SEVENTH FRAMEWORK PROGRAMME
Research Infrastructures

INFRA-2012-2.3.1 – Third Implementation Phase of the European High Performance Computing (HPC) service PRACE

PRACE-3IP

PRACE Third Phase Implementation Phase Project

Grant Agreement Number: RI-312763

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PRACE Integrated Access Programme Launch

Final

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Table of Contents

List of Figures

List of Tables

References and Applicable Documents

[1]   PRACE-3IP Deliverable 5.2 "Integrated HPC Access Programme for SMEs", February 2013

[2]   PRACE-3IP Deliverable 5.1 "Analysis of Models and Practices for Industrial Access", December 2012

[3]   INNO Partnering Forum - DRAFT SYNTHESIS REPORT, http://www.vinnova.se/PageFiles/604825187/synthesis_report.pdf

[4]   INNO-Partnering Forum Workshop Material, : "Better innovation support for SMEs in Europe", 7 November in Brussels,

[5]   http://www.prace-project.eu

[6]   http://www.prace-project.eu/Industry-Access

List of Acronyms and Abbreviations

AISBL	Association Internationale Sans But Lucratif (legal form of the PRACE RI)
BSC	Barcelona Supercomputing Center (Spain)
BPI	Banque Publique d'Investissement
CEA	Commissariat à l'énergie atomique et aux énergies alternatives (France)
CINECA	Consorzio Interuniversitario, the largest Italian computing centre (Italy)
CRM	Customer Relationship Management
CSC	Finnish IT Centre for Science (Finland)
DEISA	Distributed European Infrastructure for Supercomputing Applications. EU project by leading national HPC centres.
EC	European Community
EESI	European Exascale Software Initiative
EPCC	Edinburg Parallel Computing Centre (represented in PRACE by EPSRC, United Kingdom)
EPSRC	The Engineering and Physical Sciences Research Council (United Kingdom)
ESFRI	European Strategy Forum on Research Infrastructures; created roadmap for pan-European Research Infrastructure.
FZJ	Forschungszentrum Jülich (Germany)
GENCI	Grand Equipement National de Calcul Intensif (France)
GRNET	Greek Research and Technology Network S.A. (Greece)
HPC	High Performance Computing; Computing at a high performance level at any given time; often used synonym with Supercomputing

HLRS	High Performance Computing Center Stuttgart (Germany)
IAP	Integrated Access Programme
ICHEC	Irish Centre for High-End Computing (Ireland)
IPB	Institute of Physics Belgrade (Serbia)
IPR	Intellectual Property Rights
IT	Information Technology
ISV	Independent Software Vendors
JSC	Jülich Supercomputing Centre (FZJ, Germany)
KI	knowledge and innovation
KPI	Key Performance Indicators
MoU	Memorandum of Understanding.
NCF	Netherlands Computing Facilities (Netherlands)
NCSA	National Centre for Supercomputing Applications (Bulgaria)
NDA	Non-Disclosure Agreement. Typically signed between vendors and customers working together on products prior to their general availability or announcement.
PM	Person Month
PATC	PRACE Advanced Training Center
PRACE	Partnership for Advanced Computing in Europe; Project Acronym
PRACE-1IP	PRACE First Implementation Phase Project
PRACE-2IP	PRACE Second Implementation Phase Project
PRACE-3IP	PRACE Third Implementation Phase Project
ROI	Return on Investment
R&D	Research and Development
SARA	Stichting Academisch Rekencentrum Amsterdam (Netherlands)
SHAPE	SME HPC Adoption Programme in Europe
SME	Small Medium Enterprises
SMM	Small and Medium sized Manufacturers
SSC	Scientific Steering Committtee
SURFsara	Dutch national High Performance Computing & e-Science Support Center
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
UC-LCA	University of Coimbra - Laboratório de Computação Avançada (Portugal)
URL	Uniform Resource Locator
WP	Work Package

Executive Summary

The pilot for an integrated access programme for small to medium-size enterprises (SMEs) has been prepared and launched. The pilot, called SHAPE (<u>S</u>ME **H**PC **A**doption **P**rogramme in **E**urope) Pilot, provides SMEs with access to high-value expertise to identify computational needs and design high performance computing projects, as well as providing SMEs with direct access to HPC facilities to investigate opportunities.

The SHAPE Pilot has been designed to refine the test the assumptions of the SHAPE programme proposal as defined in the PRACE-3IP Deliverable D5.2. This Pilot, on its completion, will therefore provide the PRACE AISBL with the final recommendations and guidelines for fully implementing and launching SHAPE as a comprehensive HPC Adoption Programme. The Pilot, managed by PRACE-3IP WP5, will support a limited number of European SMEs (5 to 6). In this Pilot, the processes for marketing and engagement, application submission, application assessment and the execution of the selected Pilot projects have all been defined, approved and put in place. The SHAPE Pilot web page, Application Form and Open Call for Proposals have all been defined, approved and implemented. Information databases on HPC use cases and domain expertise have been defined and their population is ongoing.

1 Introduction

The <u>S</u>ME <u>H</u>PC <u>A</u>doption <u>P</u>rogramme in <u>E</u>urope (**SHAPE**) [1] is a pan-European programme to support the adoption of High Performance Computing (HPC) by European small to medium-size enterprises (SMEs). In order to refine and test the SHAPE offering, a smaller-scale Pilot programme has been prepared and launched. This Deliverable describes the structure, content and operational status of the processes and tools necessary for the execution of this Pilot programme.

SHAPE is being developed by the PRACE (Partnership for Advanced Computing in Europe) [5] Consortium under its PRACE-3IP European Union funded project. SHAPE has been proposed by PRACE-3IP Workpackage 5 "*Services for Industrial Users and SMEs*". The design of SHAPE is based on a previous analysis undertaken in PRACE-3IP WP5 and reported in [2]. It is also based on the conclusions of an EU-funded project that defined best practices for supporting innovation in SMEs [3][4]. SHAPE will offer SMEs an integrated service that includes information and networking, coaching, access to expertise in different HPC and computational sciences domains as well as access to HPC resources within an Open R&D model. SHAPE, once implemented, will focus on working on a one-to-one basis with SMEs willing to adopt a new HPC-supported solution. The SHAPE proposal is described in detail in the PRACE-3IP Deliverable 5.2 [1].

Following approval by the PRACE AISBL Management Board, the SHAPE Pilot's Open Call for SMEs was launched in June 2013.

Section 2 of this Deliverable contains an overview of the SHAPE Pilot outlining the steps involved for an SME. Sections 3 and 4 describe the Pilot processes, tools and their status, while Section 5 describes those tools that will be implemented during the lifetime of the Pilot but that are not explicitly required to complete it. Finally, Section 0 contains a breakdown of the remaining tasks to set-up and run the Pilot along with their deadlines and the responsible institution. There are three Annexes to this document. Annex I contains the draft content for a leaflet for general distribution that will describe the Pilot and how to apply for it. Annex II contains a flyer with a general description of the SHAPE programme is being used to disseminate the initiative. Annex III contains the application form for SMEs wishing to participate in the Pilot. The application form is available on the web at <u>www.prace-project.eu/shape-application-form</u>.

2 Overview of the SHAPE Pilot

The following steps have been defined to guide an SME participating in the Pilot:

1. An SME is identified as a possible candidate for the Pilot's Open Call for Proposals: this can be via contact with a PRACE partner, or, an SME responding to the Pilot's Open Call for Proposals
2. The SME submits a proposal to the Pilot's Open Call for Proposals via the SHAPE Pilot web page (on the PRACE web site at the URL http://www.prace-project.eu/shape). Where required, assistance is be given from a PRACE partner in the creation of the submission.
3. The proposal is reviewed by a panel, approved by the PRACE Management Board using criteria also approved by this Board. The final selection of the participating SMEs is done by this Board.
4. A dedicated team from a PRACE centre works with the SME:
   a. to develop a proof-of-concept and run this on an appropriate PRACE machine,
   b. to define a business project proposal.

These steps are implemented by the processes and tools outlined in Section 0 and 4.

To clearly identify SHAPE and its Pilot activity, a SHAPE logo has been designed by WP5 with the support of the PRACE web team and approved by the PRACE Board of Directors. The logo, presented in Figure 1, helps characterise the work on HPC adoption by SMEs and build a brand for SHAPE.

Figure 1: SHAPE Logo

3 The SHAPE Pilot Processes

Figure 2 shows the processes and tools that are implemented in order to execute the Pilot. The remainder of this section describes the structure, implementation and status of these processes.

PROCESSES

- Marketing and Engagement
- Application Submission
- Application Assessment
- Project Work

TOOLS

- Web Page
- SHAPE/PRACE SME Contact Database
- Leaflet
- Use Cases
- Press Release
- Experts
- Application Form
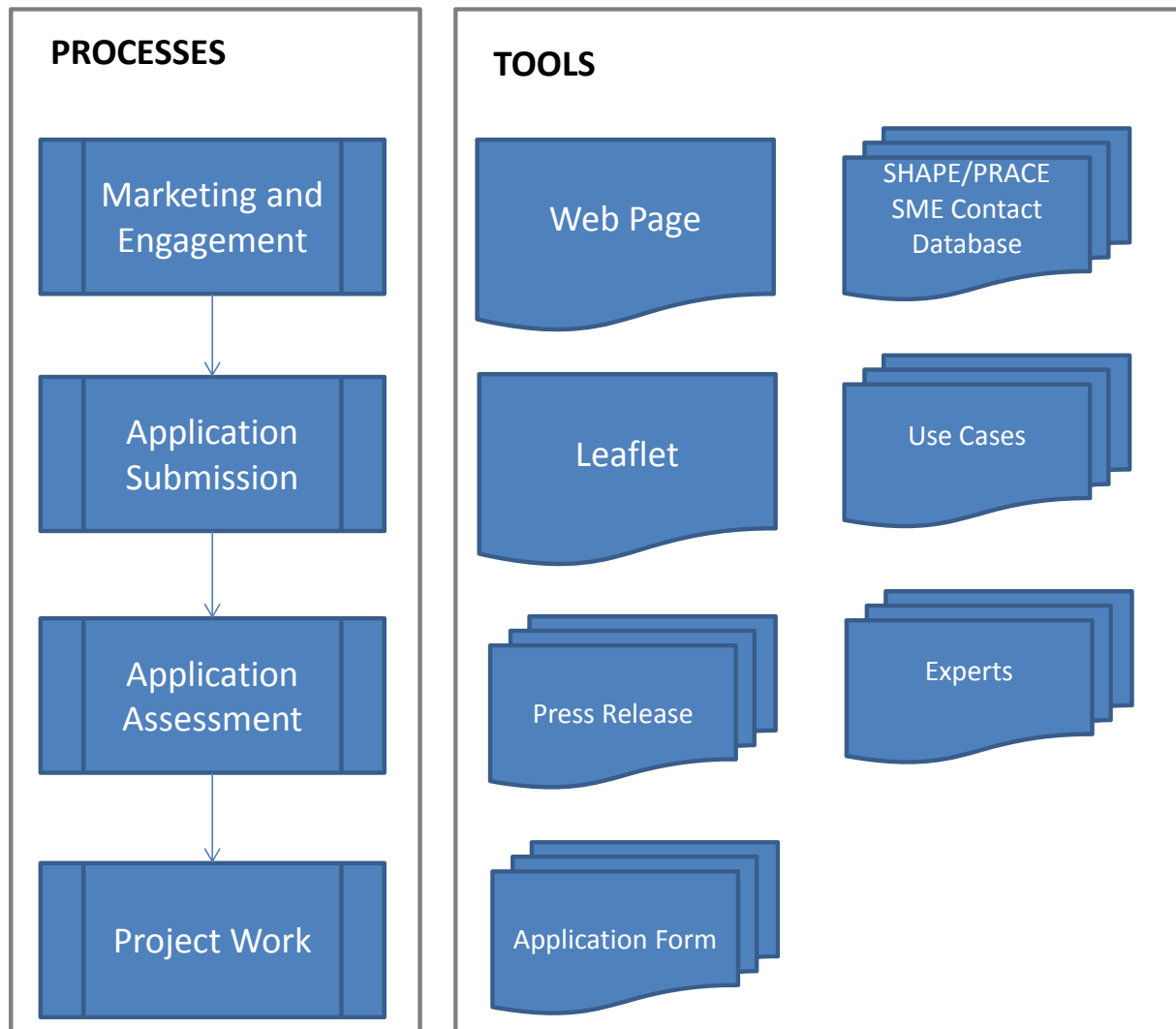
Figure 2: The SHAPE Pilot Process Map and supporting tools

3.1 Marketing and Engagement

The marketing and engagement process is concerned with running a pan-European campaign aimed at recruiting potential SME participants for SHAPE. Due to its limited resources the Pilot is aiming to engage with 5 to 6 SMEs (depending on the size of the eventually chosen Pilot projects).

The Pilot will therefore mainly approach:

1. SMEs already known to the PRACE centres that are participating in the Pilot,

2. SME contacts obtained through other channels, e.g. through work with national/regional SME support bodies (as one of the tasks, the Pilot team will go out and present the Programme to such organisations),
3. SMEs that contact the Pilot through existing communication channels (web, mail, etc.).

Engagement with larger companies will also be considered, should they apply. The participating companies are expected to come from across 3 or 4 application domains. All the PRACE contributions to these Pilot projects will come from WP5 in PRACE-3IP.

The marketing and engagement process in the Pilot requires the implementation of the following tools.

- SHAPE Pilot programme web page within the PRACE site. (Section 4.1 of this Deliverable provides more information on the web page and its status.)
- A leaflet about the Open Call for Proposals. (Section 4.2 provides more information about this leaflet.)
- An SME contact database. (Section 4.5 describes this database and its status.)
- A PRACE press release about the Open Call for Proposals. (Section 4.3 provides more information on this.)

The marketing and engagement process also requires the implementation of the following actions:

- Sending of an email to all PRACE industrial contacts about the Open Call for Proposals.
- Presentation of the SHAPE Programme to national/regional SME support bodies.

The dates for completion of these actions are listed in Section 0 of this Deliverable. The Pilot's marketing and engagement campaign is underway and runs from the opening date for the Open Calls for Proposals (in June 2013) through to the deadline for the Call for Proposals (in September 2013) i.e. the 1st cut-off date in Section 3.2.

3.2 Application Submission

This process has been defined and subsequently approved by the PRACE-3IP Management Board.

SMEs can apply to the Open Call for Proposals through the SHAPE Pilot page on the PRACE website at URL: http://www.prace-project.eu/shape.

The application submission process is based on two phases identified here as cut-off dates.

1. **1st Cut-off Date** – Application preliminary submission– an SME applies through the web page and provides the following information:
   - Project title/abstract
   - Company contact details
   - What does the company do?
   - The proposed HPC solution and its objectives
   - Proposed high-level workplan
   - Expected Business Impact

After the preliminary submission, each application is assigned an owner from the SHAPE (i.e. WP5 in PRACE-3IP) team. An owner works with the SME to prepare a more detailed application and any supporting documents during the period between the **1st** and **2nd Cut-off Dates**. The SHAPE team will acquire the help of a domain expert, from the PRACE community, if needed.

2. **2nd Cut-off Date** – the closing date for submission of the final proposal. After this date the final selection process will occur.

The 1st cut-off date (i.e. date for preliminary submission of Applications) is expected to be September 15th 2013.

The 2nd cut-off date (i.e. date for submission of final proposals with the help of project coaches) is expected to be end of the September 30th 2013.

The application submission process in the Pilot has therefore required the implementation of the following tools.

- An application form with a submission mechanism via the SHAPE programme website. (Section 4.4 describes the content and status of this application form and Section 4.1 describes the web page and its status).

It will also require implementation of the following action:

- Assignment of a project owner from the SHAPE team to each submitted application at the close of the 1st cut-off date. (Section 0 lists the deadline for this action.)

3.3 Application Assessment

The Application Assessment process described here has been designed and subsequently approved by the PRACE-3IP Management Board on June 11th , 2013. In this process the final proposals will be reviewed following the 2nd cut-off date of the Open Call for Proposals. These final proposals will go through the following two-stage review process:

i.) A **review panel**, comprising one or two representatives from each of: the SHAPE team, the PRACE Management Board, and, one or two representatives designed by the PRACE BoD; will review the applications gathered by the SHAPE team and create a ranked shortlist.

ii.) Then, at the 2nd stage, the **PRACE-3IP Management Board** will make the final decision on the successful proposal to be selected from the short list. It is planned to accept up to a maximum of 5-6 applications in the pilot (based on the effort available in WP5).

The review will take place according to the following criteria that have been approved by the PRACE-3IP Management Board.

- Technical Feasibility – This assesses the feasibility of the idea or industrial project proposed by the SME. During the Pilot an SME proposal must only require expertise already available within PRACE centres.
- Business Case – this assesses the commitment of the SME Management:
  - o to co-invest with PRACE in achieving the projects goals. An SME must commit at least the same amount of resources to the proposed project as SHAPE.

o to create in the mid-term, added value as a result of the project. For example through staff recruitment, increase market share, investment, etc.

o to realise the expected return on investment (ROI) from doing the project.

• Practical technical recommendations suggested by the SHAPE Team.

This review will be completed by mid-October 2013.

The application assessment process in the Pilot therefore requires the implementation of the following actions:

• A ranking by the review panel, of all the applications submitted at the 2nd cut-off date.
• Based on the rank provided by the review panel, a final selection by the PRACE 3IP Management Board.

3.4 Project Work

It has been approved by the PRACE-3IP Management Board that during the Pilot if an SME's proposal is selected to be a Pilot project then a dedicated team of staff from a PRACE centre will work with the SME to achieve the goals of the project. This collaboration of the PRACE staff with the SME to achieve the project goals is defined as the Project Work.

Each Pilot project will have the same two overall goals:

1. To develop a proof-of-concept and where possible run this on an appropriate PRACE system.

2. To define a business project proposal.

Creating a **proof-of-concept** (eg. running a test case on a target platform) enables an SME to determine if using HPC resources on a real industrial project can produce gains in terms of time to solution and performance. If deemed appropriate, the PRACE staff assigned to a Pilot project will assist the SME in preparing a PRACE Preparatory Access application in time for the cut-off date of December 1st 2013. This access will take place on an Open R&D basis (with the publication of all the results obtained at the end of the grant period) [6].

The **business project proposal** defines '*The Way Forward*' for implementing the solution developed as proof-of-concept during the Pilot. It will help the SME understand the various technical options or further working with their idea.

For each selected project, a collaboration agreement will be drawn up between PRACE and the SME.

Successful projects will start in October 2013 and must finish by May 2014. Each Pilot project is divided into tangible milestones. These milestones are expected to be agreed with the SHAPE team by November 2013 (one month after project start).

Progress on each Pilot project will be monitored by the SHAPE team. This will be via a series of monthly reports and a final report.

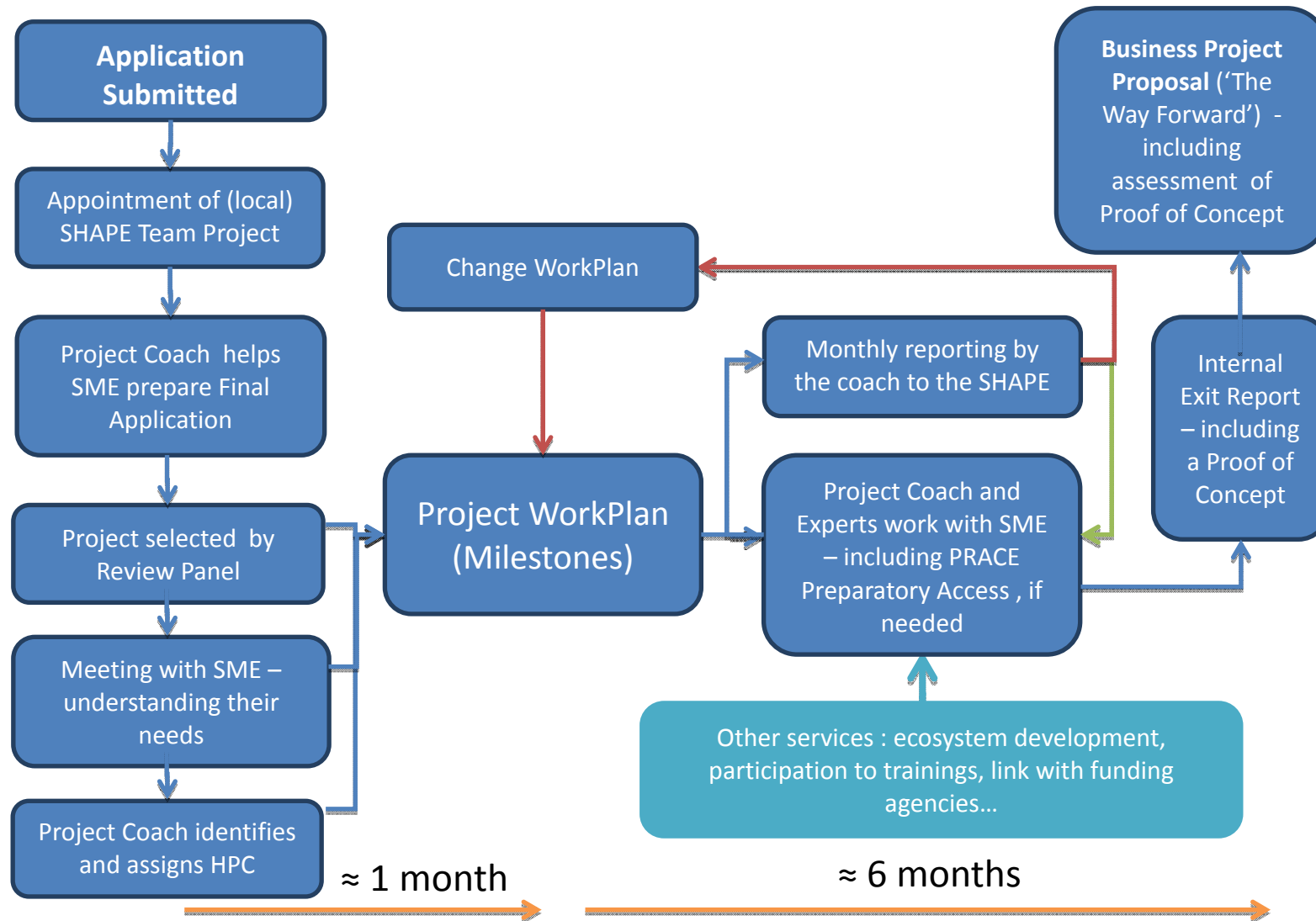Figure 3 shows what happens when a proposal is chosen to be a Pilot project.

Figure 3: The selection and execution of a SHAPE Pilot project

4 Tools for executing the Pilot processes

This section describes the structure and implementation of the SHAPE tools necessary for the Pilot and shown in Figure 2.

Due to time limitations, not all the SHAPE tools presented in the PRACE 3IP Deliverable D5.2 [1] that describes SHAPE, will be operational or offered to the SMEs chosen to participate in the Pilot. However, in order for the Pilot to obtain meaningful results to help structure the eventual full Programme, all the core aspects of the SHAPE will have to be available.

These tools are described in further detail in the sub-sections below.

4.1 The SHAPE Pilot web page

The address for this page is http://www.prace-project.eu/shape. This page is live and includes the mechanism for an SME to apply to the Pilot as well as describing the Pilot itself. In due course HPC use cases will also be available from this web page (See Section 5.1).

4.2 The SHAPE Pilot leaflet

Annex I contains a draft of this leaflet. This leaflet summarises the Open Call for Proposals and refers to the SHAPE Pilot web page where more information on the call can be found.

The leaflet contains information on:

- the submission deadlines for the preliminary proposal and the final proposal,
- the terms and conditions.

4.3 Press release

A press release based on the Leaflet that describes the Open Call for Proposals is being prepared and will be launched imminently. Each of the SHAPE partners will re-issue this notice in their own country

Furthermore, a flyer presenting the SHAPE Programme has been prepared to disseminate the SHAPE initiative. The flyer, shown in Annex II of this Deliverable, is available as a PDF version and will be downloadable from the SHAPE Pilot web page. The flyer has already been distributed at the 5th PRACE Executive Industrial Seminar in Bad Boll (Stuttgart, Germany) on 15th and 16th April 2013.

4.4 Application form

Annex III shows the contents of the Application Form that can be submitted via the SHAPE Pilot web page. This is live on the Pilot web page at http://www.prace-project.eu/shape-application-form.

4.5 The SHAPE/PRACE SME contact database

This database is a sub-set of the PRACE Customer Relations Management (CRM) database. It contains those SMEs who have expressed an interest in SHAPE or who have been identified as possible candidates for the Pilot and the subsequent full SHAPE programme.

This SME contact database will be maintained and updated by the SHAPE team throughout the lifetime of the Pilot and the full SHAPE programme.

5 Other tools available during the Pilot

This section contains SHAPE tools that will be implemented during the Pilot but that are not explicitly required for the successful completion of the Pilot.

5.1 HPC use cases database

The SHAPE Pilot web page will also contain outlines of various HPC projects that SHAPE partners have undertaken with industrial and commercial SMEs and larger organisations. These will be added to throughout the lifetime of the Pilot. It will however be populated with some initial material that will be available when the Pilot's Open Call is announced.

5.2 Experts database

The SHAPE team will build a database of experts with skills that may be relevant to the potential SME applicants to the programme. Initially during the Pilot this database will only be populated with the relevant experts from the SHAPE team.

6 Future Work

Table 1 contains the various tasks remaining (with deadlines) for running the Pilot. For each task it states the institution responsible for its completion.

Task	Deadline	Responsibility
Contact local SME support bodies	30-Jun-13	All WP 5
Contact WP industrial contacts	30-Jun-13	All WP 5
Press release	30-Jun-13	BSC, CINECA
Applications close	15-Sep-13	All WP 5
Project coaches working with selected SMEs	30-Sep-13	Project coaches
Rank done by the review panel	5-Oct-13	WP 5, MB, BoD
PRACE MB final selection	15-Oct-13	PRACE MB
Start the actual work	16-Oct-13	Project coaches
Milestones Plan for each project	30-Nov-13	Project coaches
Monitor the progress according to process	Continuous	All WP 5
Preparatory Access application	1-Dec-13	Project coaches
Final Report	1-May-14	Project coaches/WP 5
Pilot finished	1-May-14	Project coaches
Industrial seminar in Barcelona: invite Pilot SMEs	22-May-13	All WP 5
SME contact database	Continuous	EPCC
Experts database	Continuous	EPCC

Table 1: The next steps for executing the SHAPE Pilot

As shown in Table 1, the Pilot will run until May 2014. In order to refine the SHAPE proposal, the Pilot is expected to deliver answers to questions such as:

- Best practices for Programme implementations (i.e. things that work and things that do not in the various processes proposed);
- The optimal management structure of the Programme;
- The scope and resource requirement of the Programme.

When the Pilot is finished, its results will be documented in a final Deliverable (D5.3.2). This will include a set of recommendations to further implement and improve the SHAPE programme, giving PRACE the opportunity to set up and fund a permanent effective SME support programme.

Annex I Draft Open Call for Proposals Leaflet (including Terms and Conditions)

SHAPE Pilot

SME HPC Adoption Programme in Europe

SHAPE

SHAPE, the SME HPC Adoption Programme in Europe, is a pan-European, PRACE-based programme supporting HPC adoption by SMEs. The Programme aims to raise awareness and equip European SMEs with the expertise necessary to take advantage of the innovation possibilities opened up by High Performance Computing (HPC), thus increasing their competitiveness..

HPC is a powerful technology that can enable the development of new products or services, reduce time-to-market and cost of R&D or increase quality. The opportunities opened up by HPC are vast and an increasing number of SMEs turn to HPC in order to create new business opportunities.

The Programme will help European SMEs overcome barriers to using HPC, such as cost, lack of knowledge and lack of resources. It will facilitate the process of defining a workable solution based on HPC and defining an appropriate business model.

SHAPE Pilot is the trial phase of the programme and it aims to work with selected SMEs in order to help them adopt HPC.

Who can apply?

SMEs from EU Member States and/or PRACE member countries, that have an interesting idea that can be implemented using HPC. The selected solutions should bring a potential tangible Return on Investment to their business.

What will be done?

Following an open selection process based on business and technical criteria, the project work will involve the following:

- Defining an appropriate HPC model for the selected solution
- Assessing the solution's business and technical viability
- Possibility of using PRACE's resources in order to test the solution (through PRACE Preparatory Access).

The objective is to equip the participating SMEs with knowledge that will allow them to make an informed decision on the selected solution.

Who will work with you?

One of the PRACE's goals is to enable transfer of HPC knowledge from academia to industry. Using their accumulated expertise, the experts of PRACE will work with the selected SMEs in order to develop their solutions. The resources of PRACE will be deployed in order to provide test tools, if needed (through PRACE Preparatory Access).

How does it work?

- The call for **Applications** opens on 17 June 2013 with a closing date of **15 September 2013**. Please apply on-line at http//prace-ri.eu/shape-application-form and submit information on your project proposal.
- Each project will be assigned a **Project Coach** who will facilitate contacts with other future team members (e.g. PRACE Technical Experts) and who will assist the applicants in preparing a more detailed application.
- These applications will be analysed by the SHAPE team (and further developed in conjunction with the applicant, if needed) and a final version will be created. The deadline for these final proposals is 30 September 2013.
- The final proposals will go through the following two-stage review process.
    - i.) A **Review Panel**, composed of one or two representatives from the SHAPE team and from the PRACE-3IP Management Board each, plus two representatives appointed by the PRACE Board of Directors, will review the applications and create a ranked shortlist. The selection criteria are: the strength of the business case, technical feasibility, the applicant's willingness to commit to the project.
    - ii.) The PRACE-3IP Management Board will make the final decision on the successful proposals based on the ranked shortlist.

    The final decision will be communicated by PRACE to the successful applicants by **mid October 2013**.
- The selected projects will define a milestones plan within 1 month. Each project will be assigned a team of Technical Experts whose task will be to assist in demonstrating the benefit of applying HPC (and thus defining an appropriate HPC business model), with the possibility of entering the PRACE Preparatory Access Call[1] (cut-off date = **1 December 2013** – participation in this call is on an Open R&D basis and will require the disclosure of the project results related to this Call).
- The successful project will run until **May 2014**.
- An exit report (a Proof of Concept, also outlining a way forward for the applying SME) will be issued upon project completion.

For any information on this Programme, please visit our website at www.prace-ri.eu/shape or contact shape@prace-ri.eu.

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[1] http://www.prace-ri.eu/Call-Announcements and
http://www.prace-ri.eu/IMG/pdf/prace_preparatory_access_terms_of_reference_prototype_pilot_final.pdf

Terms and Conditions

These Terms and Conditions are the general guidelines applied in the Programme.

Purpose

The program is funded with public funds with the objective to promote the use of HPC by SMEs, thus increasing the competitiveness of European industry. Only SMEs can apply.

Confidentiality

All work within projects is confidential. If a company applies for PRACE Preparatory Access, its rules will apply within that process.

Truthfulness of data provided at registration

All SMEs participating in the program agree to provide truthful information regarding the description of the project requested in the form. The information submitted must be verifiable by PRACE.

Intellectual Property Rights

Any Intellectual Property developed within a project, belongs to the participating company (again, the rules of the PRACE Preparatory Access will apply within its process). The ownership of the knowledge by either PRACE or the participating companies will remain as such during and after the Programme.

Liability

The programme is not liable for any unintentional damage caused by working within the Programme

Security

The Programme confirms that all information in relation to a project is secure.

Scope

Participation in the Programme does not entitle to any further assistance outside of the scope of the Programme.

Contribution to Final Report

The participating SME is expected to provide certain information to the Programme's Final Report (this will be agreed with each company)

Dissemination

SHAPE reserves the right to disseminate the results of each project to the extent agreed with each participant. The participating companies grant PRACE the right to use their brands and logos for PRACE dissemination of the program results. The participating companies will use the PRACE logo or other agreed material for disseminating the collaboration in the promotion of services or products that can be derived from the direct effect of the participation in the program

Annex II SHAPE Flyer

SHAPE - SME HPC ACCESS PROGRAMME IN EUROPE

Pilot Project Summary

SHAPE, the SME High Performance Computing (HPC) Access Programme in Europe is a pan-European, PRACE-based programme supporting HPC adoption by SMEs. The Programme aims to equip Small and Medium-sized Enterprises (SMEs) with the awareness and expertise necessary to take advantage of the innovation possibilities opened by HPC, increasing their competitiveness. The mission of this Programme is to help European SMEs to demonstrate a tangible Return on Investment (ROI) by assessing and adopting solutions supported by HPC, thus facilitating innovation and/or increased operational efficiency in their businesses.

SHAPE aims to overcome the following barriers to HPC adoption:

- Lack of expertise in and/or knowledge of the possibilities of HPC and advanced numerical simulation
- Lack of resources to facilitate the HPC adoption process
- The entry costs of implementing new technologies.

Find more information how to join PRACE please contact us at: www.prace-ri.eu

Developing such a comprehensive programme through PRACE is the most effective option. For example, a pan-European programme can provide resources and expertise that the existing national or local programmes are unable to cater for. Also, a pan-European initiative will open new possibilities for companies based in countries where there is no local programme. Thus, the Programme is complementary to local initiatives. As locality helps to lower existing barriers, all projects will be served locally first, if that is the better option and if a local initiative exists in the respective country. **SHAPE** will be employed for projects that cannot be supported locally or for amplifying the outcome of national initiatives at PRACE level (providing access to more HPC resources or allowing SMEs to be visible in the market of 25 PRACE member countries and beyond).

In order to support European SMEs, **SHAPE** will develop an integrated service offer:
- Information and networking
- Access to expertise (science-domain expertise as well as applied mathematics, HPC and computer science expertise)
- Access to HPC systems (including pre- and post-processing and computing services)
- Information on funding sources.

The main focus of the Programme's operations will be to work on a one-to-one basis with SMEs willing to adopt a new, HPC-supported solution. The Programme will be able to take such companies as far as trying out the solution on the Programme's (i.e. PRACE's) infrastructure. The existing solutions such as the PRACE Open R&D Access Programme (www.prace-ri.eu/Industry-Access), the PRACE Advanced Training Centres (PATCs - www.prace-ri.eu/PRACE-Advanced-Training-Centres) and the PRACE Implementation Phase Project's Open Source code enabling activity (www.prace-ri.eu/IMG/pdf/D9-1-1_2ip.pdf) will be employed in order to provide some of the Programme's services.

To evaluate various solutions for practical project implementation, the PRACE Project will run a Pilot commencing in June 2013 and ending in April 2014. The **SHAPE** team will be looking for SMEs willing to "give HPC a try" with the help of our team.

For further information on this Programme, please contact the **SHAPE** team at shape@prace-ri.eu.

www.prace-ri.eu

Annex III Content for Application Form

SHAPE Application Form
_____

1st Step – please provide your project proposal

Closing Date = 15 September 2013

WARNING: *A password is required to submit this form. Please contact shape@prace-ri.eu to request it.*

Project Title

Project Abstract
(150 words)

Company Details

Company Name

Company Address

Company Website

Contact Name

Contact Position

Contact Email

Contact Phone

What does the company do?
(300 words)

The proposed HPC solution and its objectives
(500 words)

Proposed high-level Work Plan

Expected Business Impact
(250 words)

Enter the password: *
To obtain the password, please contact shape@prace-ri.eu.

Following this application a **SHAPE Project Owner** will contact you and will work with you on developing the final version of the application, if needed. The deadline for the final version is **September 30th 2013**. Then the final proposals will go through the review process and a final decision on the selected applications will be taken by PRACE before **mid October 2013**. The Project Owner will be in contact with you again after that date.