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Author(s): Philippe Segers, GENCI; Veronica Teodor, Juelich
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Authorship	Written by:	Philippe Segers, GENCI; Veronica Teodor, Juelich
	Contributors:	Florian Berberich, Juelich; Ioannis Liabotis, GRNET; Inigo Yenes, PRACE aisbl; Janne Ignatius, CSC; Manuel Fiolhais, UC-LCA; Marie Sandberg, CSC; Oriol Pineda, BSC; Pedro Alberto, UC-LCA; Sergio Bernardi, CINECA.
	Reviewed by:	Norbert Meyer, PSNC Thomas Eickermann, Juelich;
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http://www.prace-ri.eu/IMG/pdf/D2.1_4ip.pdf
- [3] http://ec.europa.eu/justice/data-protection/reform/index_en.htm

List of Acronyms and Abbreviations

aisbl	Association International Sans But Lucratif (legal form of the PRACE-RI)
BoD	PRACE Board of Directors
Capex	Capital Expenditure
CHPC	Centre of High Performance Computing
CUDA	Compute Unified Device Architecture (NVIDIA)
DEEP-ER	Dynamical Exascale Entry Platform - Extended Reach
EC	European Commission
GP	PRACE General Partner
GPU	Graphic Processing Unit
HLST	High Level Support Team
HM	PRACE Hosting Member
HPC	High Performance Computing; Computing at a high performance level at any given time; often used synonym with Supercomputing
IAC	Industrial Advisory Committee
IPR	Intellectual Property Rights
MB	Management Board (highest decision making body of the project)
MD	Managing Director
MOOC	Massively Open Online Course
MoU	Memorandum of Understanding
MPI	Message Passing Interface
MPP	Massively Parallel Processing
Opex	Operational Expenditure
PA	Preparatory Access (to PRACE resources)
PATC	PRACE Advanced Training Centres
PRACE	Partnership for Advanced Computing in Europe; Project Acronym
PRACE 1	PRACE agreement for the Initial Period of five years
PRACE 2	The upcoming next phase of the PRACE Research Infrastructure following the initial five year period
RI	Research Infrastructure
RIST	Research Organisation for Information Science and Technology
SSC	PRACE Scientific Steering Committee

SWG	PRACE Strategy Working Group
Tier-0	Denotes the apex of a conceptual pyramid of HPC systems. In this context the Supercomputing Research Infrastructure would host the Tier-0 systems; national or topical HPC centres would constitute Tier-1
Tier-1	National or topical HPC centres
VAT	Value Added Tax
XSEDE	Extreme Science and Engineering Discovery Environment
WP	Work Package

List of Project Partner Acronyms

BSC	Barcelona Supercomputing Center - Centro Nacional de Supercomputacion, Spain
CINECA	CINECA Consorzio Interuniversitario, Italy
CSC	CSC Scientific Computing Ltd., Finland
ETHZurich (CSCS)	Eidgenössische Technische Hochschule Zürich – CSCS, Switzerland
GENCI	Grand Equipement National de Calcul Intensiv, France
GRNET	Greek Research and Technology Network, Greece
JUELICH	Forschungszentrum Juelich GmbH, Germany
PRACE	Partnership for Advanced Computing in Europe aisbl, Belgium
PSNC	Poznan Supercomputing and Networking Center, Poland
UC-LCA	Universidade de Coimbra, Laboratório de Computação Avançada, Portugal

Executive Summary

This deliverable is an update of the PRACE-4IP deliverable D2.1 “First Report on PRACE 2.0 Development” [2] and reports on the status of the implementation process of the second period of operations of the PRACE pan-European Research Infrastructure, so-called PRACE 2, that will succeed between 2017 and 2020 the PRACE agreement for the Initial Period (referred to as PRACE 1 in this deliverable).

Since its establishment in 2010, PRACE 1 has been very successful in providing a world-class HPC infrastructure to European researchers in science and industry, thus enabling these users to access globally competitive HPC systems based on scientific and technical merit. Four Hosting Members (France, Germany, Italy and Spain) secured funding for the Initial Period from 2010 to 2017, while all PRACE project partners continued to develop the services and brand of PRACE in four FP7-funded Preparatory and Implementation Phase projects (PRACE-PP, PRACE-1IP, PRACE-2IP, PRACE-3IP) and one under Horizon 2020 (the current PRACE-4IP).

At the occasion of the 25th PRACE Council Meeting in Amsterdam in March 2017, the PRACE Members ratified a Resolution to proceed with the second phase of their partnership – now known as PRACE 2.

With the second period defined from 2017 to 2020, PRACE will strengthen Europe’s position as a world-class scientific supercomputing provider. Supercomputing is considered a key enabling technology for knowledge development, scientific research, big data analytics, solving global and societal challenges, and supporting European industrial competitiveness. PRACE 2 will build on the important achievements reached by PRACE 1 with the long-term objective of providing a sustainable infrastructure.

For the PRACE 2 programme, the PRACE Members have thoroughly discussed and defined the underlying funding model of the Research Infrastructure, based on the contribution of the 5 Hosting Members (France, Germany, Italy, Spain, and Switzerland) and the General Partners. The European Commission supports specific PRACE activities via projects funding.

The impact of PRACE 2 is already visible for user communities. In the 14th Call for Proposals for Project Access, PRACE was able to make available 2000 Million core hours, that is 2,5 times more resources than in previous calls.

1 Introduction

The focus of this deliverable is to report on the status of the implementation process of the second period of operations of the PRACE pan-European Research Infrastructure, so-called PRACE 2 that will succeed between 2017 and 2020 the PRACE agreement for the Initial Period (referred to as PRACE 1 in this deliverable). This deliverable is an update of the PRACE-4IP deliverable D2.1 “First Report on PRACE 2.0 Development” [2] that reported on the status of the early stage of the implementation process of the PRACE 2.

During the second year of PRACE-4IP, Work Package 2 (WP2) Task 2.1 continued to provide major support to the PRACE aisbl Council and the PRACE Board of Directors (BoD) in order to further identify and analyse the different elements of PRACE 2 - such as funding and governance.

This deliverable, describing the activity undertaken by task 2.1, is structured as follows:

- Section 2, after recalling the mission and objectives of PRACE, concentrates on the analysis of the transition from PRACE 1 to PRACE 2 and the different elements of the new PRACE 2 programme which include governance, funding, VAT aspects, PRACE Peer Review Process and High Level Support Teams.
- Section 3 reports on the legal support provided by WP2 of the PRACE-4IP project regarding the copyrights for the PRACE training material and adaption of PRACE policies to the new European legislation on Data Protection. Support was also performed in establishing Memoranda of Understanding (MoUs) with other research projects, programmes and organisations as part of PRACE’s ambition to create both a European and international HPC ecosystem.
- Finally, some conclusions are drawn in Section 4.

For some of the topics covered in this deliverable, the analysis is based on the formulation of legal questions related to these topics, and on an evaluation of answers provided by the legal advisor firm Bird & Bird LLP assisting PRACE.

2 Mission and Objectives

The overarching goal of PRACE is to provide a federated European supercomputing infrastructure that is science driven and globally competitive. It strengthens European science by providing access to high-end computing and data analysis resources which help drive discoveries and new developments in all areas of science, from fundamental research such as mathematics and computer sciences, medicine, engineering to applied sciences such as digital humanities and social sciences. The goal of this is to help create a fertile basis for research, technology development and industrial competitiveness in Europe.

PRACE 2 is built on the important achievements reached by PRACE 1 with the long-term objective of providing a sustainable HPC infrastructure. In order to reach this objective, PRACE aisbl decided to set up an integrated programme relying on the contribution of all the PRACE partners, with the following mission:

- To provide a world-class HPC and data infrastructure to European researchers in science and industry comprised at any one time of leadership-class pan-European systems, interlinked with an underlying network of national and regional systems;
- To develop an architecturally diverse supercomputing infrastructure no individual country could afford in order to sustain European competitiveness;

- To foster international collaborations on the forefront of high-end computing in simulation and data science and to bring competence to the PRACE member states according to their contributions;
- To help develop Europe by promoting the European idea of “Bringing stability and peace through open scientific discourse between all members”;
- To enhance the scientific output of a supercomputing system through international Tier-0 allocations coupled with the assistance of the local high level support teams;
- To foster healthy research competition through the unique and purely scientific review based process that pushes scientists to the top, while avoiding unnecessary duplication;
- To stimulate the deployment of HPC in the knowledge economy in Europe and help European industry become more competitive.

2.1 The new PRACE 2 programme

As described in PRACE-4IP D2.1 the PRACE Strategy Working Group (SWG) has proposed a model for the PRACE 2 programme that would be based on sharing the operational costs of the Tier-0 infrastructure. In more detail, the previously proposed model required that Hosting Members (HMs) finance the required hardware investments nationally (Capex) while all other members contribute to the operational costs (Opex), in a distribution that could be based on national GDP and other modulating factors. The HMs would provide such contribution in cycles, while non-Hosting Members would provide such contribution in cash, which would be distributed to the HMs according to their provision of cycles.

In the period which followed the submission of Deliverable 2.1 and of this model proposal, it became apparent that in order for the European scientific communities to fully benefit from the performance of leadership-class Tier-0 systems provided by the PRACE 2 Hosting Members, it is essential to provide them with high-level support teams which can assist in various aspects such as code enabling and optimisation of scientific applications.

The scientific computing community is facing massive application software development challenges due to a continued miniaturisation of processing elements and node architectures that are rapidly becoming more massively parallel and heterogeneous. As an example, existing simulation codes require software development that can harness the capabilities of novel hardware for the solution of challenging scientific problems and several old algorithms need to be replaced with newer versions which should be co-designed for contemporary hardware features. The purpose of the PRACE 2 High Level Support Teams (HLSTs) is to help the European Tier-0 users in this transition, using the expertise of the PRACE hosting sites, relayed with the support of other PRACE partners, with proven approaches for traditional massively parallel processing (MPP) systems with MPI and OpenMP as well as the need to harness new emerging architectures like XEON PHI with new programming models - such as HPX-3 or Legion, and GPUs with specific programming models like CUDA.

A new PRACE 2 programme was proposed which is based on computing cycles made available by HMs on Tier-0 systems and on the establishment of HLSTs in charge of supporting European scientific communities in their efficient use of Tier-0 systems. Based on the above considerations, the PRACE SWG and Council adopted this new model and did not continue with the implementation of the operational costs sharing model. This programme has effectively started with the PRACE Call 14 for Project Access, which was published in October 2016, with project allocations from April 2017, and it will run for three years, i.e. until PRACE Call 19. The PRACE Council is committed to start the preparations for PRACE 3 in order to be ready for this next phase on time. Nevertheless, the PRACE 2 programme

may be extended and the Tier-0 systems may continue to operate beyond Call 19 until the subsequent phase of PRACE is defined and implemented.

The allocation process of PRACE 2 will be based on the existing processes of PRACE 1 – which is based on scientific and technical merit. It will be further developed to accommodate the changing needs of the science communities (including data services) and to continually improve the scientific quality of the projects.

2.1.1 *Governance aspects*

During the process of designing and implementing PRACE 2, the PRACE Council revisited the PRACE governance model in order to assess it and propose possible necessary changes based on the following principles:

- To support the transparent, prompt and flexible decision making on the basis of expert input and advice as appropriate;
- To ensure a clear separation of powers and responsibilities between the Council ('mind' of organisation), the Board of Directors (BoD) and the PRACE aisbl staff ('hands' of organisation), conferring independence to the Council and its Chair from management;
- To ensure strong monitoring and oversight of the activities of PRACE to maximise the value and impact of PRACE.

The main bodies of PRACE with their roles and responsibilities have been described in detail in PRACE-4IP D2.1 [2]. In the following section we summarise the interaction between such bodies and we highlight the governance aspects that define the relation between PRACE 1 and PRACE 2.

2.1.2 *Interactions between the bodies*

The interactions between the bodies are shown in the following figure:

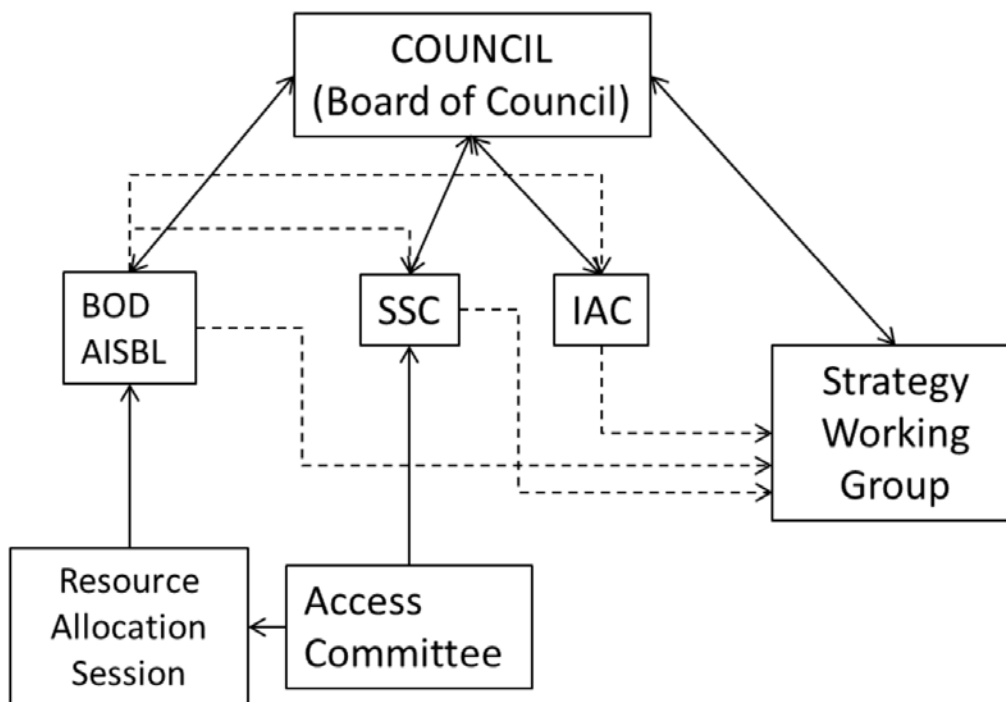


Figure 1: The interactions between the PRACE bodies

The arrows indicate the reporting and interaction routes:

- There is two-way communication between the Council and the BOD, the Scientific Steering Committee (SSC), the Industrial Advisory Committee (IAC) and the Strategy Working Group (SWG¹). The Council receives advice and input from these bodies, provides a direction and asks for input;
- The BoD, the SSC and the IAC are involved in the SWG, through membership of their chairs;
- There is a link between the BoD, the SSC and the IAC, through the Managing Director (MD), and through the Chair of the SSC, who is a member of the BoD;
- The Access Committee (AC) is responsible for ranking proposals submitted to PRACE calls. This ranking is then passed to the Resource Allocation Session which examines it. It is then up to the BoD to approve the proposed allocations to projects and systems. A report on the allocations is then made to the Council. The AC reports back to the SSC on the review process for each call.

Delegates of the Council, Advisors to the Council and Members of the BoD are fully separated, i.e. no individual can have more than one of these positions or roles simultaneously.

2.1.3 Role of Hosting Members in PRACE 2

The Hosting Members under the PRACE 2 programme provide access to their Tier 0 systems, as set out in the PRACE 2 programme. The Hosting Members pay their annual fees to PRACE aisbl and each of them is represented in the SWG by nominated members. Each hosting member has a representative in the PRACE BoD.

¹ The Working Rules of the SWG were agreed at the 19th Council meeting (February 2016).

In addition, they have a responsibility to establish and manage the High Level Support Teams (HLSTs) at each of their PRACE 2 sites. There is a requirement for the HMs to provide information about outcomes and to provide case studies from the work of the HLSTs. This could provide valuable evidence of the added value of the HLSTs, and the contribution to the European computational software community. The PRACE Council monitors the progress of HLST engagements and makes recommendations to the hosting sites, if improvements are necessary based on feedback collected by PRACE aisbl from the application groups which received support from the HLSTs.

2.1.4 *High Level Support Teams*

In order for the European scientific communities to fully benefit from the performance of leadership-class Tier-0 systems provided by the PRACE 2 Hosting Members, it is necessary to provide them with high-level support teams which could help projects when it comes to code enabling and optimisation of scientific applications. Each team will be located at a HM Tier-0 site and will be composed of HPC experts having, on the one hand, strong skills both on specific HPC architectures provided by the Hosting Members as well as applied mathematics, computer science and management of data, and on the other hand will be experienced in the applications fields they will support.

The HLSTs will be integrated into the line management of the PRACE 2 hosting sites and will be under full control of the local HM site. This will include the HM site controlling the:

- Personnel selection process;
- Management of team staff;
- Contractual engagement;
- Monitoring of the team and reports/articles to be used by PRACE aisbl and its partners in order to promote this activity.

Selection of the HLST work will be based on the following principles:

- Level-2 support will be the standard work of HLSTs and will be provided during the project access phase with prioritized inputs from the PRACE Access Committee during its bi-annual meetings;
- Level-3 support will be decided on as part of HLST work or as additional project activity depending on the workload of HLSTs and following the analysis of past PRACE projects and the advice of SSC, IAC, PRACE partners and the European scientific communities (e.g. the scientific use cases presented by the SSC). Twice a year, a joint meeting chaired by the PRACE Managing Director, will be organised in order to provide prioritized inputs to the different HLST. This meeting must ensure that the activities of the HLSTs are aligned to each other and that effort is being spent efficiently.

2.1.5 *Role of General Partners in PRACE 2*

The General Partners contributing to PRACE 2 fund the HLST programme and pay their annual fees to PRACE aisbl. They are represented in the Strategy Working Group by three nominated members and have one representative in the PRACE BoD. The General Partners manage the DECI mechanism and provide resources on the Tier-1 level systems.

2.1.6 Voting Rights

According to the PRACE AISBL statutes, the Association shall seek unanimity on all decisions and matters. When this is not possible, three majorities are defined, according to the nature of the decision:

- Unanimous vote (100%) notably for admission of new members, setting the annual contributions, or for amendment of the statutes, among others.
- Qualified majority (>83%) in general for any matter with financial implications.
- Absolute majority (>50%) for any other issues.

Further to this, in some situations the HMs have an explicit veto right, especially for items concerning their level of contribution. Article 14 of PRACE aisbl statutes contains a comprehensive description of the application of these majorities.

Qualified majority and Absolute majority are defined in the statutes in relation to both the number of members and the contributions of such members. This means that any resolution passed by an absolute majority needs the positive vote of >50% of the members, which needs to include >50% of the contributions to PRACE aisbl.

In PRACE aisbl, the Hosting Members hold the majority of the contributions. In the first period of PRACE, this was computed as 24,5% of contributions for each Hosting Member, and a remaining 2% equally distributed among the rest of PRACE members. This is especially relevant for decisions requiring qualified majority, for which the positive vote of all the Hosting Members is necessary.

In the second period of PRACE these percentages will change, according to the inclusion of an additional HM (CSCS, Switzerland), but also accounting for the increased contribution of the rest of PRACE members, through the funding of the HLST programme. The voting rights will be reviewed and amended in order to address this situation. As part of the PRACE 2 programme arrangements, an overall review and thorough analysis of the voting rules will also be carried out to ensure a continuing, safe and balanced decision making processes for PRACE.

2.1.7 Management of PRACE 1 and PRACE 2

PRACE 1 defined a sliding window for the fulfilment of the HM obligations. This sliding window is still open. This means that the PRACE 1 and PRACE 2 programmes will overlap until the end of 2018 as shown in the following figure:

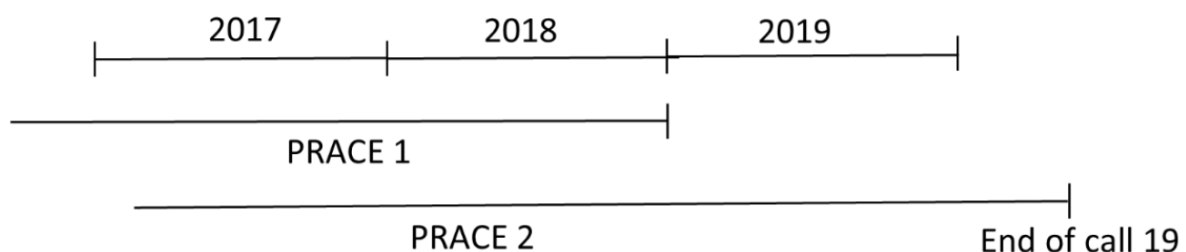


Figure 2: PRACE 2 and PRACE 1 overlapping

Some member states will be participants of PRACE 1 and PRACE 2, while others will only be participants of PRACE 1.

During this overlapping period, the PRACE 2 programme will be implemented as an optional programme of PRACE aisbl. In this way, the oversight and decisions associated with the PRACE 1 programme are separated from those associated with PRACE 2 thus ensuring that member states that are only participants of PRACE 1 cannot influence decisions which relate exclusively to PRACE 2.

At Council meetings, some items will be specific to the PRACE 2 programme:

General items	PRACE 2 specific items
<ul style="list-style-type: none"> ● Peer review process ● Outcomes from PRACE 1 allocations ● SSC and AC compositions ● IAC composition ● PRACE AISBL office budget ● Governance (chair, vice chair, secretary, MD) ● Support of and participation in projects - such as EXDCI ● Strategic relations with EC 	<ul style="list-style-type: none"> ● Outcomes from PRACE 2 allocations, including monitoring of juste retour ● All HLST related issues ● All additional GP contributions ● All PRACE 2 HM-systems related issues

Table 1: Specific PRACE 2 items at PRACE Council meetings

PRACE 2 specific items will be voted for in the Council, whereby the Association Members of PRACE 2 have a right to vote and the other Members shall be informed. In respect of these PRACE 2 specific items, only the Association Members of PRACE 2 will be taken into account when calculating the Council quorum and majority requirements as described in the Statutes. The contributions which shall be taken into account pursuant to Article 9.7 of the Statutes for the purposes of forming the majorities established in Article 14 of the Statutes with regard to PRACE 2 specific items, are only the additional contributions for PRACE 2 (to the exclusion of the annual contributions as provided in Article 9 of the Statutes).

2.1.8 Funding Aspects

During the first phase of the PRACE RI, from 2010 to 2015 - PRACE 1, Tier-0 resources were provided by four Hosting Members (Germany, France, Italy and Spain) based on an initial agreement that defined the amount of resources to be provided, whose cost was burdened by the respective countries. The European Commission (EC) provided complementary resources for the PRACE Implementation Phase projects, which funded several important activities related to:

- Services for the Tier-0 infrastructure, such as user support for access calls to these systems, establishment of the peer review system, user forums;
- The HPC ecosystem in Europe at large, such as Tier-1 DECI calls and later Tier-1 for Tier-0 services, training, code scaling and benchmarking, dissemination, the industrial collaboration SHAPE programme and exploration of future supercomputing technologies both on the hardware and software sides.

Because the cost of Tier-0 computer resources provision relied exclusively on national funding from the four hosting members, this model was not sustainable. Furthermore, there were no immediate plans of the EC to fund the infrastructure itself, i.e., the cost of the

provision of computing cycles. The principle “To compute you must contribute” was adopted, according to which all association members of PRACE 2 are supposed to contribute to the Tier-0 infrastructure. This is the base of the PRACE 2 optional programme business model. The contribution would take the following form:

- For Hosting Members: Provision of a predefined fraction of the current Tier-0 supercomputers managed by each partner, which now includes Switzerland as well.
- For Non-Hosting Members, called General Partners (GPs): Funding of High-Level Support Teams (HLSTs). The HMs and GPs will determine how the funding for HLSTs is distributed over the HM sites.

The HSLTs will perform level 2 and level 3 support work for the scientific users of the PRACE infrastructure. Each GP will pay a fee which takes into account the GDP of the respective country as well the past usage of Tier-0 computer cycles. There will be a ramp-up of contributions to take into account that two hosting partners, Italy and Spain, will still provide cycles for PRACE within the PRACE 1 framework. This transitory phase will end in 2018, after which all hosting partners will provide cycles within PRACE 2. The PRACE 2 phase is expected to run for a period of three years as from the PRACE Call 14 (published in October 2016 with allocations starting in April 2017) through to PRACE Call 19.

The EC is expected to continue supporting PRACE through the Implementation Phase projects, with PRACE-5IP already started, thus sustaining other very important aspects of the PRACE activities, namely those related to the HPC ecosystem in Europe, as referred to above.

The contribution by each GP would be paid directly to PRACE AISBL and would be added to the current membership fee which covers the expenses of the PRACE AISBL office in Brussels. Altogether, this is an extended fee for the whole infrastructure.

PRACE 2 will pave the way for the next phase of PRACE - PRACE 3, in which it is expected that the European Commission will contribute directly to the Tier-0 infrastructure, both in Capex and Opex, thereby assuring the long term sustainability of PRACE resources.

2.1.9 VAT Aspects

During the preparation of the set-up of the AISBL, an in depth analysis of the fiscal and taxation position of the association was performed. The legal and fiscal advisers brought the case to the Belgian tax office authority that in turn answered positively to the VAT and taxation exemption that PRACE aisbl presently has.

In essence, until now the provision of HPC-cycles by the HM to PRACE is not subject to VAT, since these cycles are not provided for reward.

In addition, PRACE's activities are not subject to VAT for the following main reason highlighted by the legal and fiscal advisers B&B:

„...the services currently offered by PRACE (the supply of HPC-cycles) do not have a direct link with the contribution paid by the Members as they mainly benefit the specific sector of European HPC scientific research and development as well as the communities of the Members in general. The counterpart received by Members for paying their yearly membership fee, is a mere (invaluable) voting right. The latter can only be seen as a process of internal financing and not as constituting a form of economic activity in the sense as described above. Consequently, the service rendered by PRACE must be considered as for free and does not fall within the scope of application of the VAT legislation“.

The contribution model devised for PRACE 2 differs from the initial phase, in what concerns the inclusion of the concept of support from the Non-Hosting Members. Such a support in the form of extended membership fee is neither related to the amount of computing resources given by the Hosting Members nor to any notion of service. Instead, it aims to establish teams of high level experts located at the hosting sites and totally dedicated to the support of the European scientific communities for the most efficient use of the Tier-0 systems.

The PRACE 2 Programme document approved by the PRACE Council stated clearly that:

“ .. PRACE 2 is built on the important achievements reached by PRACE 1 with the long-term objective of providing a sustainable infrastructure. In order to reach this objective, PRACE AISBL decided to set up an integrated programme relying on the contribution of all the PRACE partners.

This programme will be based on computing cycles made available by Hosting Members (HMs) on Tier-0 systems and on the establishment of High Level Support Teams (HLSTs) in charge of supporting European scientific communities in their efficient use of Tier-0 systems.“

Furthermore:

„ ...Most of the financial load of the PRACE 2 programme will be carried by the HMs through the provisioning of Tier-0 systems, by the European Commission – through funding of the Implementation Phase (IP) projects –, as well as by the General Partners (GPs) – through funding of scientific activities, training, communication, organisation of the call for proposals and high-level support teams. The motivation for making such substantial contributions are transparently documented here. These motivations will serve as terms of reference in decision making of the PRACE 2 governance bodies. The motivations are:

- *to provide a world-class HPC and data infrastructure to European researchers in science and industry comprised at any one time of leadership-class pan-European systems, interlinked with an underpinning network of national and regional systems;*
- *to develop an architecturally diverse supercomputing infrastructure no individual country could afford in order to sustain European competitiveness;*
- *to foster international collaborations on the forefront of high-end computing in simulation and data science, and to bring competence to the PRACE member states according to their contributions;*
- *to help develop Europe following the European ideas: bring stability and peace through open scientific discourse between all members;*
- *to enhance the scientific output of a supercomputing system through international Tier-0 allocations and the support by the local high level support teams;*
- *to foster a healthy competition by the unique and purely scientific review process that pushes scientists to the top, while avoiding unnecessary duplication;*
- *to stimulate the deployment of HPC in the knowledge economy in Europe and help the European industry improving its competitiveness.“*

However, in such a model there might be VAT or tax implications for members, and it may be necessary to take it into account in dealing with the fee collection and/or money distribution to the hosting sites. This aspect has been analysed at both the AISBL and members level, and the implications were well understood and accepted as well as its impact on the HLST resources made available.

2.1.10 Peer Review Process

The joint Peer Review is the most important feature and central element of PRACE. It has the function to act as a single entry point to the complete catalogue of HPC resources offered by PRACE, and to manage the processes related to their evaluations.

As part of the arrangements for PRACE 2, these services have been reviewed and improved according to the lessons learned so far and the recommendations of the PRACE SSC.

With regards to Preparatory Access, PRACE offers the following four different schemes:

- Type A: This scheme is intended to produce scalability plots for the performance of the codes on PRACE HPC systems, as well as other parameters that may be relevant to apply for PRACE calls for Project Access. The maximum duration of Type A projects is 2 months.
- Type B: The objective of this scheme is to undertake code development and optimisation. Applicants will need to describe the proposed work plan in detail, including the human resources and expertise available to implement the project. The maximum duration of Type B projects is 6 months.
- Type C: In this scheme, PRACE experts are requested to provide the necessary support to undertake adaptations (development and optimisation) to the codes of PRACE users. The maximum support that can be requested is the equivalent to 6 person-months of effort. The maximum duration of Type C projects is 6 months.
- Type D: This scheme allows PRACE users to start a code adaptation and optimisation process on a PRACE Tier-1 system with PRACE experts advising in the system selection process. In addition to Tier-1 computing time, the PRACE user will also receive Tier-0 computing time towards the end of the project (in form of the Type A scheme) to test the scalability improvements with the work supported by PRACE experts. The maximum support that can be requested is the equivalent to 6 person-months of effort. The maximum duration of Type D projects is 12 months.

Preparatory Access was originally based on quarterly cut-offs, where the evaluation of received proposals was carried out. This was established for the convenience of working in batches, but it also implies an average time-to-resources-access of three months. Experience has shown that this offset is inconvenient for small applications that only require a short allocation period to produce performance plots of their codes, prior to applying to PRACE Project Access. Because of this, the quarterly cut-off has been removed for Type A and Type B schemes, turning them into a real open call. With this change, a maximum time-to-resources of two weeks is expected. However, the quarterly cut-offs have been maintained for Type C and Type D, since these represent larger projects involving the technical support provided by WP7.

In relation with Project Access, the whole evaluation process has been thoroughly analysed by the PRACE SWG, with special emphasis on the feedback received from the PRACE SSC. The overall conclusion of this analysis is that the process is strong and adheres correctly to the principles defined for PRACE Peer Review during PRACE Preparatory Phase project, as follows:

- Transparency
- Expert Assessment
- Confidentiality
- Prioritisation
- Right to Reply
- Managing Interests

- No Parallel Assessment
- Ensure Fairness to the Science Proposed.

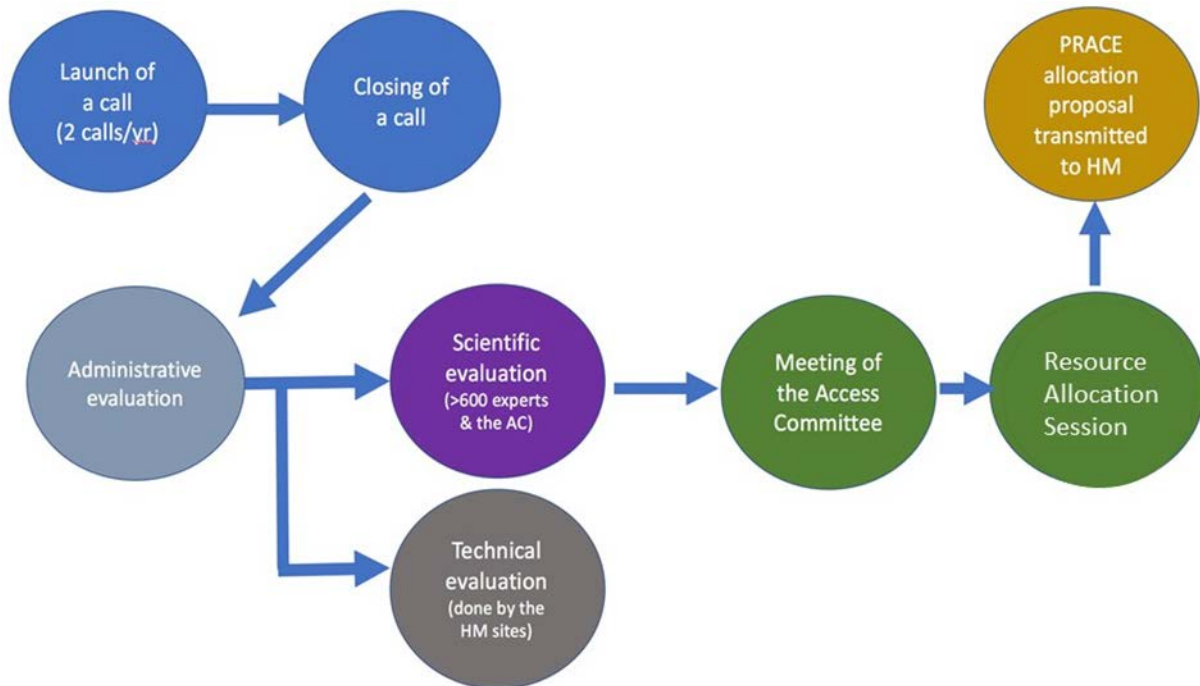


Figure 3: The PRACE Peer Review Process

Nevertheless, some weaknesses have also been identified, and the SWG has proposed a few modifications to the process, in order to address them. There has been a special emphasis in increasing the involvement of the scientific community and in improving the technical excellence of PRACE projects. The following table summarises the improvements in the main steps of the PRACE Peer Review process for Project Access:

Step	Measure	Expected impact
Submission of proposals	The time between the opening and the closure of the call has been extended from 4 weeks to 8 weeks.	Increase of the quality of proposals received.
Administrative check	This step allows the applicant to correct minor errors found during the administrative check, but not to submit missing sections or documents anymore.	Decrease of the proposals administratively rejected, while maintaining the fairness for all applicants.
Technical assessment	This step preceded the scientific evaluation, and a rejection here implied that the proposal would not undergo scientific evaluation. In relation with the new HLST program, proposals technically rejected will still be scientifically evaluated. Those proposals found scientifically excellent but technically not feasible will be forwarded to the HLST programme.	Increase the scientific productivity of PRACE users through high-level technical support to scientifically excellent applications.
Scientific Evaluation	The PRACE Access Committee has been involved again in the selection of reviewers. The time for finalising the scientific reviews has also been extended to 4 weeks.	Improve the quality of the scientific reviews.
Prioritisation	The past prioritization process involved the distribution of proposals into different scientific domains for a preliminary ranking. This has been eliminated, to increase the distribution according solely to scientific excellence.	Distribution of awards by scientific excellence, removing any possible distribution by scientific domains.
Resource allocation	The transparency of this process has been increased, by allowing external observers from the scientific community, PRACE members and funding agencies to attend the allocation session.	Increase the trust of PRACE stakeholders in the Peer Review process.
Evaluation reports	The reports provided to the applicants will be more detailed, and will include the relative ranking in the call. Resubmission of applications receiving the lower prioritization mark (1/5) will not be allowed for a period of one year.	Improve the feedback for PRACE applicants, in order to allow them to better understand the ranking and take appropriate measures for possible resubmissions.

Table 2: PRACE Peer Review process for Project Access

All these improvements have already been applied in PRACE 14th Call for Project Access, the first PRACE Call that includes PRACE 2 resources, from France, Germany and Switzerland. The evaluation of the proposals in this call has finished recently (31 March 2017), and a detailed analysis will be carried out by the PRACE SSC in the next months.

3 Support to other Work Packages

In addition to the support mentioned in previous sections of this deliverable, the working group has provided direct legal support for PRACE aisbl in various topics and to arising issues of a legal nature in the different work packages.

This section reports on the legal support provided by WP2 of PRACE-4IP project concerning the copyrights for the PRACE training material and adaption of PRACE policies to the new European legislation on Data Protection. It also summarises the legal support provided to the PRACE Research Infrastructure related to the collaboration with other research infrastructures, in the form of the current Memoranda of Understanding signed at the project level.

3.1 Copyrights for PRACE training material

Following the recommendation from the EC and further to the analysis made in the previous deliverable D2.1 of PRACE-4IP [2], WP2 in collaboration with the training activity (WP4) has produced a collection of documents relevant to the issues of Intellectual Property Rights (IPR) and licensing that is useful for the partners of the project. This material collected and made available to partners in the Annex 5.1 of this deliverable will be further developed during PRACE-5IP and submitted to the relevant review and internal approval process. The aim is to keep in one single document all the provisions pertaining to the management of the IP making available specific Annexes which can be used for the different activities and materials of the Project.

An overview of the PRACE IP policy is listed in the following table that summarises the types of training material PRACE distributes through its producers, summarises associated copyright issues, provides some recommendation for handling them and indicates the types of contracts already in place.

Type of Material	Producer (in most cases)	Where the material is published/shared	Suggested Type of License, Other copyright issues	Contracts in place
Seasonal School Material (PPT, Video, Code, PDFs) and PATC Material (PPT, Video, Code, PDFs)	<ul style="list-style-type: none"> PRACE Partner not funded by PRACE Universities associated with PRACE partners Commercial Companies 	<ul style="list-style-type: none"> Training events PRACE training portal 	<ul style="list-style-type: none"> Producer of the IPR remains the owner Publishing Consent should be signed by author PRACE should be able to publish this material on the training portal Suggested Licencing Creative commons Attribution, non-commercial, no derivative works 3.0 licence or other open source licence, i.e. Apache, BSD, GPL. 	<ul style="list-style-type: none"> Publishing consent and authorship statement
SoHPC	<ul style="list-style-type: none"> SoHPC student 	<ul style="list-style-type: none"> PRACE Summer of HPC website 	<ul style="list-style-type: none"> SoHPC students give the copyrights to PRACE partners, keeping a license to use these materials for non-commercial purposes 	<ul style="list-style-type: none"> Summer of HPC programme: License to the Student
MOOC Material	<ul style="list-style-type: none"> PRACE partner funded by PRACE Universities associated with PRACE partners 	<ul style="list-style-type: none"> MOOC platform 	<ul style="list-style-type: none"> Producer of the IPR remains the owner but some right should be transferred to PRACE, i.e. use and publish in MOOC platforms and other web sites for educational and dissemination purposes (non-commercial promotional material etc) Publishing Consent should be signed by author 	<ul style="list-style-type: none"> Agreement on training material and activities
Code Vault material	<ul style="list-style-type: none"> PRACE Partners funded by PRACE Universities associated with PRACE partners 3rd parties. 	<ul style="list-style-type: none"> CodeVault GitLab repository 	<ul style="list-style-type: none"> Producer of the IPR remains the owner Publishing Consent could be signed by author or be clearly present in the terms of publishing in the code vault Suggested Licencing Creative commons Attribution, non-commercial, no derivative works 3.0 licence or other open source licence, i.e. Apache, BSD, GPL. 	<ul style="list-style-type: none"> Open source

Table 3: Overview copyrights of PRACE training material

In relation to the possibilities for commercial exploitation of the training material produced in the context of the PRACE project, the creators can decide, within the scope of the PRACE project legal framework (CA, GA etc.) if the results of their work can be exploited commercially or not. This should be reflected in the licence that accompanies the material. A good example where commercial exploitation could be allowed is the CodeVault material that is accompanied by open source licences that allow commercial use, i.e. Apache or BSD type of licences. This is of particular value for SMEs and other commercial entities seeking to find valuable material to start their work with HPC codes.

3.2 Data protection aspects

In collaboration with WP3, WP2 started discussions about the need to adapt PRACE policies to the new European legislation on Data Protection (a Directive and a Regulation) [3]. The Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, repealing Directive 95/46/EC (General Data Protection Regulation), entered into force on 24 May 2016, but it will apply from 25 May 2018 onwards. The Directive needs to be transposed by the EU Member States into their national law by 6 May 2018.

The mentioned Regulation will replace the current Directive (Directive 95/46/EC) and will be directly applicable in all Member States without the need for implementing national legislation, thus harmonising how data is being processed and handled across EU Member States.

In order to address the new requirements which will come into effect with the new legislation, PRACE is in the process of undertaking some adjustments at the research infrastructure and project level concerning the following aspects:

- Data Protection Policy Statement;
- Data Retention and destruction policy;
- Data protection incident reporting and logging procedure (in case of any breach or loss of data);
- Subject access request procedure;
- Procedures for overseas transfers;
- Data Security policy.

At present, PRACE aisbl has a Data Protection Policy in place and already filled in a Declaration for the registry of the Belgian Commission on Data Protection. At the Project level, the Grant Agreement already includes general guidelines for the beneficiaries to follow on data protection.

In this context, WP2 is analysing the current statements/disclaimer of all relevant PRACE partners where personal data is being collected, in order to clarify their responsibilities, and if needed to put in place, with the help of the legal advisors, an agreement with those PRACE partners. The Annex 5.2 of this deliverable gives an overview of the current analysis undertaken by WP2.

3.3 Memorandum of Understanding

PRACE has three different levels of Memoranda of Understanding (MoUs). At the 6th Council, Copenhagen, 24 January 2012, the following classification and decision was approved.

Council-2012-06-05: *The Council agrees on the rationale for collaborations presented above and approves the methodology presented. BoD shall apply this process to the pending requests from SPECS, IGE and HP-SEE.*

And the referenced methodology is:

- 1. If the collaborators are PRACE users, seek advice of the Scientific Steering Committee on the pertinence and suitability of pursuing this collaboration or of expressing PRACE support to the project proposal. If the answer is affirmative, BoD makes a proposal to Council voting via e-mail and acts based on the Council decision.*
- 2. If the collaboration is technology oriented, set-up an evaluation committee composed of the PRACE Association and the PRACE project to assess the interest of PRACE to engage in such collaboration and identify who would be the PRACE contact person. The contact person is the person in charge of proposing collaboration work plan and presented to the BoD for approval. After approving it, the BoD makes a proposal to Council voting via e-mail and acts based on the Council decision.*
- 3. If the collaboration is related to strategic issues (e.g. international collaborations with peer actors, investments on HPC at national or international level, access programme design), then the Board of Directors makes a proposal in the subsequent Council (including contact person, work plan and draft MoU, if applicable) and a voting decision will take place at that time.*

In the reporting period four MoUs were prepared:

1. PRACE-XSEDE-RIST MoU

This MoU 'INFORMATION EXCHANGE CONCERNING PROMOTION OF USE OF ADVANCED RESEARCH COMPUTING' is a continuation of the already existing MoU between RIST and PRACE and an extension to XSEDE. This MoU corresponds to item 3 in the methodology with the Managing Director (MD) as contact person and follows two main objectives:

- A. Exchange of information;
- B. Holding technical meetings;

With the long term goal to offer joint allocation.

2. PRACE-CHPC MoU

A new MoU between PRACE and the Centre for High Performance Computing, South Africa on INFORMATION EXCHANGE CONCERNING PROMOTION OF USE OF SUPERCOMPUTERS was approved by the PRACE Council on 3 February 2017 with the following two main objectives

- A. Exchange of information;
- B. Holding technical meetings;

This MoU corresponds to the category 3 in the methodology and the proposed contact person is the MD.

3. PRACE-4IP-DEEP-ER MoU

One of the recommendations of the 1st periodic review of the PRACE-4IP project was to work closer with the European Exascale projects:

Develop closer collaboration and alignment with the EU Exascale projects. Although this activity may fall into the timescale of PRACE-5IP, the project should consider a framework for this type of cooperation going forwards.

To foster closer collaboration PRACE prepared a MoU with the DEEP-ER project in order to get access to and evaluate its prototype. This category 2 MoU will be signed on project level by Thomas Lippert, FZJ as project PRACE-4IP coordinator.

4. PRACE-4IP-MontBlanc MoU

Also in order to address a EC review recommendation a MoU was proposed to the MontBlanc project. The scope, the analysis of BoD and classification is identical to the DEEP-ER MoU. This MoU was approved by MontBlanc and is in the process of being approved by PRACE at project level as well.

4 Conclusion

During the timeframe of the PRACE-4IP project, we have seen the conclusion of the process of designing and implementing PRACE 2 which will take into effect between 2017 and 2020 and will succeed the PRACE agreement for the Initial Period. In this deliverable, we have reported on the participation of WP2 in this complex task. This task required deep analysis of the funding and governance scenario, so as to provide a robust process, that could be implemented by all partners of the project whilst taking into account the increased need for funding larger and improved world-class HPC and data infrastructure for the use of the whole community of European researchers in science and industry.

On our journey to establish a sustainable Research Infrastructure, the PRACE 2 programme is based on the principle of sharing the costs of the Tier-0 infrastructure between Hosting Members and General Partners. During this period, it became obvious that for the European scientific communities to fully benefit from the performance of leadership-class Tier-0 systems provided by the PRACE 2 Hosting Members, it is necessary to provide them with support through High Level Support Teams in terms of code enabling and optimisation of scientific applications. Taking into account these two recommendations, the new PRACE 2 programme will be based on computing cycles made available by HMs on Tier-0 systems and on establishing HLSTs which will be in charge of supporting European scientific communities in their efficient use of Tier-0 systems. The HLSTs will be funded by General Partners and hosted by Hosting Members.

During the process of designing and implementing PRACE 2, the PRACE Council revisited the PRACE governance in order to adapt and optimise it to the new process, taking into account the entering of a new Hosting Member (CSCS from Switzerland). One of the most important aspects of these governance improvements is the new procedure that has been designed for the Peer Review process. All these improvements have been applied to the PRACE 14th Call for Project Access, the first PRACE Call that includes PRACE 2 resources, from France, Germany and Switzerland, in addition with resources from Italy and Spain.

In addition to the indicated support of PRACE 2, the working group has also provided direct legal support for PRACE aisbl in topics of various nature and to arising issues of a legal nature in different work packages, such as on Copyrights for PRACE training material, Data protection aspects, drafting new MoUs (with XSEDE-RIST, CHPC, DEEP-ER, and MontBlanc).

The next steps will be to start working on a sustainable model for PRACE for the period after 2020 (PRACE 3), taking into account the evolution of the European HPC stakeholders ecosystem such as EOSC, EDI, among others.

5 Annex

5.1 PRACE Intellectual Property Policy

PRACE INTELLECTUAL PROPERTY POLICY

The aim of this document is to compile in one single document the rules governing the Intellectual Property generated by the Partners of the PRACE Project in accordance with the relevant Grant agreement and Consortium Agreement as well as the Recommendation on the management of intellectual property in knowledge transfer activities and Code of Practice for universities and other public research organisations² from the European Commission (EC).

In addition several templates are provided as annexes in order to be used for the different activities and materials in the context of the mentioned Project.

1. DEFINITIONS

Access rights: means rights to use results or background under the terms and conditions laid down in this Agreement.

Affiliated entities: For the definition, see Article 2.1(2) of the Rules for Participation Regulation No 1290/2013: 'affiliated entity' means any legal entity that is:

- under the direct or indirect control of a participant, or
- under the same direct or indirect control as the participant, or
- directly or indirectly controlling a participant.

'Control' may take any of the following forms:

- a) the direct or indirect holding of more than 50% of the nominal value of the issued share capital in the legal entity
- b) concerned, or of a majority of the voting rights of the shareholders or associates of that entity;
- c) the direct or indirect holding, in fact or in law, of decision-making powers in the legal entity concerned.

However the following relationships between legal entities shall not in themselves be deemed to constitute controlling relationships:

- a) the same public investment corporation, institutional investor or venture-capital company has a direct or indirect holding of more than 50% of the nominal value of the issued share capital or a majority of voting rights of the shareholders or associates;
- b) the legal entities concerned are owned or supervised by the same public body.

Associated country: means a third country which is party to an international agreement with the Union, as identified in Article 7 of Horizon2020 Framework Programme Regulation No 1291/2013. Article 7 sets out the conditions for association

² http://ec.europa.eu/invest-in-research/pdf/ip_recommendation_en.pdf

of non-EU countries to Horizon 2020 (see Article 2.1(3) of the Rules for Participation Regulation No 1290/2013)

Beneficiaries: Partners participating in the PRACE Project which have signed a Grant Agreement with the EC

Background: means any data, know-how or information — whatever its form or nature (tangible or intangible), including any rights such as intellectual property rights — that:

- a) is held by the Beneficiaries before they acceded to the Project Agreement, and
- b) is needed to implement the action or exploit the results.

Consortium Agreement (“CA”): means the Agreement signed by the Beneficiaries among themselves in order to specify the rules governing their participation and cooperation in the PRACE Project

Copyright: legal intellectual property right that grants creator of an original work exclusive rights for its use and distribution. Such a work includes training material in written, video and audio form as well as program code. Depending on the national legislation and contracts between employee and employer, copyright holder can be either the author or the employer.

Fair and reasonable conditions: means appropriate conditions, including possible financial terms or royalty-free conditions, taking into account the specific circumstances of the request for access, for example the actual or potential value of the results or background to which access is requested and/or the scope, duration or other characteristics of the exploitation envisaged.

Intellectual Property Rights: means the legal rights granted with the aim to protect the creations of the intellect. These rights include Industrial Property Rights (e.g. patents, industrial designs and trademarks) and Copyright (right of the author or creator) and Related Rights (rights of the performers, producers and broadcasting organisations).

License: permission to use copyrighted material which is granted by the copyright holder.

Results: means any tangible or intangible output of the action, such as data, knowledge and information whatever their form or nature, whether or not they can be protected, which are generated in the action as well as any attached rights, including Intellectual Property Rights.

Software: means sequences of instructions to carry out a process in, or convertible into, a form executable by a computer and fixed in any tangible medium of expression.

Third Parties: is any legal entity which has a legal link to the Beneficiary implying collaboration that is not limited to the action, but which do not sign the Grant Agreement with the EC.

2. MANAGEMENT OF INTELLECTUAL PROPERTY RIGHTS

The Beneficiaries have the obligation to take measures to implement the above

mentioned Commission Recommendation on the management of intellectual property in knowledge transfer activities.

According to such Recommendation Beneficiaries that are universities or other public research organisations must take measures to implement the principles set out in Points 1 and 2 of the Code of Practice annexed to the Commission Recommendation on the management of intellectual property in knowledge transfer activities (Annex I of this document).

The Beneficiaries must ensure that researchers and third parties involved in the action are aware of them.

3. ACCESS RIGHTS TO BACKGROUND

3.1 Background covered

Beneficiaries must identify and agree (in writing) on the background for the action ('agreement on background').

Access Rights are the only rights that are granted to Beneficiaries to other Beneficiary's Background in the context of the Project.

The Beneficiaries shall identify in the Annex I of the Consortium Agreement the Background to which they are ready to grant Access Rights, subject to the provisions of the relevant Consortium Agreement and Grant Agreement. Such identification may be done by e.g.:

- Naming a specific department of a Party
- And/or by subject matter.

The owning Beneficiary may add further Background to Attachment 1 of the CA during the Project by written notice. However, only the Management Board of the Project can permit a Beneficiary to withdraw any of its Background from Attachment 1.

The Beneficiaries agree that anything not identified in Attachment 1 of the CA shall not be the object of Access Right obligations regarding Background. They agree, however, to negotiate in good faith additions to Attachment 1 if a Beneficiary asks them to do so and those are Needed. For the avoidance of doubt, the owner is under no obligation to agree to additions of its Background to Attachment 1 of the CA.

3.2 General Principles

Each Beneficiary shall implement its tasks in accordance with the CA and shall bear sole responsibility for ensuring that its acts within the Project do not knowingly infringe third party property rights.

Parties shall inform the Consortium as soon as possible of any limitation to the granting of Access Rights to Background or of any other restriction which might substantially affect the granting of Access Rights.

If the Management Board of the Project considers that the restrictions have such impact,

which is not foreseen in the Consortium Plan, it may decide to update the Consortium Plan accordingly.

Any Access Rights granted expressly exclude any rights to sublicense unless expressly stated otherwise.

Access Rights shall be free of any administrative transfer costs.

Access Rights shall be granted on a non-exclusive basis, if not otherwise agreed in writing by all the Parties.

Results and Background shall be used only for the purposes for which Access Rights to it have been granted.

3.3 Exercise of access rights — Waiving of access rights — No sub-licensing

To exercise access rights, this must first be requested in writing ('request for access'). Waivers of access rights are not valid unless in writing.

Unless agreed otherwise, access rights do not include the right to sub-license.

Upon request of the owner, the granting of Access Rights may be made conditional on the acceptance of specific conditions aimed at ensuring that these rights will be used only for the intended purpose and that appropriate confidentiality obligations are in place.

The requesting Beneficiary must show that the Access Rights are needed.

3.4 Access rights for other beneficiaries, for implementing their own tasks under the action

The Beneficiaries must give each other access — on a royalty-free basis — to background needed to implement their own tasks under the action, unless the beneficiary that holds the background has — before acceding to the Agreement —:

a) informed the other Beneficiaries that access to its background is subject to legal restrictions or limits, including those imposed by the rights of third parties (including personnel), or

b) agreed with the other beneficiaries that access would not be on a royalty-free basis.

Any alternative arrangement to point b) above shall require approval of the Management Board.

3.5 Access rights for other beneficiaries, for exploiting their own results

The Beneficiaries must give each other access — under fair and reasonable conditions — to background needed for exploiting their own results, unless the beneficiary that holds the background has — before acceding to the Agreement — informed the other beneficiaries that access to its background is subject to legal restrictions or limits, including those imposed by the rights of third parties (including personnel).

Requests for access may be made — unless agreed otherwise — up to one year after the period set out as the duration of the Project.

Non-exclusive Access Rights to Results shall be granted on a royalty-free basis when required for exploitation in the operation, research and development and other non-profit internal functions of a Party.

Access Rights to Background if Needed for Exploitation of Results for these purposes shall be granted on fair and reasonable conditions.

Access Rights for internal research and university trainings shall be granted on a royalty-free basis.

Access Rights to Background if Needed for Exploitation of a Beneficiary's own Results, including for research on behalf of a third party, shall be granted on fair and reasonable conditions.

3.6 Access rights for affiliated entities

Unless otherwise agreed in the consortium agreement, access to background must also be given— under fair and reasonable conditions (see above; Article 25.3 GA) and unless it is subject to legal restrictions or limits, including those imposed by the rights of third parties (including personnel) —to affiliated entities established in an EU Member State or 'associated country', if this is needed to exploit the results generated by the beneficiaries to which they are affiliated.

Unless agreed otherwise (see above; Article 25.1 GA), the affiliated entity concerned must make the request directly to the beneficiary that holds the background.

Requests for access may be made — unless agreed otherwise — up to one year after the period set out in Article 3 GA.

Such Access Rights shall be granted upon written bilateral agreement.

Affiliated Entities which obtain Access Rights shall in return grant Access Rights to all Parties and fulfil all confidentiality and other obligations accepted by the Parties under the Grant Agreement or this Consortium Agreement as if such Affiliated Entities were Parties.

Access Rights may be refused to Affiliate Entities if such granting is contrary to the legitimate interests of the Party which owns the Background or the Results.

Access Rights granted to any Affiliated Entity are subject to the continuation of the Access Rights of the Party to which it is affiliated, and shall automatically terminate upon termination of the Access Rights granted to such Party.

Upon cessation of the status as an Affiliated Entity, any Access Rights granted to such former Affiliated Entity shall lapse.

Further arrangements with Affiliated Entities may be negotiated in separate agreements.

4. OWNERSHIP OF RESULTS

4.1 Ownership by the beneficiary that generates the results

Results are owned by the Beneficiary that generates them.

4.2 Joint ownership by several beneficiaries

Two or more Beneficiaries own results jointly if:

(a) they have jointly generated them and

(b) it is not possible to:

(i) establish the respective contribution of each beneficiary, or

(ii) separate them for the purpose of applying for, obtaining or maintaining their protection

The joint owners must agree (in writing) on the allocation and terms of exercise of their joint ownership ('joint ownership agreement'), to ensure compliance with their obligations under this Agreement.

These terms should ensure that access rights to the joint Results shall be granted to the other Beneficiaries at no cost as required for use in the execution of the Project. If part of the Results has been created by a subcontractor, the subcontracting Beneficiary shall ensure that all Beneficiaries have the same rights for licensing, transferring ownership and access as if the Results had been created by the subcontracting Beneficiary. The Management Board of the Project may unanimously decide on differing regulations for subcontracts.

Unless otherwise agreed in the joint ownership agreement, each joint owner may grant non-exclusive licences to third parties, without any right to sub-license, to exploit jointly-owned results (without any right to sub-license), if the other joint owners are given:

a) at least 45 days advance notice and

b) fair and reasonable compensation.

c) Any commercial Exploitation shall require the prior written consent of the joint owners; the joint owners shall be entitled to object to the terms of the license with the legal effect towards third parties.

Once the results have been generated, joint owners may agree (in writing) to apply another regime than joint ownership (such as, for instance, transfer to a single owner with access rights for the others).

The Management Board of the Project may decide upon additional regulations with respect to jointly owned Results and access rights. Such decisions shall be taken according to the voting rules applicable to the task which generated the Results. The decisions shall be in writing.

The Beneficiaries acknowledge that while additional regulations with respect to joint Results may be decided and adopted by Management Board, nothing in such regulations will themselves be effective to transfer ownership of any intellectual property rights belonging to any Beneficiary or jointly by any Beneficiaries. Any such transfer of ownership will require the agreement of each owner.

4.3 Rights of third parties (including personnel)

If third parties (including personnel) may claim rights to the results, the Beneficiary concerned must ensure that it complies with its obligations under the Agreement.

If a third party generates results, the Beneficiary concerned must obtain all necessary rights (transfer, licences or other) from the third party, in order to be able to respect its obligations as if those results were generated by the beneficiary itself.

If obtaining the rights is impossible, the Beneficiary must refrain from using the third party to generate the results.

4.4 EU ownership, to protect results

The EU may — with the consent of the beneficiary concerned — assume ownership of results to protect them, if a beneficiary intends — up to four years after the period set out as duration of the Project— to disseminate its results without protecting them, except in any of the following cases:

- a) the lack of protection is because protecting the results is not possible, reasonable or justified (given the circumstances);
- b) the lack of protection is because there is a lack of potential for commercial or industrial exploitation, or
- c) the beneficiary intends to transfer the results to another beneficiary or third party established in an EU Member State or associated country, which will protect them.

Before the results are disseminated and unless any of the cases above under Points (a), (b) or (c) applies, the Beneficiary must formally notify the European Commission and at the same time inform it of any reasons for refusing consent.

The beneficiary may refuse consent only if it can show that its legitimate interests would suffer significant harm.

If the European Commission decides to assume ownership, it will formally notify the beneficiary concerned within 45 days of receiving notification.

No dissemination relating to these results may before the end of this period or, if the European Commission takes a positive decision, until it has taken the necessary steps to protect the results.

The EU may — with the consent of the beneficiary concerned — assume ownership of results to protect them, if a beneficiary intends — up to four years after the period set out as duration of the Project — to stop protecting them or not to seek an extension of protection, except in any of the following cases:

- a) the protection is stopped because of a lack of potential for commercial or industrial exploitation;
- b) an extension would not be justified given the circumstances.

A beneficiary that intends to stop protecting results or not seek an extension must — unless any of the cases above under Points (a) or (b) applies — formally notify the European Commission at least 60 days before the protection lapses or its extension is no longer possible and at the same time inform it of any reasons for refusing consent. The Beneficiary may refuse consent only if it can show that its legitimate interests would suffer significant harm.

If the European Commission decides to assume ownership, it will formally notify the beneficiary concerned within 45 days of receiving notification.

5. ACCESS RIGHTS TO RESULTS

5.1 Exercise of access rights — Waiving of access rights — No sub-licensing

The conditions set out in Article 3.3 above apply.

The obligations set out in this Article do not change the security obligations, which still apply.

5.2 Access rights for other beneficiaries, for implementing their own tasks under the action

The Beneficiaries must give each other access — on a royalty-free basis — to results needed for implementing their own tasks under the action.

5.3 Access rights for other beneficiaries, for exploiting their own results

The beneficiaries must give each other — under fair and reasonable conditions (see Article 3.5) — access to results needed for exploiting their own results.

Requests for access may be made — unless agreed otherwise — up to one year after the period set out as duration of the Project.

A third party shall not be granted direct Access to Results generated by other Beneficiaries unless those Beneficiaries explicitly agree to it.

5.4 Access rights of affiliated entities

Unless agreed otherwise in the consortium agreement, access to results must also be given — under fair and reasonable conditions (Article 3.6) — to affiliated entities established in an EU Member State or associated country, if this is needed for those entities to exploit the results generated by the beneficiaries to which they are affiliated.

Unless agreed otherwise the affiliated entity concerned must make any such request directly to the beneficiary that owns the results.

Requests for access may be made — unless agreed otherwise — up to one year after the period set out as duration of the Project.

5.5 Access rights for the EU institutions, bodies, offices or agencies and EU Member States

The Beneficiaries must give access to their results — on a royalty-free basis — to EU institutions, bodies, offices or agencies, for developing, implementing or monitoring EU policies or programmes.

Such access rights are limited to non-commercial and non-competitive use.

This does not change the right to use any material, document or information received

from the Beneficiaries for communication and publicising activities as agreed in the Grant Agreement.

5.6 Access Rights for Parties entering or leaving the Consortium

5.6.1 New Parties entering the Consortium

All Results developed before the accession of the new Beneficiary shall be considered to be Background with regard to said new Beneficiary.

5.6.2 Parties leaving the Consortium

5.6.2.1 Access Rights granted to a leaving Party

5.6.2.1.1 Defaulting Party

Access Rights granted to a Defaulting Beneficiary and such Beneficiary's right to request Access Rights shall cease immediately upon receipt by the Defaulting Beneficiary of the formal notice of the decision of the Management Board to terminate its participation in the Consortium.

5.6.2.1.2 Non-defaulting Party

A Non-defaulting Party leaving voluntarily and with the other Parties' consent shall have Access Rights to the Results developed until the date of the termination of its participation. The time limit for its right to request these Access Rights shall start on the same date.

5.6.2.1.3 Access Rights to be granted by any leaving Party

Any Party leaving the Project shall continue to grant Access Rights pursuant to the Grant Agreement and this Consortium Agreement as if it had remained a Party for the whole duration of the Project.

5.7 Specific Provisions for Access Rights to Software

For the avoidance of doubt, the general provisions for Access Rights provided for in Article 5 are applicable also to Software. Parties' Access Rights to Software do not include any right to receive source code or object code ported to a certain hardware platform or any right to receive respective Software documentation in any particular form or detail, but only as available from the Party granting the Access Rights.

5.8 Additional Access Rights

For the avoidance of doubt any grant of Access Rights not covered by this Consortium Agreement shall be at the absolute discretion of the owning Party and subject to such terms and conditions as may be agreed between the owning and receiving Parties.

6. PROTECTION OF RESULTS – VISIBILITY OF EU FUNDING

6.1 Obligation to protect the results

Each Beneficiary must examine the possibility of protecting its results and must adequately protect them — for an appropriate period and with appropriate territorial coverage — if:

- a. the results can reasonably be expected to be commercially or industrially exploited and
- b. protecting them is possible, reasonable and justified (given the circumstances).

When deciding on protection, the Beneficiary must consider its own legitimate interests and the legitimate interests (especially commercial) of the other Beneficiaries.

6.2 EU ownership, to protect the results

If a Beneficiary intends not to protect its results, to stop protecting them or not seek an extension of protection, The EU may — under certain conditions (see Article 26.4) — assume ownership to ensure their (continued) protection.

6.3 Information on EU funding

Applications for protection of results (including patent applications) filed by or on behalf of a beneficiary must — unless the Commission requests or agrees otherwise or unless it is impossible — include the following:

“The project leading to this application has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 653838”.

7. EXPLOITATION OF RESULTS

7.1 Obligation to exploit the results

Each Beneficiary must — up to four years after the period set out as duration of the Project — take measures aiming to ensure ‘exploitation’ of its results (either directly or indirectly, in particular through transfer or licensing) by:

- a. using them in further research activities (outside the action);
- b. developing, creating or marketing a product or process;
- c. creating and providing a service, or
- d. using them in standardisation activities.

This does not change the security obligations, which still apply.

7.2 Results that could contribute to European or international standards — Information on EU funding

If results are incorporated in a standard, the Beneficiary concerned must — unless the European Commission requests or agrees otherwise or unless it is impossible — ask the standardisation body to include the following statement in (information related to) the standard:

“Results incorporated in this standard received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 653838”.

8. DISSEMINATION OF RESULTS — OPEN ACCESS — VISIBILITY OF EU FUNDING

8.1 Obligation to disseminate results

Unless it goes against their legitimate interests, each beneficiary must — as soon as possible — ‘disseminate’ its results by disclosing them to the public by appropriate means (other than those resulting from protecting or exploiting the results), including in scientific publications (in any medium).

This does not change the obligation to protect results, the confidentiality obligations, the security obligations or the obligations to protect personal data, all of which still apply.

A Beneficiary that intends to disseminate its results must give advance notice to the other beneficiaries of — unless agreed otherwise — at least 45 days, together with sufficient information on the results it will disseminate.

Any other Beneficiary may object within — unless agreed otherwise — 30 days of receiving notification, if it can show that its legitimate interests in relation to the results or background would be significantly harmed. In such cases, the dissemination may not take place unless appropriate steps are taken to safeguard these legitimate interests.

If a Beneficiary intends not to protect its results, it may — under certain conditions— need to formally notify the Commission before dissemination takes place.

8.2 Open access to scientific publications

Each Beneficiary must ensure open access (free of charge online access for any user) to all peer-reviewed scientific publications relating to its results.

In particular, it must:

- a. as soon as possible and at the latest on publication, deposit a machine readable electronic copy of the published version or final peer-reviewed manuscript accepted for publication in a repository for scientific publications; Moreover, the beneficiary must aim to deposit at the same time the research data needed to validate the results presented in the deposited scientific publications.
- b. ensure open access to the deposited publication — via the repository — at the latest:
 - i. on publication, if an electronic version is available for free via the publisher, or
 - ii. within six months of publication (twelve months for publications in the social sciences and humanities) in any other case.
 - iii. ensure open access — via the repository — to the bibliographic metadata that identify the deposited publication.

The bibliographic metadata must be in a standard format and must include all of the following:

- the terms “European Union (EU)” and “Horizon 2020”;
- the name of the action, acronym and grant number;
- the publication date, and length of embargo period if applicable, and
- a persistent identifier.

8.3 Information on EU funding — Obligation and right to use the EU emblem

Unless the European Commission requests or agrees otherwise or unless it is impossible, any dissemination of results (in any form, including electronic) must:

(a) display the EU emblem and

(b) include the following text:

“This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 653838”.

When displayed together with another logo, the EU emblem must have appropriate prominence.

For the purposes of their obligations under this Article, the Beneficiaries may use the EU emblem without first obtaining approval from the Commission.

This does not however give them the right to exclusive use.

Moreover, they may not appropriate the EU emblem or any similar trademark or logo, either by registration or by any other means.

8.4 Dissemination of patentable Results

In case of dissemination of patentable results, if a Beneficiary objects in order to file a patent before dissemination, the objecting Beneficiary shall notify its decision to file or not a patent within one (1) months from the notification of its objection.

The objecting Beneficiary shall inform the Coordinator of the Project of its decision and in the event that the objecting Beneficiary wants to file a patent, it shall perform appropriate action within three (3) months from the notification of its decision. The coordinator shall inform the parties concerned in case of objection by a party.

8.5 Disclaimer excluding Commission responsibility

Any dissemination of results must indicate that it reflects only the author's view and that the Commission is not responsible for any use that may be made of the information it contains.

9. TRANSFER AND LICENSING OF RESULTS

9.1 Transfer of Ownership of Results

Each Party may transfer ownership of its own Results following the procedure below.

It must however ensure that its relevant obligations also apply to the new owner and that this owner has the obligation to pass them on in any subsequent transfer. This does not change the security obligations, which still apply.

Unless agreed otherwise (in writing) for specifically-identified third parties or unless impossible under applicable EU and national laws on mergers and acquisitions, a beneficiary that intends to transfer ownership of results must give at least 45 days advance notice (or less if agreed in writing) to the other beneficiaries that still have (or still may request) access rights to the results.

This notification must include sufficient information on the new owner to enable any beneficiary concerned to assess the effects on its access rights.

Unless agreed otherwise (in writing) for specifically-identified third parties, any other beneficiary may object within 30 days of receiving notification (or less if agreed in writing), if it can show that the transfer would adversely affect its access rights. In this case, the transfer may not take place until agreement has been reached between the beneficiaries concerned.

It may identify specific Linked Third Parties it intends to transfer Results to in Attachment 5 to the Consortium Agreement. The other Beneficiaries hereby waive their right to object to a transfer to listed Linked Third Parties according to the Grant Agreement.

The transferring Beneficiary shall, however, notify the other Beneficiaries of such transfer and shall ensure that the rights of the other Beneficiaries and the Research Infrastructure will not be affected by such transfer.

Any addition to Attachment 5 after signature of this Consortium Agreement requires a decision of the Management Board.

The Parties recognize that in the framework of a merger or an acquisition of an important part of its assets, a Beneficiary may be subject to confidentiality obligations which prevent it from giving the full 45 calendar days prior notice foreseen in Grant Agreement.

The obligations above apply only for as long as other Beneficiaries still have - or still may request - Access Rights to the Results.

9.2 Granting licenses

Each beneficiary may grant licences to its results (or otherwise give the right to exploit them), if:

- a. this does not impede the rights under Article 31 and
- b. not applicable.

In addition to Points a) and b), exclusive licences for results may be granted only if all the other beneficiaries concerned have waived their access rights.

This does not change the dissemination obligations or security obligations, which still apply.

9.2.1 PRACE recommendations for open source licenses are:

9.2.1.1 Software

Unless there are specific reasons to choose otherwise, use the permissive MIT license. If the software is part of some open source product family, then it is often best to use a matching license.

9.2.1.2 Non-software

Unless there are specific reasons to choose otherwise, use the permissive Creative Commons BY-SA 4.0 license for non-software, such as documentation, lecture slides, audio and video material etc.

The suggested licenses are permissive, which should make it easy for example for SMEs to benefit from project results, while maintaining the acknowledgement of PRACe work.

10. USE OF NAMES, LOGOS OR TRADEMARKS

Nothing in the Consortium Agreement of the Project shall be construed as conferring rights to use in advertising, publicity or otherwise the name of the Beneficiaries or any of their logos or trademarks without their prior written approval.

11. CONSEQUENCES OF NON-COMPLIANCE

If a Beneficiary breaches any of its intellectual property obligations, the grant may be reduced by the European Commission.

Such breaches may also lead to any of the other measures agreed with the European Commission.

ANNEX I**EC Code of Practice for universities and other public research organisations concerning the management of intellectual property in knowledge transfer activities³**

This Code of Practice consists of three main sets of principles.

The principles for an internal intellectual property (hereinafter “IP”) policy constitute the basic set of principles which public research organisations should implement in order to effectively manage the intellectual property resulting from their – own or collaborative – activities in the field of research and development.

The principles for a knowledge transfer (hereinafter “KT”) policy complement those relating to IP policy by focusing more specifically on the active transfer and exploitation of such intellectual property, regardless of whether or not it is protected by IP rights.

The principles for collaborative and contract research are meant to concern all kinds of research activities conducted or funded jointly by a public research organisation and the private sector, including in particular collaborative research (where all parties carry out R&D tasks) and contract research (where R&D is contracted out to a public research organisation by a private company).

1. PRINCIPLES FOR AN INTERNAL INTELLECTUAL PROPERTY POLICY

1. Develop an IP policy as part of the long-term strategy and mission of the public research organisation, and publicise it internally and externally, while establishing a single responsible contact point.
2. That policy should provide clear rules for staff and students regarding in particular the disclosure of new ideas with potential commercial interest, the ownership of research results, record keeping, the management of conflicts of interest and engagement with third parties.
3. Promote the identification, exploitation and, where appropriate, protection of intellectual property, in line with the strategy and mission of the public research organisation and with a view to maximising socio-economic benefits. To this end, different strategies may be adopted – possibly differentiated in the respective scientific/technical areas –, for instance the "public domain" approach or the "open innovation" approach.
4. Provide appropriate incentives to ensure that all relevant staff play an active role in the implementation of the IP policy. Such incentives should not only be of a financial nature but should also promote career progression, by considering intellectual property and knowledge transfer aspects in appraisal procedures, in addition to academic criteria.

³ <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32008H0416>

5. Consider the creation of coherent portfolios of intellectual property by the public research organisation – e.g. in specific technological areas – and, where appropriate, the setting-up of patent/IP pools including intellectual property of other public research organisations. This could ease exploitation, through critical mass and reduced transaction costs for third parties.

6. Raise awareness and basic skills regarding intellectual property and knowledge transfer through training actions for students as well as research staff, and ensure that the staff responsible for the management of IP/KT have the required skills and receive adequate training.

7. Develop and publicise a publication/dissemination policy promoting the broad dissemination of research and development results (e.g. through open access publication), while accepting possible delay where the protection of intellectual property is envisaged, although this should be kept to a minimum.

2. PRINCIPLES FOR A KNOWLEDGE TRANSFER POLICY

8. In order to promote the use of publicly-funded research results and maximise their socio-economic impact, consider all types of possible exploitation mechanisms (such as licensing or spin-off creation) and all possible exploitation partners (such as spin-offs or existing companies, other public research organisations, investors, or innovation support services or agencies), and select the most appropriate ones.

9. While proactive IP/KT policy may generate additional revenues for the public research organisation, this should not be considered the prime objective.

10. Ensure that the public research organisation has access to or possesses professional knowledge transfer services including legal, financial, commercial as well as intellectual property protection and enforcement advisors, in addition to staff with technical background.

11. Develop and publicise a licensing policy, in order to harmonise practices within the public research organisation and ensure fairness in all deals. In particular, transfers of ownership of intellectual property owned by the public research organisation and the granting of exclusive licences² should be carefully assessed, especially with respect to non-European third parties. Licences for exploitation purposes should involve adequate compensation, financial or otherwise.

12. Develop and publicise a policy for the creation of spin-offs, allowing and encouraging the public research organisation's staff to engage in the creation of spin-offs where appropriate, and clarifying long-term relations between spin-offs and the public research organisation.

13. Establish clear principles regarding the sharing of financial returns from knowledge transfer revenues between the public research organisation, the department and the inventors.

14. Monitor intellectual property protection and knowledge transfer activities and related achievements, and publicise these regularly. The research results of the public research organisation, any related expertise and intellectual property rights should be made more visible to the private sector, in order to promote their exploitation.

3. PRINCIPLES REGARDING COLLABORATIVE AND CONTRACT RESEARCH

15. The rules governing collaborative and contract research activities should be compatible with the mission of each party. They should take into account the level of private funding and be in accordance with the objectives of the research activities, in particular to maximise the commercial and socio-economic impact of the research, to support the public research organisation's objective to attract private research funding, to maintain an intellectual property position that allows further academic and collaborative research, and avoid impeding the dissemination of the R&D results.

16. IP-related issues should be clarified at management level and as early as possible in the research project, ideally before it starts. IP-related issues include allocation of the ownership of intellectual property which is generated in the framework of the project (hereinafter "foreground"), identification of the intellectual property which is possessed by the parties before starting the project (hereinafter "background") and which is necessary for project execution or exploitation purposes, access rights⁴ to foreground and background for these purposes, and the sharing of revenues.

17. In a collaborative research project, ownership of the foreground should stay with the party that has generated it, but can be allocated to the different parties on the basis of a contractual agreement concluded in advance, adequately reflecting the parties' respective interests, tasks and financial or other contributions to the project. In the case of contract research the foreground generated by the public research organisation is owned by the private-sector party. The ownership of background should not be affected by the project.

18. Access rights should be clarified by the parties as early as possible in the research project, ideally before it starts. Where necessary for the purpose of conducting the research project, or for the exploitation of foreground of a party, access rights to other parties' foreground and background should be available, under conditions which should adequately reflect the parties' respective interests, tasks, and financial and other contributions to the project.

ANNEX II

Summer of HPC programme

Assignment to the Beneficiaries:

All of the intellectual property rights (including but not limited to copyright, neighbouring rights, rights on designs and models, rights on domain names, rights on databases, software rights, rights relating to all distinctive signs such as trademark rights, patent rights, hereafter collectively referred to as the « Intellectual Property Rights ») relating to all works created, designed, developed or produced in whole or part by the undersigned, alone or in collaboration with others, during the “Summer of HPC programme” as defined in the PRACE Project Proposal Form, such as but not limited to all of the videos, computer programs or simple lines of code, documentation, databases, texts, manuals, reports, diagrams, algorithms, analyses, distinctive signs, tools, methods, processes, inventions, discoveries and improvements, (hereafter referred to separately or jointly as the « Works ») remain the exclusive property of or are immediately transferred to the Partnership for Advanced Computing in Europe (PRACE) Aisbl and to the Beneficiaries of the PRACE Project (PRACE-3IP – FP7 312763) participating in any of its implementation phases (hereafter "the Partners") from the moment of their creation, and are subject to the present article.

The transfer of the Intellectual Property Rights on the Works includes without restriction the transfer of the rights relating to all modes of exploitation of the Works, including but not limited to the right of reproduction (in an unlimited number of copies on all types of supports generally whatsoever), translation (into all languages), adaptation (notably for making products derived therefrom), modification, use, deletion, destruction, broadcasting, distribution, loan, lease and communication to the public (by all media) of the Works, in whole or part, in whatever manner, both in their original form and in a modified form, for all types of use and exploitation, for all commercial or non-commercial purposes, including research, development and promotion. The above-mentioned transfer is, for every mode of exploitation or use, definitive, worldwide and understood in the broadest possible sense authorised by the applicable positive law, for the entire legal period of the respective rights and free of any charge.

The support(s) which contain Works, as well as all of the documents which were exchanged between the Partners and the undersigned, are also the exclusive property of the Partners.

OPTION1: The undersigned guarantees that it will not introduce into the Works any element, subject, reminiscence or resemblance violating or capable of violating the rights of a third party or legal provisions (for example, relating to public order and good morals).

The undersigned accepts that PRACE act, as of the signing of this contract, as the exclusive representative of the undersigned for the exercise of the moral rights on the Works, such as the right of disclosure or of paternity concerning the Works. The undersigned recognises that PRACE (and/or the other Partners) will have the sole right to determine whether, when and how the Works will be exploited, it being specified that Works which are not exploited will also remain the exclusive property of the Partners. The undersigned will refrain from invoking against PRACE (and/or the other Partners) its moral right with regard to the integrity of the Works and thus will not object to any adaptation or modification of the Works, provided that this does not harm its honour or reputation.

OPTION2: The undersigned authorises PRACE (and/or the other Partners) to exploit the Works without mentioning the name of the undersigned and to affix to it any distinctive sign of its choice.

License to the Student:

Any license of background intellectual property rights granted by the Partners to the undersigned will be strictly limited for the duration of the project and for the sole purposes of carrying out the Works.

Without prejudice to the here above paragraph, the Partners hereby grant the undersigned a royalty-free, non-exclusive, perpetual, worldwide license of use of the Intellectual Property Rights related to the Works. This license is granted under the following terms and conditions: i) the Works shall be used only for use for non-commercial purposes, ii) PRACE shall be consulted prior to any use of the Works, iii) any modification to the Works shall be subject to prior explicit permission by PRACE, iv) any sublicense granted by the undersigned shall be done under the same terms and conditions as the present license, and v) any use of the Works shall make reference to PRACE according to the reasonable requirements to be communicated by PRACE.

ANNEX III**Agreement on training material and activities**

WHEREAS:

- The undersigned (“the Educator”) is engaged in the design, development, delivery or presentation of some training materials (“the Course”) which will be put at the disposal of PRACE AISBL (“PRACE”) to be made available through an online training platform (“the Platform”) hosted by FutureLearn for a specific agreed term (“the Term”) as part of the training activities covered by Work Package 4 of the PRACE-4IP project funded by the EU’s Horizon 2020 research and innovation programme (2014-2020) under grant agreement 653838.
- Such training material solely reflects the opinion of its author in the context of such Project. The content of this training material has not been approved by the PRACE Project Partners and therefore does not emanate from them nor should it be considered to reflect their individual or collective opinion.
- The Educator hereby gives these representations and warranties for the purpose of assuring to PRACE, and any other parties who may rely hereupon, that PRACE has obtained all necessary right, title and interest in the Course/s
- The Educator specifically intends that the representations and warranties contained herein may be relied upon by any party that is contemplating an acquisition, license, right to distribute, or any other interest in and to any Course covered hereby.

NOW THEREFORE, the undersigned hereby represents, warrants, acknowledges, certifies and agrees as follows:

- 1- The Educator hereby grants to PRACE a non-exclusive, worldwide, royalty-free license, transferrable to FutureLearn during the Term (which FutureLearn may not sub-license unless otherwise agreed) solely for the purposes of making each Course and all related Content available on the Platform and promoting them in any and all media throughout the world, to:
 - a. use, copy, reproduce, distribute, publish, broadcast, show, publicly perform, make available to the public, display, or otherwise communicate and store each Course and all Content submitted to FutureLearn for offer on the Platform; and
 - b. enhance, amend, modify and improve Content and create, make and procure original works based on the Content to ensure compatibility with the Platform, for marketing purposes or as may be required by law (for example, accessibility compliance).

All right and title to Courses and Content created by the Educator (including Intellectual Property Rights), will remain with the Educator or the relevant

licensor of such Content as the case may be. Unless otherwise agreed by the parties, the licences described above will expire at the end of the applicable Course Presentation Period agreed with Futurlearn. Notwithstanding the previous sentence, FutureLearn shall be permitted to make available on the Platform for the Term (or such other period agreed by the parties) the description page and Trailer for each Course.

- 2- The Educator commits to participate in and aid in the smooth running of the Interactive Media that relates to a Course that Educator is delivering. The Educator will not communicate with Learners other than through the Interactive Media of the Platform except with Learners who have consented to receive communications from PRACE through channels other than the Interactive Media of the Platform and/or with whom PRACE has or develops a relationship that is independent from the Learner's registration with FutureLearn.
- 3- The Educator guarantees that the Content of the Course doesn't breach any confidentiality obligation. The Educator guarantees also that the training material doesn't contain any virus.
- 4- The Educator guarantees that she/he has obtained all licences, waivers, consents, approvals and permissions with respect to any third-party rights (including all Intellectual Property Rights) required for any Content (including the waivers of any applicable moral rights and/or performers' rights) included in a Course.
- 5- Before any Content of the Course/s is submitted to FutureLearn, the Educator whose name, image, likeness, voice and/or biographical details is or may be used in connection with advertising, marketing or promoting the relevant Course commits to provide a release in the specific form (Schedule 3 of the contract with Futurlearn).
- 6- Educators shall not attempt to: (a) modify, adapt, alter or create any derivative works of the Platform; or (b) decompile, disassemble, reverse engineer or otherwise derive the source code for the Platform.
- 7- The Educator will indemnify and hold harmless PRACE and FutureLearn and any parent or holding company, subsidiary or other affiliate (and each of their officers, directors, employees, agents and representatives) from and against any losses, damages, liabilities, costs and expenses (including legal fees and expenses) reasonably incurred by any of them as a result of or in connection with any action, demand or claim (including claims arising from violation or infringement of any third party's Intellectual Property Rights, rights to privacy, publicity or unfair competition or defamation) relating to this Agreement.
- 8- The Educator agrees that PRACE processes his/her personal data according to the applicable laws and PRACE Policy on data protection and will share those

data with the training platform to the extent required by the purpose of the training.

9- No claim is pending, has been threatened, nor but for the passage of time will be pending, threatened or will accrue that could have a direct or indirect effect on the Course.

10-All proprietary software programs and other tools used by the Educator in the creation of the Course were duly and validly licensed for use by the Educator and were used within the scope of the applicable license agreement when creating the Course.

IN WITNESS WHEREOF, the Educator enters into this Agreement with full knowledge of its content and significance and with full knowledge that other parties will rely on the content hereof when making decisions and entering potential transaction.

Date:

Name:

Position:

Institution:

Signature:

ANNEX IV

Publishing consent and authorship statement

Event:

Lecture:

Date and place:

I, the undersigned presenter, hereby state that I am the exclusive owner of copyright and related rights on the abovementioned work, which includes the lecture itself as well as all the assisting tools used during the lectures (e.g. the presentation and other similar documents) and the videorecording of the lecture. As the exclusive right owner I hereby authorize Jožef Stefan Institute to distribute and make available to the public the abovementioned work and its videorecording for educational purposes in various media, including, but not limited to classroom, television (broadcast, cable and satellite), internet (including webcasts and podcasts), and any other communications medium currently existing or later created. In accordance with the Copyright and Related Rights Act of Republic of Slovenia I am therefore transferring non-exclusively, territorially unlimited and for the time of duration of my copyright and related rights to the Jožef Stefan Institute the following economic rights to the abovementioned work and its videorecording: the right of reproduction, the right of distribution, the right of public transmission, the right of public communication by phonograms and videograms, the right of public presentation, the right of broadcasting, the right of rebroadcasting, the right of secondary broadcasting and the right of making available to the public. I am keeping my moral rights.

For the purpose of translation and subtitling of the abovementioned work and for the purpose of using excerpts of the abovementioned work in non-commercial adverts or other non-commercial promotional materials I am also transferring non-exclusively, territorially unlimited and for the time of duration of my copyright and related rights to the Jožef Stefan Institute the right of transformation of the abovementioned work.

As the presenter I affirm that in case my abovementioned work or its videorecording includes works, protected by other persons' copyright or related rights, I have either gained these persons' copyright or related rights to these works or have gained their permission for publishing my abovementioned work and its videorecording online. I take full responsibility for potential damages or other claims of other copyright or related rights owners against Jožef Stefan Institute that arise out of publishing my abovementioned work and its videorecording online.

I also agree that Jožef Stefan Institute processes my herein provided personal data in the database of presenters for the purpose of managing the portal.

As the copyright and related rights owner I am fully aware that the content (including the videorecording of my abovementioned work) is published on the videlectures.net portal under the Creative Commons Attribution- Noncommercial-No Derivative Works 3.0 licence.

Date:

Signature:

Name: Institution:

Presenter data:

E-mail:

5.2 PRACE Data Protection Analysis

DATA PROTECTION INTERNAL AUDIT		
Rol	REQUIREMENT	DEFINITION
	Data Processor	means a natural or legal person, public authority, agency or other body which processes personal data on behalf of the controller
	Data Controller	means the natural or legal person, public authority, agency or other body which, alone or jointly with others, determines the purposes and means of the processing of personal data
DATA HANDLING POLICIES	Data protection policy in place	A policy containing the handling of personal data
	Data retention and destruction policy	Retain only as long as necessary
	Data protection incident reporting and logging procedure	In case of any breach or loss of data
	Subject access request procedure policy	All natural or legal persons providing personal data are entitled to access and/or correct their personal data, and to refuse the processing of such data
	Data minimisation	Personal data must be adequate, relevant and limited to those which are necessary in relation to the purposes for which they are processed.
	Accountability	The controller shall be responsible for and be able to demonstrate compliance with these principles
	Lawfulness, fairness and transparency	Personal data must be processed lawfully, fairly, and in a transparent manner in relation to the data subject.
	Pseudonymisation	information which allows data to be attributed to a specific person is held separately and subject to technical and organisational measures to ensure non-attribution
	Purpose limitation	Personal data must be collected for specified, explicit and legitimate purposes and not further processed in a way incompatible with those purposes
	Procedures for overseas transfers in place	The Data Protection Directive thus determines the situations where personal data may be transferred to third countries.
	Data Security policy	Data kept safe and secure
COMPLIANCE RIGHTS DATA SUBJECTS	Explicit and informed consent	Included parental if applicable
	The right to be forgotten	The erasure of personal data
	Data portability right	The data subject has the right to receive the personal data provided to a controller and transmit those data to another controller

		without hindrance from the controller to which the personal data have been provided.
	Right to object to automated decision-making	The right to object at any time to processing of personal data for marketing purposes. The data subject has the right not to be subject to a decision based solely on automated processing, including profiling.
	Right of access by the data subject	The data subject shall have the right to obtain from the controller confirmation as to whether or not personal data concerning him or her are being processed, and, if that is the case, access to the personal data.
	Right to rectification	The data subject shall have the right to obtain from the controller without undue delay the rectification of inaccurate personal data concerning him or her.
OBLIGATION OF THE CONTROLLER	Implementation of appropriate technical and organisational measures	The processing of the personal data is performed in accordance with the Regulation.
	Notification of a personal data breach to the supervisory authority	
	Communication of a personal data breach to the data subject	In case the personal data breach is likely to result in a high risk to the rights and freedoms of natural persons.
	Maintain certain documentation	
	Conduct a data protection impact assessment for more risky processing	
	Maintain an internal breach register.	
	Implement data protection by design and by default	
THE PROCESSOR	Processing governed by a contract or other legal act between processor and controller	
	Records of processing activities	Maintain a written record of processing activities carried out on behalf of each controller
	Obligation of confidentiality	
	Engagement of another processor only with prior specific or general written authorisation of the controller	
	Delete and return all the personal data to the controller after the end of the provision of services	
	Designate a data protection officer (when applicable)	
	Appoint a representative (when	

	not established in EU) in certain cases	
	Notification of a personal data breach to the controller without undue delay	