

AMENDMENT REQUEST LETTER

Munich, 07-04-2017

European Commission
Communications Networks, Content and Technology
B-1049 Brussels
Belgium

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SERVICE WITH ACKNOWLEDGMENT OF RECEIPT

Dear Khalil Rouhana,

Subject:

Request for Amendment No. 5 to grant agreement No. 601116
Project title "ECHORD Plus Plus" – "European clearing House for Open Robotics
development Plus Plus"

With reference to the above mentioned grant agreement, I request on behalf of the
consortium to modify the grant agreement as follows:

1 - Addition of one or more beneficiary (ies)

The following entity is added as beneficiaries with effect from the date specified in
the following table:

Table 1: *Beneficiary selected to strengthen the user-focus in the healthcare PDTI
experiment CLARK (WP 25) based on the recommendations of independent experts
during the on-site review on 7th July 2016 after Phase I of PDTI.*

Full name and legal form of the beneficiary (national registration number if any)	Established in (full address city/state/province/country)	Represented by (name of legal representative), (function), and/or(name of legal representative), (function), or her/his/their authorized representative	Experiment acronym(s)	Start date of participation
UNIVERSITE DE TECHNOLOGIE DE TROYES (UTT)	Rue Marie Curie 12, 10004 Troyes, France	Mr. Pierre Koch, Directeur, and/or her/his/their authorized representative	CLARK	01/12/2016

2 - Termination of one or more beneficiaries' participation

The participation of the following beneficiaries is terminated [from the date specified in the following table]:

Table 2: *List of terminated beneficiaries.*

Full name and legal form of the beneficiary (national registration number if any) (beneficiary no.)	Experiment acronym(s)	End date of participation
CYPRUS UNIVERSITY OF TECHNOLOGY (198(I)/2003, LEMESOS) (participant no. 63)	ROBODILLOS	10/08/2016
HELIKAS ROBOTICS LTD (HE331322, NICOSIA) (participant no. 64)	ROBODILLOS	10/08/2016
ROBOSOFT Services Robots (331720987, BAYONNE) (Participant no. 49)	ARNICA	15/08/2016
INLOC ROBOTICS SLU (B453989, Barcelona) (Participant no. 50)	ARNICA	15/08/2016
Assistance Publique - Hopitaux de Paris (42132660400012) (Participant no. 52)	ARNICA	15/08/2016

3 - Adjustment of the PDTI process

The structure of the PDTI process was adjusted to include a **Design Phase**, preceding the previously defined **Prototyping Phase** and **Small Scale Test Series Phase**. The change has led to the following adjustment of WP5 Deliverables.

Table 3: *New deliverable definition for WP5.*

Deliverable no.	Deliverable title	Due date	Adjustment
D5.4	Open Call and selection of the RTD consortia	M24	This deliverable is a combination of the former D5.4 (titled: Document with all details relevant for the scenario-specific RTD proposals) and D5.5 (titled: Received proposals based on the open call for RTD proposals. This merger was done to combine related topics – the call and its result), to make the deliverable more complete and to shorten the list of deliverables.
D5.5	Phase I – Design Phase: Selection of the two winning	M30	Added: This deliverable is added in order to reflect Phase I of the PDTI process which was added after the process had to be changed – three phases and

	teams for phase II		six teams (three per scenario to be reduced to two per scenario instead of two phases and four team to be reduced to one per scenario)
D5.6	Feasibility studies on prototypes (Phase II)	M52	Added: This deliverable (former D5.7) was more specifically geared to Phase II of the PDTI Technology development now.
D5.7	Small-scale test series and user-acceptance studies (Phase III)	M64	Added: This deliverables (former D5.8) was more specifically geared to Phase III of the PDTI technology development.
D5.8	PDTI manual	M64	Added: This is the former deliverable D.5.9.

4 - Budget changes implemented

A total budget of 925.645 € (EU contribution) is shifted from TUM to the beneficiaries listed below.

Table 4: *Budget shifted from TUM's budget to different partners.*

Beneficiary	EU contribution	Description
FCC (participant no. 54)	40.736€	PDTI Phase II (experiment: ARSI)
IBAK (participant no. 56)	1.564 €	PDTI Phase II (experiment: ARSI)
SIMTEC (participant no. 55)	25.972 €	PDTI Phase II (experiment: ARSI)
EURECAT (participant no. 53)	187.208 €	PDTI Phase II (experiment: ARSI)
Universidad de Sevilla (participant no. 66)	79.692 €	PDTI Phase II (experiment: SIAR)
IDMIND (participant no. 65)	96.552 €	PDTI Phase II (experiment: SIAR)
Universidad Pablo de Olavide (participant no. 67)	80.340 €	PDTI Phase II (experiment SIAR)
ACCEL (participant no. 57)	125.585€	PDTI Phase II (experiment: ASSESSTRONIC)
Université Pierre et Marie Curie-Paris 6 (participant no. 58)	48.775 €	PDTI Phase II (experiment: ASSESSTRONIC)
Servicio Andaluz de Salud (participant no. 59)	17.100 €	PDTI Phase II (experiment CLARK)
MLAB (participant no. 68)	62.075 €	PDTI Phase II (experiment CLARK)
Universidad de Malaga (participant no. 61)	25.200 €	PDTI Phase II (experiment CLARK)
UC3M (participant no. 60)	45.510 €	PDTI Phase II (experiment CLARK)

62)		
Activageing (participant no. 110)	22.440 €	PDTI Phase II (experiment CLARK)
ECA (participant no. 90)	15.120 €	Budget increase to finance the replacement of one partner in the originally accepted Call II experiment MAX-ES, replacement of partner IRT SYSTEMX accepted in Amendment 4
AluPec (participant no. 91)	10.080 €	Budget increase to finance the replacement of one partner in the originally accepted Call II experiment MAX-ES, replacement of partner IRT SYSTEMX accepted in Amendment 4
Blue Ocean Robotics (participant No. 6)	8.280 €	An increase of personnel costs (1,8 PM) in order to monitor the PDTI Phase II Healthcare experiments
UWE (participant no. 3)	29.999 €	An increase of personnel costs 12 PM) in order to strengthen the RIF marketing at the lead beneficiary of the RIFs
UPC (partner no. 4)	3.416,50 €	An increase of other Direct Costs (travel budget) in order to perform a share of the final reviews of Call II experiments

In TUM's budget now 311.600 € (EU contribution) are reserved to finance pre-specified additional activities to strengthen the impact of the project.

Table 5: *Detail of TUM's budget dedicated to impact enhancement.*

Activity financed	Activity Type	Subcontracting	EU contribution
Pictures of the RIFs	OTHER	YES	4.800 €
360° videos of the RIFs + corporate video	OTHER	YES	9.400 €
Travel costs for photographers	OTHER	YES	6.000 €
2 Samsung Gear VR Glasses	RTD (Other Direct Costs)		200 €
2 Samsung Galaxy S6 smartphone	RTD (Other direct costs)		900 €
4 Beam+ telepresence robots	RTD (Other direct costs)		10.800 €
Best picture award ceremony at Automatica	OTHER	YES	3.200 €
Additional costs due to final reviews	RTD (Other direct costs)		4.800 €
Kick-off meeting for experiments (Sara Coburn Price)	OTHER	YES	3.500 €
Workshop for experimenters	OTHER	YES	18.000 €
Experiment booster program	OTHER	YES	250.000 €

5 - Modification of duration

The duration of the project specified in Article 3 of the Grant Agreement is modified as follows:

New duration: 64 months.

6 - Modification of Annex I - Description of Work

Annex I - Description of Work is modified.

The revised Part A.2 (List of beneficiaries), A.3 (Overall budget breakdown), Part B.1 (Scientific and/or technical quality) and Part B.2 (Implementation) of Annex I dated 07/04/2017 attached to this letter replace any former version.

All other provisions of the Grant Agreement and its annexes shall remain unchanged.

Annex II – Amendment Justification; provides the detail of the motivation for each item in the present Amendment request letter.

All separate requests, including, but not limited to, the ones regarding the implementation of the experiments can be approved independently. The respective modifications of this Amendment Request shall take effect on each of the dates as specified throughout this Amendment Request.

Yours sincerely,

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For the coordinator on behalf of all beneficiaries, done in München

Name of the legal entity:

Technische Universität München, Arcisstrasse 21, 80333 München, Germany

Name of legal representative:

Stamp of the organisation (if applicable):

Signature of legal representative:

Date:

SEVENTH FRAMEWORK PROGRAMME

THEME ICT-2011-9

Cognitive Systems, Interaction, Robotics

Grant agreement for

Large-scale integrating project

<p><i>Annex II - “Amendment Justification”</i></p>

Project acronym: **ECHORD++**

Project full title:

European Clearing House for Open Robotics Development

Grant agreement no.: **601116**

Date of preparation of Annex II (latest version): 07.04.2017

Date of approval of Annex II by Commission: *(to be completed by Commission)*

2 - Termination of one or more beneficiaries' participation

As foreseen in Annex I dated 07/04/2017, the number of PDTI consortia is reduced from 6 (three consortia to address the PDTI challenge on healthcare and three to address the PDTI challenge on Urban Robotics) to 4 (two for each of the two challenges) between Phase I (Design Phase) and Phase II (Development of prototypes, Scientific monitoring, feasibility studies). The selection is based on the results of on-site reviews by independent experts which took place in Barcelona on 6th & 7th July 2016 (Urban robotics) and 7th July 2016 (healthcare). The terminated beneficiaries participated in the two experiments which lost the competition (for healthcare: ARNICA, for Urban Robotics: ROBODILLOS).

Article 1.1 of the Grant Agreement is modified accordingly.

3 - Adjustment of the PDTI process

Originally, the overall PDTI process (at that time referred to as: *PCP pilots*) was expected to feature two successive phases,

1. A **prototyping phase**, in which RTD consortia were expected to design the solution and develop a prototype accordingly,
2. A **small scale test series phase**, in which teams would produce series of prototype, to be tested and qualified.

However, it became necessary to extend the process to include a third phase, preliminary to the above two; that is, a **design phase**, distinct from the above prototyping phase. To better accommodate this change to the PDTI process, we have taken the initiative to adjust the number and content of deliverables in WP5, as discussed below.

Adjustment of deliverables

Original situation: The original PDTI process structure called for the following deliverables: A first pair of deliverables were intended to address aspects relevant to the RTD calls (*originally labelled* D5.4, D5.5), another WP5 deliverable corresponded to Amendment III (D5.6). Then, two additional deliverables were expected to come at the end of each of the two originally anticipated phases (D5.7 and D5.8). A final deliverable was expected to provide an overview of the overall PDTI process, including lessons learned (D5.9).

New situation: The overall deliverable structure has remained the same, but we have streamlined things where useful, and added details as relevant to better reflect the new PDTI process structure,

as detailed in the table below. In particular, the two original deliverables related to RTD calls were merged into a single deliverable (*now labelled D5.4*). We have kept the same pattern of having one deliverable to reflect each phase, implying we have added one to cover the new Phase I (design phase, now D5.5), in complement to the two pre-existing deliverables for the prototyping and series test phases (which are now numbered D5.6 and D5.7, respectively). Finally, the PDTI manual remains, but now with deliverable number D5.8.

4 - Budget changes implemented

The budget of 925.645 € (EU contribution) shifted from TUM to the beneficiaries listed in the Amendment request letter is motivated by the following; **a)** to finance PDTI Phase II as described in the Annex I), **b)** cover the additional budget need of experiment MAX-ES (as accepted in Amendment Request 4 dated 28/11/2016), **c)** finance some additional activities to promote primarily the RIFs and **d)** cover an additional request for personnel costs of two partners of the core consortium (BOR and UWE):

Experiment Booster Program: Further supporting Experiments on their road to market

Following cancellation of a Call 1 experiment, some leftover budget has been available. Project partners have given consideration to the opportunity of using this budget to the benefit of consortia in the Experiment Instrument, in particular in such a way as to further support Experiments in the process of bringing a product to market. To that end, core project partners have negotiated a possible **support program** with an external delivery organization: UnternehmerTUM Projekt GmbH (independent spin-out of TUM). UnternehmerTUM enjoys an outstanding track record in the area, offers links to potential customer companies, venture capital and serial entrepreneurs. The program provided by UnternehmerTUM, in addition to personalized coaching provided by the organization, allows access to an externally funded incubation programme (Nexpreneurs), and the opportunity to bid for a customer oriented accelerator programme (TechFounders). It should be noted, however, that the proposed solution requires of beneficiaries that they relocate to Munich for a period of time. It is anticipated that this requirement may prove a deterrent. Accordingly, the offer for support will be formulated in the following manner:

Core consortium partners will directly engage in dialogue with Experimenters, describe the offer from UnternehmerTUM, but also allow Experimenters to formulate a similar offer themselves, to be provided by an external organization of their choosing. Suitability of such alternate solutions will be assessed based on a number of explicit criteria (modes of delivery and contents of the program, duration, scope, and cost). Once the offer has been made clear to all Experimenters, interested consortia will be asked to provide a short proposal (one to two pages, font size 12) describing their own suitability to the support program (one page), as assessed by the following criteria,

1. Technical excellence of the Experiment's product or service,
2. A Technology Readiness Level no lower than 6,
3. Scalability of potential enterprise,
4. Ability of the Experimenters to benefit from program,
5. Ability of the team to commit resources necessary to the completion of the program.

In addition, for teams proposing their own solutions for the support program, a second page will be expected to substantiate the suitability of the solution, in particular with regards to the aforementioned criteria (delivery, content, scope, etc.). The selection of funded proposals will be performed by core partners.

As previously mentioned, cost of the above support program will be covered using the leftover funds from a cancelled Experiment from Call 1. TUM will produce vouchers for the selected teams. The selected teams will be paid on the basis of these vouchers and will subcontract the external organization themselves. It is the responsibility of the selected Experiments to respect the subcontracting regulations in place in their respective institutions. TUM, though, will make sure that the selected Experiments are aware of the regulations for subcontracting, as outlined in Section 3 – Implementation, article II.7 Subcontracting, to the ECHORD++ Grant Agreement. TUM will also point the selected Experiments to their respective auditors to clarify the details of subcontracting, particularly if these Experiments are SMEs. The precise number of teams to be supported by this program will depend on the specific cost of possible alternate solutions proposed by Experimenters. However, considering the cost of the UnternehmerTUM program, it is expected that three to four Experiments will be supported.

In complement to the above support program, access for interested Experimenters to the **St-Gallen Entrepreneurial Workshop** will be offered. This workshop consists of a two-day coursework on Business Management Innovation (BMI), focusing on development and implementation of business models. It came highly recommended by members of the I4MS project Fortissimo, and outcomes of the workshop were well received in the review meeting of the Fortissimo project. Nine Experimenters have expressed an interest in attending such a workshop.

The core partners of ECHORD++ will seek the approval of the European Commission before implementing the support program solution, selecting the experiments that will benefit from this program, and before booking the St-Gallen Workshop.

5 - Modification of duration

The additional 4 months are needed to allow the four PDTI consortia to complete all three phases of the PDTI technology development. Due to the relaunch of the Open Call for PDTI healthcare RTD

consortia and the (unjustified) redress filed against the selection of the two winning PDTI healthcare teams after Phase I, the two PDTI healthcare teams were only able to start Phase II of the technology development on 01/01/2017. Phase II and Phase III lasting for 12 months each, these teams would not be able to finalize the technology development as outlined in Annex I.

In addition, the cost-neutral extension of the project's runtime will allow for a proper closing of the project, i.e. the extraction of results, the handling of review procedures for the experiments, and the dissemination of the results in form of a closing workshop. Furthermore, the cost-neutral extension will offer opportunities in terms of visibility. All experiments of Call II finalized and the PDTI experiments nearly accomplished, this extension would allow for a major event at the IROS conference 2018 in Madrid to present the technology to industry as well as an event at the European Parliament to demonstrate the impact of ECHORD++ on transfer of robotics technology and on the European economy to politicians.

The partners of the ECHORD++ consortium are aware that even if the duration of the project is extended they will have to finalize the originally planned work with the same EU contribution. Therefore they will adjust the use of their resources and the further course of action to the new duration of 64 months.

The budget for the Experiments will remain unchanged, but the additional time will allow for wider dissemination of the results and to monitor the follow-up activities of the Experiments.

All relevant tables in the Description of Work have been adjusted accordingly.