www.trinityrobotics.eu

Aleš Ude

Jožef Stefan Institute, Slovenia

DIH network TRINITY

Digital Technologies, Advanced Robotics and increased Cyber-security for Agile Production in Future European Manufacturing Ecosystems

[DT-ICT-02-2018](#) - Robotics - Digital Innovation Hubs (DIH)

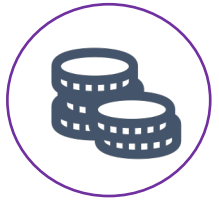EU funding: ~ € 16 000 000

54 months – January 2019 to June 2023

Improve agility & innovation capability of European manufacturing companies (focus on SMEs) through robotics, possibly supported by IoT and cyber-security technologies
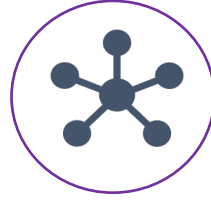
Build a network of Digital Innovation Hubs beyond the project life-time

Provide critical mass of use cases to demonstrate new robotic technologies & added-value in different sectors

Create a digital access point to facilitate access to knowledge, collaboration and networking
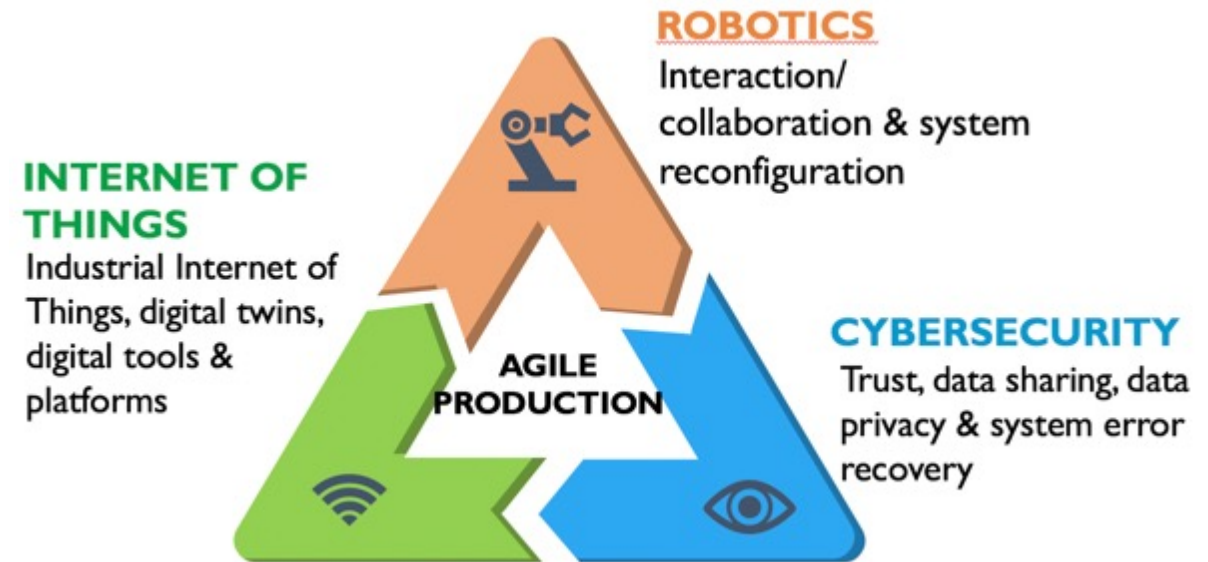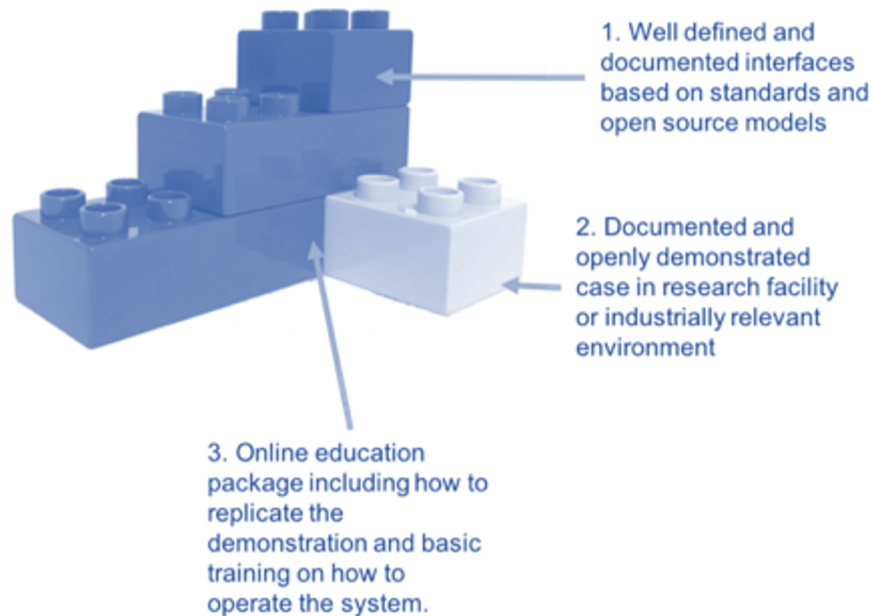
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Consortium

- Coordinator: Tampere University

- 16 partners from 10 countries:

  - 5 universities
  - 3 Research & Technology organisations
  - 2 companies
  - 4 industry/technology associations
  - 2 technology broker SMEs
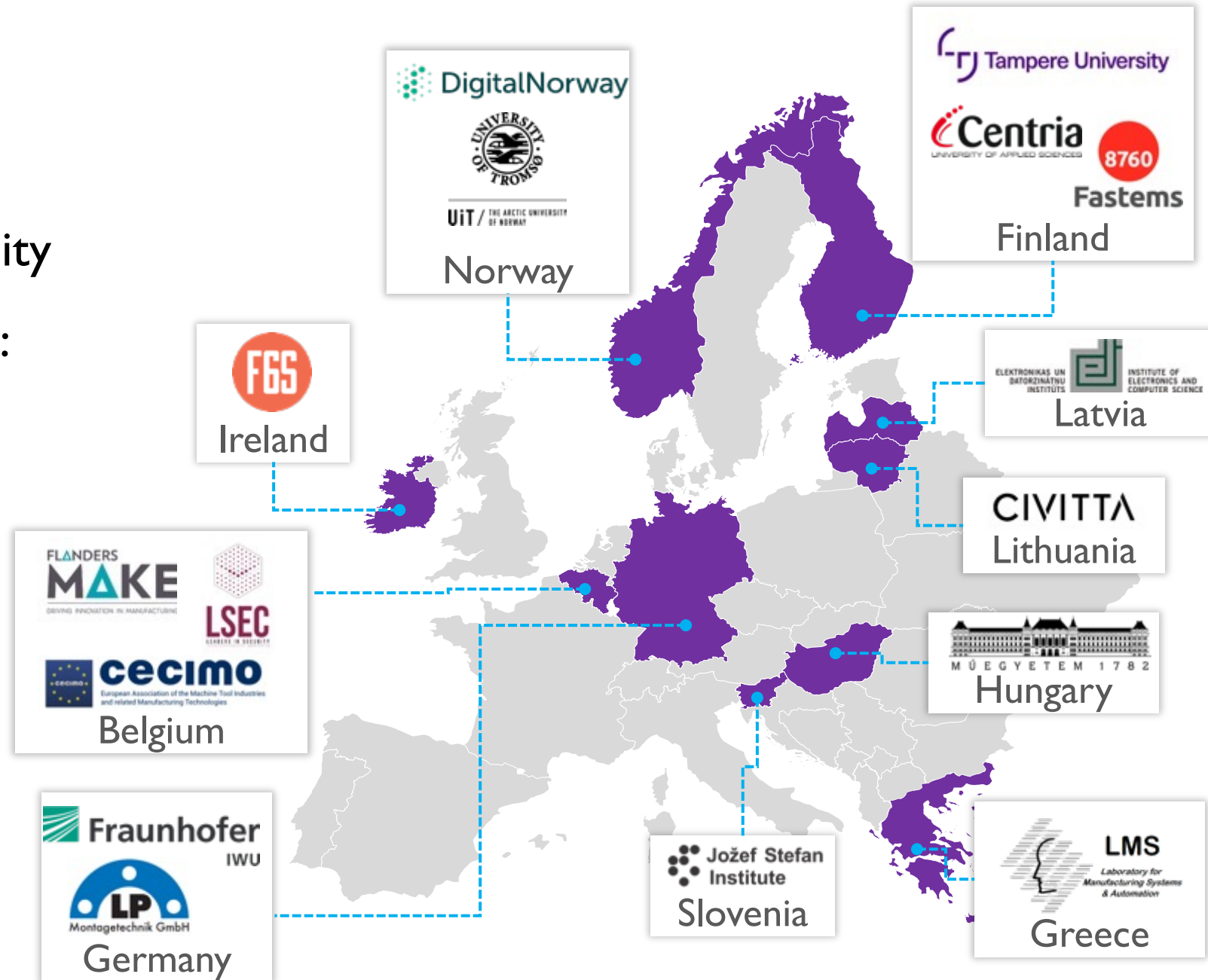
Concept and approach for increasing knowledge

TRINITY Target: over 50 modular use case demonstrations, with 150 technical modules by the end of 2022

1. Well defined and documented interfaces based on standards and open source models

2. Documented and openly demonstrated case in research facility or industrially relevant environment

3. Online education package including how to replicate the demonstration and basic training on how to operate the system.

INTERNET OF THINGS
Industrial Internet of Things, digital twins, digital tools & platforms

ROBOTICS
Interaction/ collaboration & system reconfiguration

AGILE PRODUCTION

CYBERSECURITY
Trust, data sharing, data privacy & system error recovery

Two calls; 2019, 2021
- 70% funding
- SMEs and slightly bigger consortiums
- 50-300k€ for 6-12 months demos
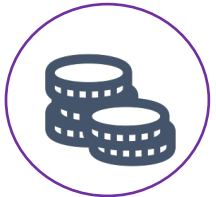
What is in it for you?

Access to solutions adapted to your needs (modular approach)

Access to wide network, expertise and knowledge through the TRINITY network and digital access point
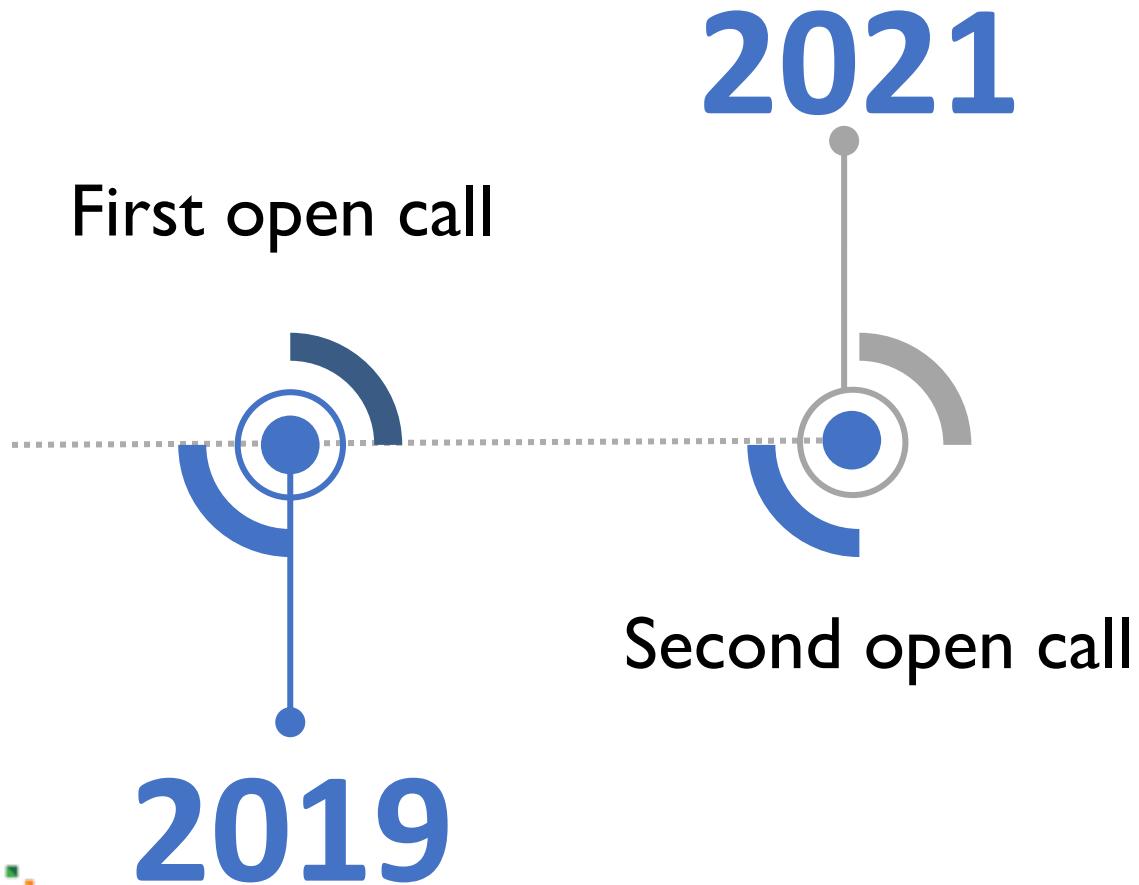
Speeding up the technology transfer and shorten time to market

Funding opportunities through open calls – help us shape the call topics to meet your needs

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Open calls

2021

First open call

Second open call

2019

- Deadline for the 2nd open call: June 1st, 2021
- Up to 30 company demonstrators to be funded
- Proof-of-Concepts in industrial environments
- Up to EUR 200,000 funding per demonstrator (70%)
- Total budget 3,5m€ for 2nd Open Call

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2nd TRINITY open call

- TRINITY external demonstrations can be a proof of concept experiments testing the TRINITY technologies or they can be novel solutions innovated by the applying SMEs.

- Inspiration and ideas for external demonstrations can be found from our TRINITY demonstrations catalogue.

- TRINITY technology modules can be used in the proposed applications.

- TRINITY demonstrations & modules can be accessed at

  https://trinityrobotics.eu/catalogue

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TRINITY External Demonstrators

Open Call – 2 tracks

TRINITY solutions	NOVEL solutions
Implementation of available TRINITY module(s)/use cases	New solution contributing to TRINITY objectives

SME Tech/end-user — Lead – up to 3 partners Consortium

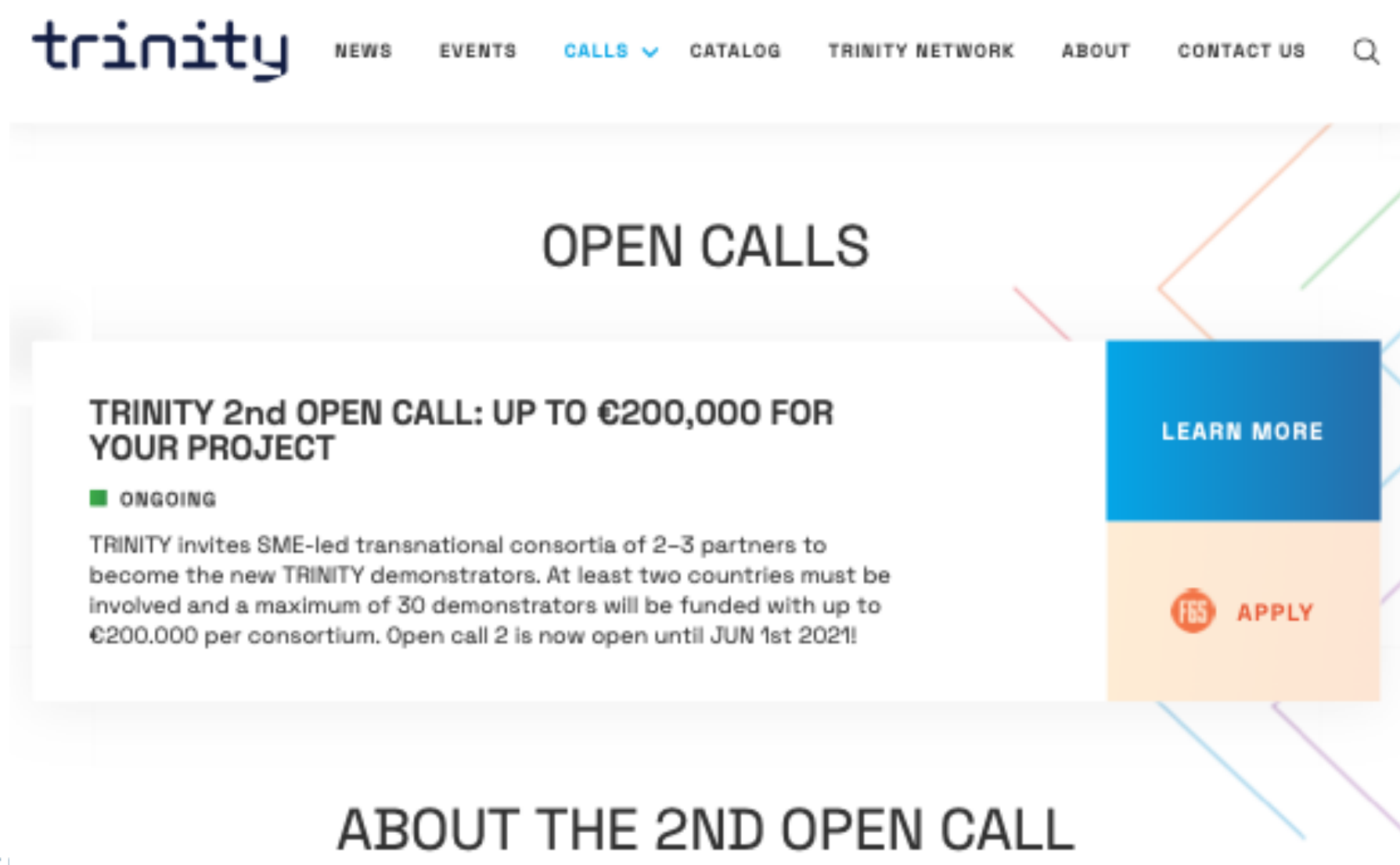**SME Tech/end-user** — Lead – up to 3 partners Consortium

**Duration
10 months**

Consortium members:
Technology adopters/ end-users: SMEs and slightly bigger
Technology providers: Technology SMEs, Competence Centres, Large companies, Research Centres and academia
EU member states, H2020 associated countries

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Submission: https://trinityrobotics.eu/open-calls/

Timeline

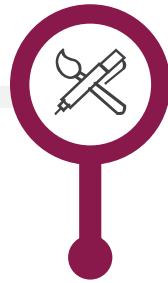**Evaluation & Selection**

Jun - Sep 2021

Contracting phase

Oct 2021

Application the project

Phase 1
PLANNING

Duration: 1month
Allocation: up to 10% budget

Duration: 8 months
Allocation: up to 70% of budget

Application the project

Phase 2
IMPLEMENTATION

Application the project

Phase 3
DISSEMINATION

Duration: 1month
Allocation: up to 20% of budget

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Review process

- Eligibility check

- 3 external evaluators will score and comment each proposal according to the following evaluation criteria

- The possibility to receive extra points

- After evaluation proposals will be ranked. Only the top proposals (double number of expected proposals to be selected) will access the next step of the evaluation process.

- Consensus meeting to decide final score

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Evaluation criteria

TRINITY open calls, evaluation criteria			
Evaluation criteria		Sub-criteria	Scoring (0-10)
Impact	Industrial relevance and exploitation plans	Overall impact of the proposed prototypes if successful; Industrial relevance of the proposed prototype if successful; Quality of the exploitation plans and market potential; Relevance of the prototype to the objectives of the call. Positive impact in at least 2 countries.	Threshold 6/10; Weight 2
Concept	Soundness of concept	Feasibility of the proposed prototype and technological contribution; Level of innovation and technological challenges addressed; Quality of the work plan.	Threshold 6/10; Weight 1
Resources	Partners of the consortium	Quality of the consortium and cross sector check; Clarity of partner roles and completeness of the consortium; Technical capacity and excellence of the proposer and its capability to achieve the deployment of TRL 5-7 services; Justification of the proposed resources.	Threshold 6/10; Weight 1
Project Plan	Implementation of the concept	Feasibility and Effectiveness of the project plan Clarity of tasks and deliverables Timing of the tasks Risk assessment and mitigation plan	Threshold 6/10; Weight 1

Extra points & eligibility

- There is a female(s) in the lead (e.g. main contact persons in the proposals)

- At least 1 partner is from EU-13 countries (joined EU since 2004)

- TRINITY use-cases or individual modules are used in combination of own development (concept, code, technology, etc)

- All categories have reached the threshold (min 6 points in each category prior the awarding of possible bonus points)

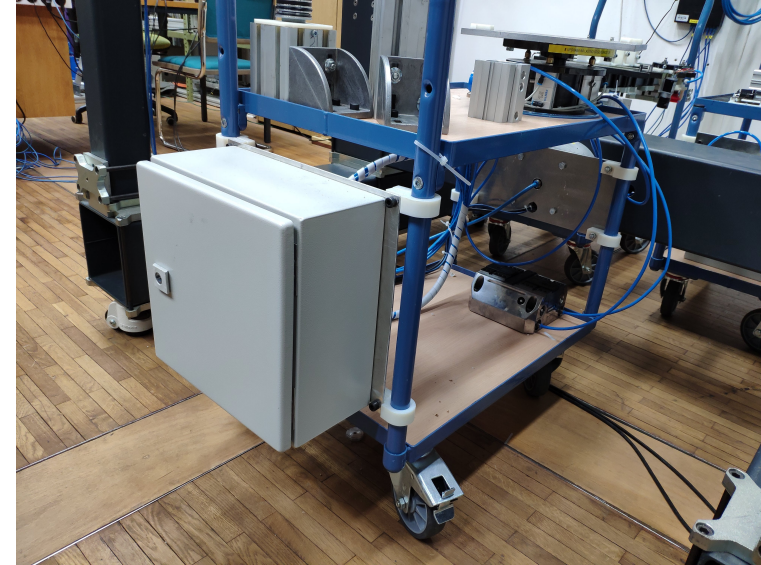TRINITY

Example TRINITY Modules offered by JSI

1.

Hardware & software interface for robot programming by manual guidance
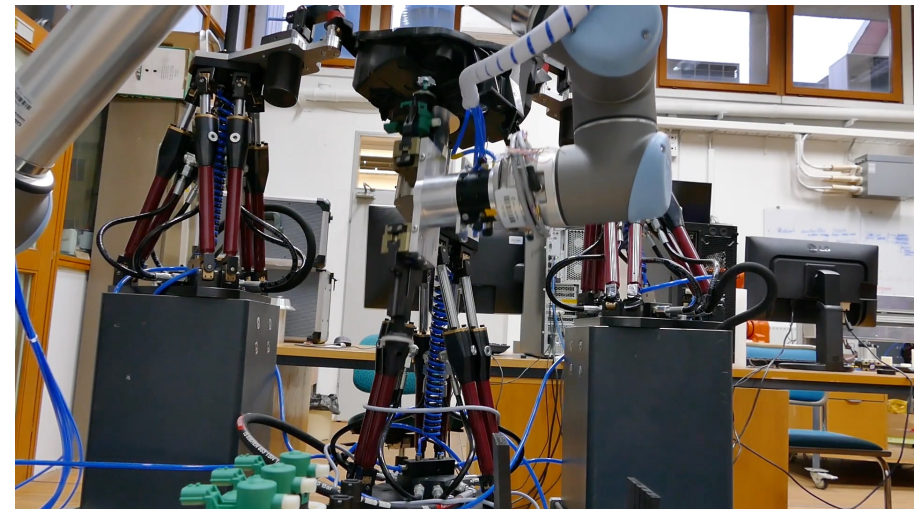

Switch 1
Button A
Button B
Switch 2

2.

ROS hardware and software interface for peripheral elements that are not ROS-compliant

3.

Automatic recon-figuration of flexible fixtures

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Payment schedule

- The maximum funding rate is 70%, but it will depend on private investment defined by each use case demonstration.

- Each 3rd Party (selected via the open calls) will receive the funding on a lump sum scheme and according to the terms of the contract signed between TRINITY consortium and the selected project representative

- After each 3rd Party project review and successful evaluation of each deliverable, its cost will become eligible. Deliverables that are not accepted will be re-evaluated at next review. If this is the last review, the cost of these deliverables will not be paid to the 3rd Party project and their cost will be automatically reduced from the subcontract.

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