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Opportunities for joint nanotechnology projects with Japanese companies



Nanotechnology

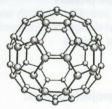
A product relates to nanotechnology if:

- There are Nano scale components with typical size of 100 nm and less
- Key features and properties of obtained products are defined by the presence of Nano scale components
- The production includes **control and modification** of the shape, size, integration and interaction of single nanoscale components

Nanomaterials

Nanocomponents

Nano-enabled products







Nanotechnologies can be applied in:

- Energy sector solar panels, batteries, fuel cells, energy efficient light sources
- Medicine express diagnosis, nanomedicines and nanovaccines
- Electronics smaller size microprocessors
- Automotive industry additives in fuel and oil, coating for engine parts and new paint coatings



RUSNANO: overview

- Founded in 2007
- Russian Federation's asset contributions : ~ € 3.3 bln
- State guaranteed debt financing (bonds issuance): ~ € 4,5 bln
- Mission: to provide the state policy for nanoindustry development
- Application task: commercialization of nanotechnology projects
- Main instrument: investment projects

Basic Research

prototype development

startup companies

mass production

Scientific and **Educational**

Research and **Design Centers**

Financing

Commercial enterprises

Federal Target Programs Russian Academy of Sciences Russian Fund for Basic Research



Private Investors



RUSNANO: overview

Russian Corporation of Nanotechnologies (RUSNANO) was established in 2007. It is a statefinanced entity.

In March'11 Rusnano changed its legal

status to open joint-stock company

RUSNANO is engaged in financing of projects in the field of nanotechnologies The projects nearing the

commercialization stage are of top priority for the corporation.

RUSNANO acts as a co-investor. Early-stage investment by RUSNANO lowers the risk of its investment

partners from the private sector.

Types of projects:

- · Manufacturing projects -Russian development or technology transfer
- Infrastructure projects
- Projects in scientific research and experimental-design development
- Educational projects

RUSNANO main instruments:

- ·Contributing to chartered capital of legal entities (non-controlling share).
- ·Financial support by means of loans provision/ guarantee.
- Demand stimulating activities via partners network and connections with local authorities.

Manufacturing projects criteria:

- Investment in the creation of new or expansion or modernization of existing manufacturing of nanotechnology industry goods on the territory of
- •They are financed on principles of payback and return on investment

RUSNANO

RUSNANO reorganization in 2011

Russian Corporation of Nanotechnologies

Open joint-stock company "RUSNANO":

business structure

Infrastructure fund and educational programs: non-profit organization

Investment Projects

- Business development
- o Projects review
- Deal Structuring
- Co-financing
- Execution

Innovation Infrastructure

- Infrastructure projects and programs
- Foresights, Roadmaps
- Standardization, certification and metrology
- Education
- Promotion

Results of the reorganization:

- 1. Improving the efficiency of investment activity;
 - 2. Reducing the time of projects review;
- 3. RUSNANO can participate in the capital of foreign companies directly.



RUSNANO

Support for applicants / co-investors

Nonfinancial

Support

Financial Support

Corporative:

· Minority stake of RUSNANO in all projects

Credit:

- · Long and relatively cheap money
- · Guarantee of loans

Exit strategies

· Sale of the RUSNANO package to a private investor



Infrastructure:

 Qualitative expertise on the pre-portfolio stage: scientific and technical + investment expertise: ·Foresight and Roadmaps

Management:

·Regular management of the portfolio company Control of investment funds employment in the interest of shareholders

Administrative:

·Safeguard from bureaucratic pressure ·Support in product's market promotion

The main requirement allocation of production or R&D in Russian Federation •Forming the MFN treatment



We apply **flexible investment approach**, giving our portfolio companies

strong financial and administrative support

Special Requirements:

- Rusnano representation on Board of Directors
- Production site located in Russia

Target Investment:

- · Late stage product development
- Existing prototype
- ·Scale-up of existing production



Governing Law:

- Deals are structured in accordance with Russian law
- Deals are structured in accordance with English law
- Arbitration Institute Stockholm Chamber of Commerce

Financing:

- Up to \$250 mln per deal in equity or debt
- Average investment size is \$30 -\$70 mln
- · Rusnano looks for minority share





01.04.2008 - 31.01.2013: received 2 205 applications

Investment Application

Inspection test and examination

Internal investment expertise

Rejected: 1 939 On an internal expertise: 69

Internal technical and scientific expertise

M

Technical and scientific Board

On an official expertise (duediligence stage) – 78

Investment policy committee

The decision on providing investment is made by: Management Board – investment up to \$40 mln. Board of Directors – investment above \$40 mln.

123 projects approved

