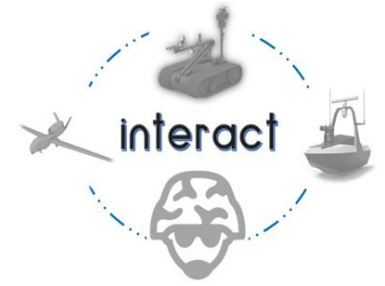
INTERACT PROJECT

Overall Presentation



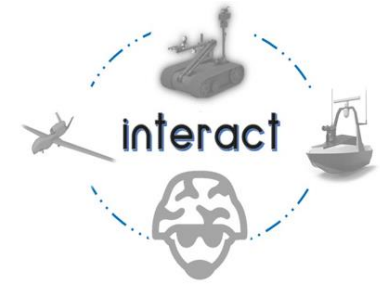
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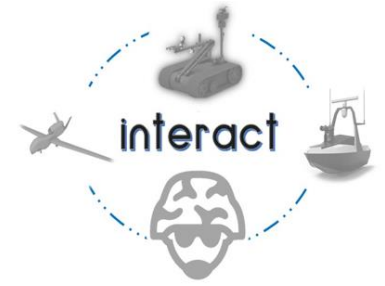
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INTERACT at a Glance



- Acronym: **INTERACT**
- Title: **INTERoperability Standards for Unmanned Armed ForCes SysTems**
- Call identifier: **PADR Call US-03-2019**
- Maximum Foreseen EU Contribution: **1.500.000 €**
- Project duration: **24 months**
- Start date: **1st June 2021**
- Project coordinator: **Fraunhofer Gesellschaft**

Introduction to the Project



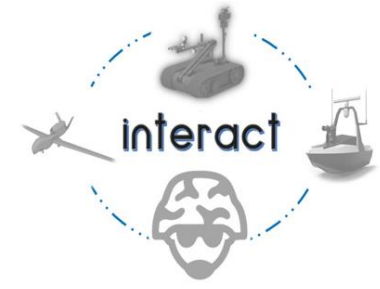
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INTERACT PADR project enhances the capabilities of **European armed forces** to safely and effectively operate *unmanned systems* together with *manned systems* in joint or combined operations.



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Introduction to the Project



The project will deliver the effective means to ensure the **interoperability** and **standardisation** of different:

Unmanned systems

Equipment

Components

Procedures

For maximising **benefit** and optimising **adoption** and **integration** of **unmanned systems** in the operation of **armed force**.

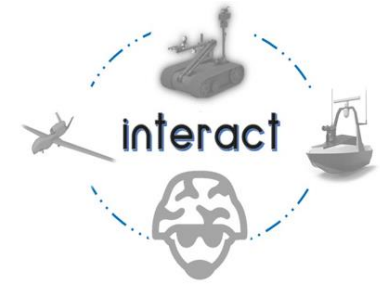


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The Challenge



Unmanned systems are already broadly used by the **armed forces** to conduct a wide variety of tasks **ranging** from



Data collection,



Providing services
(like transport, navigation and communication),

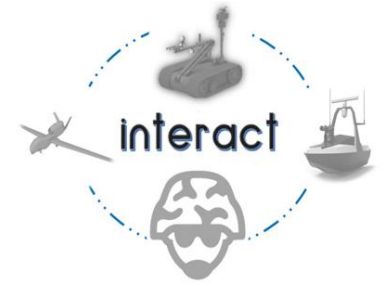


Providing effects
(kinematic and non-kinematic).



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The Challenge



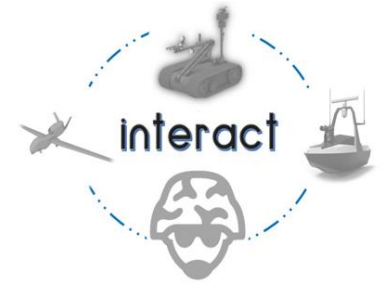
Currently, **unmanned airborne systems** are dominating, but **unmanned ground vehicles** and **surface water systems** are also increasingly complementing traditional branch of services and expanding their **range of applications**.

The complexity of the **military tasks** and **missions** are expected to broadly expand the use of unmanned systems in the **defence domain**, often **operating together** with manned systems and human actors.



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The Challenge

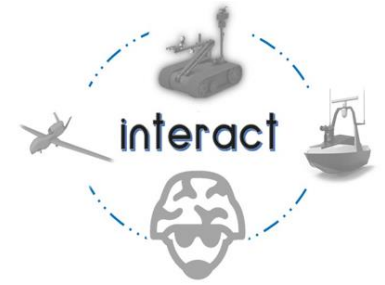


The increasingly demand for competitive solutions has led to innovative unmanned military systems that have been developed and tested throughout Europe by various large manufacturers and industries.

However, each manufacturer implements different ways of navigation and control, different interfaces for data acquisition and processing, and different possibilities of operating unmanned systems in a complex environment together with manned systems.

Consequently, **interoperability** and **compatibility** among the systems is **reduced**, the **vendor lock-in** is **increased** and the **system life cycle management** is **hampered**.

INTERACT: The Offered Solution

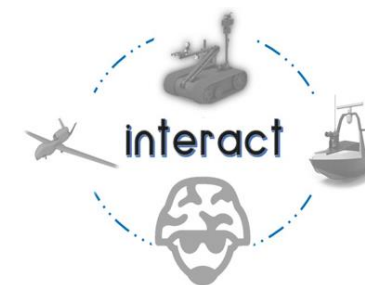


The development of an ***interoperable open architecture*** for mobile, unmanned systems (***land, air, and water***) by the **INTERACT project** provides a strategic value for both – **operational end-users** and **industry**.



The ability to make the **unmanned systems interoperable i.e. exchange data and information from various systems on one hand** and **ensuring interchangeability across system payloads in a flexible manner on the other hand**, will enable the **armed forces to react comprehensively to rapidly changing requirements**.

INTERACT: The Offered Solution



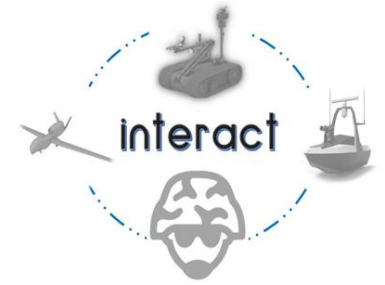
In brief, the INTERACT solution will:

- **Enable a smoothly adoptable composition of systems and teams**
(both manned and unmanned).
- **Facilitate that required resources can be exchanged rapidly and reallocated.**
- **Reduce or avoid system downtimes by optimally distributing and exploiting systems or system parts.**



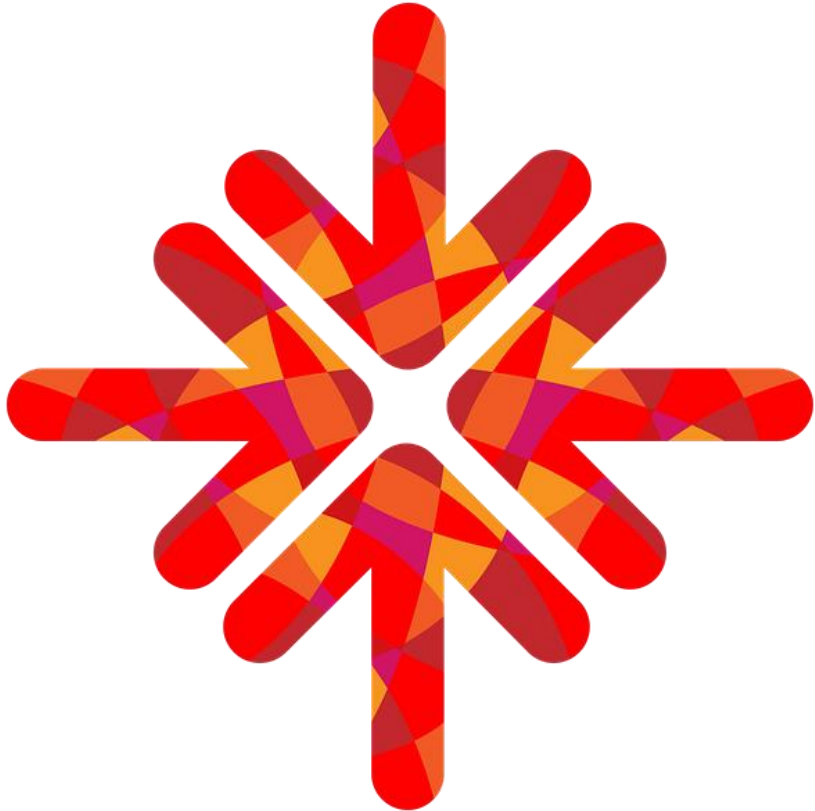
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INTERACT: The Offered Solution



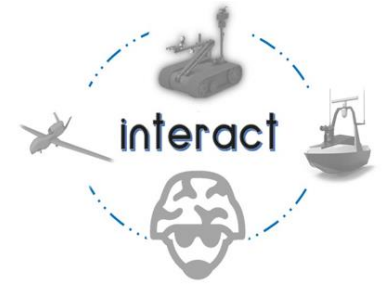
All the above can apply within **armed forces units**, between **different armed forces units** or service branches but conceptually **also across national forces**.

Lastly, **standardized interfaces for human-machine interaction** can achieve continuity in the handling of the systems with positive effects on the **certification, training and relevance** of the assets.







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Objectives



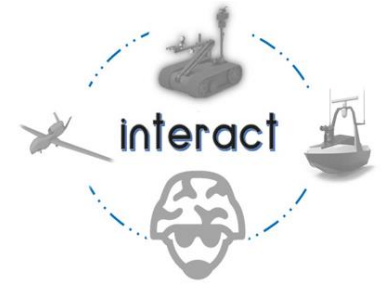
The INTERACT project will propose a set of interoperability standards for military unmanned systems which will be compatible across the domains of:

-  **IT services,**
-  **Data,**
-  **Data Links,**
-  **Engineering procedures.**



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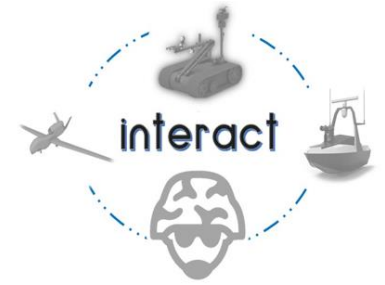
Objectives



These **interoperability standards** will be aggregated and integrated into an **interoperable open architecture** of **unmanned systems**.

As such, **INTERACT** defines the **first step** towards **life cycle interoperability**, which is a critical strategic level for competitiveness of **European defence industry** and an essential enabler to provide **European armed forces** with **information superiority** and **decision dominance** over adversaries.

Interoperable Open Architecture



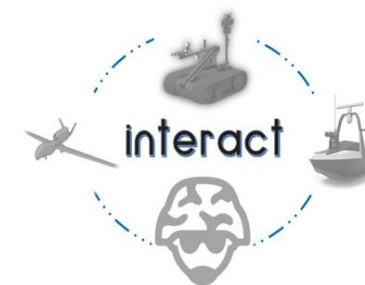
INTERACT aims to offer to the **EU** and the **European Armed Forces** an **interoperable open architecture** with a set of interoperability standards, to **better plan** and **operate unmanned systems** in military missions.

The **unmanned systems industry** in Europe will benefit as **INTERACT** enables the industry to build their current and future developments of unmanned systems on the basis of an **Interoperable Open Architecture** with common interoperability standards for **unmanned systems**.



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Consortium



AIRBUS



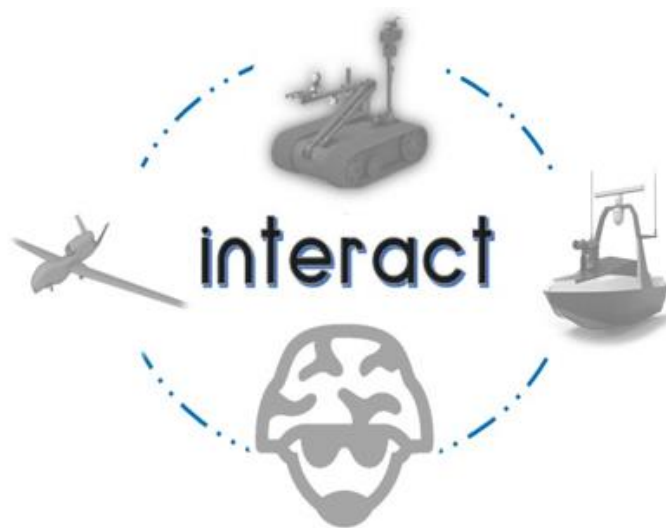
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Thank you for your attention!

Any questions?

www.interact-padr.eu



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