EUROPEAN ROBOTICS WEEK
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Outcomes of the ERW2017 National Coordinators Workshop: Summary Report

Summary of the key findings from a workshop convened by euRobotics under the theme "Evolving ERW2016 and beyond", held at Bluepoint, Brussels on 30th June 2017

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1. Introduction

The Workshop brought participants to Brussels from across the European robotics sector, representing many - though not all - countries within the EU. The following objectives had been identified:

- Review ERW 2016, identifying highlights and noting what had been taken forward from last year's workshop.
- Showcasing national approaches and activities
- Planning for ERW 2017
- Efficient coordination of efforts across the whole of ERW.

As in the previous year, a further informal 'network-building' Workshop objective was also pursued, to bring the workshop's participants together as a community.

2. Workshop process

After the euRobotics team opened the event, welcomed participants and outlined the history and growth of ERW to date, the Workshop departed to a certain extent from the approach taken with the earlier workshops. While plenty of opportunity was provided for group discussion and brainstorming as in previous years, the 2017 workshop provided more scope and agenda time for presentations. These enabled individual national coordinators to showcase the approaches taken to ERW in their own countries, with a focus on specific events.

Of course, the value of bringing national coordinators together in a workshop setting is precisely to enable them to share approaches, to collaborate in discussion, and to understand points where individual perspectives converge and therefore where common ground can be found, and conversely, where perspectives may diverge. As in previous years, a process was followed in which ideas proposed by delegates were then progressively honed down to a series of conclusions and practical proposals.

As is customary for this annual event, the Workshop was facilitated by a moderator to help the group work through the Agenda on time and to focus on the Workshop's objectives, stimulating the discussion and ensuring all voices were heard and all coordinators had an opportunity to participate in discussion.

3. Outcomes

3.1 Workshop discussions

This section outlines key points from the delegates' collaborative discussions, in the form of the ideas, proposals, questions and challenges put forward by delegates within three broad themes – Education, Outreach and Sponsorship, with communication being a constant thread running through each themed discussion. As always, given the purpose of this workshop, the focus of each of these themes was on ERW.

3.1.1 Outreach

Marketing for companies – the benefit of involvement in ERW could be framed in terms of support for participating companies' marketing activities.

Contacts with different educational institutions – this is a mainstay of ERW, but while universities are the first line of involvement in ERW, outreach to secondary schools was also emphasised.

Encouraging companies to cooperate with universities – the power of ERW to forge cross-sector collaborations was cited here, with the example here of bringing companies and universities together.

To motivate universities to get more students – here ERW could be presented as a recruitment platform to attract future students on the strength of the universities' involvement in ERW.

Partnerships with NGOs – the multiplier effect of collaborating with certain NGOs to gain added profile for ERW was highlighted here.

Social media (Facebook, Twitter, LinkedIn) – the principal social media networks are natural channels for ERW to reach out to a broader audiences.

Local newspapers – there is some debate about the comparative value of local or sector-specific media in gaining attention for ERW. However, some of the national coordinators had had some success is gaining coverage for ERW events.

TV shows focused on technology – TV coverage was highly prized but hard to achieve but by focusing on programmes that showcased technology, efforts could be successful in bringing ERW events to a TV audience.

Newsletters from local governments – in some countries, there was felt to be some potential for coverage in newsletters produced by local governments.

To talk externally about ERW – the value of speaking publicly about ERW on a variety of platforms was recognised as an important part of a wider programme of public engagement.

3.1.2 Sponsorship

Discussion about ways to attract or pursue sponsorship often had an educational angle, partly reflecting that several of the workshop's participants had direct experience of working within the education sector.

Tips for companies/sponsors – it was recognised that sponsors needed guidance on how to gain benefit from their involvement in ERW.

Organising trips to/from schools and to/from companies – here, sponsorship could bring schools and companies together.

Involving families/communities – the wider participation of a company's employees within the communities it served was cited as a possible angle to be explored.

Educational activities – sponsorship could take many forms; one of the most frequently mentioned was the active participation of companies in educational activities related to ERW.

Employees in charge of classes – an expert in robotics leading a classroom discussion or carrying out a robotics demonstration could help capture the imagination of school students.

Providing (STEM / Pedagogical) material – a basic tool, in which commercially produced material, perhaps branded 'in association' with a given sponsor, could provide benefits for the sponsor and for a given ERW activity.

'How do you learn STEM using robots?' – commercial-academic collaboration to promote STEM subjects and careers.

Support letter from local authorities – the association of local government with ERW could produce mutual benefits.

euRobotics certificate to both school and company – essentially a promotional tool conferring recognition on both parties.

Local media – designating a media partner for ERW could bring valuable publicity for ERW events as well as a fresh source of potential content for the participating media outlet.

Teachers training academy – licensed teachers – licensing robotics teachers could add to the professional profile of individual teachers and provide a fresh source of prestige social value to the robotics sector.

In discussion, delegates cited the following specific benefits for sponsoring organisations if they were to become involved in supporting ERW:

Visibility – helpful profile-raising through an involvement with ERW.

Develop networks – sponsoring ERW could play a valuable role in building connections and relationships.

Future recruitment – students and visitors to ERW today could become the recruits of tomorrow.

Potential customers – again, today's ERW visitor could become a sponsor's future customer.

Publicity – the fundamental benefit of sponsorship; the challenge comes in converting 'raw' publicity into a tangible or quantifiable asset

Practical application – sponsorship can provide companies with ways to showcase their products and techniques.

Motivation / Raising the profile of the school – publicity, visibility and credibility rolled into one by association with ERW.

Service for the whole community – by bridging the distance between companies and the public, ERW can perform a beneficial service for the community as a whole.

Bridging skills gap – the active participation of companies in ERW could be a valuable step in addressing the widely acknowledge skills shortage in STEM related skills.

3.1.3 Education

Universities – several universities in several countries participate in ERW; this collaboration could become a standard feature of the ERW 'package' everywhere.

Ministers –there is an opportunity to lobby education departments and ministries at both a national and regional government level to support ERW.

Industry – just as with universities, so with industry – a vital sector with so much of value to offer to ERW.

Local politicians / MPs – beyond institutions, building relationships with key political influencers can bring a range of benefits to ERW organisers.

From children to politicians – an ERW engagement strategy should make provision to target each stratum of society.

Hub of innovation – As an annual series of events held for one week, ERW may provide a focus to inspire a cross-sector alliance of participants to form an enduring innovation hub.

Participated budget – drawing on a Polish initiative, ERW coordinators could explore the potential to draw down from discretionary budgets held at national, regional or local level.

Makers – the case for involving the maker movement in ERW was well made at the ERW national coordinators workshop in 2016 and it remains compelling.

Health institutions – the role of robots in both the health and care sectors could be the key to adjusting public perceptions about the impact of robotics on society, and ERW could provide the showcase to demonstrate the value.

Scalable kits for each level – providing kits to meet a range of budgets was a recurrent theme during the workshop and there was wide consensus about the value.

Teacher training – clearly an essential pre-condition for the development of a robust robotics education sector.

Open Friday – this was the idea of designating one day either during ERW or as a weekly feature when robotics departments would devote time to public engagement.

Although these points were disparate, there were several recurring ideas, spanning two and sometimes all three discussion themes. There would be considerable value in drawing these out to form an agenda of priorities for action.

4. National perspectives

The national showcases which had first been introduced at the 2016 ERW national coordinators' workshop were increased in number this year, giving everyone an opportunity to draw ideas, inspiration – and lessons – from a broader range of national experiences during ERW16 itself.

4.1 Spain and Italy

The first national showcase pairing was of Spain and Italy, presented respectively by Lia Garcia and Fiorella Operto.

4.1.1 Spain (Summary):

Spain is not a major robotics power in Europe. The majority of companies in the robotics sector are spin-offs from universities. Most robotics companies are to be found in Catalunya, the Basque Country and Madrid. There is a small presence of collaboration robots but none for service robots as a national market for these has not yet developed. Successful companies operate mainly in international markets and as yet there is no domestic demand.

ERW events have varied in size: some are very small, and are typically organized by schools and associations. ERW enjoys no institutional or financial support in Spain. In fact the only support takes the form of a blog post by the Spanish education ministry, encouraging teachers to organise events.

Hisparob organized a large-scale event - Robotics Day - involving teachers, academia and science, in which real robots interacted with people. Event organisers typically find it difficult to attract media interest for smaller events. Even so, the insight from Spain is that 'Small events can change the world'.

4.1.2 Italy (Summary):

Italy offers potentially fertile ground for robotics. The population is very comfortable with technology. It has a skilled and technologically adept workforce. An example was cited from Michelin, who trained workers in Piedmont to use an exoskeleton. There has been extensive experience of young people using robots, and robotics events have been taking place over the past ten years. However, such activity takes place independently of government, which provides no funding. Given this lack of state financial support, creative approaches are taken in order to publicise events. For example, students studying public relations have helped teachers to publicise events for free.

A programme about robotics and programming for middle managers was developed with Bocconi School of Management. There is a growing acknowledgement in Italy that coding as important as literacy. However, an intergenerational approach is needed; as has also been noted in several European countries, there is also a recognition of the need to address the gender gap.

4.2 Romania and Poland

The second national showcase paired Romania, presented by Ana Maria Stancu, with Poland presented by Krzysztof Walas.

4.2.1 Romania (Summary):

- A robotics club has been set up in disadvantaged areas. However, at the time of the Workshop, no public funding is available and efforts are being made to find funding so that young people entering (and winning) robotics competitions can be encouraged to careers in robotics. While some of the elements required for a national robotics sector are in place, there are current limitations. This is symbolized by the revelation that the Romanian Association of Robotics has no robot. Firms teach robotics and the Romanian government has appointed an Open Data Director. However, experience has shown that events of the right scale do get noticed: a larger event was organized as part of Bucharest Technology Week (outside of ERW) and it attracted media attention. Looking ahead, there were plans to seek sponsorship from IBM Romania for an INMOOV robot.

4.2.2 Poland (Summary):

The robotics sector seemingly has healthy roots in Poland. Robotics taught at all universities and a robotics festival is organized by the University of Poznan. Companies provide robotics tutorials. However, networking is not strong and there is a perception that the stakeholders do not currently work together.

A vigorous effort was made to promote ERW. All companies and schools were emailed to invite them to become involved in ERW. There were many positive responses and events were held in several Polish cities. Well-organised events in Lublin resulted in good media coverage, with half a dozen articles in the local media. One of the highlights in Lublin was an exhibition on medical robots.

In Wroclaw, companies and universities worked together to use collaborative robots. In Krakow, a robot in a shop window was set up with QR codes. When the public scanned these, the robot would respond.

For the future, a 'Baltic challenge' is planned, with the ambition that this will be the biggest robotics challenge within the Baltic region. Key insights from Poland: forward planning is essential, while creating a robotics showroom will generate interest.

4.3 Moldova and Bosnia Herzegovina

The third pair of national presentations showcased Moldova, represented by Mihaela Iurascu and Bosnia Herzegovina, for whom Maja Hadziselimovic presented the national showcase.

4.3.1 Moldova (Summary):

Moldova has one Nao robot ('Frank') and is to acquire a second, this time with a female identity. A robotics event was organized in Moldova last year and this received coverage on TV. Looking ahead, a robotics forum would be organized in Moldova.

4.3.2 Bosnia Herzegovina (Summary):

Perhaps reflecting the wider specific circumstances of the country, Bosnia Herzegovina does not have a connected network of robotics scientists. However, there are links with IEEE, the global professional body for electronics. The Bosnian perspective was one of identifying what incentives could be offered to companies to get involved with ERW, other than networking and publicity. The proposed approach was to bring companies in at the very beginning by from the start by involving them in co-creating event concepts. A key dynamic within the nascent robotics sector was transactional: universities provide training to students, who go to companies to learn about robotics.

4.4 Other national insights and developments

Germany: Adidas is now producing shoes on a large scale again in Europe. Advances in robotics and automation, coupled with short shipping times compared to manufacturing in Asia, has made European/domestic production attractive once again. This development is likely to be popular in Adidas's 'home' market as it plays to regional and local affinities.

Slovenia: the press is interested in the impact of robotics on the economy in terms of investment and employment. There is a recognition that robotics can bring high skilled jobs to deprived areas.

Portugal: the University in Aveiro has a partnership with a local newspaper, which publishes an article about robotics every week.

Slovakia: efforts are being made involving industry to convince the relevant government department to change academic curricula to include robotics.

Poland: local administrations provide a participatory budget, of which 10% can be used by citizens for projects of their choice; there is a move to use some of this budget to fund the creation of a robotics club.

Italy: one notable feature was the use of robotics for children in hospitals.

Romania: scalable kits can be provided, ranging from a simple, cheap option to more elaborate, higher budget propositions.

KUKA: a proposal was made to create a network of contacts across KUKA subsidiaries in Europe and for members of this network to be encouraged to become involved in organizing ERW locally, with due care taken to avoid ERW being too closely associated with a single organisation.

5. Final thoughts

With the emphasis more clearly on the exchange of ideas and information within an existing common approach rather than on scoping a putative approach in the first place (as the first workshop had in 2015), this year's event continued on its evolutionary journey. The collective endeavour was well understood, as was the role and position of euRobotics as the coordinating body and, to an even greater extent than before, as the driving force for ERW.

As at last year's event, but even more so, there was a greater sense that this was an established network, one in which a significant number of the participants had been in communication with each other between the Workshops, and to a large extent had done so with the encouragement of the euRobotics team. This impression persisted despite the presence of a number of first-time participants.

Again, as last year, the format allowed a substantial amount of time for national approaches and experiences to be showcased. So the Workshop's continued value and interest for delegates lay both in being able to see and hear how ERW activities were delivered in other countries as well as in being able to work together collaboratively to share ideas and spark fresh thinking.

Beyond the specific examples, the local initiatives and worthwhile practices on the ground from across Europe that came to the surface during the Workshop, there was a 'meta-message' about the role of euRobotics in the process. As a not-for-profit agency at the centre of the robotics sector, euRobotics plays a role as a kind of brokerage or a clearing house and certainly as a resource offering expertise about communication for the robotics sector. It serves as a repository of information about activities carried out across Europe both to promote the robotics sector and also to stimulate interest in robotics. In this regard, it also plays a part in the current stream of thinking about Science Communication and about public engagement with science, clearly with a particular focus on the role of robotics, in industry, in education and in society.

In tandem also with its stewardship of the Outreach Advisory Board under RockEU2, euRobotics can propagate the application of some general 'rules of engagement' regarding communication for robotics. These rules exist already; they form part of the modus operandi of the agency, and they include such guidance as the use of story-telling to achieve a connection with general audiences; a firm preference for simple language, especially when the subject matter is complex; and also other kinds of guidance to help the robotics sector to achieve cut-through into public consciousness, such as an advocacy to pursue collaborations with museums and other 'platforms and institutions which are already accessible to the public. Again, using its position as a broker and connector, euRobotics could usefully bring experts together to further develop an over-arching communication and engagement strategy for the sector.

A body that sits at the centre of any pan-European endeavour can play a dual role, both in forging a common European outlook and also in bringing national differences into view within a common frame. In regard to robotics, what are the common themes in public and media perception that span the member state populations, and what national differences exist? Again, euRobotics provides a unique lens through which to discern these points. For example, is the negative media perception of robotics as an eliminator of jobs one that is shared across Europe, or are there nuances. Armed with the insights and understanding of the convergences and divergences in national and continental perceptions, euRobotics is well-positioned to identify where – and how – influence can be focused to provide a more constructive, better-informed and more confident

narrative about the contribution that robotics will make to European societies and to their future prosperity.

ERW itself has the potential to be the nucleus and the motor of innovation, and this is especially true outside of north-west Europe. This was very clear from the reports from Moldova and Romania but also from Italy and Spain and for this reason one feels justified in making this a general observation. This is not only a matter of innovation concerning robots and robotics; a claim may also be made for the place and value of ERW in raising public awareness and preparedness for the digital age more broadly.

It can be observed that ERW is doing something that national or regional governments ae unable or unwilling to do and that is to reach out to connect with the grassroots of society at ground level. ERW does this thanks to the hard work and commitment and enthusiasm of a small but growing network of enthusiastic individuals whose work is not dissimilar to that of an NGO. For this they surely deserve recognition, not only for their efforts but also for their growing body of achievements in bringing robotics onto an ever more prominent public platform.

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