



Innovation Network Corporation of Japan (INCJ)

2017 February 8

Our philosophy

- The basic philosophy of Innovation Network Corporation of Japan (INCJ) is "open innovation". By promoting open innovation, Japanese companies can escape from the pyramid type industrial structure and will dramatically strengthen the productivity and competitiveness of Japanese industry.
- In order to advance open innovation, it is important to utilize not only debt but also equity as risk money.
- INCJ has promoted open innovation through (1) investment in venture companies, (2) restructuring and integration of business, and (3) utilization of overseas management resources.

【Basic policy】 In investing, INCJ emphasizes on the following matters, unlike the private sector.

- Focus on not only profitability and feasibility but also social significance (investment impact)
- Provide relatively mid- to long-term risk money (emphasis on long-term investment collection ratio (MoC), not investment return rate (IRR))
- Investment in areas where risk is high only for private sector (private enterprises, collaboration with private funds)

【Investment criteria】

(1) Alignment with social needs, (2) Growth and (3) Innovation

Innovation Network Corporation of JAPAN (INCJ)

- Launched July 2009 with a 15-year lifetime
- Established under the Law on Special Measures for Industrial Revitalization
- Overall investment capacity of ¥2 trillion

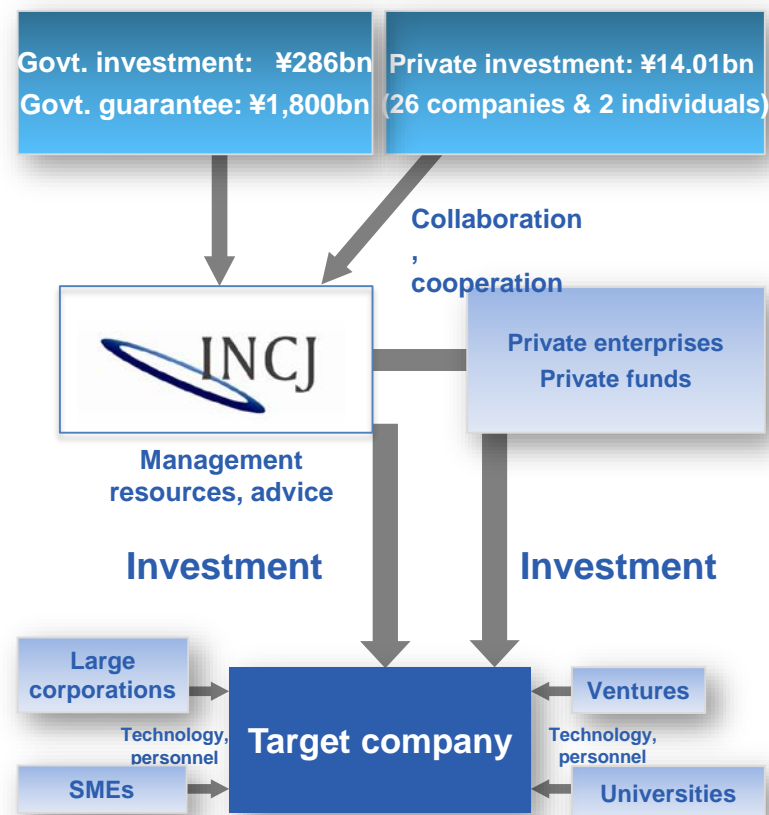
Shareholders

Government of Japan (investment of ¥286bn)

26 Corporations (¥14bn in total, ¥500m each*) *In alphabetical order*

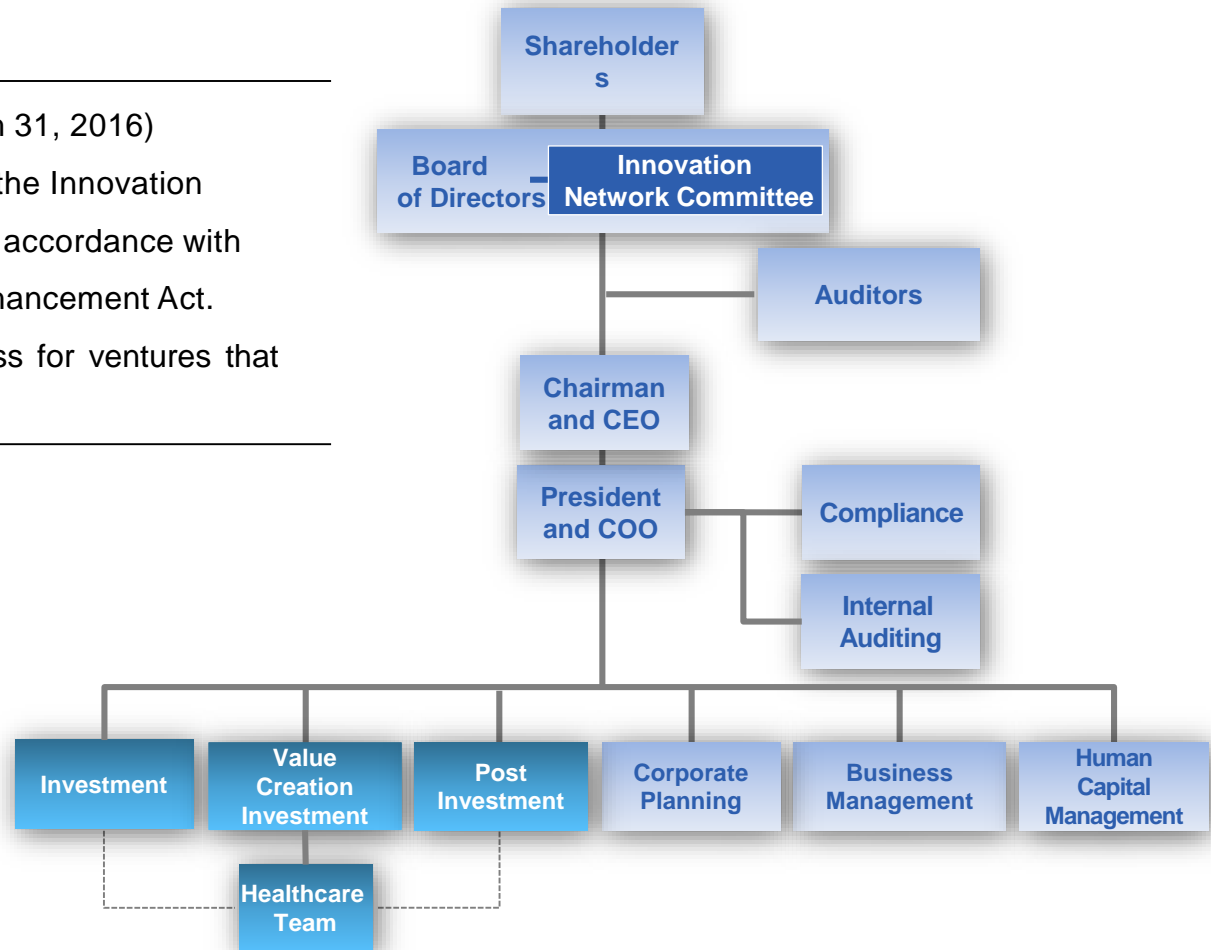
- | | | |
|--|--------------------------------------|---|
| ● Asahi Kasei Corporation | ● Mitsubishi Corporation | ● Sumitomo Mitsui Banking Corporation |
| ● Canon Inc. | ● Mitsubishi Heavy Industries, Ltd. | ● Takeda Pharmaceutical Company Limited |
| ● Development Bank of Japan Inc. | ● Mizuho Bank, Ltd. | ● The Bank of Tokyo-Mitsubishi UFJ, Ltd. |
| ● East Japan Railway Company | ● Osaka Gas Co., Ltd. | ● Toshiba Corporation |
| ● General Electric Japan Holdings Limited | ● Panasonic Corporation | ● Toyota Motor Corporation |
| ● Hitachi, Ltd. | ● Sharp Corporation | |
| ● JGC Corporation | ● The Shoko Chukin Bank, Ltd. | |
| ● JX Nippon Oil & Energy Corporation | ● Sony Corporation | *Exception: Development Bank of Japan, which contributed ¥1.5bn |
| ● Marubeni Corporation | ● Sumitomo Chemical Co., Ltd. | |
| ● Mitsubishi Chemical Holdings Corporation | ● Sumitomo Corporation | |
| | ● Sumitomo Electric Industries, Ltd. | |

Structure



Outline of the organization

- No. of employees: 117 (as of March 31, 2016)
- Investment decisions are made by the Innovation Network Committee, established in accordance with The Industrial Competitiveness Enhancement Act.
- Set up a quicker investment process for ventures that meet certain requirements.



Professionals from Private Sector

○ The members of investment front are not temporary transfer from private companies but change of career from various professions such as investment funds, banks, consulting companies, business companies, etc.

Investment Front (67) ※ as of Sept. 2016

Investment Group: 27 (PE Funds, Consulting Firm)

VC Investment Group: 30 (VC Funds, Companies)

Healthcare Team: 4 (Pharmaceutical Companies)

Post Investment Group: 10 (Companies)

Back Office (20)

Business Management: 12
(Attorneys 3, Government Officials 2)

Portfolio Management: 7 (Accountants)

Human Resource Management: 3 (HR Consulting)

Corporate Planning: 5 (PR2, Government Officials 3)

Innovation Network Committee (Main career)

(Chairperson) Hiroyuki Yoshikawa	President of the University of Tokyo, Chairman of the Science Council of Japan, Chairman of the National Institute of Advanced Industrial Science and Technology, Special Advisor to the Japan Science and Technology Agency
(Chairman's representative) Akio Mimura	Chairman of Nippon Steel Corporation Representative Director, Vice Chairman of the Japan Association of Economic Organizations, President of the Japan Chamber of Commerce and Industry President, Tokyo Chamber of Commerce Association
(Committee member) Hideko Kunii	Ricoh Managing Executive Officer, Professor, Graduate School of Engineering Management, Shibaura Institute of Technology, Assistant President
(Committee member) Tanahashi Gen	Mori Hamada Matsumoto Law Offices Partners
(Committee member) Tetsuichiro Muto	Professor, Institute of Medical Science, The University of Tokyo, Director of Cancer Research Group, Public Interest Foundation Cancer Institute · Medical Director Honorary Director
(Corporate Auditor) Hideo Takaura	Price Waterhouse Japan Firm Senior Partner · Aoyama Audit Corporation Representative Employee, Representative Executive Officer Aarata Audit Corporation
(Committee / CEO) Toshiyuki Shiga	Vice President of Nissan Motor (current position), Vice Chairman of the Association of Corporate Executives
(Committee · COO) Mikihide Katsumata	President and Representative Director of New Frontier Capital Management Co., Ltd. President and Representative Director, Mobile · Internet Capital Corporation

1. Investment impact

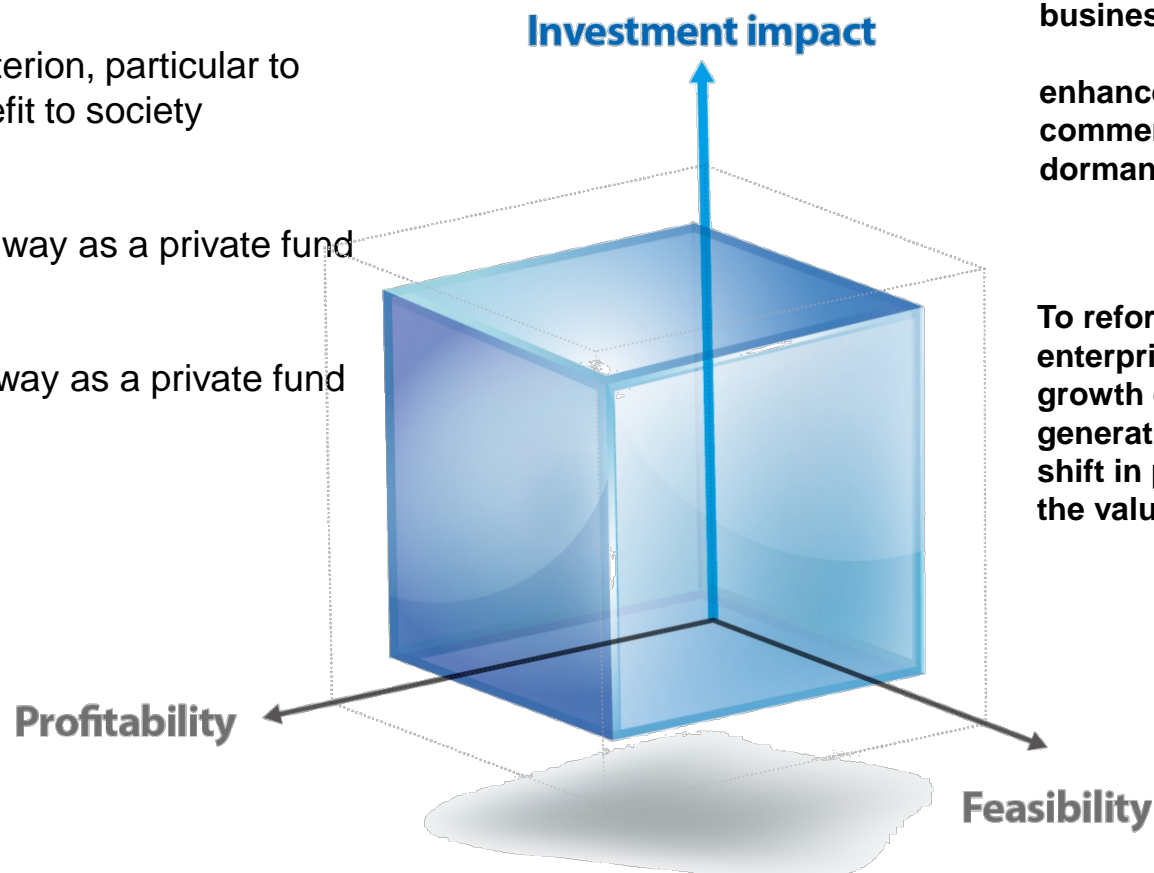
- A third assessment criterion, particular to INCJ: the potential benefit to society

2. Profitability

- Assessed in the same way as a private fund

3. Feasibility

- Assessed in the same way as a private fund

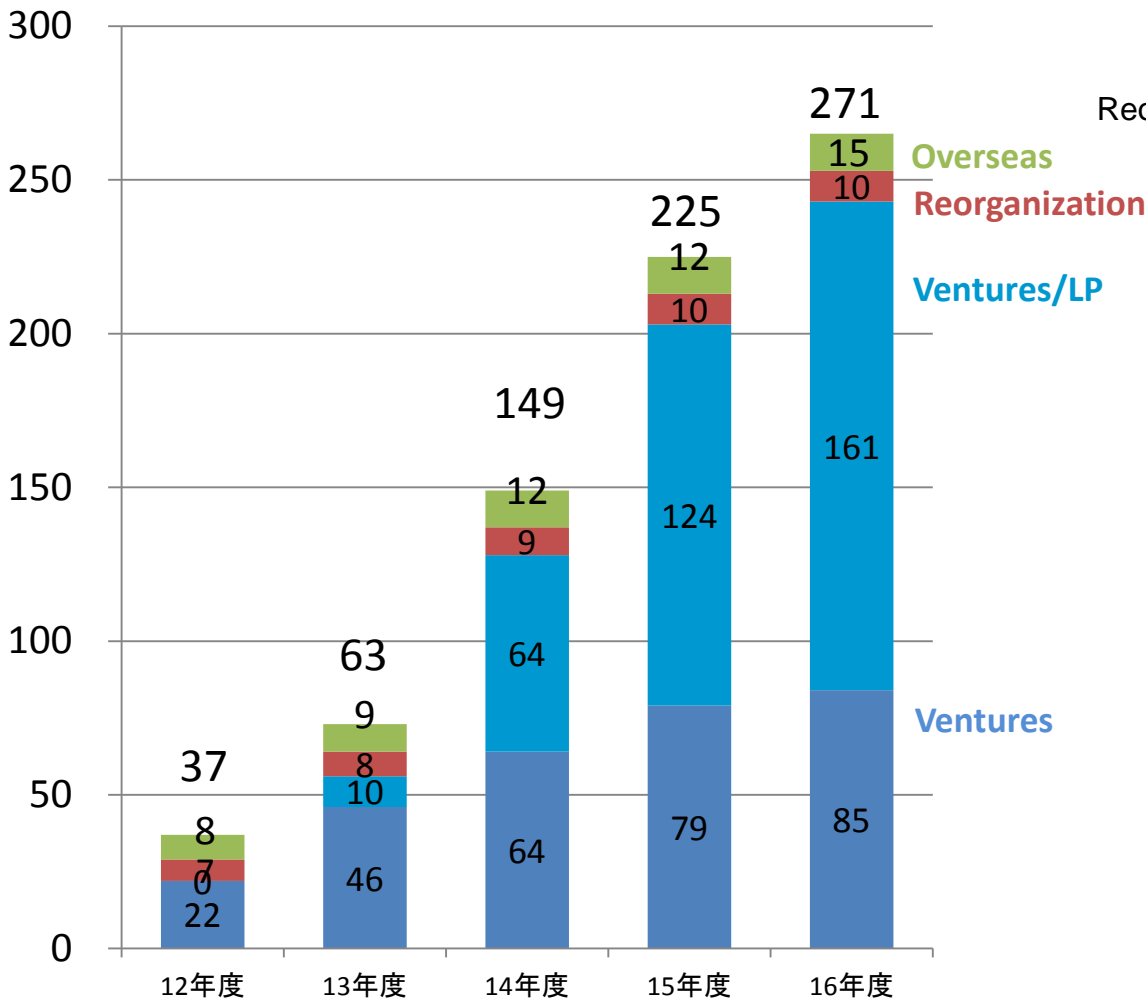


To create next-generation industries and emerging businesses:

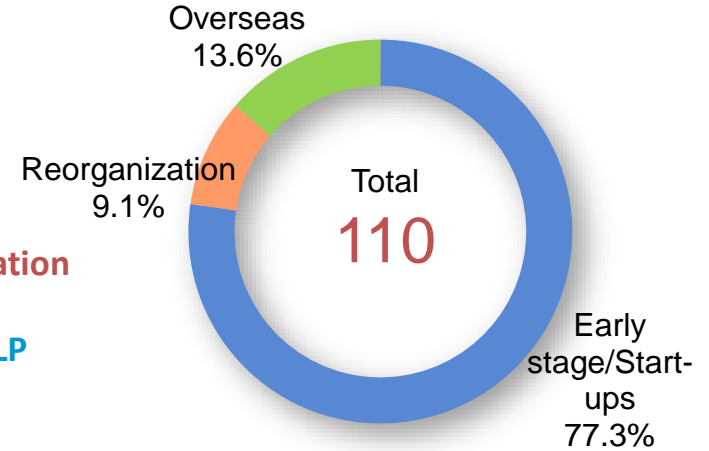
enhance value of commercialize new or dormant technologies

To reform existing enterprises through growth of next-generation industries: shift in positioning on the value chain

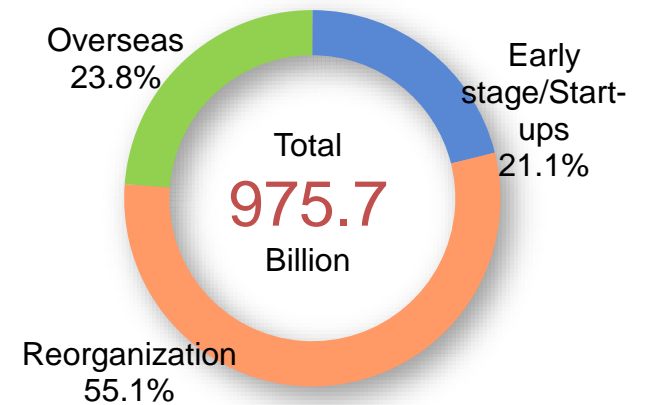
Changes over time in number of invested



Number of investments



Amount invested (cumulative)



Investment portfolio

Exit / Partial exit

	Materials / Chemicals	Electronic Devices	Industrial Machinery	Energy	Transportation/ Automobile	Consumer Goods / Retail (Incl. Services)	Life Sciences	IT/Business Service/Contents	Infrastructure (Incl. Services)	Strategic LP Investment		
Early stage	UniZeo Advanced Zeolites ZEPTOR LIB Electrode MC Copper Paste QUADRAC RMT server/ HBC LSI ATONARP real-time analysis	exvition Gesture UI XCorebrEX Display Controller Trigence Digital Speaker Technology QUADRAC RMT server/ HBC LSI ATONARP real-time analysis	NejiLaw Innovative Bolts ASTRO SCALE space debris removal technology	SHELAR POWER Solar Cell Module			Life Science Intellectual Property Platform Fund LSP Pharma8 Alzheimer's treatment Mediature Partners Medical Device Incubation Fund ODTI Duchenne Muscular Dystrophy Rena Heterocyclic oligonucleotides for drugs Curadim Pharma new drugs for intractable diseases	AQUA RNAi R&D Neptune Pharma, Inc. RNAi with DDS Human IPS Cell Derived Platelets Create Vaccina Company, Ltd. Tuberculosis Vaccine PRACE Home medicare Platform Curadim Pharma new drugs for intractable diseases	Incubation of Voice Search Coiney Smartphone Payment GRA AgriPlatform New Farmers Support Shift One Motion Comics miselu Social Instruments SOINN Artificial brain FTRON Cyber Security ROYAL GATE Smartphone Payment	BIG IPDC Infrastructure	UTECH Industrial and Academic Collaboration VC UMA Venture investment in the field of raw materials and chemistry UB Hands-on VC with Cooperation from Industry TechAccel Open-innovation CVC fund IF Startup Incubation Fund ATR #Iwccc Fund for Neuroscience / Robot / etc. VC for energy related sector innovations	
	Start-ups	asmi.jp Advanced Polymer ATV Composite Material Recycling NPA Aluminum/Steel ALPS Microwave Platform Technology Early stage commercialization of graphene FLORIDA Embedded Flash Memory	SEFUSON Flash Memory ALCANTARA Diamond Saw Wire ALPS Power Cores, Current Sensors SCIVAX Nanosprint FLORIDA Embedded Flash Memory	SQUSE 3rd-Generation Si. Robotic Arm HELL PERFORMANCE NMR Spectronix High Power Ultrashort Pulse Laser NAMtech Mist Separator INNOVIA Powered Exoskeleton 3D robot vision system	Small Wind Turbines ENAX LIB		nikko High Value-Added Natural Textile Platform Business for the Apparel Industry Aelen Beak Company Internet Store Oh My Glasses Eyewear SPA UNIVERSAL VIEW Ophthalmic Medical Devices STELLA PHARMA Radiation therapy for cancer	Anisoptarma Science Anticancer DDS PRISM Drug Development with PPI Regulation New generation Personal Mobility Quantar Systems next-generation Sequencer UNIVERSAL VIEW Ophthalmic Medical Devices STELLA PHARMA Radiation therapy for cancer	midokura Network Visualization Solutions 6027 Development of Content pubridge e-book platform CLUBHOUSE COMMUNICATIONS ID-POS Data Platform CLOUDIAN Cloud Object Storage product JPBridge IP Platform Fund Q&W Development of Content SMART Big Data Application	Sansan Cloud Based Business Card Management Service AGRA Data Integration Tool K-engine Cloud Platform for Home Builders SmartDrive Telematics Service Provider feltes Digital risk technologies Q&W Deep learning TREASURE big-data analysis platforms	JTOWER In-building Wireless Infrastructure Sharing peach LCC	WIL (with investment of Startup Investment Fund in Japan and US)
		Companies - reorganization and integration	IBMJ Material for LIB Sunbae Global Film Holdings Polyolefin film manufacturer	RENASAS Semiconductor: MCU/ASP-SoC JOLED OLED Display Panel		UNI CARRIERS Forklifts Auto Parts Manufacturer					Intern W/NEED Jdar Energy Development	
			Use of overseas management resources	Oji Fibre Solutions Pulp / Paper / Packaging Nistica Optical Module Start-Up transpherm Gall Power Semiconductor	Harmonic Drive AG Precision reduction gear Langis Joy Energy energy meter Smart Meters Wilex gba Communication Software		ChauCer Freeze-dried products Sunbae Healthcare Service Critical Care Hospital in Cambodia KBI Biopharma Contract Development & Manufacturing (CDMO)					seadocs Wind turbine Installation Vessel AGS Portuguese and Brazilian Water Industry Sole Holding S.p.A. PV IPP in Italy Agua Nueva Chilean Water Industry eco Telecommunications infrastructure services

→ Venture Investment Collaborating with Policy Issues

- Promote venture investment, etc. in cooperation with policy issues, such as the Fourth Industrial Revolution
- Example: artificial intelligence and fusion of manufacturing and services

(AI and manufacturing)

Target: 3D media corporation Ltd.

Outline: Development and sales of industrial 3D robot vision system

Authorized investment: 0.8 billion yen

Release date: May 26, 2016



株式会社
三次元メディア
Vision of Tomorrow

Venture from Ritsumeikan University that develops and sells 3D vision system that corresponds to "eye" and "brain" of industrial robot

- Realized automation of bulk picking work on factory production line by cooperation with multi axis robot (TVS series)
- By combining unique algorithm and hardware, it is possible to recognize black, translucent, glossy parts, etc. with high accuracy and high speed



TVS3.0シリーズ
ビジョンヘッド



ワーク位置・姿勢を
画像認識

(AI and service)

Target: ABEJA Corporation

Outline: Data analysis platform utilizing artificial intelligence

Authorized investment: 500 million yen (upper limit)

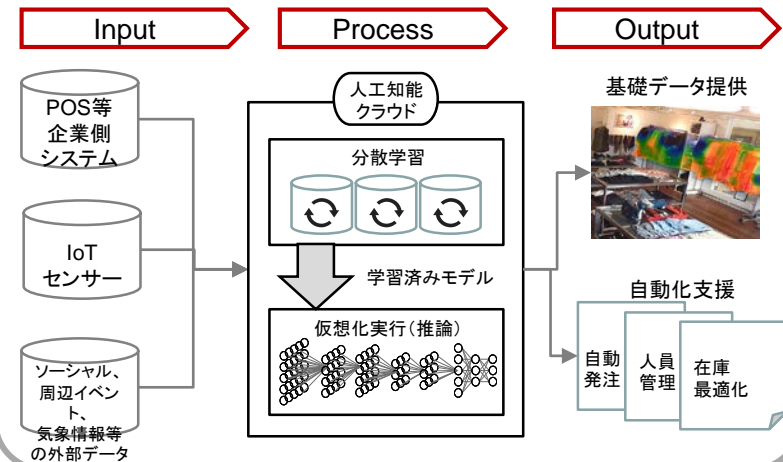
Release date: July 25, 2016

株式会社ABEJA

Providing "ABEJA Platform", a cloud service that collects, analyzes, and visualizes various information by utilizing deep learning by own research and development



ABEJA PLATFORM

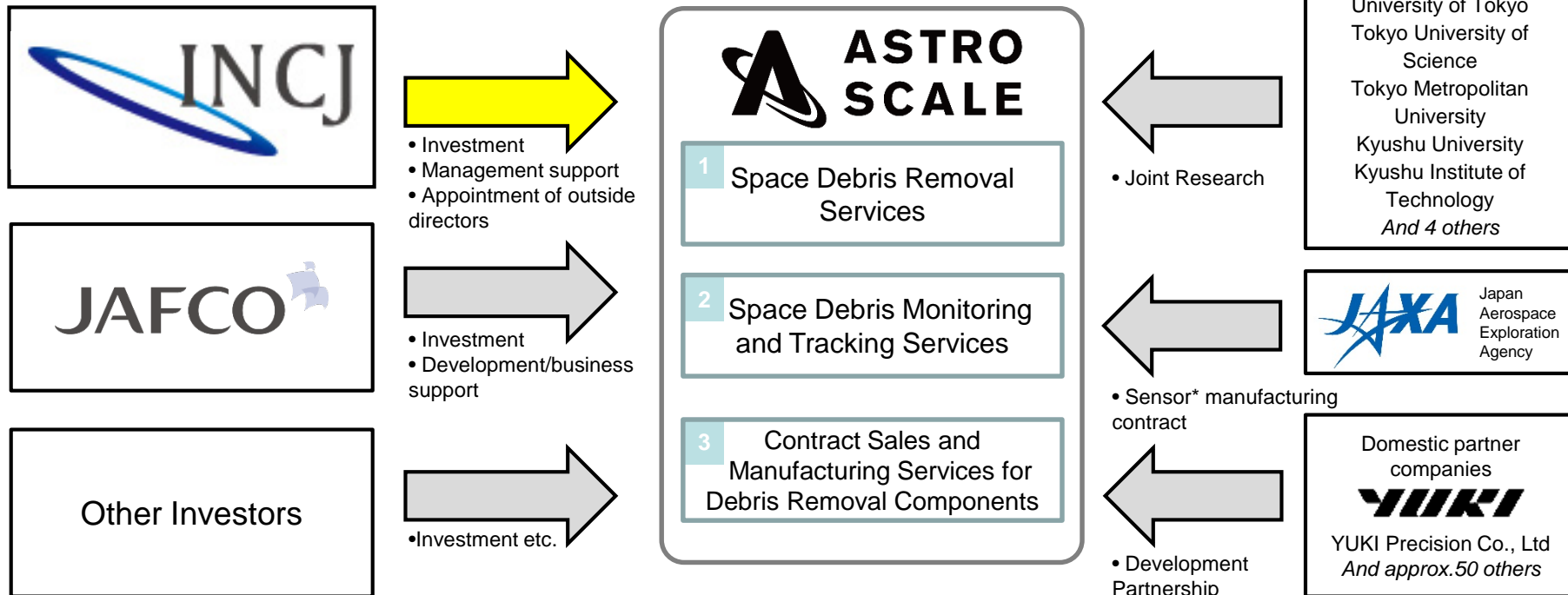


Target : ASTROSCALE PTE. LTD.

Outline : Development of space debris* removal technologies and other space-related services

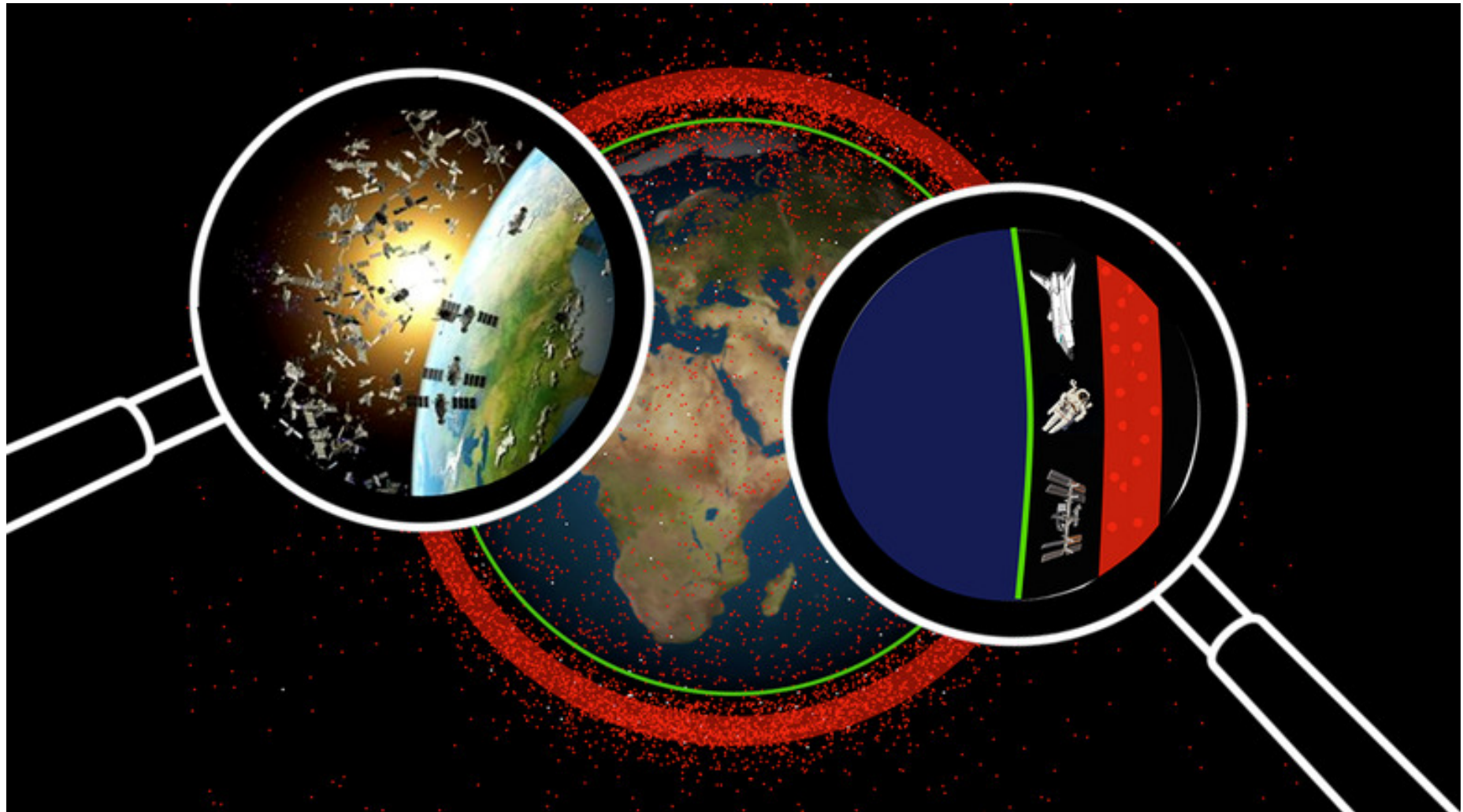
Authorized investment : US\$30 million (maximum)

*Space debris includes decommissioned satellites, spent rocket stages and other orbiting inoperative manmade objects or fragments of such objects produced through collisions

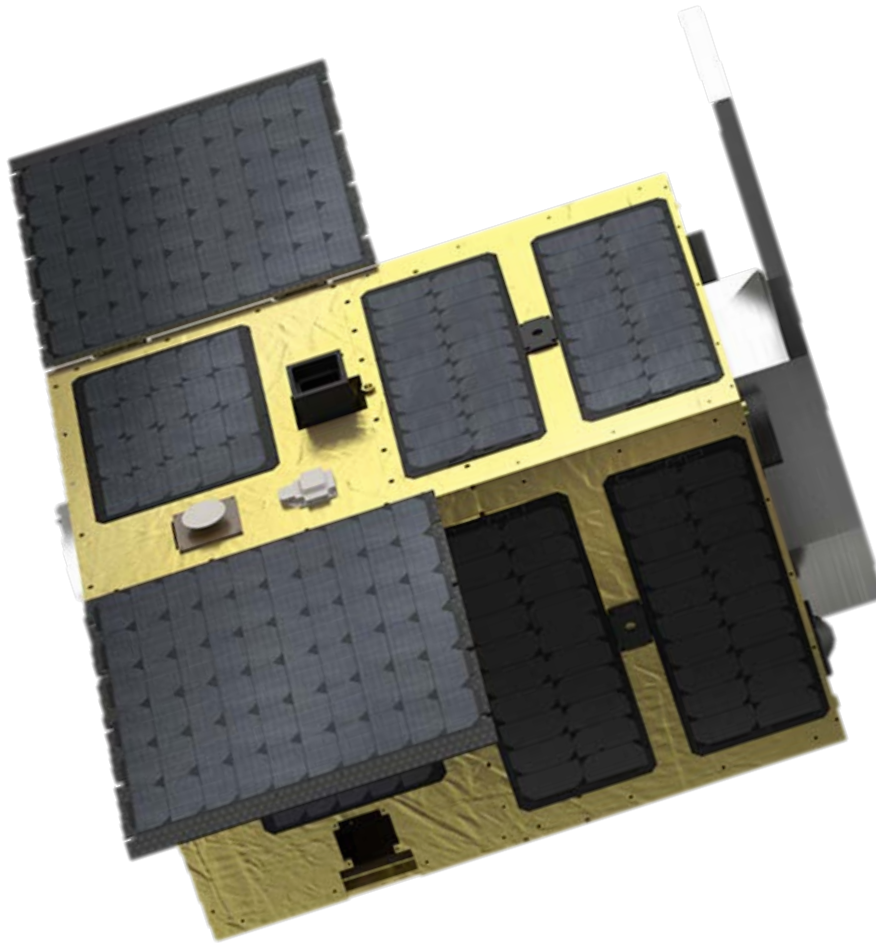


- Contribute to the resolution of the space debris issue that is increasingly threatening development of the space industry, by supporting ASTROSCALE to develop new technology, demonstrate its effectiveness, and structure a robust business model
- Support satellite technology development and contribute to value creation in space-related industries

*space debris monitor



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Spacecraft Retrieval

Safe approach and inspection of spacecraft in-orbit

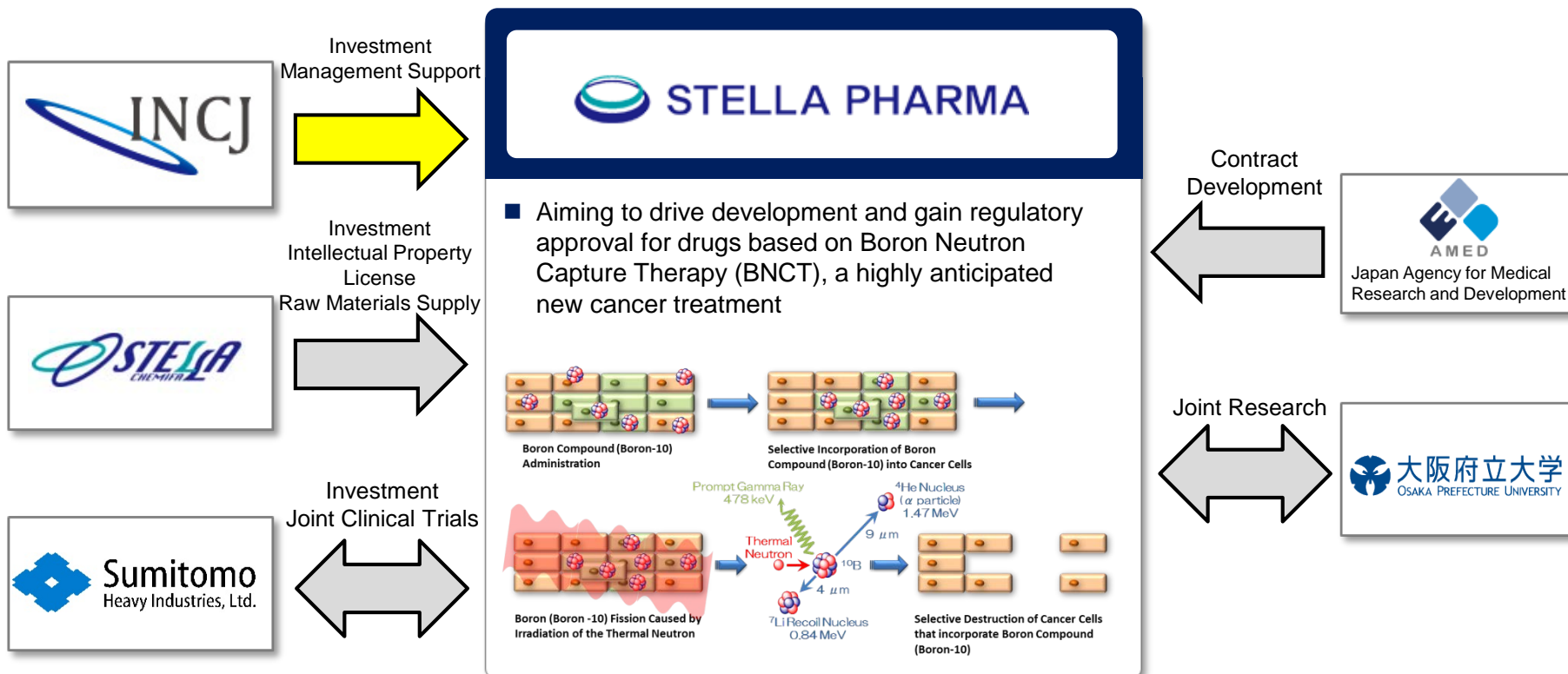
Capture and diagnosis

Deorbiting for atmospheric reentry

Target: STELLA PHARMA CORPORATION

Outline: R&D, manufacturing and sales of medical products and medical devices

Authorized Investment: 3.5 billion yen (maximum)



- Targeting world-first regulatory approval and commercialization of BNCT, a new type of cancer treatments
- Driving innovative medical technology development by open innovation across manufacturing industries and domestic academia

Cooperation with external organizations

Kauffman Fellows Program(KFP)

- Concluded a partnership agreement
Silicon Valley's core talent cultivating organization with the aim of constructing an ecosystem conducive to innovation in Japan.
- Currently carrying out the three activities of seeding commercialization, trend mapping, talent support and matching.



National Institute of Advance Industrial Science and Technology

- Concluded a partnership agreement aimed at driving open innovation.
- Creating new possibilities in innovation by matching AIST technical knowledge and technological seeds with INCJ financial and commercialization capabilities.



Tokyo Metropolitan Government Bureau of Waterworks

- Concluded a partnership agreement in overseas water business.
- Practical application of the Tokyo Metropolitan Government Bureau of Waterworks' world-class water industry operations expertise.



Japan Science and Technology Agency

- Concluded a partnership agreement aimed at channeling the excellent research results of Japan's universities and public research facilities into industrial applications.
- Through the provision of JST patents to an IP fund and other means, aim to combine JST's R&D support faculties with the INCJ's investment capabilities to achieve commercialization of specific projects.



Japan Venture Research Co., Ltd.

- Concluded a partnership agreement aimed at firmly establishing a start-up ecosystem in Japan.
- The partnership encourages information disclosure to start-up companies and promotes the upgrading and popularization of a database of start-ups in Japan. Furthermore, by promoting information disclosure, the partnership aims to globalize Japan's venture community and support the global growth of its start-up companies.



RIKEN

- Concluded a partnership agreement aimed at driving open innovation.
- Creating new industry by combining RIKEN R&D abilities and INCJ financial and commercialization capabilities.



Collaborations with external organizations

New Energy and Industrial Technology Development Organization

- Signed a mutual cooperation agreement with the aim of creating new industries.
- Aim to implement and achieve specific business projects by using the results of NEDO's information regarding the details of R&D projects and INCJ's information and advice regarding technology needs based on international market trends.



Advanced Telecommunications Research Institute International

- Signed a mutual cooperation agreement toward the promotion of open innovation in the fields of neuroinformatics, life support robots, and radio communications.
- Aim to create new industries through combining ATR's research development capabilities and INCJ's financial and business support capabilities.



National Institute for Materials Science

- Conclusion of a memorandum of understanding (MOU) on cooperation on industrial development.
- Promote licensing and commercialization through a partnership combining the research and development of NIMS with INCJ's technology commercialization and investment capabilities.



Japan Agency for Medical Research and Development

- Signed a cooperation agreement with the aim of commercialization of the result of research development capabilities in the medical field.
- Aim to implement and achieve specific business projects by using the support by AMED and INCJ's investment capabilities.



【Actual Investments】

- By the end of December 2016, 85 venture investment, 25 business consolidation / overseas investment, 110 investments totaled. Supporting 161 venture companies through LP investment.
 - The total amount of investment is 975.7 billion yen, the actual investment amount is 709.9 billion yen. About 20% of venture investment among them, investment of business restructuring and overseas investment are about 80%. Priming effect is 459.9 billion yen.
- * Change in priming effect (234.7 billion yen (H26 / 3) → 353.1 billion yen (H26 / 9) → 422.8 billion yen (H27 / 3) → 431.6 billion yen (H27 / 9) → 444.7 billion yen (H28 / 3) → ¥ 459.9 billion (H28 / 9))

【Actual Exits】

- 25 exits were held by the end of December 2016
- Multiple of 25 exits are 1.6 times (Existing investment amount of 159.4 billion yen, collected amount of 260.6 billion yen)

【Investment profit / loss etc.】

- As of the end of March 2016, a total of 1,388.8 billion yen was recorded, including the market valuation gain of 696.3 billion yen.
- The estimated amount of collected amount is 1,355.4 billion yen as of the end of March 2016 against the actual investment amount of 647.5 billion yen. Multiple of Exit is 2.1 times.
- At the beginning of the establishment, the net asset value per share of 50,000 yen was about 122,000 yen at the end of 2015, about 2.4 times.