Press Conference

President of JST

February 19, 2014

Japan Science and Technology Agency

Strategic Basic Research Program

ACCEL

What is ACCEL?

[Points]

Of all the world-leading, outstanding research outcomes achieved in Strategic Basic Research Programs, etc.

○**Select** **some that show promise but are difficult for companies to judge risk anytime soon**

○**Through** **innovation-oriented research management led by Program Manager (PM)**

- **Demonstrate the technological feasibility of the research outcomes (Proof of Concept: POC)**
- **Promote the appropriate acquisition of rights**

→**Link the flow of R&D to companies, ventures, and other enterprises**

[R&D expense] (incl. overheads)

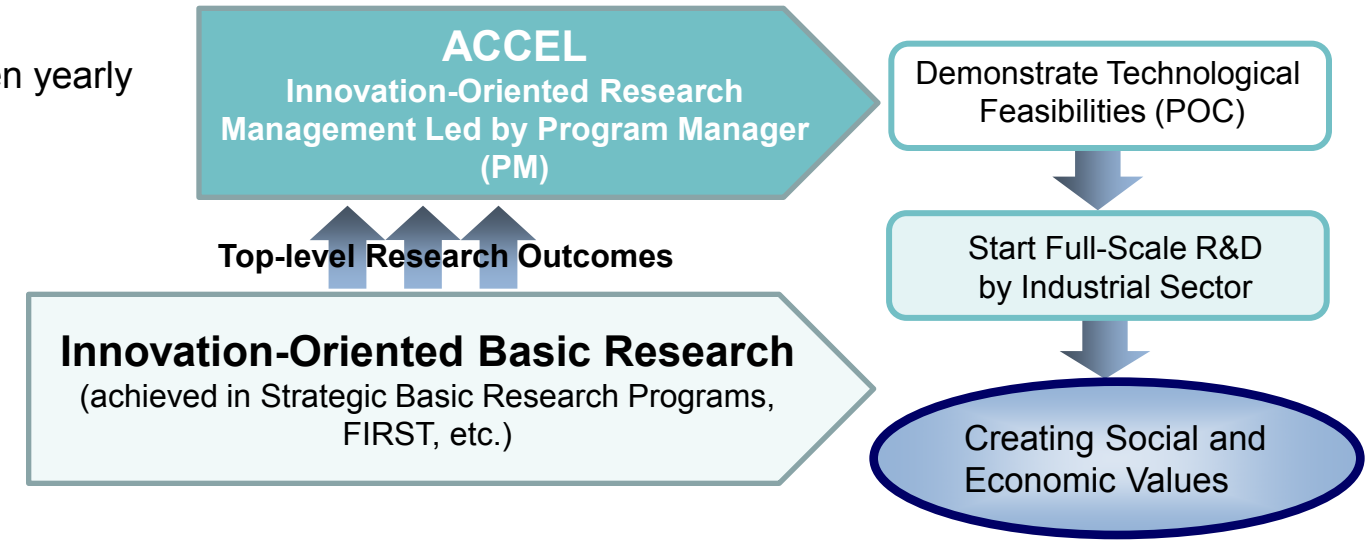
Approx. tens of million to 300 million yen yearly

[R&D period]

Five years or less

[Number of research projects to be selected]

Approx. 5 projects yearly



※ ACCEL is not based on an open application system.

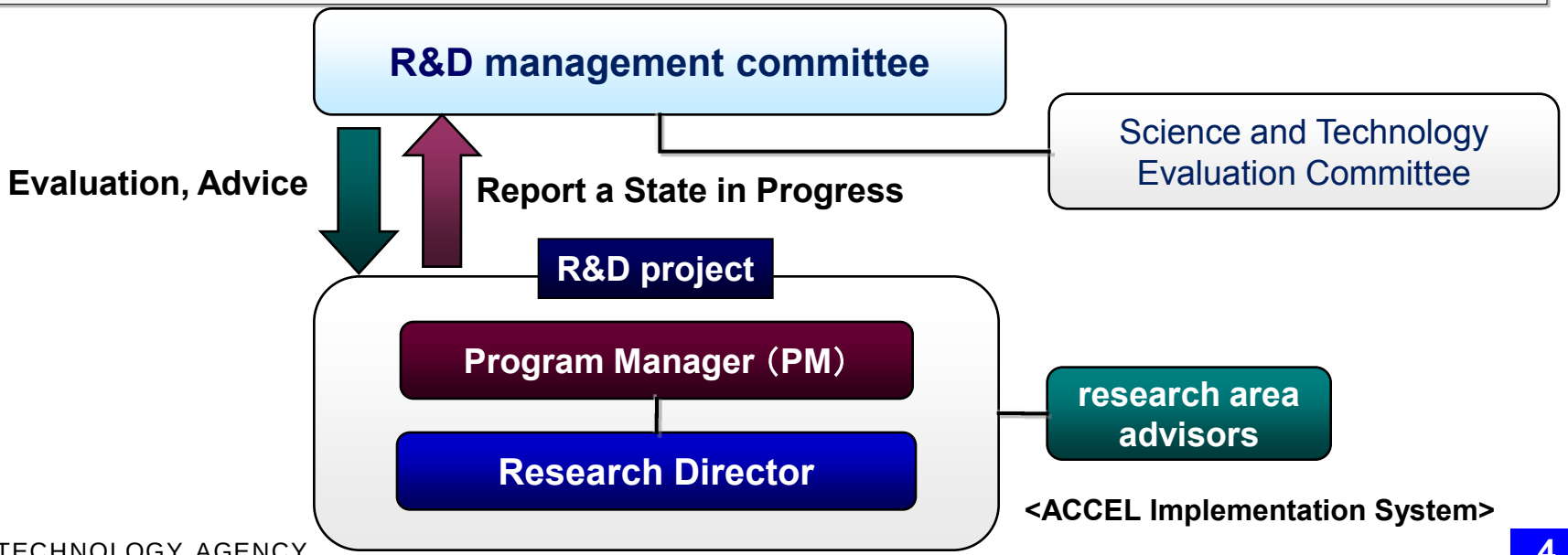
ACCEL Implementation System

[R&D System]

Assign a "**Program Manager(PM)**" to each R&D project
→ PM manages R&D agenda in corporation with its Research Director.
○**R&D is conducted by Research Director.**
○**Advice is offered by "research area advisors,"** who are assigned to each project as needed.

[Evaluation System]

- **Evaluation is conducted by the "R&D management committee."**
- **Set up the "Science and Technology Evaluation Committee" for each project** for the purpose of utilizing the judgment made in **R&D management committee.**



<ACCEL Implementation System>

Projects 1-3

1. Materials Science and Application of Electrides

Research Director **Dr. Hideo Hosono**

(Professor, Materials and Structures Laboratory/Frontier Research Center/Materials Research Center for Element Strategy, Tokyo Institute of Technology)

Program Manager (PM) **Dr. Toshiharu Yokoyama**

[R&D summary]

The new material $12CaO \cdot 7Al_2O_3$(C12A7) Electride, which was developed in the ERATO and FIRST HOSONO project, has the advantages of being chemically and thermally stable and easily emitting electrons. By maximizing these advantages, we intend to apply the material and relevant electrides to unparalleled, high-functional catalysts and electronic materials.

[R&D period]

From October 2013 to March 2018

[R&D budget]

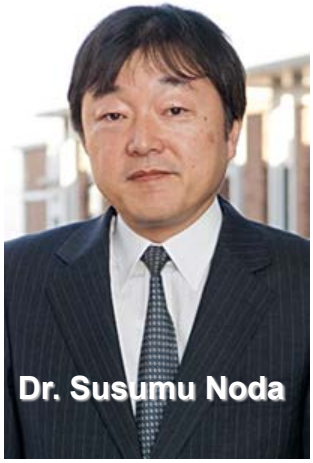
1.5 billion yen

2. "Photonic Crystal Surface-Emitting Semiconductor Laser" — Towards Realization of High Power and High Brightness Operation

Research Director **Dr. Susumu Noda**

(Professor, Graduate School of Engineering, Kyoto University)

Program Manager (PM) **Dr. Shigenori Yagi**



[R&D summary]

In the CREST project, it was demonstrated that photonic crystal surface-emitting semiconductor lasers (PCSELs) can achieve a perfect single mode oscillation in a broad area. By maximizing this advantage, we aim at developing lasers with a stable, high power and high brightness operation that can lead to it being applied to laser processing, which could not be achieved with existing semiconductor lasers. We will also develop various functional lasers that can be utilized for various potential applications in biology, precise measurements, and so on.

[R&D period]

From December 2013 to March 2018

[R&D budget]

1.5 billion yen

Project 1-3

3. “PCP ”—Molecule Control Science by Use of Nanospace

Research Director **Dr. Susumu Kitagawa**

(Director/Professor, Institute for Integrated Cell-Material Sciences (iCeMS), Kyoto University)

Program Manager (PM) **Mamoru Inoue**

[R&D summary]

Porous Coordination Polymers (PCPs), which were developed in the ERATO KITAGAWA project, show high selectivity and capacity to adsorb/desorb certain gasses with rigid and flexible frameworks.
In ACCEL, we will work on the project to maximize potential uses of PCPs and realize the effective gas separation/storage technologies for energy and space saving, taking into account both cost-effectiveness and device downsizing.

[R&D period]

From December 2013 to March 2018

[R&D budget]

1.5 billion yen

JST' Support for Venture Companies

JST's Support for Venture Companies

Start: April 2014
Budget: 2.5 billion yen

Purposes

- Provide financial, physical and technical support to the venture companies that aspire to make practical application of research outcomes derived from JST's research; promote the application and delivery of these outcomes to society, with the foundation and growth of venture companies
- Not only money but also in-kind contributions can be made, for instance by providing intellectual properties (IP) as well as property, plant, and equipment (PPE).
- Encourage venture capital companies and other financial institutions to finance venture business, inspired by JST's support
- Make effective use of patents held by JST and universities, triggered by in-kind contributions with IP

Needs to Support Business Start Ups

○ To link innovative technologies produced in universities and other institutions with the creation of innovation, it is necessary to enhance the establishment of new companies. However, in recent years, the foundation rate of university ventures has been declining. It is essential that we make an effort to support starting a business by providing the money to cover the shortfall of initial funding, the discipline of IP and technological management, and the know-how to manage a company.