COUNCIL OF THE EUROPEAN UNION

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NOTE

From:	The Presidency
To:	Delegations
No. Cion Prop.:	6596/12 RECH 56 COMPET 96 IND 31 TELECOM 32
Subject:	Draft Council Conclusions on 'High Performance Computing: Europe's place in a Global Race'

Delegations will find attached draft Council Conclusions on 'High Performance Computing: Europe's place in a Global Race' with a view to the discussion by the Research Working Party at its meeting on 8 April 2013.

ANNEX

Draft Council Conclusions on
'High Performance Computing: Europe's place in a Global Race'

THE COUNCIL OF THE EUROPEAN UNION

RECALLING

- the conclusions of the European Council of 11 and 12 December 2008[1], which called for the launching of a European plan for innovation, combined with the development of the ERA and with reflection on the future of the Lisbon Strategy beyond 2010;
- its conclusions of 29 May 2009[2] on Research Infrastructures and the regional dimension of the ERA which called on the Commission to pursue sustainability, global connectivity, interoperability and unimpeded use of pan-European e-Infrastructures, and on the Member States to consider the role of e-Infrastructures in their national roadmaps and/or programmes for research infrastructures;
- its conclusions of 3 December 2009[3] on the Future of ICT research, innovation and infrastructures which called on Member States to have more coordinated investments in High Performance Computing (HPC) and to propose financial incentives for jointly developing and sharing research infrastructures in exascale computing, and on Member States and the Commission to pool their investments in HPC under PRACE[4] and to strengthen the position of European industry and academia in the use, development and manufacturing of advanced computing products, services and technologies;
- its conclusions of 17 May 2010[5] on various issues related to the development of the ERA, urging the need for further development of computing infrastructures, such as PRACE ;

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1 Doc. 17271/1/08
2 Doc. 10612/09.
3 Doc. 17190/09.
4 PRACE (Partnership for Advanced Computing in Europe) is an ESFRI project creating a persistent pan-European Research Infrastructure for High Performance Computing: www.prace-ri.eu
5 Doc. 9451/10.

1. WELCOMES the Commission's communication entitled "'High Performance Computing: Europe's place in a Global Race"[6], advocating for a renewed European strategy in HPC to position the EU as a centre of innovation, a hub of scientific excellence and a global partner;

2. HIGHLIGHTS that HPC is a crucial asset for the EU's innovation capacity and STRESSES its strategic importance to benefit the EU's industrial capabilities as well as its citizens, by innovating industrial products and services, increasing competitiveness, and addressing societal and scientific grand challenges more effectively;

3. EMPHASISES the importance to deploy and maintain a European HPC infrastructure, and RECOGNISES the achievements of PRACE[7] to pool leadership-class computing systems and make them available to all researchers in the EU. NOTES that other world nations have declared HPC an area of strategic priority and massively increased their efforts in this area;

4. AGREES that gaining independent access to HPC state-of-the-art technologies, systems and services in the EU would support growth and competitiveness in the ICT industry and the economy in general, and HIGHLIGTHS that Europe has all the technical capabilities and human skills to develop native capabilities covering the whole technological spectrum of the next generation of HPC systems (exascale computing);

5. ACKNOWLEDGES the efforts of HPC stakeholders to support the implementation of a EU-level HPC strategy, in particular PRACE and the industry-led European Technology Platform for HPC (ETP4HPC);

6. STRESSES the importance of supporting and strengthening the dual role of European industry in HPC, both as supplier of independent and state-of-the-art technologies and systems, and as user of HPC to innovate in products, processes and services;

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6 [COM(2012) 45 final]

7 Partnership for Advanced Computing in Europe (PRACE) http://www.prace-ri.eu/

UNDERLINING the overall objective to ensure European leadership in the supply and use of HPC systems and services by 2020:

7. RECOGNISES the need for an EU-level policy in HPC to optimise national and European investments, addressing the entire HPC ecosystem: HPC use by Science and by industry, especially SMEs; HPC industrial supply for independent development of exascale computing; excellence in HPC applications; EU-level governance; and achieving a level-playing field for EU companies;

8. INVITES Member States, the Commission, and industry to increase their investments in HPC (noting the importance of investment in software development, HPC methodologies, training and education, in addition to hardware) in order to match similar efforts in other world regions;

9. STRESSES the importance to link the acquisition of HPC systems with the development of advanced European HPC technology through the use of innovation instruments such as Pre-Commercial Procurement and Public Procurement of Innovative solutions. HIGHLIGHTS the importance of PRACE for pooling and sharing national and EU resources, including leadership and expertise, to provide a world-class European HPC infrastructure, and for stimulating innovation through joint public procurement, pre-commercial procurement and other innovation instruments to support the development of leadership-class HPC capabilities in Europe;

10. STRESSES the importance of supporting Centres of Excellence in HPC applications addressing key societal, scientific and industrial challenges in areas that are strategic for Europe;

11. INVITES Member States and the Commission to step up the efforts to substantially increase the supply of scientists and engineers with HPC skills, through adequate training and educational programmes addressed to industry and academia;

12. INVITES Member States to set up HPC Competence Centres to facilitate access to HPC capabilities and services and to support the transfer of industry relevant expertise from national and regional supercomputing centres to industry – especially to SMEs. NOTES the importance of supporting the provision of platform-based technology and HPC methodologies, in addition to HPC hardware, to address real-life industry requirements ;

13. INVITES the Commission to raise inequalities in the access of EU manufacturers to foreign HPC markets with the relevant countries, in order to ensure fair access by European companies and a level playing field;

14. INVITES all the HPC stakeholders to consider the possibility of a public-private partnership to implement in synergy all the elements of the European HPC strategy. NOTES the challenges inherent in such a partnership, and invites discourse to address technical, financial and regulatory barriers.