



The European Coordination Hub for Open Robotics Development



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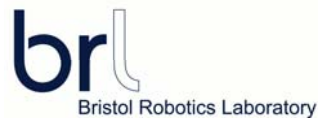
## **ECHORD++ Review Meeting WP6 Reporting Period 3**

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**Prof. Alberto Sanfeliu**

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Luxembourg, February 14th 2017



# Structured Dialogue and Outreach

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**Leader:** UPC (32PM)

Other partners: TUM (12,5PM), SSSA (5,5PM), UWE(5,5PM), CEA(5,5PM), RU ROBOTS (2,5PM)

Total: 63,5PM

First month: M1 - Last month: M60

## Tasks:

T6.1 Overall outreach and communication planning (M1-M3)

Partners: all

T6.2 Represent E++ at workshops, conferences, etc. (M3-M60)

Partners: all

T6.3 Organization of major fairs and events (M6-M60)

Partners: all

T6.4 R&D publications (M18-M60)

Partners: all

## Deliverables

D6.1 Action plan for communication / PR measures

D6.2 1st, 2nd, 3rd, 4th Annual White paper on the structured dialogue

D6.3 The final R&D publication

## Outcomes of WP6 July 2015- November 2016

The third reporting period has been a huge success for ECHORD++ in terms of dissemination and the starting point to introduce to the market, the robotic prototypes developed under Echord++.

Echord++ has participated in more that **44 activities**.



## Outcomes of WP6 July 2015- November 2016

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Our objective in Structured Dialogue and Outreach is oriented to reach:

- A wider professional audience (ex. Automatica, Hannover Messe or Smart City World Congress & Expo)
- Specific professional target audiences (through workshops)
- Business people (ex. Robobusiness)
- General public (ex. Festa de la Ciencia)
- Scientific and technological people (ex. IROS or EFTA))

# Outcomes of WP6 July 2015- November 2016

Our stands are designed to potentiate the ECHORD++ image and personalized each one of the robotic prototypes.





## Overview of tasks for WP 6

### T6.2. Representation E++ at workshops, conferences & T6.3 Organization of major fairs and events (1)

SCIENTIFIC CONGRESSES	VENUE	DATE	INSTITUTION	DETAILS
IROS 2015	Hamburg, Germany	September 29 <sup>th</sup> –October, 1 <sup>st</sup> , 2015	UPC, TUM, SSSA	<b>Stand:</b> Echord++ Instruments and Experiments Call 1 Brochure
IROS 2015	Hamburg, Germany	October 2 <sup>nd</sup> , 2015	TUM, UPC, SSSA	<b>Workshop:</b> “Urban Robotic Applications”. Invited Speakers and call for posters. Coord. A. Sanfeliu
EFTA 2016	Berlin, Germany	September, 6 <sup>th</sup> , 2016	UPC	<b>Workshop:</b> “Robotics Technology Transfer: Innovation from Academia to Industry” (RTT2016). Coord. A. Grau. UPC
IROS 2016	Korea	October 9 <sup>th</sup> – 14 <sup>th</sup> , 2016	TUM, BOR, UPC, BRL	<b>Workshop:</b> “Robotic Healthcare” F. Maurelli

## Overview of tasks for WP 6

### T6.2. Representation E++ at workshops, conferences & T6.3 Organization of major fairs and events (2)

BUSINESS EVENTS	VENUE	DATE	INSTITUTION	DETAILS
Smart Agriculture Conference	Birmingham, UK	September, 8 <sup>th</sup> , 2015	BRL	Business Conference
Venture Fest Wales	Cardiff, UK	September, 29 <sup>th</sup> , 2015	BRL	Business Conference
FT Future of Manufacturing	London, UK	September, 30 <sup>th</sup> – October, 7 <sup>th</sup> , 2015	BRL	Business Conference
EPSRC	Bristol, GB	January 26 <sup>th</sup> , 2016	BRL	Funding Opportunities SPARC F. Dailami
SME Day (FET)	Bristol, GB	February, 24 <sup>th</sup> , 2016	BRL	Business Dissemination
ESTnet Awards 2016	Cardiff, GB	March, 2 <sup>nd</sup> , 2016	BRL	Business Networking

## Overview of tasks for WP 6

### T6.2. Representation E++ at workshops, conferences & T6.3 Organization of major fairs and events (3)

BUSINESS EVENTS	VENUE	DATE	INSTITUTION	DETAILS
Venture FEST East Midlands	Leicester, GB	March, 16 <sup>th</sup> , 2016	BRL	Business Networking
Robobusiness	Odense, Denmark	June 1st - 3rd, 2016	TUM, BRL, BOR	<b>Stand:</b> Echord++ booth at the business fair and Healthcare Workshop
MOD Presentation	Filton, GB	April, 15 <sup>th</sup> , 2016	BRL	Business Dissemination
Glos Business Show	Cheltenham, GB	May, 18 <sup>th</sup> -19 <sup>th</sup> , 2016	BRL	Business Exhibit and Talk
Venture FEST Wales	Cardiff, GB	September, 28 <sup>th</sup> , 2016	BRL	Business Networking
Venture FEST South West	Exeter, GB	October, 18 <sup>th</sup> , 2016	BRL	Business Networking



## Overview of tasks for WP 6

### T6.2. Representation E++ at workshops, conferences & T6.3 Organization of major fairs and events (4)

TRADE FAIRS	VENUE	DATE	INSTITUTION	DETAILS
SMART CITY WORLD CONGRESS & EXPO	Barcelona, Spain	November 17 <sup>th</sup> – 19 <sup>th</sup> , 2015	UPC, TUM	<b>Stand:</b> Echord++ PDTI in Urban Scenarios.
SMART CITY WORLD CONGRESS & EXPO	Barcelona, Spain	November 18 <sup>th</sup> , 2015	UPC	<b>Panel:</b> GOVERNEMENT PANEL GO-32. Developing Innovative Public Procurement Practices. Prof. A. Sanfeliu
INDUSTRIE PARIS	Paris	April, 4 <sup>th</sup> -8 <sup>th</sup> , 2016	CEA	<b>Stand:</b> CEA participation
BAUMA	Munich, Germany	April, 11 <sup>th</sup> -17 <sup>th</sup> , 2016	TUM	<b>Stand:</b> together with other institutions at the world's most important trade fair for the construction industry. 2F experiment.

## Overview of tasks for WP 6

### T6.2. Representation E++ at workshops, conferences & T6.3 Organization of major fairs and events (5)

TRADE FAIRS	VENUE	DATE	INSTITUTION	DETAILS
HANNOVER MESSE	Hannover, Germany	April, 24 <sup>th</sup> -27 <sup>th</sup> , 2016	TUM	<b>Stands:</b> Two booths, one with Bayern Innovativ and one upon invitation of the EU Commission
INNOROBO 2016	Paris, France	May 24 <sup>th</sup> – 26 <sup>th</sup> , 2016	CEA-UPC	<b>Stand:</b> CEA participation
AUTOMATICA 2016	Munich, Germany	June 21 <sup>st</sup> – 24 <sup>th</sup> , 2016	UPC - TUM	<b>Stand:</b> 7 Echord++ Prototypes were presented with a great success.
SMART CITY WORLD CONGRESS & EXPO	Barcelona, Spain	November 17 <sup>th</sup> – 19 <sup>th</sup> , 2016	UPC - TUM	<b>Stand:</b> PDTI Sewer Prototypes ARSI and SIAR

## Overview of tasks for WP 6

### T6.2. Representation E++ at workshops, conferences & T6.3 Organization of major fairs and events (6)

WORKSHOPS	VENUE	DATE	INSTITUTION	DETAILS
STEM Masterclass	Bristol, GB	January 13th , 2016	BRL	<b>Workshop:</b> STEM
Intro Mechatronics	Bristol, GB	January 21 <sup>st</sup> , 28 <sup>th</sup> – March, 17 <sup>th</sup> , 24 <sup>th</sup> , 2016	BRL	<b>Workshop:</b> Business Workshop. Introduction to Mechatronics F. Dailami
Welsh Govt-RIF Briefing	Bristol, GB	February 1st , 2016	BRL	<b>Workshop:</b> Training Welsh Government RIF
Intro to Robot	Bristol, GB	March 3 <sup>rd</sup> , 10 <sup>th</sup> , 2016	BRL	<b>Workshop:</b> Introduction to Robots
Workshop with CNA	Pisa	May 2016	SSSA	<b>Workshop:</b> Introduction to CNA's affiliated SMEs to ECHORD++ and the concept of the RIF

## Overview of tasks for WP 6

### T6.2. Representation E++ at workshops, conferences & T6.3 Organization of major fairs and events (7)

WORKSHOPS	VENUE	DATE	INSTITUTION	DETAILS
Festa de la Ciencia	Barcelona, Spain	June 18 <sup>th</sup> , 2016	UPC	<b>Workshop:</b> Popular Workshop about Urban Robotics with citizen participation. 3 sessions
Workshop with Artex	Florence	December 2016	SSSA	<b>Workshop:</b> Introduction to ARtex's affiliated SMEs to ECHORD++ and the concept of the RIF (audience, 50 people).
Italy-Japan workshop	Peccioli	November 2016	SSSA	<b>Workshop:</b> ECHORD++ and the Peccioli RIF.

## Overview of tasks for WP 6

### T6.2. Representation E++ at workshops, conferences & T6.3 Organization of major fairs and events (8)

OTHER EVENTS	VENUE	DATE	INSTITUTION	DETAILS
BBC Panorama	Bristol, UK	August 26 <sup>th</sup> , 2015	BRL	Dissemination Event for All Public
British Science Week	GB	March 11 <sup>th</sup> , 2016	BRL	Series of Events
Creating Smart Europe	Amsterdam	June 22 <sup>nd</sup> -24 <sup>th</sup> , 2016	CEA	Stand
ForItAAL Summer School	Peccioli, IT	June 2016	SSSA	Get to know ECHORD++ and the Peccioli RIF (audience, 50 people)
Science Museum Robot show	London, GB	July, 4 <sup>th</sup> , 2016	BRL	Exhibit and Talk
European Robotics Week 2016		November 19 <sup>th</sup> -27 <sup>th</sup> , 2016	BRL	Diverse presentations

# Overview of tasks for WP 6

## T6.2. Representation E++ at workshops, conferences & T6.3 Organization of major fairs and events (9)

Participation in scientific conferences as **IROS** and **EFTA** with two specifics workshops in urban robotics and robotics technology transfer and many workshops to specific target audience

IROS 2015	Hamburg, Germany	September 29 <sup>th</sup> – October, 1 <sup>st</sup>	UPC, TUM SSSA	STAND and Workshop on Urban Robotics
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Intro Mechatronics	Bristol, GB	January 21 <sup>st</sup> , 28 <sup>th</sup> – March, 17 <sup>th</sup> , 24 <sup>th</sup>	BRL	Business Introduction Mechatronics. Workshop. to
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# Overview of tasks for WP 6

## T6.2. Representation E++ at workshops, conferences & T6.3 Organization of major fairs and events (10)

Robo business	Odense, Denmark	June 1st - 3rd	TUM, BRL, BOR	Echord++ Workshop Healthcare	Booth In	and PDTI
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Festa de la Ciencia	Barcelona Spain	June 18 <sup>th</sup>	UPC	Popular Workshop about Urban Robotics with citizen participation.
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# Overview of tasks for WP 6

## T6.2. Representation E++ at workshops, conferences & T6.3 Organization of major fairs and events (11)

Automatica	Munich, Germany	June 21st – 24th	UPC TUM	-	STAND. 7 Echord++ Prototypes were presented with a great success.
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## Overview of tasks for WP 6

### T6.2. Representation E++ at workshops, conferences & T6.3 Organization of major fairs and events (12)

At the **Smart City World Congress 2015 and 2016**, we disseminate the PDTI prototypes of **Sewer Infrastructure** in cities to extremely specified target audiences as public bodies and city councils , which have a high probability of creating further innovative public procurements process as PPI.

SMART CITY WORLD CONGRESS & EXPO	Barcelona Spain	2015 2016	UPC TUM	STAND. Echord++ PDTI in Urban Scenarios.
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# Overview of WP6. Tasks 6.1 & 6.2 2017

## ECHORD++. WP6. DISSEMINATION ACTIVITIES

WP6. Organization of workshops, conferences, major fairs and events	2017							
	GLOBALROBOT EXPO STAND	EUROBOTICS FORUM	HANNOVER MESSE STAND	INNOROBO	GENERAL ACTIVITIES	IROS 2017	MEDICA	SMART CITY WORLD CONGRESS
<b>EXP1 PARTNERS</b>								
3DSSC								
CoHRoS								
debur								
DexBuddy								
EXOTrainer	Prototype			Prototype			Prototype	
2F								
GARotics								
LA-ROSES								
LINarm++								
MARS								
MODUL			Prototype					
MOTORE++							Prototype	
pickit								
SAPARO								
TIREBOT								
<b>PDTI HEALTH PARTNERS</b>								
AQUAS								
CONSORCI GARRAF								
ARNICA								
ASSESSTRONIC							Prototype	
CLARK							Prototype	

# Overview of WP6. Tasks 6.1 & 6.2 2017

## ECHORD++. WP6. DISSEMINATION ACTIVITIES

WP6. Organization of workshops, conferences, major fairs and events	2017							
	GLOBALROBOT EXPO STAND	EUROBOTICS FORUM	HANNOVER MESSE STAND	INNOROBO	GENERAL ACTIVITIES	IROS 2017	MEDICA	SMART CITY WORLD CONGRESS
<b>PDTI URBAN PARTNERS</b>								
BCASA	EIP WATER				Water Innovation Europe 2017			Attend
AJUNTAMENT BARCELONA								
ROBODILLOS								
ARSI	Prototype							Prototype
SIAR	Prototype							Prototype
<b>EXP2 PARTNERS</b>								
AAWSBE1	Prototype							
CATCH		Participate						
CoCoMAPS			Poster					
DUALARMWORKER								
FASTKIT				Prototype				
Flexsight			Prototype					
GRAPE	Poster	Participate						
HOMEREHAB								
HyQReal			Poster					
INJEROBOT	Poster							
KERAAL				Prototype			Prototype	
MAXES								
RadioRoso				Prototype				
SAFERUN								
SAGA		Participate	Prototype					
WIRES								

## Task 6.4: R&D Publications and project outcomes

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1<sup>st</sup> Annual White paper on the structured dialogue.

**PDTI Sewer**

2<sup>nd</sup> Annual White paper on the structured dialogue

**PDTI Healthcare**

3<sup>rd</sup> Annual White paper on the structured dialogue

**EXPERIMENTS**

4<sup>th</sup> Annual White Paper & Final R&D Publication

**FROM LAB TO MARKET**

Industry-orientated publication with scientific results

**PROJECTS – ROBOTICS PRECOMMERCIAL PRODUCTS & ROBOTICS PRODUCTS**



## Task 6.4: R&D Publications and project outcomes

### 1<sup>st</sup> AWP PDTI Sewer. Phase 0

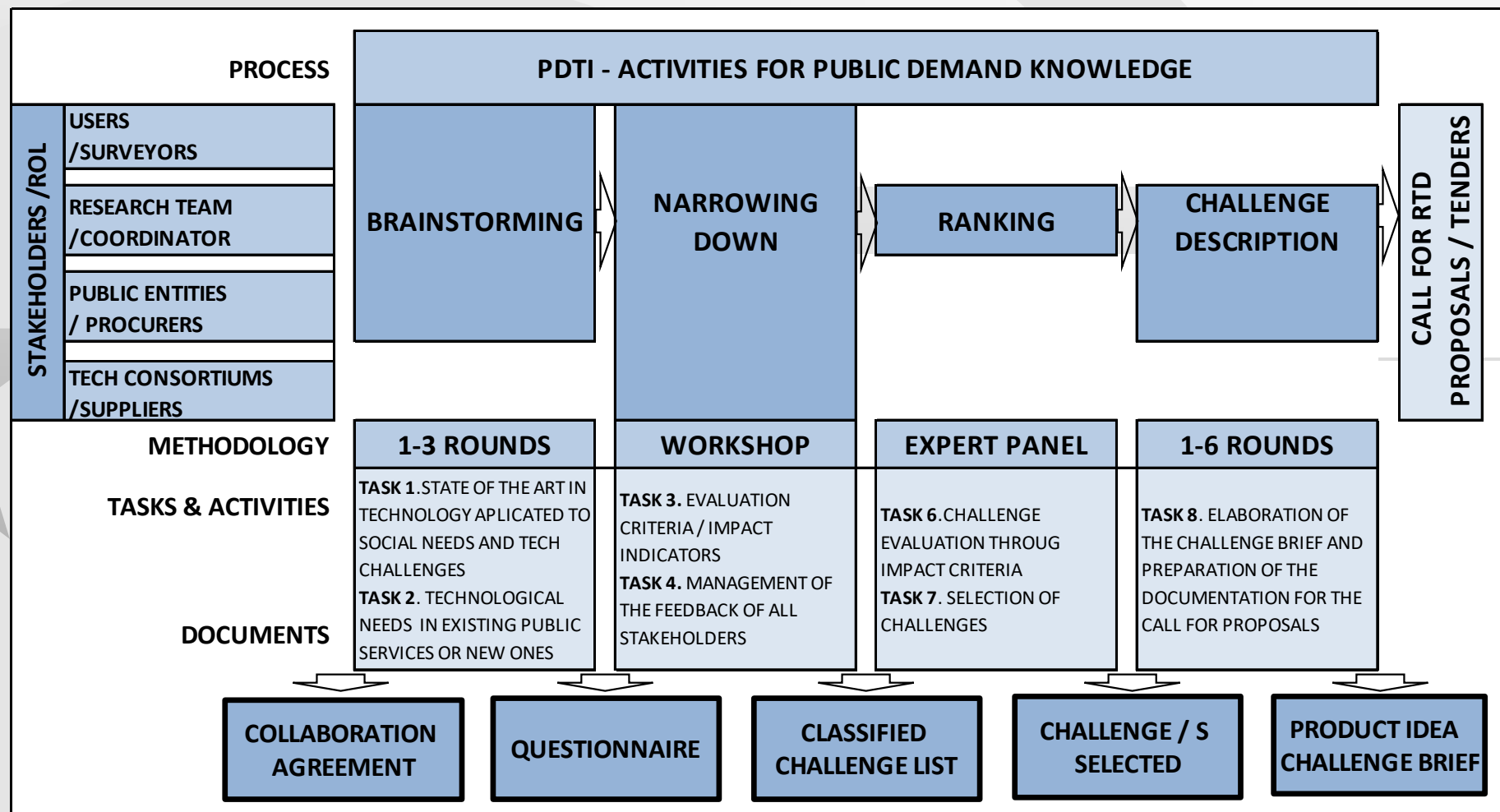
PRODUCT INNOVATION LIFE CYCLE			
PDTI			
ACTIVITIES FOR PUBLIC DEMAND KNOWLEDGE		ACTIVITIES FOR RESEARCH AND TECHNICAL DEVELOPMENT OF PRE-COMMERCIAL PRODUCTS	PUBLIC PROCUREMENT FOR COMMERCIAL ROLL-OUT
	PHASE 0	PCP	PPI

PDTI							
ACTIVITIES FOR PUBLIC DEMAND KNOWLEDGE				CALL FOR RTD PROPOSALS	ACTIVITIES FOR RESEARCH AND TECHNICAL DEVELOPMENT OF PRE-COMMERCIAL PRODUCTS		
BRAINSTORMING	NARROWING DOWN	RANKING	CHALLENGE DESCRIPTION		SOLUTION DESIGN	PROTOTYPING	SMALL TEST SERIES

### PDTI as a Pre Commercial Procurement Instrument

# Task 6.4: R&D Publications and project outcomes

## 1<sup>st</sup> AWP PDTI Sewer: Phase 0



## Task 6.4: R&D Publications and project outcomes

### 1<sup>st</sup> AWP PDTI Sewer. Phase 0

URBAN AREAS	CITY CHALLENGES
INFRASTRUCTURE	Traffic infrastructure inspection and maintenance
INFRASTRUCTURE	Automatic detection and road surface damage warnings
INFRASTRUCTURE	Improving waste management and street cleaning
INFRASTRUCTURE	Utilities infrastructure condition monitoring
ICT & ENVIRONMENT	Environmental monitoring and control
ICT & TOURISM	Improving tourist services at the city
ICT & PLANNING	Improving the management, planning and urban city observations 1
ICT & MOBILITY	Planning and information of urban accessible routes
ICT & SURVEILLANCE	Providing safe and secure environment for citizens
ICT & MOBILITY	Improving the management, planning and urban city observations 2
PEDESTRIAN	Personalized mobility support for pedestrian areas
PEDESTRIAN	Providing safe and secure environment for citizens
PEDESTRIAN	Goods distribution technology to improve local retail
PEDESTRIAN	Personalized mobility support

## Task 6.4: R&D Publications and project outcomes

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### 2<sup>nd</sup> AWP PDTI Healthcare

#### Elsevier S&T Books series (book proposal)

**Title:** *Robotics for Elderly: From ideas to concrete solutions*

**Book objectives:** This book aims to present various approaches of robotics for elderly people. We will present not only scientific contribution, but also the perspective from end-users and medical staff involved in the process, with a particular attention for clinical trials.

**Audience:** medical professionals, robotic manufacturers and providers, students, researchers, politicians.

## Task 6.4: R&D Publications and project outcomes

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### Scientific articles

A. Grau, Y. Bolea, A. Puig-Pey, A. Sanfeliu, J. Casanovas (2016) From academic to industry by an innovative projects: Echord++, ETFA 2<sup>nd</sup> Int. Workshop on Robotics Technology Transfer: Innovation fro Academia to Industry (RTT2016), Berlin, September 6<sup>th</sup> 2016.

A. Bandera et al. (2016), CLARC: a Robotic Architecture for Comprehensive Geriatric Assessment, Proceedings of the XVII Workshop on Physical Agents, Malaga (Spain), June 16-17, 2016

R. Marfil et al. (2016), Percepts symbols or Action symbols? Generalizing how all modules interact within a software architecture for cognitive robotics, Proceedings of the XVII Workshop on Physical Agents, Malaga (Spain), June 16-17, 2016

A. Puig-Pey, Y. Bolea, A. Grau, J. Casanovas (2017), Robotics; Urban challenges; Smart City; Innovative Public Procurement; Public End Users Driven Technological Innovation, in Special Issue in Urban Robotics, Robots and Autonomous Systems, 2017. Accepted.

## Conclusions

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- The number of events to disseminate had a huge increase respect to the previous reviewing period
- The dissemination has been done in trade fairs, expo, workshops, conferences, etc.
- The ECHORD++ brand has been disseminated through the world
- The PDTI has had very high impact as we have seen through the questions that has been arisen in the dissemination events



Thanks  
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