

## Introduction

Last year's White Paper, entitled *The State of Science and Technology in Transcending the Storm of Fierce International Competition*, addressed the issue of how Japan should weather the gathering storm of fierce international competition intensified by the emergence of China and the other BRICs countries<sup>1</sup>.

The strengthening by the US of its international competitiveness through the America COMPETES Act and other measures has reverberated loudly among countries of the world, causing them to reform their own R&D systems. In Japan as well, there has been intense discussion on ways to bolster our R&D competitiveness, culminating in the passing of the R&D-Capacity Strengthening Act<sup>2</sup> [literal translation] by a nonpartisan vote of the Diet in June 2008. Then in October, four Japanese researchers were awarded the Nobel Prize. That splendid achievement revealed to the world Japan's prowess in research and development cultivated over long years of S&T advancement.

Faced with a growing economic crisis, many countries are seeking to generate employment by investing in environment- and energy-related fields, giving impetus to what may be called the "Green New Deal." By generating and productizing innovative technologies in such fields, an accelerating shift is afoot toward a low-carbon society, which, in turn, will spawn significant socioeconomic changes. Concurrently, new trends of open or global innovation are coalescing along with the increasing mobility of and intensifying competition among talented researchers to draw Japan into a full-fledged period of global transformation.

Reflecting these circumstances, this White Paper is entitled *Towards Japan's Own Innovative Science and Technology across the Threshold of Global Transition*. The Paper addresses future modes of science and technology expected to advance solutions to the environmental and other global issues while endeavoring to preserve sustainable socioeconomic development among the world's countries; strengthening the competitiveness of Japan's Monodzukuri<sup>3</sup> and service sectors; and meeting a diverse set of public needs for a safe and secure living environment. Addressed also is a new R&D system being established in Japan to strengthen basic science capability as the wellspring of innovation while creating a globally open, highly attractive Japanese research environment. In sum, a new S&T policy is introduced, one needed as Japan passes into this period of global transition utilizing innovation spawned by an elevated R&D capacity.

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<sup>1</sup> Brazil, Russia and India

<sup>2</sup> Act to Strengthen R&D Capacity by Advancing R&D System Reform and Promote R&D Efficiency (Act No. 63 of 2008) [literal translation]

<sup>3</sup> Particularly secondary industries