

# WHOLODANCE

## Whole-Body Interaction Learning for Dance Education

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## Deliverable 8.8

### WhoLoDancE Danceathon

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## Introduction

This document is meant to report the final dissemination event organised by the Consortium, and it is complementary with D8.6 (*Second dissemination event*, submitted as *Dissemination events (M19-M36)*) and D8.4 (*First dissemination event*, submitted as *Dissemination events (M1-M18)*), reporting dissemination events of the First and Second Reporting Period, respectively, as part of the agreed dissemination strategy (D8.1, *Dissemination and Exploitation strategy plan and preliminary materials*).

As discussed at the time of the Intermediate Review in Luxembourg in September 2017, the formulation initially adopted in the Dow resulted into being misleading, as it would have implied organising an event based on competing groups engaged in some sort of dance marathon.

### Dance-athon

- We discovered that we had employed a wrong terminology.
- We had thought of a dance hackathon, and had no intention of organising a dance marathon, which is what Dance-athon usually means 😊.
- We would like to have a performance where all the developed tools are live-demoed in a media-attractive way, and where other developers can compete presenting additional applications.
- But we would need a dedicated budget and some sponsoring for offering hackathon prizes.
- We will now check what can be the possibilities of meeting these requirements in three alternative settings:
  - Genoa Festival of Science
  - Athens Onassis Foundation
  - Rome Europe Festival



Edwin Morley-Fletcher – Luxembourg, 7 September, 2017 11

Figure 1. The relevant slide shown by the coordinator at the Intermediate Review in Luxembourg in September 2017

Given the limited amount of resources available for this development, what appeared to be concretely feasible was an event organised within the educational section of the International Festival of contemporary dance Romaeuropa. This solution, which was WhoLoDancE preferred choice (also in compliance with the reviewers' indication of looking, if possible, for an international festival) happened eventually to overlap with the availability of an analogous occasion within the Festival of Science in Genoa. Both events took place during the month of October 2018. Other invitations had been received meanwhile, and in particular a very attractive one was very kindly proposed by a member of our reviewers' panel, Joanna Szymajda, at the Institute of Music and Dance in Warsaw. Unfortunately, by then, all of WhoLoDancE partners had exhausted their budgets, and regretfully this offer could not be accepted.

The Consortium organised therefore its great event in Rome, Italy, choosing the possibility to have it hosted within the prestigious Romaeuropa Festival, which is one among the most important European festivals in the field of contemporary arts, theatre, dance and music. As planned, the event was the occasion not only to showcase the final prototype tools to a large public of experts and lay people, mostly from the dance domain, but to prepare an articulated event with different moments, including a presentation with the support of video material, an interactive workshop with hands-on tools demonstration, a dance performance realised for the occasion with the use of some of the project tools, and a public debate with the public, discussing outcomes and future perspectives of use case applications and exploitation initiatives.

To report this as comprehensively as possible, the report will go through the planning, organisation and promotion of the event, a thorough description of the event as it actually took place, and how it was communicated outside, and the outcomes of the event for further follow up and exploitation.

As a conclusion, the report will give an account of smaller dissemination events held between September and December 2018, not included or only briefly anticipated in D8.6.

## Before the event

### Conception and planning

The WhoLoDancE coordinator established a first contact with the foundation organising the festival, Fondazione Romaeuropa, at the end of 2017. The initial format proposed for the event was the *WhoLoDancE Performative Workshop* (described in the appendix of D8.6), elaborated in the first months of the year by the Consortium through the collaboration of technologists and dance artists to present the prototype project tools in a visual and interactive way. Some mail exchanges and vis-à-vis meetings with the responsible of Fondazione Romaeuropa, Francesca Manica, have been necessary to agree on the final event format, encompassing both tools demonstration and a live dance performance conceived for the occasion and made as a *premiere* at the Festival. As a final step, the choice of the moderator for the final discussion went for Leonetta Bentivoglio, a critic, essayist and journalist at the daily newspaper *Repubblica* in the field of dance and theatre, as well as artistic consultant for eminent music and theatre festivals and events in Italy and abroad. The event was confirmed in the summer of 2018, with the title "*WhoLoDancE Experience – Lab & Performance @ Romaeuropa Festival*" (hereafter "*WhoLoDancE Experience*") and set for the 7<sup>th</sup> October 2018 at the *MACRO Testaccio - La Pelanda (Ex Mattatoio)* cultural centre. For space reasons, the Foundation limited the number of participants to 50, thus we agreed on making the participation free upon reservation.

### The venue

*La Pelanda (Ex Mattatoio)*, part of the *MACRO Testaccio Museum of Contemporary Art of Rome* (the second of the two MACRO exhibition spaces, part of the of the museum since 2003), is a cultural centre located in a 5000 square meters area once dedicated to the swarming of the pigs, and now restored as an example of industrial architecture of the late Nineteenth Century. The main body consists of a large nave, a truncated conical chimney and other metal equipment. The entire complex has been designed as an open system, modular in its structures and entirely accessible to the public, with large glazed surfaces that enhance volumes and perspectives. Contemporary art exhibitions are staged in two cavernous industrial halls. The centre is part of a cultural complex that also includes a seat of Rome's Accademia di Belle Arti and the University of Roma Tre's Architecture Department.



Figure 2. *La Pelanda (Ex Mattatoio)*, part of *MACRO Testaccio Museum of Contemporary Art of Rome*. From left to right: "*Mattatoio Testaccio (Rome)*" by Nicholas Gemini [CC BY-SA 4.0], Wikimedia Commons; "*Pelanda dei suini*" (CC BY-NC-ND 2.0) by designwallah, Flickr; "*Digital Life: empower your senses*" (CC BY-NC-SA 2.0) by Scissor.Studio, Flickr.

### Program

As previously mentioned, the event was planned to be articulated into four moments: (1) projection of videos (teaser and the short WhoLoDancE movie, both described in D8.3); (2) interactive workshop with demonstration of prototype tools; (3) live demo performance; (4) public debate with the public. The detailed schedule of the event, as presented in our event leaflet, is displayed in the table below.

#### Sunday, 7 October 2018, 14:30-18:30

Content	Beginning	Duration
Projection of videos prepared by the WhoLoDancE Consortium: motion capture sessions, developed technologies and their applications to choreography and learning	14:30	30 min
<i>WhoLoDancE Performative Workshop</i>	15:00	2 h

intro & interactive laboratory: hands-on demonstration of the tools developed by technologists and artists of the WhoLoDancE consortium		
<i>Break</i>		
<i>Two Pandoras: the thin membranes between resiliency and fragility</i> Intro & demo performance: <i>piece</i> realized through the use of motion analysis and sound synthesis tools <i>Choreographers and interpreters</i> : Istituto Stocos, K. Danse	17:30	30 min
Meeting with the public: present and future applications, technology platforms and ICO. <i>Moderator</i> : Leonetta Bentivoglio	18:00	30

## Promotion

The promotion of the event started about one-month in advance, and addressed a lay people audience, yet mostly focusing on the field of dance to address practitioners, professional dancers and choreographers.

### Fondazione Romaeuropa website

The event was showcased in the [Fondazione Romaeuropa](#) website, within the [Community](#) section of the 2018 Romaeuropa Festival program (ITA), which included all the participatory, formative initiatives of the festival. The [event-dedicated page](#) (ITA), shown below, included photo, brief overview of the project and event description, schedule and contacts for reservation.

ACQUISTA 06 4555 3050

FONDAZIONE ▾ ARCHIVIO ▾ FESTIVAL ▾ BIGLIETTERIA ▾ OPIFICIO ▾ WEB TV

## Community REF18: WhoLoDancE Experience

**WHOLODANCE EXPERIENCE**  
**COMMUNITY**

Mattatoio  
domenica 7.10  
dalle h 14:30

Mostrami dove

PROGRAMMA

**WhoLoDancE (Whole-body interaction Learning for Dance Education)** è un progetto di ricerca triennale finanziato nell'ambito del programma Horizon 2020 dell'Unione Europea. Il progetto, prossimo alla conclusione, si è dedicato alla registrazione di una grande quantità di movimenti realizzati da ballerini e coreografi professionisti tramite tecnologie video e motion capture, portando alla creazione di un vasto **archivio digitale di movimenti appartenenti a diversi generi di danza (balletto, contemporaneo, flamenco e danze popolari greche)**, primo in Europa.

Figure 3. Preview of the "WhoLoDancE Experience" dedicated page within the Community section of the Fondazione Romaeuropa website.

The *Fondazione Romaeuropa* contributed to the event promotion showcasing it through its professional channels, including artistic association, schools and academies.

## Event platforms, website and social media

### EVENTBRITE

To maximise the outreach of the event, this was showcased in the [Eventbrite](#) platform – where the Consortium had already created an account for the project, for previous events - with a [dedicated page](#) (ITA) with brief project overview, program and event details. The website allowed to make direct free reservations through a form, which were directly forwarded to the PC. Thanks also to the direct link from Facebook (see following paragraph), all the 67 tickets available were sold a few days before the event.

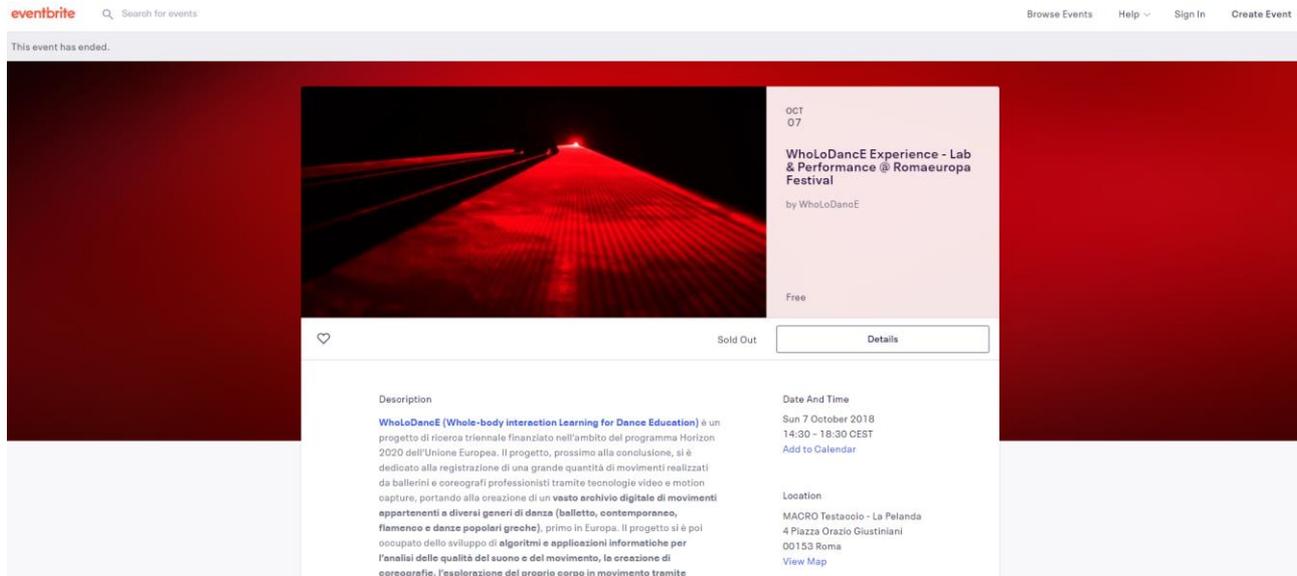


Figure 4. Preview of the "WhoLoDancE Experience" dedicated page in Eventbrite

### FACEBOOK

The event was also promoted on the [WhoLoDancE Facebook page](#), with a [dedicated page in the Event section](#) (ENG) describing the event and linking to the Eventbrite platform for reservation. The event was posted several times and shared by Consortium partners, too. Also, the PC made a dedicated advertising campaign – with focus on users interested in dance and technology - on Facebook, which led to a total reach of 10.791 people, 345 responses and 67 tickets sold.

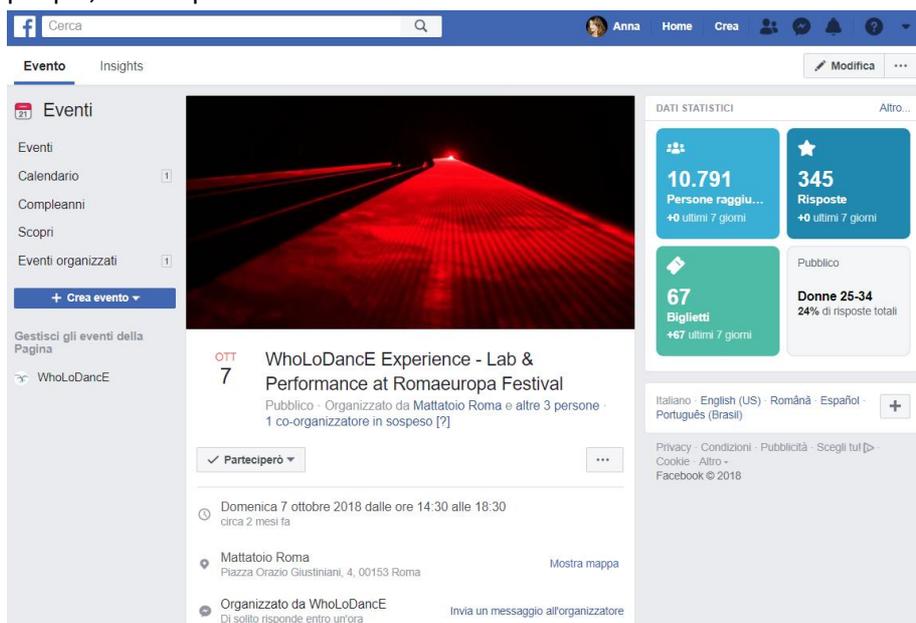


Figure 5. Preview of the "WhoLoDancE Experience" Facebook event page, with statistics of the outcomes of the advertising campaign

**WEBSITE AND OTHER SOCIAL MEDIA**

The event was also promoted through other project social media channels:

1. The [project website](#), with a [dedicated page in the Event section](#) (ENG), with description of the Romaeuropa Festival, the event, schedule and contacts for reservation
2. Twitter, with [tweet posting](#) from the project account and re-posting from the Consortium partners institutional and personal accounts.



**Wholodance** @Wholodance\_EU · 12 set

↻ 9 ❤️ 11 ▼

On #7Oct2018, come and attend "WHOLODANCE EXPERIENCE – LAB & Performance @Romaeuropa Festival": hands-on interactive dance tools demonstrations, discussions and performance at #LaPelandia #MacroTestaccio #Roma More at [bit.ly/2xa7B5w](http://bit.ly/2xa7B5w) #dance #art #informationtechnology #VR

**WhoLoDancE at Romaeuropa Festival – Wholodance website**

[wholodance.eu](http://wholodance.eu)

Figure 6. Preview of promotional tweets made with the project accounts and re-tweeted by Consortium partners with institutional and personal accounts

## Mailing campaigns

An event two-page leaflet (see below) was prepared for additional promotion (ITA, ENG) with project presentation, description of the event – and specific focus on the performance -, schedule and contacts for reservation. The PC circulated the leaflet by e-mail and WhatsApp to professional and personal contacts who might be possibly interested, and invited Consortium partners to do the same. Also, the PC made a web-based research of dance academies, schools and cultural associations within the city of Rome and sent ad hoc invitations to potentially interested people and institutions.

**WHOLODANCE EXPERIENCE**  
LAB & Performance @ Romaeuropa Festival

Rome, 7 October 2018, 14:30 – 18:30  
MACRO Teatraccio - La Biopista Room 2  
Piazza Ciriaco Giustolisi, 4

**WhoLoDancE Experience** comes as a result of the work carried out within the WhoLoDancE (Whole-body Interaction Learning for Dance Education) project, that after three years of work will come to its conclusion in December 2018.

WhoLoDancE is a research program funded under the Horizon 2020 programme of the European Union. The project has been dedicated to the recording, through video and motion capture technologies, of a wide range of movements performed by professional dancers and choreographers, leading to the creation of a vast **digital archive of movements belonging to different genres of dance (ballet, contemporary, flamenco and Greek folk dances)**, the first in Europe. The project has then worked on the development of **algorithms and computer applications for the analysis of sound and movement qualities, the creation of choreographies, the exploration of one's body in motion through improvisation by means of sonification and virtual reality tools**, at the service of artistic research, choreography, teaching and learning. The project is the result of the collaboration and continuous dialogue between artists (dancers, choreographers), researchers (computer and sound engineers) and specialists in the field of 3D animation.

The event, hosted by the renowned **Romaeuropa Festival**, offers two interconnected events: **the interactive laboratory (WhoLoDancE Performative Workshop)** already presented and appreciated in previous international events (Toulouse, Madrid, Genoa), and the **demo performance (Two Pandoras: the thin membrane between resiliency and fragility)** that represents one of the conclusive moments of the project and will be represented for the first time at Romaeuropa Festival.

Before the beginning of the laboratory, some **videos will be projected to "name" the project activity** (motion capture sessions) and provide some first cues on the technologies developed by WhoLoDancE consortium partners and their potential, while at the end of the performance

project partners will be happy to meet the public in a **debate on present and future applications of these technologies** in the field of dance, but also in possible other fields related to motions (fitness, sports and more). Other topic of discussion will be the possibility to promote fundraising tools, such as an **initial coin offering (ICO)** or else the emission of digital tokens to remunerate, automatically and without any transaction cost, all components that will contribute to the development and success of a **technological platform dedicated to the analysis, training and creative exploration of all activities related to the movement**, of which WhoLoDancE constitutes an initial prototype (proof of concept). The meeting will be moderated by the writer and journalist **Leoneta Bentivoglio**.

**Program**  
Sunday, 7 October 2018, 14:30-18:30

Content	Beginning	Duration
Projection of videos prepared by the WhoLoDancE consortium: motion capture sessions, developed technologies and their applications to choreography and learning	14:30	30
WhoLoDancE Performative Workshop Intro & interactive laboratory: hands-on demonstration of the tools developed by technologists and artists of the WhoLoDancE consortium	15:00	2 h
<i>Break</i>		
Two Pandoras: the thin membrane between resiliency and fragility Intro & demo performance: piece realized through the use of motion analysis and sound synthesis tools Choreographers and interpreters: Instituto Stoccos, K. Danse	17:30	30
Meeting with the public: present and future applications, technology platforms and ICO. Moderator: <b>Leoneta Bentivoglio</b> .	18:00	30

The participation is **free upon reservation** for a maximum of 60 people.  
To register, as either individuals or groups, please provide your name to [info@wholodance.eu](mailto:info@wholodance.eu) or (+39) 5492568329.

**WhoLoDancE Performative Workshop**  
Interactive laboratory

The laboratory aims to offer an **"experiential journey"** during which the public can discover, deepen and experience how some innovative digital technologies can be applied to different genres of dance by integrating into new processes for teaching, learning, improvisation and movement creation, both inside and transversally to different kinds of dance, combining them. The laboratory includes 4 workshops, where technologists and artists in turns will show various possibilities of using digital technologies, in the form of live demos or through video projections, and it will be possible for the public to directly experience some of the available technologies.

These technologies include: the **WhoLoDancE movement library**, the digital archive of movements created through the motion capture sessions, and its tools for visualization, annotation of principles and quality of movement and segmentation of sequences; the **similarity engine**, which is designed to search for similar movements based on user-defined criteria, even using movements recorded in real time with low cost sensors (**sketching tool**) or smartphones (**real-time similarity search application**); the **blending engine**, able to create sequences of movements or combine parts of movements between them; systems for displaying movements in virtual reality via smartphone (**low-end VR platform**) or the HoloLens; applications for study and improvisation that allow the user, by wearing motion capture suits or special sensors, the real-time observation of the moving body through 3D avatars (**choreography**) or listening, by converting different qualities of movement in as many different sounds (**sonification tool**).

The Laboratory is led by dancers and choreographers of the WhoLoDancE consortium (K. Danse, Centre for Dance Research-Coventry University, Lykeion ton Hellenidon, Instituto Stoccos) and scientific-technological partners: Athens RC, Casa Paganini-InfoMus (DIBRIS, University of Genoa), Image and Sound Processing Group (Department of Electronics, Information and Bioengineering, Politecnico di Milano, Motek Entertainment BV, Peachnote GmbH).

The laboratory, held in **English**, is accessible to anyone, and is directed to dance school students and teachers, dancers and choreographers, dance enthusiasts as well as a **professionals of different disciplines** interested in exploring the relationship between technology and movement.

**Two Pandoras: The Thin Membranes Between Resiliency and Fragility**  
Demo performance

**Two Pandoras: the thin membrane between resiliency and fragility** is a short performance that explores the creative possibilities of motion analysis tools and sound synthesis. During the piece, two dancers explore and whip up a choreography based on the combination of choreographic and musical composition methods. The performance is built with the support of the software tools for the real-time analysis of the movement quality and sound synthesis and control realized within the project.

**Concept, choreography** Muriel Romero (Instituto Stoccos), Jean-Marc Matos (K. Danse)  
**Interpreters** Muriel Romero (Instituto Stoccos), Marianne Masson (K. Danse)  
**Music and sound synthesis** Pablo Palacio (Instituto Stoccos)  
**Real-time motion analysis technologies** Casa Paganini-InfoMus (DIBRIS, University of Genoa), Instituto Stoccos  
**Interactive laser technology** Instituto Stoccos

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 688865

Figure 7. Preview of the ENG version of the two-page leaflet prepared for ad hoc invitations of institutions and professionals in the field on dance and beyond.

Overall, a total of 124 people reserved for the event (including Eventbrite and e-mail reservation requests) till Thursday 4 October, when reservations were closed. Even though not all of them came to attend the event, the final result can be considered as a good outreach considering the fairly specialised theme of the event.

## The event

Despite just a portion of the registered participants attended the event, the audience has been very attentive and participatory in all phases of its development.

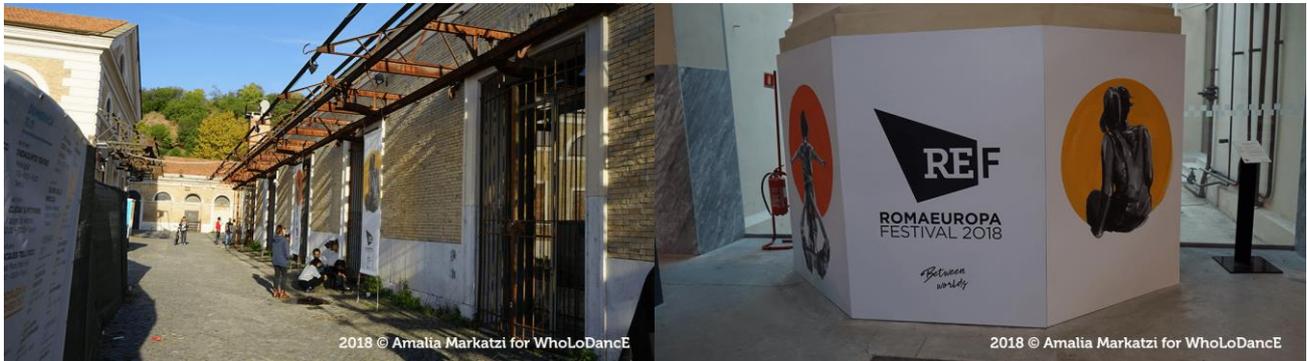


Figure 8. La Pelanda (Ex Mattatoio) cultural centre n the days of the event. Photo credits: Amalia Markatzi (Lykeion ton Hellenidon)

## Part #1 and #2: videos and WhoLoDancE Performative Workshop

While the audience was taking their seats, the Issue 2 of the project newsletter, printed as preview for the occasion, was distributed while videos were projected. The event opened with the project teaser ([“WhoLoDancE: Whole-body Interaction Learning for Dance Education”](#)), realised for the occasion, followed by the project short movie ([“WhoLoDancE: body movement and technology for enhancing choreographic creation”](#)), also finalised in view of the event.

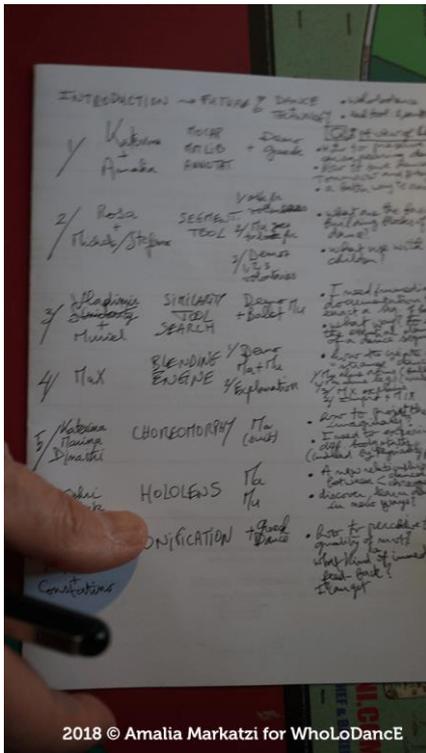


Figure 9. Sketch of the WhoLoDancE Performative Workshop structure by Jean-Marc Matos, used for the general rehearsal in the morning before the event. Photo credits: Amalia Markatzi, Lykeion ton Hellenidon

The *WhoLoDancE Performative Workshop* was introduced by the PC Edwin Morley-Fletcher (Lynkeus), who gave a brief overview of project rationale, objectives and main results, and Jean-Marc Matos (K. Danse), who introduced the theme of dance and technology and its compenetrating in modern times from a dance artist’s perspective. Regarding the digital library and data curation tools, Katerina El Raheb (Athena RC) and Amalia Markatzi (Lykeion ton Hellenidon) introduced the *Movement Library and Annotator tool*, with AM and Konstantinos Linaras giving a live example of Greek folk dances (a two-partner variation with leader’s improvisation), while Rosa Cisneros (Coventry University) and Michele Buccoli (Politecnico di Milano) presented the *segmentation tool* and its role in data curation, involving the public in a flamenco short performance. For dance data analysis, Vladimir Viro (Peachnote), Stefano Piana (University of Genova) and Muriel Romero (Istituto Stocos) provided a use case example of the *similarity search engine* and *sketching tool*; Massimiliano Zanoni (Politecnico di Milano), with the collaboration of Muriel Romero and Rosa Cisneros illustrated the creation of movement sequences and blending of parts of different movements through the *blending engine*. Turning to VR and AR experiences, the *Choreomorphy* tool was presented by KER with Marianne Masson (K. Danse) giving a live demonstration, while Oshri Even-Zohar (Motek) illustrated the *HoloLens Experience* and Pablo Palacio (Istituto Stocos) explained the functioning of the *sonification tool*, with a live demonstration by KL.



Figure 10. Moments of the WhoLoDancE Performative Workshop within the “WhoLoDancE Experience” event at Romaeuropa Festival. Photo credits: Anna Rizzo (Lynkeus) and Amalia Markatzi (Lykeion ton Hellenidon)

### Part #3: demo performance

The demo performance *“Two Pandoras: the thin membranes between resiliency and fragility”* is a choreographic project created through the collaboration of Instituto Stocos and K. Dance. This short performance proposed to explore and show the creative possibilities of motion analysis tools and sound synthesis applied to dance improvisation. During the *piece*, two dancers (Muriel Romero, Instituto Stocos and Marianne Masson, K. Danse) whipped up a choreography combining choreographic elements and musical composition obtained through movement with the application of sonification tools (arm and ankle brace, and special shoes with motion sensors) to the dancers’ body. The performance was built with the support of the software tools for the real-time analysis of the movement quality and sound synthesis and control realized designed by Instituto Stocos and Casa Paganini Infomus, University of Genova.



Figure 11. Preview image of the demo performance *“Two Pandoras: the thin membranes between resiliency and fragility”* held within the *“WhoLoDance Experience”* event at Romaeuropa Festival. Photo credits: Pablo Palacio (Instituto Stocos)

**Concept, choreography** Muriel Romero (Instituto Stocos), Jean-Marc Matos (K. Danse)

**Interpreters** Muriel Romero (Instituto Stocos), Marianne Masson (K. Danse)

**Music and sound synthesis** Pablo Palacio (Instituto Stocos)

**Real-time motion analysis technologies** Casa Paganini-Infomus (DIBRIS, University of Genoa), Instituto Stocos

**Interactive laser technology** Instituto Stocos

### Part #4: public debate

The debate, following right after the demo performance, was lively and productive. Several people from the audience posed questions to the PC and the dancers, with the moderation of Leonetta Bentivoglio. The dialogue explored the opportunities and challenges of bringing technology into the dance field, highlighting how technology is still seen as too sharp to allow a full artistic expression, but still there is high expectations on the possibilities provided by ICT-tools for choreography, but also for self-experimentation in dance. A great deal of attention was also given to the paradigm shift from music-leading-choreography to the opposite, where the movement drives sound, and dancers were asked to tell their personal experience. At the end, *questionnaires* (ITA, ENG) were distributed to provide feedback on the tools showed during the

workshop, and some people left their contacts for further follow-up on the project developments. The questionnaires were translated and sent to Coventry University, to be included as part of the tools evaluation.



Figure 12. Moments of the public debate within the "WhoLoDancE Experience" event at Romaeuropa Festival. Photo credits: Anna Rizzo (Lynkeus) and Amalia Markatzi (Lykeion ton Hellenidon)

### Live feeds and post-event dissemination

During the event, Consortium partners (Lynkeus and Lykeion ton Hellenidon) have extensively documented the event with photos and short clips taken by mobile phone and high-resolution camera; the former were extensively used to share real-time feeds on project social media accounts (Twitter, Facebook and Instagram), while the latter were used for post-event dissemination on Pinterest, Flickr and website. A professional filmmaker was hired for the occasion by the PC for documenting the whole event, and this material will be used to prepare a short movie of the event, currently in preparation. A brief account of the event has also been included in the final version of the project newsletter, Issue 2, released in November 2018.

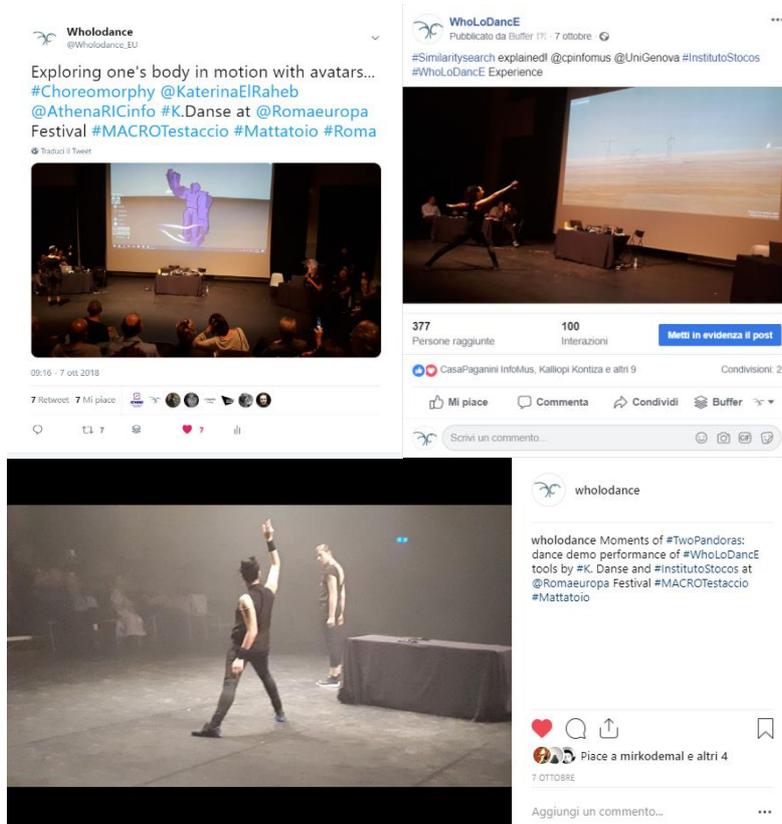


Figure 13. Social media real-time feeds of the "WhoLoDancE Experience" at Romaeuropa Festival

## Other dissemination events (September – December 2018)

Before and after this main events, some minor dissemination events have been organised in the context of other bigger events, entailing conferences in the field of ICT (EUSIPCO 2018, ICT 2018) and cultural heritage (EUROMED 2018, Biennale of Western Balkans), and science festivals (*Festival della Scienza*). Some of them had been already included in D8.6, but here have been added with photo and post-events feedbacks.

### EUSIPCO 2018

<b>Title</b>	26 <sup>th</sup> European Signal Processing Conference	<b>When</b>	7 September 2018		
<b>Where</b>	Rome, Italy	<b>Venue</b>	<i>Centro Congressi Auditorium della Tecnica</i>		
<b>Type of event</b>	Conference (with satellite workshop)		<b>Audience</b>	Academic	
<b>Brief description</b>	EUSIPCO is an international research conference focused on the theme of signal processing. The conference hosted a <i>satellite workshop</i> dedicated to the project, to be held in the form of the WPW, targeted for an audience of IT experts				
<b>Self-organised event</b>	No	<b>Leading organiser</b>	Polimi	<b>Participation</b>	All Consortium
<b>Dissemination</b>	Website, Twitter, Facebook				

The 26<sup>th</sup> European Signal Processing Conference (EUSIPCO 2018), organised by Roma Tre University, was held from the 3<sup>rd</sup> to the 7<sup>th</sup> of September 2018 in Rome at *Centro Congressi Auditorium della Tecnica*. The conference addresses the latest developments in research and technology for signal processing and its applications through oral and poster sessions, keynotes and plenaries, exhibitions, demonstrations, tutorials, demo and ongoing work sessions and satellite workshops.

Among these, the conference hosted the “WhoLoDancE: body motion analysis with applications to dance education and beyond” *satellite workshop* (7 September 2018), a one-day event where the Consortium will present the latest scientific and technical results, concluding with a performative demonstration session where to showcase the developed technologies in the form of performative dance demonstrations. This will take the structure of the WPW, to be targeted – as for MOCO 2018 - for an audience of expert technologists and IT researchers. The workshop detailed programme and the relevant abstract are reported below.

### Programme

Time	Presenter	Title
14:00 - 14:20	Edwin Morley Fletcher (Lynkeus)	Making sense of dance movement: the WhoLoDancE project
14:20 -14:40	Paolo Albornò (UniGe)	Semantic and emotional representation models: a rule-based approach
14:40-15:00	Massimiliano Zanoni, Augusto Sarti (Polimi)	Semantic and emotional representation models: a learning-based approach
15:00-15:20	Massimiliano Zanoni (Polimi), Paolo Albornò (UniGe)	Demonstrations and applications to high-level movement analysis
15:20-15:40	Vladimir Viro (Peachnote), Paolo Albornò (UniGe)	Movement-based similarity analysis: applications to searching and sketching
15:40-16:00	Vladimir Viro (Peachnote), Massimiliano Zanoni (Polimi), Paolo Albornò (UniGe)	Demonstrations and applications to movement search
16:00 - 16:20	Katerina Elraheb (Athena RC)	Movement libraries and applications: search, browse, annotate, visualise and interact with dancing bodies

16:20 - 16:40	Coffee break
16:40 -18:30	Performative demonstration session: <ul style="list-style-type: none"> <li>• Flamenco dance and movement segmentation</li> <li>• contemporary dance, multimodal interaction and dance-driven music generation</li> <li>• movement blending and application to choreography</li> <li>• Choreomorphy: dancing avatar design based on movement quality</li> <li>• VR in dance performance</li> <li>• synchronicity in Greek dance</li> <li>• Greek dance open session (all invited!)</li> </ul>

Table 1. Programme of the satellite workshop “WhoLoDancE: body motion analysis with applications to dance education and beyond satellite workshop” held within EUSIPCO 2018

### Abstract

Technologies for motion capturing have evolved very rapidly in the past few decades. In addition to professional motion capturing systems, today we can count on commercially available low-cost devices that allow us to gather motion information in everyday environments; and all sorts of sensing devices that allow us to complement this information with other multi-modal signals coming from sounds, muscle contraction, breathing, accelerometers, gyroscopes, etc.

When the goal of this multi-modal analysis is to make sense of dance movements, we are suddenly faced with additional layers of information to extract and analyse at all levels of abstraction. Similarly to what happens in the field of music information retrieval, dance offers a structured language for describing, planning and designing the emotional trajectories that can be elicited and evoked by dance movements, to make sense of which we need to resort to advanced signal processing solutions, from low-level trajectory analysis, to high-level movement quality assessment based on machine learning. The Wholodance project approaches exactly such problems from all points of view.

The main focus of the WhoLoDancE workshop is to bring together experts of dance movement analysis coming from both sides of the spectrum: scientists who focus on movement analysis and quality assessment, as well as dancers, who help scientists make sense of descriptors that are often hard to pinpoint and formalize. This workshop will present the latest scientific and technical results achieved by the Wholodance Consortium and will showcase the developed technologies in the form of performative dance demonstrations.

The workshop had a technical profile, being addressed to IT- and movement- researchers. Although the workshop did not gather a very large audience, it managed to reach a very interested public of researchers, who asked to maintain a follow up on project achievements.



Figure 14. Moments of the satellite workshop “WhoLoDancE: body motion analysis with applications to dance education and beyond” held within EUSIPCO 2018 (Rome, 7 September 2018)

## Biennale of Wester Balkans

<b>Title</b>	Biennale of Wester Balkans	<b>When</b>	11 – 14 October 2018		
<b>Where</b>	Ioannina, Greece	<b>Venue</b>	University of Ioannina		
<b>Type of event</b>	Conference		<b>Audience</b>	Academic	
<b>Brief description</b>	The Biennale of Western Balkans (BoWB) is a new arts and cultural event and institution. Its vision is to bring intangible cultural heritage and community values in the contemporary context, in connection with art and new technologies.				
<b>Self-organised event</b>	No	<b>Leading organiser</b>	Athena RC	<b>Participation</b>	Athena RC
<b>Dissemination</b>	Twitter, Facebook				

The Biennale of Western Balkans (BoWB) is a new arts and cultural event and institution, which this year will be hosted for the first time in the city of Ioannina, in the region of Epirus, Northwestern Greece. Its vision is focused on bringing intangible cultural heritage and community values in the contemporary context, in connection with art and new technologies. BoWB explores the new artistic and creative directions of intangible cultural heritage, valuing in particular contributions that examine lesser-known bodies of knowledge, collective, anonymous and non-textual works, women theorists, undiscovered collections, and projects that make interconnections of smaller scenes with wider ones. The aim is to support and present contemporary art that can engage aspects of the intangible cultural heritage of the Greek and Western Balkan communities, and of the European and international field as well. Moreover, the Biennale aims to create a critical framework for the dissemination of contemporary thought and research in art and culture, open technologies and the commons. Athena RC and Lykeion ton Hellenidon took part in the conference to present WhoLoDancE, with particular reference on how the project has been contributing to the preservation, enrichment and conveying of European intangible cultural heritage – particularly traditional Greek folk dances – by means of digital recording and archiving, enriching by annotation, and provision of tools for 3D visualisation and interactive self-experimentation in real time (Choreomorphy).

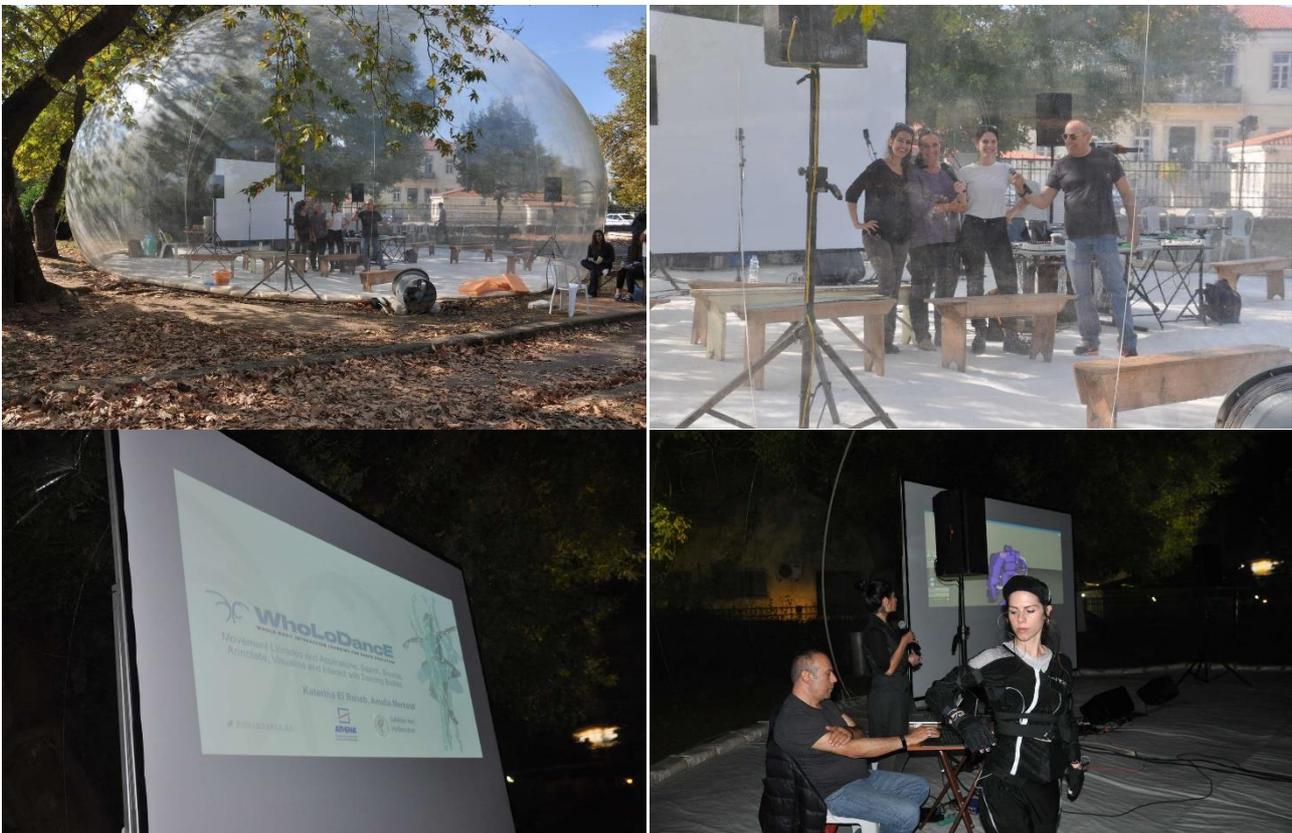


Figure 15. Moments of the Biennale of Western Balkans (Ioannina, 11-14 October 2018)

## Festival della Scienza

<b>Title</b>	Festival della Scienza		<b>When</b>	25 October – 4 November 2018	
<b>Where</b>	Genova, Italy		<b>Venue</b>	Casa Paganini InfoMus	
<b>Type of event</b>	Science festival		<b>Audience</b>	Non-specialised	
<b>Brief description</b>	Festival Della Scienza is a science festival composed of exhibitions and interactive laboratories, events and workshops. The festival hosted a project-dedicated event composed of a live demonstration of project tools and a live dance performance				
<b>Self-organised event</b>	No	<b>Leading organiser</b>	University of Genova	<b>Participation</b>	Unige, Polimi, Athena RC, K. Danse, Lykeion ton Hellenidon
<b>Dissemination</b>	Website, Twitter, Facebook Instagram				



Figure 16. "Festival della Scienza 2013 - Porto Anti" (CC BY-SA 2.0) by Festival della Scienza.

*Festival della Scienza* is the leading science festival in Italy and one of the biggest in Europe, accounting for about 200,000 visitors, 300 events and 350 speakers each year. The annual 11-day event, spread across the beautiful historical centre of Genova in about 50 different locations, represents a fixed point of reference for science dissemination where researchers, science enthusiasts, schools and families gather to explore and investigate science crossing over traditional subject boundaries, through exhibitions, interactive laboratories, meetings, workshops, shows and conferences ranging from mathematic, natural and human sciences.

This year, the Consortium took part in the event with a one-day event (October 27, Casa Paganini InfoMus), taking the form of an interactive workshop exploring the various tools developed during the project (library, segmentation and annotation, movement sketching, sonification tool, etc.), concluding with a dance improvisation performance showing the performing potentialities of sonification tools.

The event was attended by a lay public of students and families, with a format and language suitable for a non-expert audience.



Figure 17. Moments of "WhoLoDance Performative Workshop" event at Festival della Scienza (Genova, 27 October 2018).

## EUROMED 2018

<b>Title</b>	6 <sup>th</sup> International Euro-Mediterranean Conference	<b>When</b>	29 October - 3 November 2018		
<b>Where</b>	Nicosia, Cyprus	<b>Venue</b>	Filoxenia Conference Centre		
<b>Type of event</b>	Conference (with interactive workshop)	<b>Audience</b>	Academic		
<b>Brief description</b>	EUROMED is an international research conference dedicated to approached to preservation of cultural heritages. Besides participating as attendees (Athena RC), a poster and a conference paper were submitted as a joint effort of all Consortium partners (under the lead of Lynkeus)				
<b>Self-organised event</b>	No	<b>Leading organiser</b>	Athena RC, Lynkeus	<b>Participation</b>	Athena RC
<b>Dissemination</b>	Conference paper, poster, Twitter, Facebook				

Protecting, preserving and presenting our Cultural Heritage are frequently interpreted as change management and/or change the behaviour of the society. Joint European and international research produces a scientific background and support for such a change. We are living in a period characterized by rapid and remarkable changes in the environment, in the society and in technology. Natural change, war conflicts and man-made changes, including climate, as well as technological and societal change, form an ever-moving and colourful stage and a challenge for the society. Close cooperation between professionals, the policy makers and authorities internationally, is necessary for research, development and technology in the field of cultural heritage. Scientific projects in the area of cultural heritage have received national, European Union or UNESCO funding for more than thirty years. In this context, the biannual EuroMed conference has become a regular milestone on the never-ending journey of discovery in the search for new knowledge of our common history and its protection and preservation for the generations to come. They also provide a unique opportunity to present and review results, and to draw new inspiration. The agenda of this unique conference includes hundreds of excellent oral and poster presentations, as well as workshops and demonstrations from academia and industry, reflecting the wide scope of our work in the area of cultural heritage. The focus of the conference thus is on interdisciplinary and multi-disciplinary research on tangible and intangible Cultural Heritage, the use of cutting-edge technologies for the protection, preservation, conservation, massive digitalisation and visualization/presentation of the Cultural Heritage content (archaeological sites, artefacts, monuments, libraries, archives, museums, etc). At the same time, the event is intended to cover topics of research ready for exploitation, demonstrating the acceptability of new sustainable approaches and new technologies by the user community, SME's, owners, managers and conservators of cultural patrimony.

Besides participating to the conference as attendees (Athena RC), the Consortium submitted a project poster and a conference paper, prepared under the lead of Lynkeus with contributions from all Consortium partners, ("WhoLoDancE: Whole-body interaction Learning for Dance Education") giving an overview of rationale, objectives, work done so far, achieved results, the state-of-the-art of the project development, as well as lesson learned and open issues.



Figure 18. Poster presented by Athena RC at EUROMED 2018 (Nicosia, Cyprus, 29 October - 3 November 2018)

## ICT2018

<b>Title</b>	<b>ICT 2018 – Imagine digital, connect Europe</b>		<b>When</b>	4 – 6 December 2018	
<b>Where</b>	Vienna, Austria			<b>Venue</b>	Austria Palace
<b>Type of event</b>	Networking event			<b>Audience</b>	Academic, business
<b>Brief description</b>	The event is EC-organised event aimed at networking and promoting research and innovation in the field of Information and Communication Technologies				
<b>Self-organised event</b>	No	<b>Leading organiser</b>	Lynkeus	<b>Participation</b>	Lynkeus, Athena RC, Unige
<b>Dissemination</b>	Conference paper, Twitter, Facebook, Instagram				

ICT is the key European event dedicated to networking and promoting research and innovation in the field of Information and Communication Technologies, focusing on the European Union’s priorities in the digital transformation of society and industry, and represents an opportunity for the people involved in this transformation to share their experience and vision of Europe in the digital age. The 2018 edition, ICT 2018: Imagine Digital – Connect Europe, took place in Vienna on 4-6 December 2018, mostly dealing with the Horizon 2020 Work Programme 2018-20, including ICT calls across all three pillars of Horizon 2020. The event, organised by the European Commission’s Directorate-General for Communications Networks, Content and Technology in cooperation with the Austrian Presidency, entailed conferences on digital research and innovation policies, exhibitions of EU-funded research and innovation projects in the field of ICT, a series of networking activities and an innovation and start-ups village to showcase European entrepreneurship.



Figure 19. WhoLoDancE roll-up banner presented at ICT 2018 (Vienna, Austria, 4-6 December 2018)

The WhoLoDancE project was showcased in two ways: a roll up banner with a final overview of the project (methodology, workflow) and the achieved tools, hosted and illustrated within the exhibition booth of another EU-funded project managed by Lynkeus (MyHealthMyData); a networking session, entitled “Virtual reality for innovative usages of movement analysis” (Room 2.31, 5 December, 09:00-09:45), which explored ways in which IT, in conjuncture with virtual (VR) and mixed reality (MR) applications, can help preserve, integrate, re-use and convey forms of European cultural heritage, such as dance art and related cultural assets, with participation of the PC, Katerina El Raheb (Athena RC) and Antonio Camurri (Unige). The Consortium illustrating project results and discussing perspectives for their further development and exploitation routes, including the launch of an ICO for a technological platform for preservation of movement-related skills and techniques.

## Virtual reality for innovative usages of movement analysis: an ICO for WhoLoMove

Room 2.31, 05/12/2018 (09:00-09:45)

A successful H2020 project, WhoLoDancE (*Whole-Body Interaction Learning for Dance Education*) has demonstrated the capacity of recording and preserving the representation of priceless dance movement skills, while providing cutting edge digital technology to acquire relevant in-depth knowledge and experiment with new ways of learning and teaching, as well as designing new anatomically sound movements and choreographies.

Moving from proof-of-concept to operational reality for movement at large, WhoLoDancE exploitation entails that a similar approach can be applied to adjacent areas such as *wellness, sports, martial arts, crafts and work ergonomics, body movements for rehabilitation*, and even robotics. The ambition is to establish the first scalable, decentralised library of annotated motion capture files along with tools to edit, blend, sell and distribute real world body motions leveraging them into a digital marketplace.

This platform, to be called WhoLoMove, will allow *artists, craftsmen, athletes or anyone else able to perform skilful movements* to capture their performance, upload these contents into a quality controlled, integrated environment and share them with a global audience. Participants will exchange services paying through specially issued electronic coins (tokens), capable of incentivising demand and supply, implementing through a blockchain concertation layer a precise traceability of all transactions, thus securing attribution and property of the transacted assets. This in turn is expected to fuel the gathering of further data, generating demand, lowering distribution costs and triggering the participation of various players contributing to its growth. In this way, content creators will define terms and conditions under which their work is purchased, used and distributed, while data fingerprinting, time-stamping and other data protection technologies will enforce proper and legal use of content files.

### SPEAKERS

Edwin Morley-Fletcher, *Lynkeus*  
Antonio Camurri, *University of Genova*  
Katerina El Raheb, *Athena Research and  
Innovation Centre*



Figure 20. Leaflet prepared to showcase the networking session “Virtual reality for innovative usages of movement analysis” (Room 2.31, 5 December, 09:00-09:45) at ICT2018 (Vienna, Austria, 4-6 December 2018)