Sant'Anna
Scuola Universitaria Superiore Pisa

esa BUSINESS INCUBATION CENTRE Turin

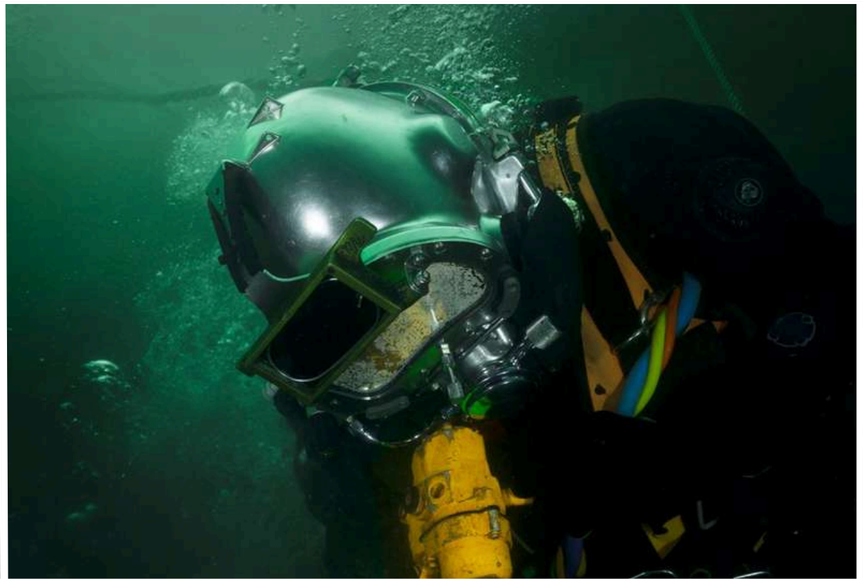
cdp

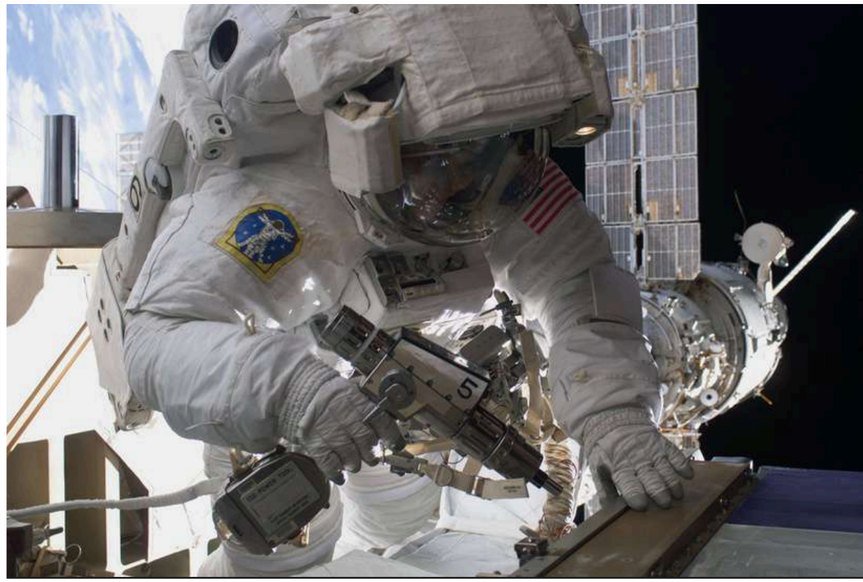
RoboIT

pariter PARTNERS

scientifica

PROBLEM





TRADITIONAL DESIGN APPROACHES TO ROBOTICS FOR HARSH ENVIRONMENTS **DO NOT SCALE**

Complexity

High cost

Specialization

MISSION

FWR AIMS TO DEFINE THE **NEW ROBOTICS STANDARD** FOR HARSH ENVIRONMENTS

FWR develops robots capable of delivering advanced robotic capabilities in *ANY* environmental condition, with extreme reliability, simplicity and cost-efficiency

SOLUTION

ROBOTIC ARM

Passive structure, inherently compatible with any harsh environment

SHIELDED ACTUATION BOX

Electronics, sensors and electric motors are housed in the box

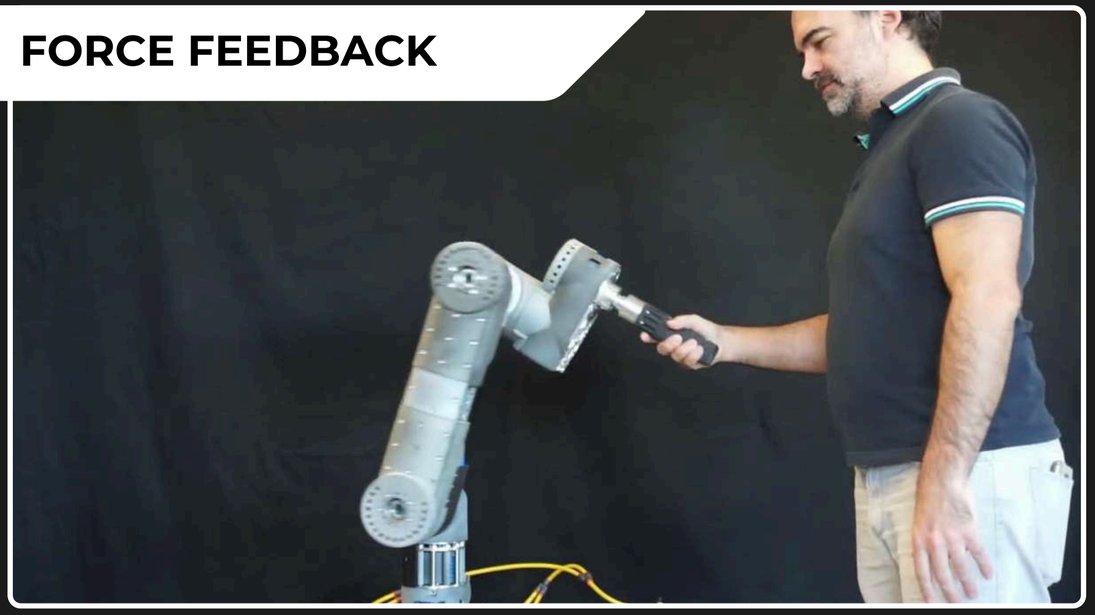
FLUID WIRES

High-quality, fluidic transmission system

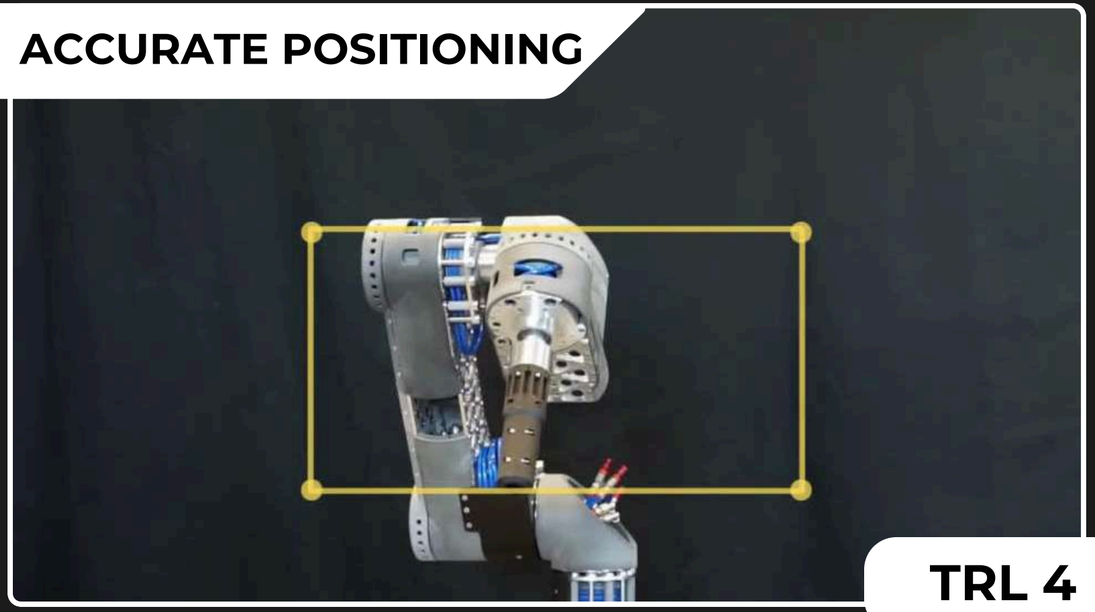
3 Patents filed

SOLUTION

FORCE FEEDBACK



ACCURATE POSITIONING



*Click here to see the videos

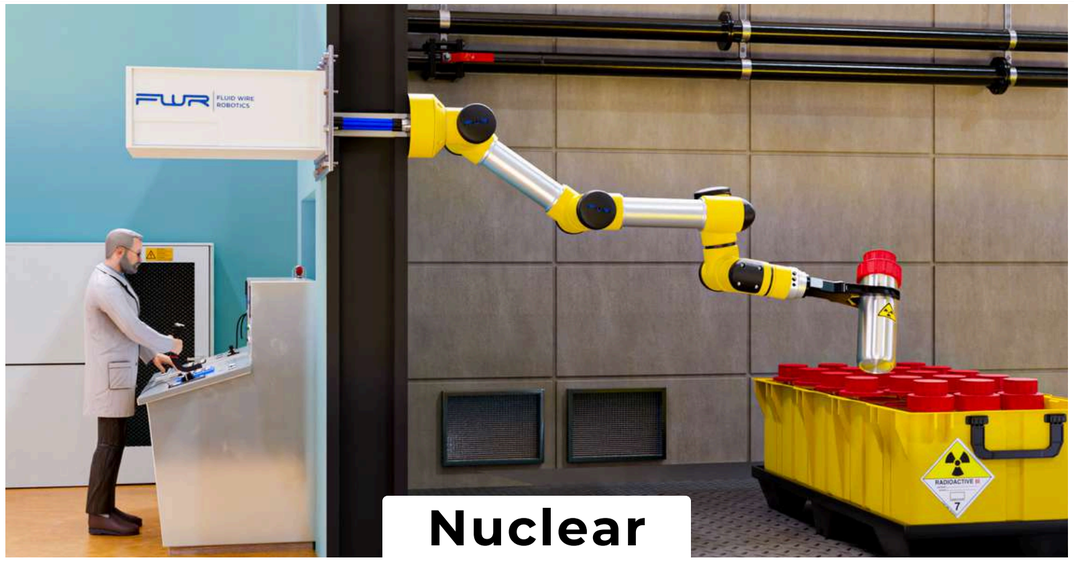
A wide range of capabilities have been demonstrated in a lab environment

the robotic arm is completely **SENSORLESS**. It neither embeds any sensors nor actuators!

Fluid Wire Technology is the ideal platform for **advanced** and **reliable** manipulation in extreme environments. *(teleoperation mode available)*

TRL 4

MARKETS



Nuclear

Space

Harsh & Innovative Industrial

Underwater

APPLICATIONS

- Inspection & Maintenance
- Radiactive material and waste handling
- Decommissioning tasks

COMPETITIVE ADVANTAGES

- Reliability in radioactive conditions
- Slender arm ideal for accessing narrow spaces
- Modular and reconfigurable for custom needs

APPLICATIONS

- In-orbit servicing
- Active debris removal
- Collaborative/autonomous assembling

COMPETITIVE ADVANTAGES

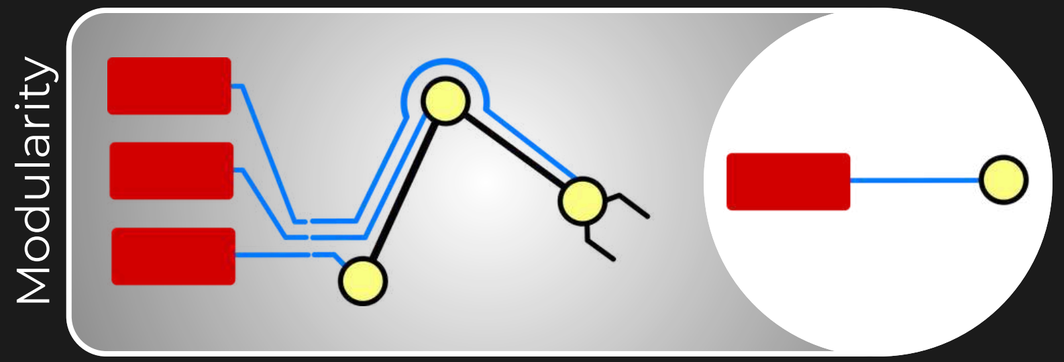
- Lightweight & low-inertia arm
- Superior thermal dissipation >> undersizing of actuators and highly dynamic movements

APP.

- ATEX/Ex
- Portable Arms
- Mobile Platforms
- Foundry
- Shipyards
- Off-shore

esa BUSINESS INCUBATION CENTRE Turin 20-month incubation program

DEVELOPMENT ROADMAP



Oct. 2024 — Radioactive > 1 MGy — ENEA ✓

Dec. 2024 — High Temperature > 150°C

Mar. 2025 — Vacuum — esa-BIC

Apr. 2025 — Underwater > 100 m

TRL 5

Financial feasibility

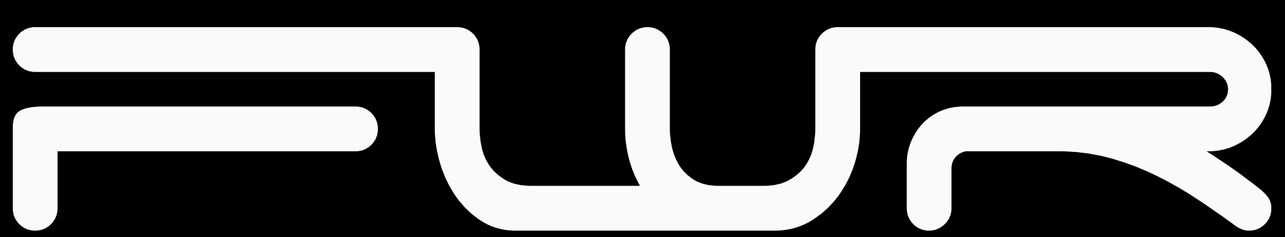
1.200.000 €
Seed Round
(fully committed)

cdp · pariter PARTNERS · Robo IT · scientifica

+1 VC fund TBA

FOUNDERS


MARCO FONTANA
CTO
FRANCESCO DAMIANI
Head of Electronics
GIANLUIGI GRANDESSO
COO
MARCO BOLIGNARI
CEO
IVAN DE LEONARDIS
CMO



FLUID WIRE
ROBOTICS

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