

## WORKSHOP ON CHANGING BUSINESS STRATEGIES FOR R&D

### OPENING REMARKS BY MR. MATSUO

Good morning. On behalf of the OECD, I would like to welcome you to today's workshop on Changing Business Strategies for R&D and Their Implications for Science and Technology Policy. I am encouraged by the large number of people who are participating in today's event – and by the fact that we have a balanced mix of people from industry, government, and academia. It demonstrates that we have identified an issue of significant importance to the innovation community as a whole and one in which the OECD can play an important role in informing the S&T policy debate.

This workshop is indeed an important element of the OECD's efforts to better understand evolving patterns of innovation and provide Member countries with analytically sound recommendations on science, technology, and innovation policy. As a number of OECD reports demonstrate, innovation is an increasingly important driver of economic growth and the creation of skilled employment. It also contributes to the advancement of a number of other important societal goals, whether improved health care, better environmental protection, or more efficient government.

Business R&D is a key element of this process. The recent OECD report, "Drivers of Growth" shows a strong link between increases in countries' expenditures on business R&D and their growth in multifactor productivity. Stimulating business R&D is therefore a critical policy objective of many national governments as they attempt more broadly to bolster innovation. How to best do this is an open question, and one that depends largely on a better understanding of how business conducts R&D.

It is clear that business R&D has changed significantly in the past decade. Most obvious is that the business sector is playing a larger role than ever in financing and performing R&D. Fuelled by growth in the late 1990s, business R&D now represents more than two-thirds of R&D funding and performance in the OECD region. Of course, growth in business R&D has not been even in all OECD countries. Some countries—including some of the largest, most industrialised of OECD members—have seen stagnation or even reductions in business R&D expenditures, further igniting interest in ways governments can provide the right incentives for firms to increase their own R&D investments.

Perhaps more importantly, the process of business R&D seems to have changed considerably. Not only have firms reorganised their R&D operations to improve their efficiency and contribution to the bottom line, but business R&D has become more open. Open in the sense that firms increasingly interact with one another—and with universities and public laboratories—in the innovation process. The wave of mergers and acquisitions, venture capital investments, collaborative research programs, and licensing of public research results attest to the more open nature of business R&D. These trends are very much in line with recent analyses of national innovation systems, which emphasise the importance of interactions among organisations in driving innovation. Such changes have arguable made business R&D more efficient by diversifying the sources of financing and performance of R&D, facilitating the widespread sharing of knowledge and allowing firm to concentrate their resources in areas in which they have the greatest strengths.

These changes have far-reaching implications for policy makers. Despite growing private-sector investments in R&D, governments continue to play a critical role in the innovation process. Governments not only establish framework conditions for innovation through competition policies, labour laws, and economic policy, they also fund significant amounts of R&D in both public and private sector laboratories. Government remains the major funder of basic research that investigates fundamentally new scientific and technological principles. Governments establish rules regulating the licensing of intellectual property and can promote collaboration through a range of other policy instruments.

To be a better partner in supporting innovation, governments must better understand changing business strategies for R&D. Innovation is not a linear process of converting R&D results into new technology and ultimately new products, processes, and services. Innovation is a complex process characterised by interactions between organisations in the private and public sectors: large firms, small firms, government labs, and universities, among others. If government is to play an effective role in this process, it must better understand how businesses are changing the ways in which they conduct R&D and the ways in which they innovate. Only then can policy makers determine how best to complement, support, and encourage industry efforts.

In the emerging innovation environment, policy makers face numerous questions in funding R&D. Governments must find ways to ensure that its relatively smaller R&D investment can better leverage business R&D. They must determine how much the public sector should spend on R&D in an era of growing business R&D expenditures, and they must determine how to prevent public expenditures from crowding out or competing with private expenditures. They must determine which policy instruments—direct government funding, tax credits, or other incentives—to use in stimulating business R&D and how to ensure a suitable balance among these instruments. Moreover, recognising the systemic nature of innovation processes, governments must determine what other policies or policy adjustments can best promote the kinds of interactions that are needed to drive innovation.

Answering these questions requires a deeper understanding of the processes of business R&D. Today's workshop will take us another step in this direction by providing an opportunity for business R&D executives, science and technology policy makers, and academic researchers to discuss innovation processes and government policy. I view it as an opportunity for policy makers to better learn how private sector executives organise their R&D activities. It will provide them much greater insight than can be gleaned from government statistics. It is also an opportunity for business leaders to present their ideas for how governments can be most helpful in supporting innovation and business R&D. I cannot promise, of course, that governments will adopt all of your suggestions, but they will give policy makers considerable guidance for devising and revising policy.

We at the OECD will make considerable use of today's discussions. Ongoing work of the working group on Technology and Innovation Policy—the TIP group—is examining changing patterns of public and private financing of R&D and will offer guidance to policy makers for reforming their R&D policies. At the initiative of the French Ministry, participants in last week's meeting of the OECD Committee on Scientific and Technological Policy, or CSTP, had a productive discussion of the contribution of new actors, namely venture capitalists and non-profit organisations, to the

financing of business R&D and of the policy frameworks that can encourage further expansion of such sources. This may lead to future work in this area. Other work already under way under the auspices of the CSTP is examining public private partnerships for innovation, the licensing of technology resulting from public research, and the steering and funding of public research organisations. All of these projects will require a deeper understanding of changing business strategies for R&D.

On that note, I wish to express my thanks to the French Ministry of Research for hosting today's workshop I thank our collaborators at EIRMA for reinforcing our initial indications of the importance of this topic and for helping us organise today's event. I hope the workshop will serve as a model for continued cooperation between the private and public sectors in advancing innovation. And I look forward to today's discussions.

Thank you.