INCJ to invest in Refinverse

Company has developed commercial model for recycling tile carpet

Tokyo, January 14, 2014–Innovation Network Corporation of Japan ("INCJ") announced today its decision to invest in Refinverse, Inc. ("Refinverse"), a company engaged in the recycling of vinyl chloride resin from carpet tiles discarded from office building construction sites and by intermediary processing companies. The investment will provide Refinverse with a maximum of ¥500 million in capital required to accelerate business expansion.

Carpet tiles are composed of an intricate three-layer structure that has made them technically challenging to recycle: a backing layer made from polyvinyl chloride compound; a pile layer composed of polyamide resin and other fibers; and a ground fabric that maintains the fibrous section. Furthermore, vinyl chloride resin emits hazardous dioxins when incinerated, and the commercial inviability of recycling has meant that the majority of used carpet tiles are discarded by dumping.

To overcome this problem, Refinverse has developed a new technology to precisely shave off and separate only the backing layer and recover it in the form of a fine powder. Furthermore, through business partnerships with manufacturers, Refinverse has achieved a commercial polyvinyl chloride compound-recycling model through which the separated and recovered polymer compound can be reused in the backing layer of carpet tiles.

While the domestic Japanese market for tile carpet has plateaued, the market for Eco mark-certified tile carpet using the recycled material provided by Refinverse is expanding annually. Moreover, the market continues to grow strongly overseas, particularly in developing markets, and the latent demand for recycled materials is especially high.

INCJ will provide Refinverse with the funding required to expand its production base, develop new recycling technology for nylon resin, and prepare for future overseas expansion, while also providing managerial support such as dispatching external directors and strengthening Refinverse's business-development framework. Through these initiatives, INCJ will support Refinverse's creation of a new recycling value chain and a model of a new materials industry that can expand globally.

About Refinverse

Established: December 2003

Business outline: Recycling of vinyl chloride resin from used carpet tiles

Location of headquarters: 4-10 Nihonbashi Hisamatsucho, Chuo-ku, Tokyo, Japan

CEO: Akira Ochi

Website: http://www.r-inverse.com/

About Innovation Network Corporation of Japan (INCJ)

INCJ was established in July 2009 as a public-private partnership 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 ¥2 trillion (approx US$25 billion).

To date, INCJ has invested approximately ¥680 billion in a total of 55 projects and is currently focused on a broad range of areas from green energy, electronics, IT and biotechnology to infrastructure-related sectors such as water supply. INCJ maintains a hands-on approach to investment, engaging in the business development of cutting-edge core technologies through intellectual property funds, expansion of venture companies and aggressive overseas development through initiatives such as restructuring and mergers of tech businesses and acquisitions of foreign companies.

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Target: Refinverse, Inc.
Outline: Recycling of used tile-carpet material using proprietary technology
              (manufacture and sales of recycled resin raw materials)
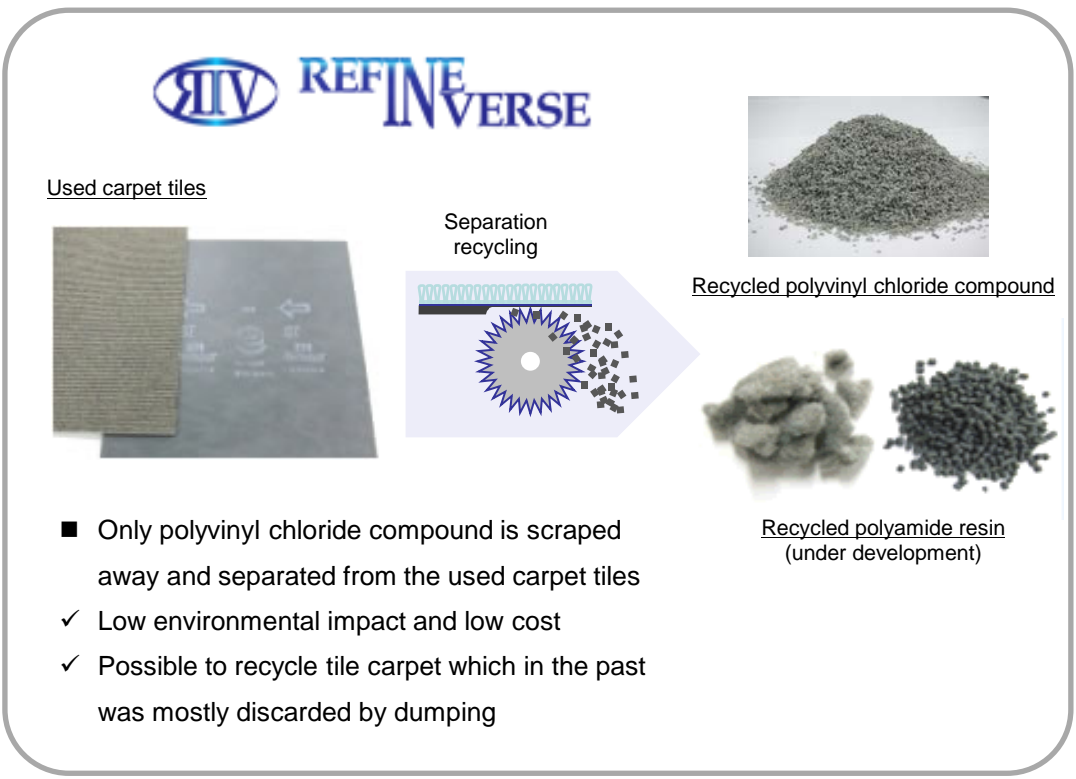Investment: Up to ¥500 million

Investment
Management support

Investment

Mitsui Sumitomo Insurance Venture Capital
Nihon Venture Capital
Shinsei Bank
Kyushu Venture Capital
Other venture capital firms

Investment

Used carpet tiles

Separation
recycling

Recycled polyvinyl chloride compound

Recycled polyamide resin
(under development)

■ Only polyvinyl chloride compound is scraped
   away and separated from the used carpet tiles
✓ Low environmental impact and low cost
✓ Possible to recycle tile carpet which in the past
   was mostly discarded by dumping

Through this investment, INCJ is supporting the creation of new value chain in the recycling field
and the development a globally deployable business model