



Federal Ministry
of Education
and Research



BMBF

German Federal Ministry of Education and Research



www.fona.bf.de

FONA³: Framework Programme Research for Sustainable Development

- Innovations for sustainable economic activities: effective implementation of research results
- 3 „flagship initiatives“: **Green Economy, City of the Future, Energy System Transformation**
- Excellent basic research: Comprehension of the System Earth
- Excellent application-oriented research: more inter- und transdisciplinarity
- Rapid knowledge transfer: create the necessary knowledge for decision-taking; show options for action
- **Sustainability in global responsibility**
- **Budget: 2,1 Mio. € (2015-2019)**

Current and Future Funding Priorities

1

Research Programme **City of the Future**

2

Research Programme **Socio-Ecological Research**

3

Research Programmes **Future Megacities +
Rapid Planning**

Funding Examples

1

**REFOWAS – Pathways to REduce FOod
WAste (2015-2018)**

2

**Trafo 3.0 – Socio-Ecological Transformation
Processes in practice (2015-2018)**

3

City of the Future Competition (2015)



SPARK POLICY INSTITUTE
igniting public policy and community change

German Research Foundation,
Christiane Joerk

Funding Overview

**Geographic
Area**

Researchers at German Institutions

Budget

Altogether €2.5 billion

**Program
Area(s)**

Serve all disciplines, scientific areas

Funding Example

Priority Program: Climate Engineering: Risks, Challenges, Opportunities?

German Centre for Integrative Biodiversity Research

Research Unit: Urban Climate and Heat Stress in mid-latitude cities in view of climate change

Research Training Group: Transformation of Global Agri-Food Systems: Trends, Driving Forces, and Implications for Developing Countries

Research Training Group: Agricultural Landscapes under Global Climate Change - Processes and Feedbacks on a Regional Scale

Collaborative Research Centre: Governance in Areas of Limited Statehood

Current and Future Funding Priorities

1

Knowledge oriented research: disciplinary scope of proposals open

2

Bottom up Approach: Funding only depends on scientific quality; DFG itself does not push forward topics – only acts as research enabler

3

DFG/UN Conference on SDG



EUROPEAN COMMISSION

Ugo Guarnacci

Policy Officer – Innovating Cities with Nature

DG Research & Innovation

**Unit: Sustainable Management of Natural
Resources**

Funding Overview

Geographic Area

Europe: 28 Member States

Budget

Horizon 2020: € 80 billion

Program Area(s)

SC5: Climate Action, Environment, Resource Efficiency and Raw Materials

Funding Example

Sustainable Cities through Nature-Based Solutions

A Renewed EU R&I Framework is proposed to integrate various fragmented actions in the field of sustainable urbanisation → 'city ecosystem'.

Such an approach would complement the current largely technology-driven 'Smart Cities' model with the socio-economic (i.e. jobs, health, social cohesion) and environmental (i.e. resource efficiency, water, waste, air quality) needs of citizens, and make converging technologies, markets, infrastructure and systemic innovation – including **social innovation** – interact.

Current and Future Funding Priorities

1

Smart and Sustainable Cities

2

Nature-Based Solutions for territorial resilience

3

Innovative governance, business and financing models for re-naturing cities



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JPI Urban Europe

Global Urban Challenges | Joint European
Solutions

Funding Overview

Geographic Area

Global (in Europe, 20 countries participating or contributing)

Budget

Direct project funding \approx €20–30m/y

Program Area(s)

Urban sustainable development: inter- and transdisciplinary, cross-sectoral, solution oriented

Funding Example

A selection of Urban Living Labs currently funded – more at: **jpi-urbaneurope.eu**

- Governance of Urban Sustainability Transitions (**GUST**)
- Social uplifting and modernization of suburban areas with Urban Living Lab approach (**SubUrbanLab**)
- Action oriented planning, regulation and investment dilemmas for innovative urban development in living lab experiences (**APRILab**)

Current and Future Funding Priorities

1

Thematic priority	2016 – Sustainable Urbanisation
Welfare and Finance	Financial models for green investments
Climate Change and Environmental Sustainability	Urban climate change adaptation and climate services
Accessibility and Connectivity	Resilient urban mobility systems; user needs and user behaviour
Urban Governance and Participation	Governance for CC adaptation
Vibrancy in Urban Economies	Green economies - a driver for cohesion
Sustainable Transition Pathways	An integrated approach to urban sustainability



Japan Science and Technology Agency (JST)

30 June, 2015



科学技術振興機構

JST's Overview



President

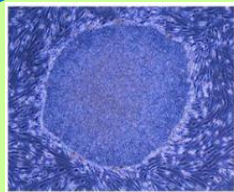
Dr. Michiharu NAKAMURA (since October 2011)

Mission

To contribute to the promotion of science, technology and innovation

Vision

- ✓ To achieve innovation in science and technology through creative R&D
- ✓ To maximize research outcomes by virtue of Japan's science and technology innovation



iPS Cell
The Nobel Prize 2012
Prof. Shinya Yamanaka



Blue Light-emitting Diode
The Nobel Prize 2014
Prof. I. Akasaki
Prof. H. Amano
Prof. S. Nakamura

JSD ※Fiscal year 2014, ※Exchange

Major Operations at JST

R&D Strategy

R&D Strategy
Planning

Strategic Basic Research

Promoting Creation of Science, Technology and Innovation

Innovative Research

S&T Infrastructure

Establishing an infrastructure to drive the generation of innovation
- Soft infrastructure to support innovation -

Funding Examples



BELMONT
FORUM

- ★ E-infrastructure ⇒ Contributing to “Knowledge-hub” activity
- ★ Food Security and Land Use Change ⇒ Supporting 2 awarded projects
- ★ Scenarios of Biodiversity and Ecosystem Services Change ⇒ Supporting 2 awarded projects
- ★ Arctic Observing and Research for Sustainability Change ⇒ Supporting 2 awarded projects
- ★ Climate Predictability and Inter-Regional Linkage ⇒ Participating in Call (in selecting process)
- ☆ Transformative Knowledge Networks ⇒ Participating in Call (in selecting process)

● **RISTEX** ([Research Institute of Science and Technology for Society](http://www.ristex.jp/)) <http://www.ristex.jp/>

One of JST's departments conducting R&D in technology for society in Japan.

RISTEX aims at solving specific social issues and places value on transdisciplinary research *by researchers and stakeholders working in collaboration* (Co-design, Co-production and Dissemination).

Ongoing “*community-based*” programs:

Redesigning Communities for Aged Society
(2010-2015) 13 PJ (finished 7 PJ)

Creating Community-based Robust and Resilient Society (2012-2017) 15 PJ

Designing a Sustainable Society through Intergenerational Co-creation (2014-2019) 3 PJ

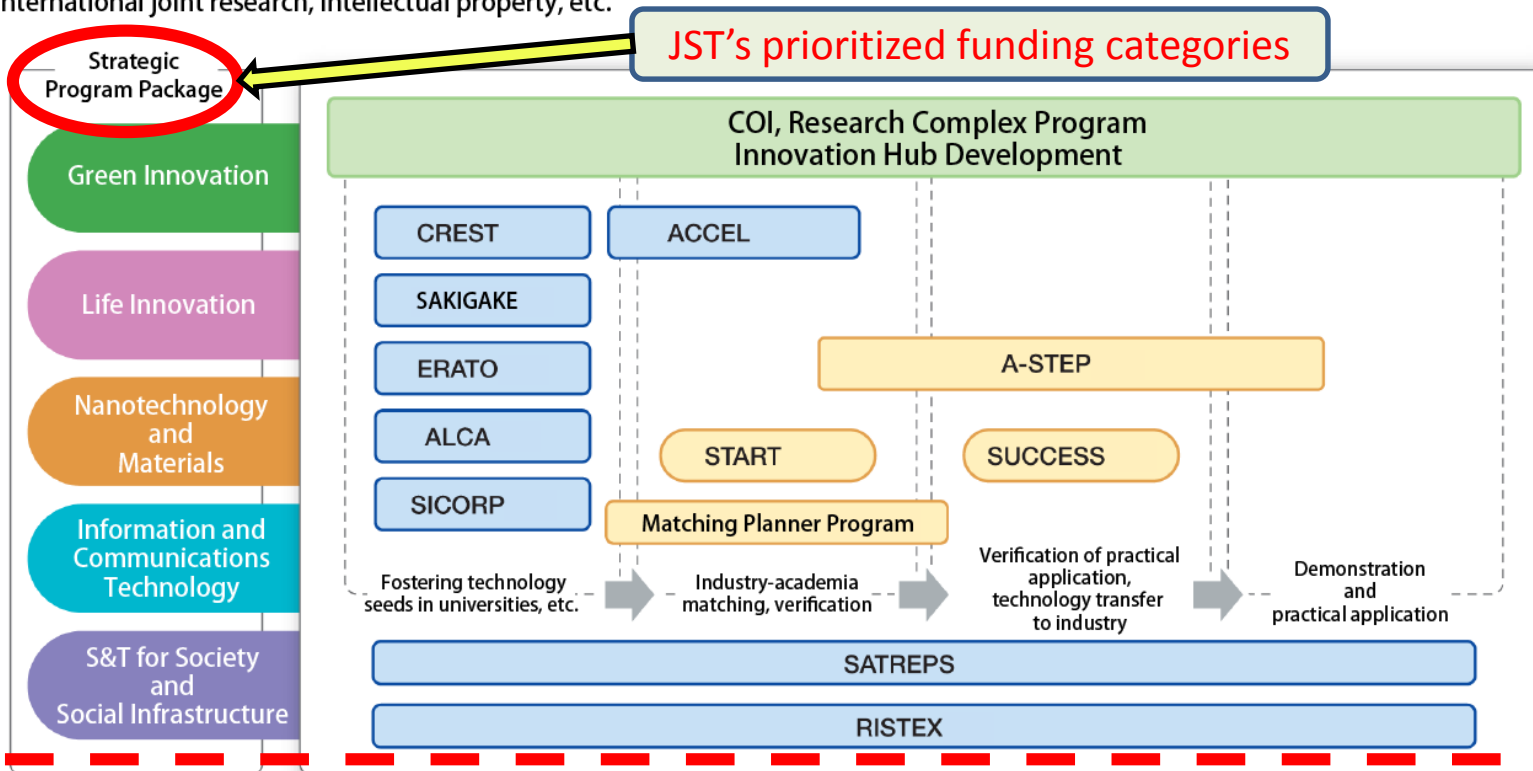


Current and Future Funding Priorities



Intersection of JST programs and fields

In order to promote science and technology innovation, JST has defined strategic program packages for each of the 5 prioritised fields below to integrate handling of basic research, commercialisation through industry-academia-government collaboration, international joint research, intellectual property, etc.



International cooperation programs

SATREPS

Science and Technology Research Partnership for Sustainable Development Program

BELMONT FORUM

SICORP

Strategic International Research Cooperative Program
Strategic International Collaborative Research Program

CONCERT JAPAN
Connecting and Coordinating European Research and Technology Development with Japan

e-ASIA JRP



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U.S. National Science Foundation

Funding Overview

Geographic Area

Global reach (no restrictions)

Budget

Across several initiatives ~ 80 - 100 M USD

Program Area(s)

Interdisciplinary approaches across Engineering, Social Behavioral and Economics Sciences, Geological, Biological Sciences and Computer, Information Sciences and Engineering

On-going Initiatives

- CRISP – Critical Resilient Interdependent Infrastructure Systems and Processes
- RIPS - Resilient Interdependent Infrastructure Processes and Systems
 - Interdependencies of critical infrastructure systems – Food – Water – Energy
 - ENG, CISE and SBE
- WSC – Water Sustainability and Climate - water availability, quality and dynamics, and the impact of both a changing and variable climate, and human activity, on the water system (GEO, SBE, ENG)
- Belmont Forum
 - Freshwater Security
 - Food Security and Land Use Change

Future Funding Priorities

1

Nexus of Food – Energy – Water Systems

2

CRISP/RIPS

3

Belmont Forum initiatives



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Netherlands organisation for Scientific Research (NWO)

Wieske Bressers (w.bressers@nwo.nl)

Funding Overview

Geographic Area

Fund researchers in The Netherlands but have a global focus

Budget

± M€ 600 (SS M€40, E&LS M€60)

Program Area(s)

- Connecting sustainable cities (VERDUS)
- National knowledge and innovation programme on water and climate (NKWK)

Funding Example

For every national programme we aim to organise an international one as well

Active and successful in international networks:

- Involved in all JPI's
- NORFACE
- Transatlantic Platform, India Platform

Current and Future Funding Priorities

1

- Circular economy
- Resilient society
- Building blocks of life
- Complexity Fundamental
- Quality of life
- Big data