



The European Coordination Hub for Open Robotics Development

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## 5th Review Meeting - Introduction

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Barcelona – 2019-03-27



# Fifth Reporting Period: December 2017 – January 2019



Coordination



Experiments



RIFs



PDTIs



Communication



# Fifth Reporting Period: December 2017 – January 2019

## Bringing it Home

- **Finishing strong:** RTD activities concluded, substantial output achieved (products, services, jobs), outreach and exploitation in full swing.
- **Tying up loose ends:** five long years, complex endeavor.

## Exploitation: From Potential to Achievement

- **Striking the right note:** understanding what support is needed to make the difference, reinventing ourselves constantly.
- **Capitalizing on potential:** providing the right exposure to results, finding the right connections to complete the value chain.

## Forward-looking

- **Critical reflection:** five years, rich in success, rich in mistakes, and that's OK.
- **Ut prosim:** What do we know now we did not five years ago? What purpose does it serve?





# Experiments

## To Market!

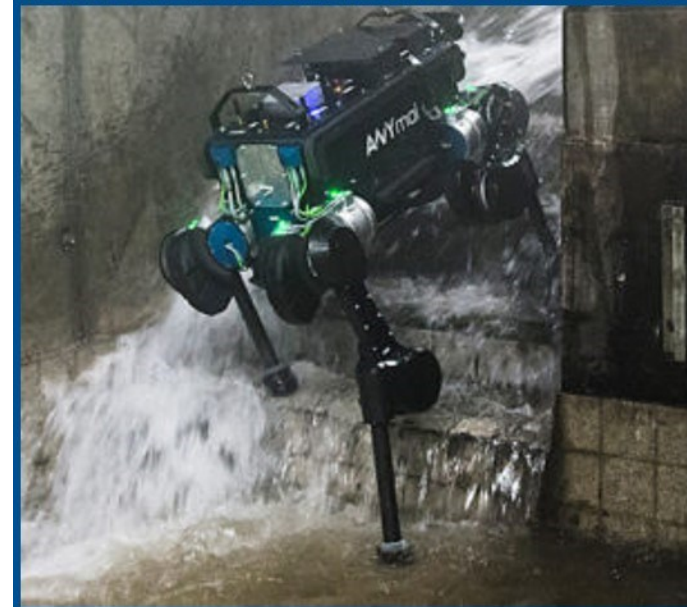
- **31 experiments:** Products, services, jobs, start-ups; new partnerships, new perspectives.
- **Changing the culture:** Promoting a product-oriented view in the European robotics research community.

## New Ways to Help: Booster Programme

- **Four Experiments,** EXOtrainer, MODUL, SAGA, LINarm++, different expectations and needs,
- **Custom support:** No ready-made solution in search of a problem, support going straight to the need.

## What next?

- **Expertise in TT,** knowing what makes it work, what's an obstacle, corporate knowledge of Technology Transfer.
- **A proven instrument,** community flocks to the ECHORD model when it needs an instrument to achieve TT.





# Robotic Innovation Facilities

## A Ground-breaking Success!

- **A new way** to pursue innovation, overcoming doubting voices to break new ground.
- **A runaway success:** 100+ technical collaborations, 1000+ unique interlocutors engaged, over 70% SMEs.

## Growing into the Role: The RIF Booster Programme

- **Recognizing the gaps:** doing new things is hard; being honest with oneself, addressing our own shortcomings is harder.
- **Looking back, moving forward:** outside expertise, consolidation of model, development of path towards self-sustainability.

## From RIFs to DIHs

- **Leading by example:** Three already functional DIHs, complete with requisite technical expertise, network of service providers, and knowledge of their target audience.
- **Carrying the model forward:** invaluable corporate knowledge to contribute to the networks, digitizing European industry.





# Public end-user Driven Technological Innovation

## The Cutting Edge

- **This is not easy!** Successful engagement of public stakeholders in the innovation process is a known challenge.
- **Adapt to make it work:** adjusting plans on-the-fly, shifting timelines, changing focus and expertise used in monitoring.

## Technical Achievements, Market Relevance

- **Real problems, real solutions:** development of technical solutions beyond SotA in mobile robotics and HMI.
- **Operational constraints:** solutions developed for the real world, working in operational environment, higher-TRL work.

## Products, Services, Exploitation

- **Results:** Four working prototypes, interest from public stakeholders, different exploitation models, from product sales to service provision.
- **Beyond the target:** Relevance of technology developed beyond specific objectives of the programme, exploitation in other settings.





# Dissemination and Outreach

## Bringing the Exposure that Matters

- **Variety of application domains** of robotics is one of its strengths, this variety is reflected in the output of the project, from industrial robotics, to agriculture and food, to medical devices, to unmanned vehicles.
- **Finding the right place:** Professionals from each area go to their own events, read their own press.

## Continuous Activity

- **Efforts investment:** ECHORD takes communication seriously, has the expertise, invests the resources,
- **Massive presence,** over 80 events in five years, over 1200 visitors, 150m<sup>2</sup> stand in automatica 2018, ~400 press clippings.

## Return on Investment

- **Products and partners visibility,** providing the right visibility brings the right kind of attention, instrumental in take-up of technology,
- **Impact on uptake of results,** visible and recognized by supported partners.





# A Challenging Time

## Meeting Problems Head-on

- **Major challenges** in all instruments, management of underperforming experiments, bridging the gap towards sustainability for RIFs, compressed time-line in PDTI.
- **Pro-active attitude**, all problems engaged and addressed, timeliness a factor of volume of activity, perceived relative importance, and resources.

## Hindsight is 20/20

- **Learning from experience:** Scope of Experiments, communication with problematic Experiments, foreseeing contingency plans for problems, RIFs' implementation, public stakeholder engagement.
- **An open process:** We do not shy away from difficult discussions, we discuss problems openly.

## Making the Most of it

- **Five intense years** of activity, a lot of success, a lot of missteps, a lot of growing, a lot of learning.
- **Outstanding results** in all three instruments.





# This is ECHORD

## ECHORD

2009-2013

**243** proposals from **500** institutions

**51** Experiments, **92** partners (**38** SMEs)

**343** dissemination activities

## The ECHORD Programme

2009-2019

Over **200** project partners

Over **170** independent experts

Over **1,000** people from academia, industry, public sector

Over **500** proposals submitted

**80%** of funding outside the core consortium

**5+** spin-offs, **250+** publications, **10+** patents/trademarks

## ECHORD++

2013-2019

**251** proposals from **639** institutions

**32** Experiments, **87** partners (**31** SMEs)

**474** dissemination activities:

### Beyond Experiments!

**110+** partners

**6** PDTI teams

**3** RIFs

