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BIAC SCOPING INPUT FOR DSTI/STP PROJECT ON HEALTH TECHNOLOGY INNOVATION

BIAC proposes the following outline for the draft program of work on health technology innovation that will be scoped by the Directorate for Science, Technology and Industry/Science and Technology Policy Division (DSTI/STP) at a meeting tentatively scheduled for early September 2006. BIAC proposes that this scoping meeting take place in Paris in order to facilitate attendance by representatives of as many OECD member governments as possible. BIAC supports active participation in this project by all OECD governments and all relevant industry sectors. In addition, we believe that the work described under Output Result No. 1 of the OECD Biotechnology Work Program for 2007-2008 (Output Area 1.3.3) should be considered a component of the overall DSTI/STP health innovation work described below.

A main reason for proposing this work is to provide a relevant and substantial test of our current understanding of innovation policies, reflecting trends such as the globalisation of R&D, the tendency towards "Open Innovation" and new ways of organising the innovation process and its impact on discontinuous and incremental innovations, the opportunities offered by digital technologies, the emergence of new types of tools, the adoption of platform approaches to innovation, etc.

Fostering Innovation in Health¹

Objectives:

1. To understand the factors that enable innovation in health-related technologies and services in modern economies.
2. To identify the organizational arrangements, policy tools, and incentive structures that encourage such innovation and thereby improve the efficiency with which scientific research translates into more effective health care systems and better medical diagnosis and treatment.
3. Based on this understanding, to develop policy recommendations for governments on how to encourage and capture the benefits of innovation in health technologies in ways that will be consistent with other policy objectives, including the sustainability of financing of health care systems and the need to avoid an explosion of costs.

¹ DSTI/STP Program of Work and Budget 2007-2008 -- Output Area 1.3.2 (Science and Innovation Policies), Output Result 11.

Intermediate Outputs

- I. Descriptive and analytical review of the health innovation “ecosystem”, focusing on understanding factors that facilitate knowledge transfer, scientific advances, into productive innovation related to health. This might include, for example, examination of:
 - A. Important recent/anticipated advances across the life sciences, in sectors such as biotechnology, pharmaceuticals, medical devices, diagnostics, and eHealth, the toolkits and methods needed to create such products/services, and the emergence of new types of services.
 - B. Relevant public- and private-sector actors whose work directly or indirectly contributes to health-related knowledge creation, technological advances, and innovation in these sectors.
 - C. Models for the organisation of the innovation process, such as:
 1. Geographically based research clusters and regional agglomerations
 2. Improved linkages between large and small firms, and among government research institutes, academic researchers, and private industry
 3. Interoperability of biological, pharmacological, and clinical databases
 4. Private networks for information exchange among innovative companies
 5. New approaches to translational and clinical research
 6. Technology platforms (as in Europe) that bring together all key players in a given research sector
- II. Descriptive and analytical review of framework conditions for fostering successful innovation in health technologies within OECD countries, leading to effective and safe new treatments and for encouraging rapid market diffusion of resulting products and services. This review will identify challenges to establishing a more coherent, efficient, and productive health innovation system, as well as incentives needed to achieve this goal, according to national health priorities. The following are some of the possible areas of focus:²
 - A. Openness of innovation systems. Key indicators might include:
 1. Geographic integration of research across national borders.
 2. Linkages among public and private research partners (e.g., government research institutes, universities, and private companies)
 3. Global business and research alliances
 4. Greater integration between basic and applied research, and between large and small firms.
 5. Mobility of researchers across government, industry, and academia
 - B. Demand-side factors, possibly including:
 1. The size of national markets for innovative health products
 2. The configuration of lead markets
 3. Presence of end users (especially patients and physicians) in the innovation process and other key stakeholders (including employers and insurers)

² These indicators were identified as particularly important by the report of the OECD Working Party on Innovation and Technology (TIP), *Innovation in Pharmaceutical Biotechnology: Comparing National Innovation Systems at the Sectoral Level* (2006), and the Aho Report on “Creating an Innovative Europe” (January 2006).

4. National regulations that affect incentives and disincentives for investing in R&D and ability to commercialize resulting products
- C. Resource factors (human, financial) and resource mobility and flexibility.
 - D. Factors relating to regulatory and market frameworks, such as intellectual property protection and consistent pricing/reimbursement regulations for innovative products.
 - E. A culture that maintains a balanced perspective on the risk/benefit ratio regarding new health technologies, and that encourages entrepreneurship, risk-taking, and creativity that benefits patients.
- III. Impact analysis – how can we better understand and measure the contribution of health-related technologies to ongoing efforts by OECD countries to strengthen their knowledge and science bases, foster economic growth, and improve economic competitiveness (e.g., as reflected in the EU's Lisbon Agenda objectives)?
- A. What are the appropriate indicators and metrics, including for assessing spillover benefits for national economies offered by innovative health-related technologies and the resulting final and intermediate products? Possible indicators include creation of high-value jobs, increased capital formation, investment in human capital, increases in labor productivity, expanded entrepreneurship, expansion of the technological and science base, R&D investment, and cluster and network creation. Recommendations for new groupings/definitions of health industries based on importance of new scientific and/or market factors might emerge as a collateral intermediate output.
 - B. Based on those indicators and metrics, what impact are new health-related technologies having on the science and technology innovation process, business models, industry structure, national competitiveness in attracting R&D investment, and national economic growth rates?

Final Outputs

- I. Analytical report examining the impact of national science, technology, and regulatory policies across all relevant health-related sectors on the development and delivery of new products and services. Identification of measures for use by governments in evaluating and improving the efficiency of their innovation policies and regulatory climates in encouraging R&D investment and the rapid diffusion and widespread uptake of new health-related technologies. Development of policy recommendations to governments for fully capturing the potential benefits offered by new health-related technologies. Possible topics might include:
 - A. Promotion of network linkages among government, the scientific community, and private industry aimed at strengthening a global R&D market in which partners can easily identify each other and work together.
 - B. Harmonization of national regulations, especially regarding intellectual property protection.
 - C. Regulatory reforms to strengthen lead markets and create incentives for early market launch of new products
 - D. Measures to foster a cultural shift that welcomes innovation and encourages risk-taking and entrepreneurship

- E. Governmental support for innovation through such measures as effective intellectual property protection, R&D grants and tax incentives for private financing of R&D, support for training of scientists, etc.
 - F. Measures to develop a stable and transparent regulatory framework that facilitates long-term planning and rapid market access for new goods and services based on innovative health technologies.
 - G. Measures to increase the speed and efficiency with which safe advances in health-related research are translated into innovative outputs, especially new goods and services.
 - H. Government support for research infrastructure.
 - I. Promotion of expanded technology platforms and clusters that cut across established structures and allow new linkages.
- II. Expert workshop on analysis and recommendations contained in the final analytical report.