Egile | DRIVEN BY PRECISION

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EGILE MECHANICS PRESENTATION

OUR COMPANY AND PRODUCTS

We are an industrial and technological group which provides **specialized services and products in the field of high precision mechanics**, committed to the creation of high-value solutions in sectors such as aerospace and metal packaging. The first one accounts for 70% of sales.

EGILE MECHANICS is one of Spain's leading manufacturers of high-technology aeronautical components. Strategic supplier.

KEY COMPANY FIGURES

- **272** employees
- **592** domestic suppliers
- Manufacture **100% in Spain**
- Commitment to **innovation**
  13% investment in R&D
- 33,4€ Millions of revenue
- >50% sales are exported

BUSINESS LINES

EAT
Aero Transmissions

Development of **transmission and gear systems** in the field of turbines, turboprop or turbofans engines and for helicopter applications.

SAFRAN
AIRBUS HELICOPTERS
Avio

EAS
Aero Systems

Development of **precision and accountability components**, intended for high criticality systems in different aircraft systems such as landing gear or complex actuation systems.

SAFRAN
sener SENER Aeroespacial
HEROUX DEVTEK
Roxel
piedrafita

EAE
Aero Engines

Development of different products that make up the **hot parts or aircraft engines** such as NGVs, TBH, blades.

ITP AERO

ECT
Can Tooling

Solutions for metal packaging. Design, manufacture and assembly of all types of **dies** and **supply of complete systems** for any format of **EOE easy-open lids**, even developing **turnkey projects**.

EVIOSYS
ENVASES UNIVERSALES
CROWN
Massilly

EEP
Extreme Precision

Design, development and manufacture of highly complex mechanical systems for large scientific facilities and for any sector requiring extremely precise mechanics.

Ciemat
ESS bilbao
cea
CERN

EGILE MECHANICS PRESENTATION

AERO BUSSINES MODELS

We follow two business models for the services/products we offer to the aerospace sector:

BUILT TO PRINT: we manufacture according to the specifications, drawings and detailed documentation provided by our client.

BUILT TO SPEC: Our services include design, engineering, technical documentation, and the manufacturing of prototypes/demonstrators to meet the exact functionalities specified by our clients.

BUILT TO PRINT

BUSSINES LINES

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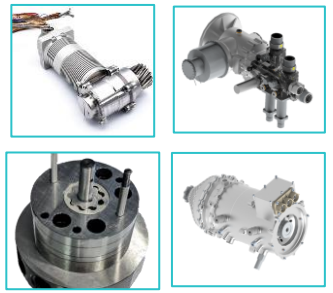
ITP AERO

BUILT TO SPEC

Product Development

R&D

From BTP to BTS



In-house designed state-of-the-art technology. From design to validation and testing, through the whole manufacturing process

ITP AERO

SAFRAN

AIRBUS HELICOPTERS

indra

EGILE MECHANICS PRESENTATION

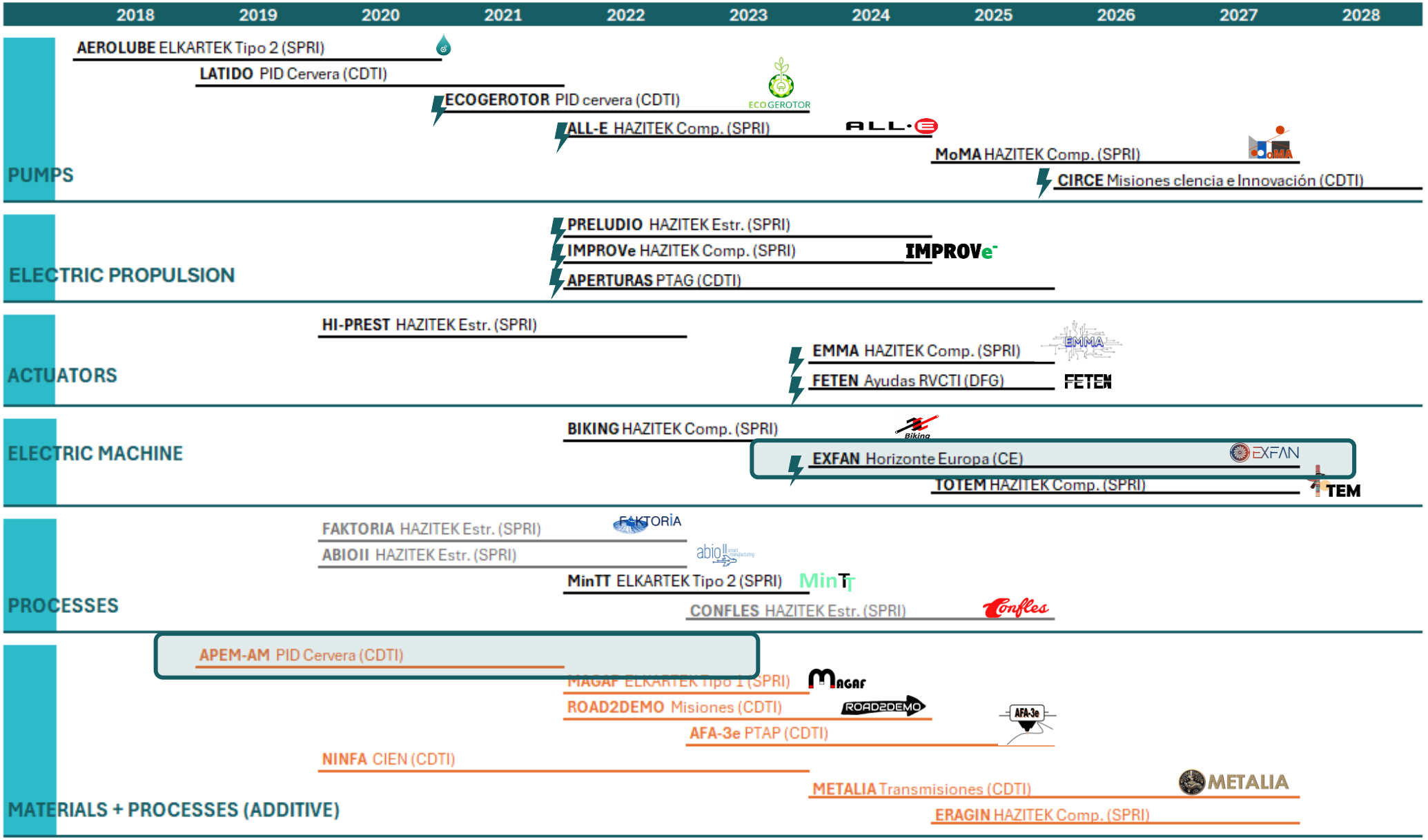
AERO BUSSINES MODELS

We are focused on the development of specialized **technologies applied to transmission, hydraulic, and electromechanical actuator systems**. We are also actively developing of **metal Additive Manufacturing (AM)**, levering its results to manufacture certain complex-geometrics components in order to improve system performance.

	PRODUCT & PROCESS TECHNOLOGY applied to…			
	Transmissions 	Oil & Fuel Pumps 	Electric Machine & Control 	Additive Manufacturing 
… both integrated into different kind of SYSTEMS: Transmissions 				
Hydraulic Systems 				
Electro Mechanical Actuator (EMA) 				

EGILE MECHANICS PRESENTATION

PUBLIC FUNDING PROJECTS



Novel recuperation system to maximize **Ex**ergy **F**rom **An**ergy for fuel cell powered geared electric aircraft propulsion system

Horizon-CL5-2023-D5-01-08 – Accelerating climate-neutral hydrogen powered/electrified aviation

https://exfan-project.eu/

Funded by
the European Union

Objectives & Challenges

Heat Dissipation

Design a revolutionary heat exchanger integrated into a geared electric fan.

Recuperation Technology

Develop an advanced recuperation device, harnessing cutting-edge technology to efficiently convert waste heat into additional thrust.

Thermal Management System

Lay out a sophisticated thermal management system to elevate heat quality

System Simulations

Implement comprehensive system simulations providing invaluable insights into the complexity of the novel propulsion system.

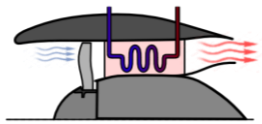
Impact

Reduce global warming potential.

Information Exchange

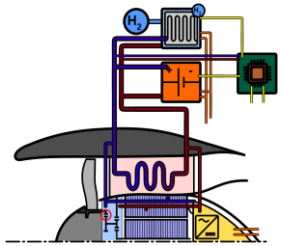
Facilitate knowledge transfer by sharing results with Clean Aviation and Clean Hydrogen JUs

Thrust vs Drag



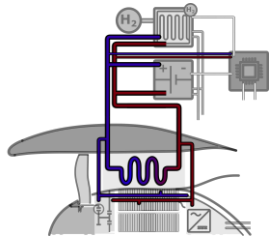
There is a trade-off between the possible generated thrust and the drag of the HX

Operation conditions



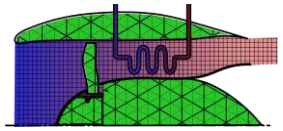
The optimal concept of operations for the exFan system might be different to standard aircraft operations

Heat quality



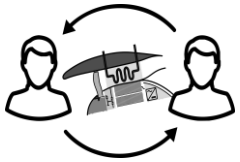
Heat Exchanger (HX) heat transfer rate depends on temperature difference

Validation

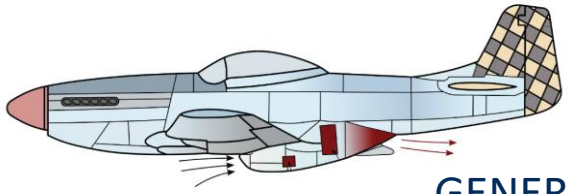


The exFAN concept needs to be validated at a low TRL to justify further development

Integration



The integration of exFan into the propulsion system is necessary to enable interaction between the developments



EXFAN WILL DEVELOP A NOVEL THRUST GENERATING AND HEAT DISSIPATION SYSTEM FOR A GEARED ELECTRIC FAN OF MEGA-WATT CLASS POWERED BY FUEL CELL

Funded by the European Union

Consortium

Project Coordinator

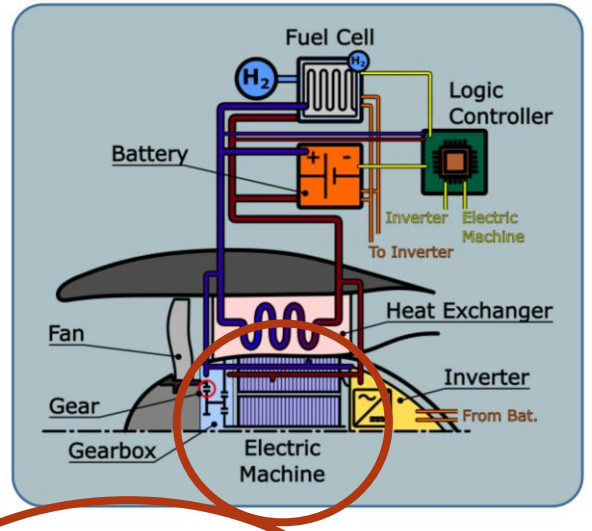
cidetec surface engineering

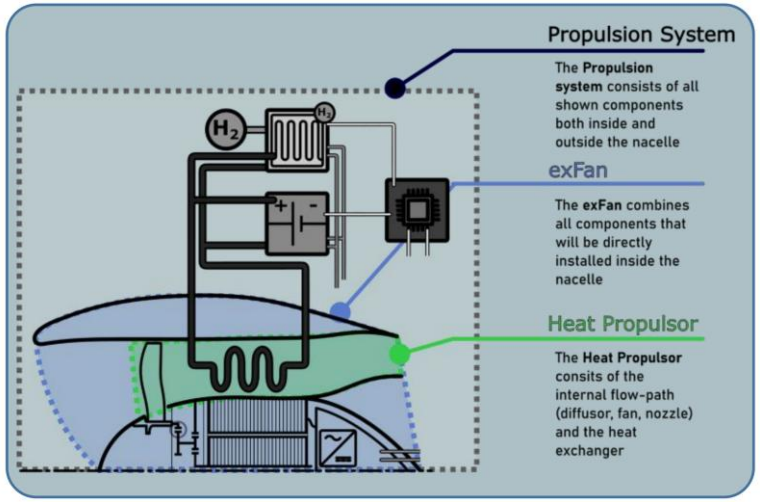
Technical Coordinator

ADT engineering

Research Coordinator

TU WIEN TECHNISCHE UNIVERSITÄT WIEN Vienna University of Technology





Project Partners

TUM FZG

IRES Innovation in Research & Engineering Solutions

Egile MECHANICS

powerid

Fraunhofer IAPT

EASN TIS

DLR Deutsches Zentrum für Luft- und Raumfahrt German Aerospace Center

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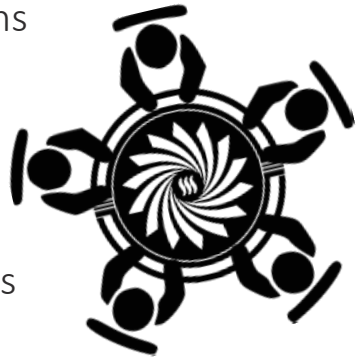
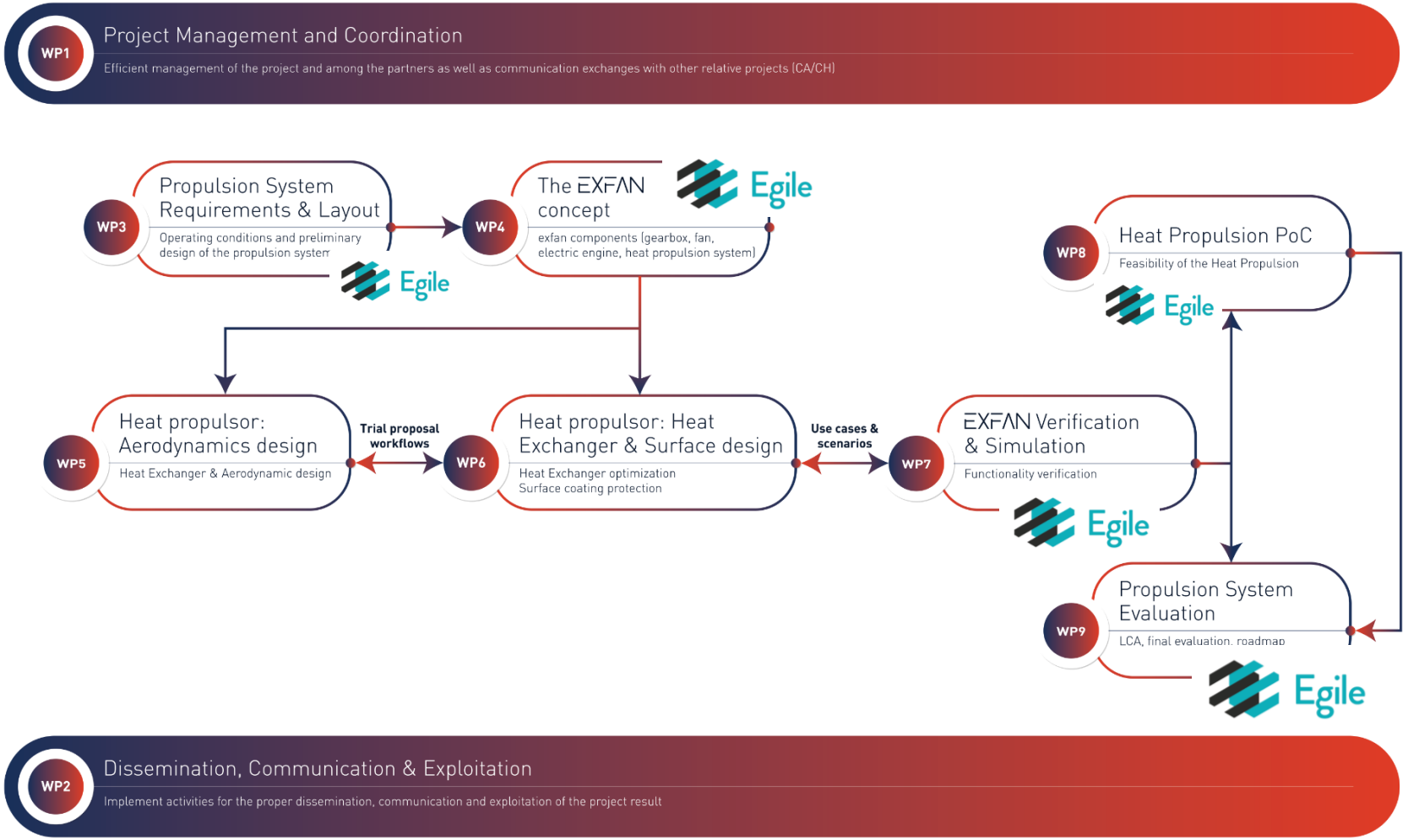
Work Structure & Management

General Asemmbly (GA)
every six months

WP updates
every two weeks





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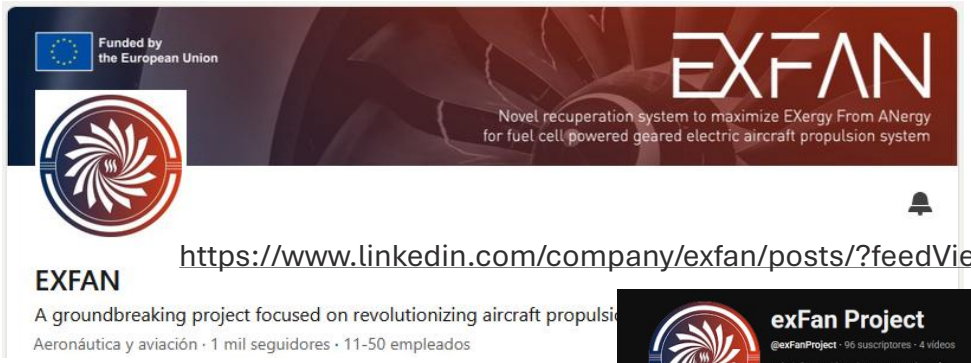
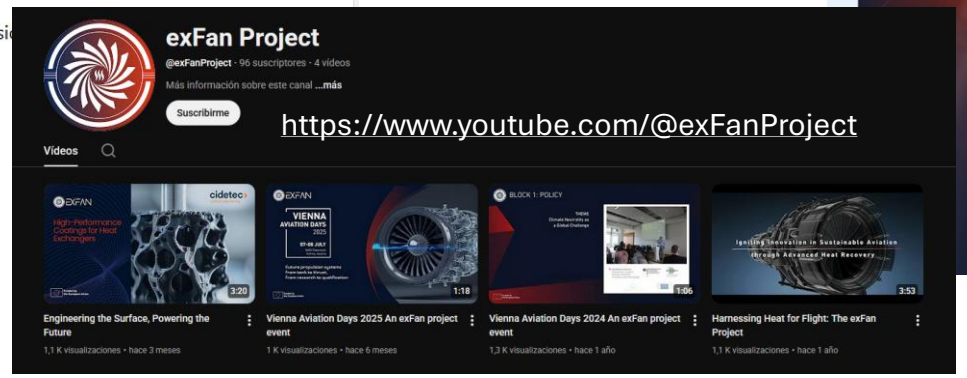
Communication Activities



https://www.linkedin.com/company/exfan/posts/?feedView=all



https://www.youtube.com/@exFanProject

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the European Union

EXFAN

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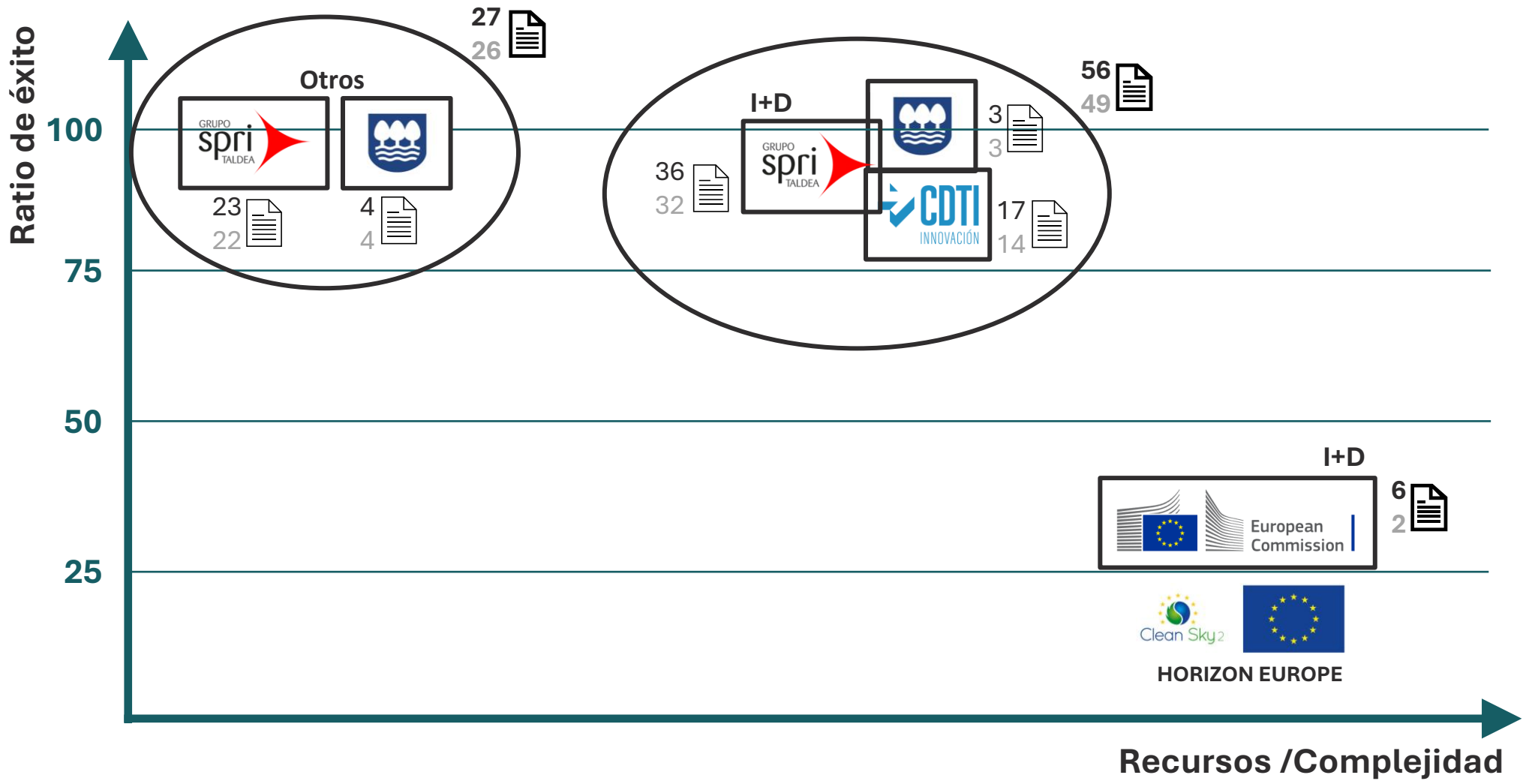
PUBLIC FUNDING PROJECTS



¿POR QUÉ EUROPA?

Estrategia EUROPA

- **Financiación de actividad I+D**
- **Aprendizaje** de la colaboración
- **Prestigio y reconocimiento.** Visibilidad del potencial de EGILE desarrollador de tecnología disruptiva
- **Oportunidad de negocio.** Estrecha colaboración con potenciales clientes en sectores estratégicos (AERONAUTICA y DEFENSA)

OBJETIVOS ESTRATÉGICOS

- Adquirir conocimiento experto en programas europeos de aeronáutica y defensa
- Identificación de eventos estratégicos donde debemos estar presentes para optimizar recursos internos
- Identificación de Partners con capacidad de tracción
- Entrada en grandes proyectos tractores que acaben en producto final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