

## **INCJ to invest in Optical Comb, Inc.**

### **The world's first company is using optical comb technique for inline measurement in industry**

- Development of the world's first inline non-contact 3D profilometer using the optical comb technique in an industrial setting
- Contribute to the development and production of next-generation automotive engines by accelerating engine volume measurement
- Contribute to the creation of smart factories and enable high-precision, high-speed automated visual inspection

**Tokyo, April 16, 2018** – Innovation Network Corporation of Japan (INCJ) announced today its decision to invest in Optical Comb, Inc., (Optical Comb) a company which develops and markets high-precision, non-contact measuring instruments applying the optical comb technique. INCJ has decided to invest a maximum of JPY400 million in growth capital to promote new business development. Optical Comb raised JPY1.29 billion Series B founding through new investments by Innovations and Future Creation Inc., Chibagin Capital Co., Ltd., Hiroshima Venture Capital Co., Ltd., The Iyo Bank Capital, Co., Ltd., and Yamanashi Chugin Management Consulting Co., Ltd., as well as additional investments by Nissay Capital Co., Ltd. and Mitsui Sumitomo Insurance Venture Capital Co., Ltd.

Optical Comb was established in 2002 as a venture company originating from the Tokyo Institute of Technology. In 2008, Optical Comb applied the optical comb technique to measurement instruments and by 2011 developed its first profilometer model. In April 2016, Optical Comb succeeded in developing the world's first inline non-contact 3D profilometer applying the optical comb technique and has rolling out this technology to automotive manufacturers across Japan.

An optical comb is a unique laser light source in which the light components are arranged at a frequency of regular intervals, the appearance of which is similar to a comb. The optical comb has received significant interest since the 1990s and received the Nobel Prize in Physics in 2005. In 2009, the optical comb length was adopted as the national standard in Japan. Optical Comb has been working on the industrial application of the optical comb technique since its foundation in the 2000s. Currently, Optical Comb's primary product is its 3D profilometer, the optical comb scanner which has a range of 78m with an accuracy of

5µm, and it is also developing a multipoint vibrometer, which can measure complex vibrations across many points at the same time. In particular, Optical Comb's products are highly competitive in the inline inspection market.

The non-contact, 3D profilometer can scan the entire surface of objects, including the shape, and reproduce 3D point data through advanced numerical processing. Equipped with automatic detection software, the profilometer can automatically determine defects against quality standards – for this reason, many companies using the software have praised the measurement instrument for its high precision and total inspection capabilities.

INCJ hopes to strengthen Japan's industrial competitiveness by introducing Optical Comb's products, which will significantly improve quality control levels in the manufacturing industry and lead to the optimization of personnel. For this reason, INCJ has decided to invest in growth capital to promote Optical Comb's business development. Optical Comb will use this round of funding to accelerate software development and plans to build a new business model which in the future will integrate data from already installed local software and cloud services for AI to conduct automatic inspection.

#### **About Optical Comb, Inc.**

Established:	April 2002
Headquarters:	Chiyoda-ku, Tokyo
President:	Hiroshi Fukuzawa
Business Outline:	Smart factory business with the development and sales of high-precision, non-contact measuring instruments with industrial application of the optical comb technique
Features:	University-originated hardware venture company, which is now also working on industrial machinery and software development in order to develop its business as a solution vendor and create a smart factory. Objective to contribute to the development of various manufacturing industries based on the achievements at automotive manufacture.
URL:	<a href="http://www.optocomb.com/eng/">http://www.optocomb.com/eng/</a>

## **About Innovation Network Corporation of Japan (INCJ)**

INCJ was established in July 2009 as a public-private investment company that provides financial, technological and management support for next-generation businesses. INCJ specifically supports those projects that combine technologies and varied expertise across industries and materialize open innovation. INCJ has the capacity to invest up to JPY2 trillion (approx. US\$20 billion).

INCJ's management team is drawn from the private sector with diverse experience in investment, technologies and management. Through its Innovation Network Committee, INCJ assesses investment opportunities that contribute to industrial innovation in Japan in line with criteria set by the government.

Press contacts:

**Optical Comb, Inc.**

Tel. (03)-6380-9807 <http://www.optocomb.com/eng/>

**Innovation Network Corporation of Japan**

Corporate Planning Group, Communications, Irie, Sakai

Tel. (03) 5218-7202 URL : <http://www.incj.co.jp/>

## Appendix

### Overview of new investment decision

#### **Target: Optical Comb, Inc.**

**Established:** April 2002 (Tokyo Institute of Technology Venture No.12)

**Representative:** Hiroshi Fukuzawa

**Headquarters:** Chiyoda-ku, Tokyo

**Business Outline:** Development and sales of optical comb generators, its applications and related equipment

#### **Overview of investment**

**Authorized Investment:** JPY400 million maximum

**Amount Invested:** JPY400 million

**Shareholding Ratio:** Not disclosed

**Investment Structure Outline:** Appendix

#### **Significance of investment**

##### **Addressing social need:**

- Improve the quality control level in the manufacturing industry by introducing inspection equipment with high precision and speed.
- Replacing the component which was previously manually inspected with inspection equipment, will be a solution to issues in Japan such as the decreased labor force and skilled labor.

##### **Growth potential:**

- Add value in the production process including through the expansion and acceleration of quality inspection in the manufacturing industry.
- Starting with the automotive industry, Optical Comb plans to expand into aviation, electronic components, semiconductor industries and additionally into space equipment and medical equipment industries in the future.

##### **Innovation:**

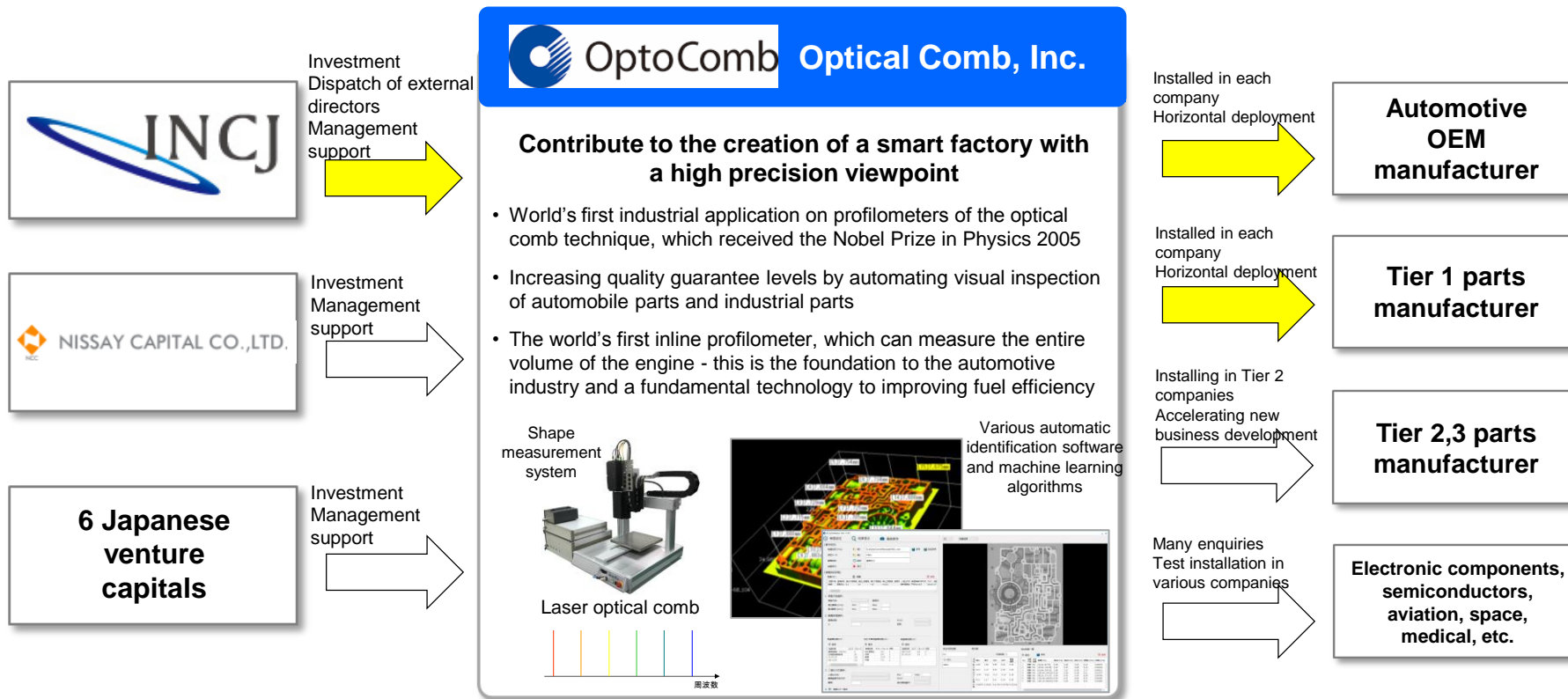
- Optical comb technology can be used for inspection of products with shapes that could not be measured with traditional non-contact sensors.
- In the future there is the possibility that this inspection technology developed in Japan will expand on a global level in a wide range of industries

**Target:** Optical Comb, Inc.

**Business Outline:** Smart factory business with the development and sales of high precision, non-contact measuring instruments with industrial application of the optical comb technique

**Total Investment:** JPY1.29 billion (total investment including co-investors, of which INCJ will investment a maximum of JPY400 million)

**Date of Announcement:** April 16, 2018



- Improve the quality control levels in the manufacturing industry by introducing high precision and high speed inspection equipment.
- Optical comb technology can measure shapes that were previously impossible to measure by existing non-contact sensors
- Contribute to the creation of a smart factory and realize machine learning by acquiring an exhaustive amount of data