A pilot textile recycling plant will open in Singapore as early as 2024, as part of an overall investment into Singaporean textile recycling capacities.

Part of these investments include a new textile recycling research centre that opened yesterday. The new research centre and eventual recycling plant – which would produce new fabrics and materials from used fabrics, such as old clothes – mark Singapore’s first attempt at recycling used textiles, beyond reusing them.

Research from the centre will be piloted at the nation’s first textile recycling plant, which will recycle 8,760 tonnes of fabric waste per year at full capacity. This is equivalent to the weight of 58.4 million T-shirts.

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The new research centre in Nanyang Technological University (NTU) comes from a $6 million investment from Royal Golden Eagle (RGE), a global resources-based manufacturing group and the world’s largest producer of viscose.

RGE executive director Perry Lim said there is an urgent need to begin recycling textile waste in Singapore, as he said the Republic produced 189,000 tonnes of textile waste last year, from sources like discarded clothing, linens and bags.

Mr Lim said: “Currently, only 4 per cent of textiles are being (re)purposed and are either given to lower-income families or exported to other countries.”

Furthermore, after the clothing has completely deteriorated in quality, it is ultimately thrown away and wasted.

Dr Jaroslav Stavik, head of RGE R&D, will search for ways to strip dye from fabrics without using toxic chemicals like bleach, among others, to make the fabric recycling process less environmentally harmful and cheaper.

Although there are presently textile recycling efforts in the United States, Europe and Asia, Prof Hu said most of these centres focused on repurposing the fabrics with some slight chemical treatment.

He said many of these efforts are by start-ups which can lack expertise and scale, adding: “This collaboration between NTU and RGE is really the first of its kind.”

(From left) Associate Professor Dalton Tay, from NTU’s School of Materials Science and Engineering, explaining the process of dye removal; Professor Hu Xiao (partially hidden), who co-leads the new RGE-NTU Sustainable Textile Research Centre; Minister for Sustainability and the Environment Grace Fu; Royal Golden Eagle managing director Anderson Tanoto; Professor Lam Khin Yong, NTU senior vice-president of research; and Royal Golden Eagle executive director Perry Lim at the new research centre.

ST PHOTO: KEVIN LIM

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