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ITE Industry Partnership Forum

## **ITE's Innovations Help SMEs Solve Issues and Gaps in Market**

Faced with an increasing demand for rice vermicelli, or *bee hoon*, Mr Desmond Goh, Director of People Bee Hoon, was keen to automate the laborious process of *bee hoon* folding. This process required his workers to fold the *bee hoon* for packing while it is drying. Despite his workers staying till 9 pm every night, the company was unable to fulfil bigger and more orders. Mr Goh's problems were compounded by the rejections he faced from private engineering firms. They told him it was either impossible or too challenging to automate the process.

2 Fortunately, ITE's Technology Development Centre took up the challenge. After nine months, they had a fully-functional machine. With the *Bee Hoon* Folding Machine, Mr Goh's productivity increased tremendously. He was able to reduce the number of workers folding *bee hoon* from 10 to two. The other workers were then deployed to take on other tasks. Best of all, Mr Goh's workers could end work on time at 5 pm, and still fulfil bigger orders more quickly.

### **Helping Industry Increase Innovation, Improve Productivity**

3 The *Bee Hoon* Folding Machine is just one of many projects that will be showcased at the Industry Partnership Forum on **4 October 2017** at the Tay Eng Soon Convention Centre at ITE Headquarters. The Forum, first started in 2014, is a platform where ITE engages the industry, providing them a comprehensive view of ITE's capabilities, collaboration opportunities and manpower development schemes. The Guest-of-Honour at this year's instalment is **Mrs Josephine Teo, Minister in the Prime Minister's Office and Second Minister for Manpower and Home Affairs.**



4 Another tasty project on showcase is the Low Sugar/No Sugar Added Gelato that ITE's Applied Food Science has developed for Papitto LLP. This invention is especially timely with the war on diabetes being announced at the recent National Day Rally.

5 Using natural ingredients such as dates, monk fruit and stevia leaf extracts, the ITE team was able to develop a low sugar/no sugar added formulation that retained the taste and creamy texture of traditional gelato. A total of four flavours have been developed and they are now available for sale on their business-to-business online portal.

6 Said Papitto LLP's Director, Mr Michael Koh, of his experience, "I heard from an industry friend that ITE is open to collaborations with companies, so I approached ITE, hoping to leverage on their expertise. We had some initial discussions, and I was assured and confident of the staff's capabilities. It was a very fruitful experience for us, and I would definitely recommend companies to consider working together with ITE on collaborative projects."

### **Smart Technology for Businesses**

7 Besides food, ITE has also worked on a Smart Shelf Solution for Unigons Singapore. This system not only automatically tracks inventory, it can also track and analyse customer buying pattern and advise optimal shelf location for specific items using an accompanying software.

8 This Proof-of-Concept system has been demonstrated at a Hong Kong retail exhibition and garnered positive reviews and new business opportunities for Unigons



Singapore. A synopsis of the other projects showcased at the Forum can be found in the Annex.

9 For more information and arrangement for media interviews, please contact:

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#### **About ITE**

The Institute of Technical Education (ITE) is a post-secondary education institution established in **1992** under the Ministry of Education. As a principal provider of career and technical education, and a key developer of national occupational skills certification and standards, ITE's **Mission** is to create **opportunities** for students and adult learners to acquire skills, knowledge and values for employability and lifelong learning. ITE's **Vision** is to be A **Trailblazer** in Career and Technical Education. Our **Values** are **Integrity, Teamwork, Excellence** and **Care**. ITE comprises the ITE Headquarters and three ITE Colleges - College Central, College East and College West.

### Synopsis of Projects on Showcase

**Minister will be visiting the booths highlighted below**

S/N	Project Title	Description
1	CPR & AED Virtual Reality Simulation	This project is an immersive 3D interactive learning tool designed to teach CPR & AED life-saving procedures in a virtual environment. Can be used to train students, volunteers and also serve as a refresher training aid.
2	Fall Detection System	This alert system allows seniors, the disabled or patients recovering alone at home to call for help without the need for a response centre. It is also able to detect falls and call for help automatically when the patient is unable to press the button. The system has been used in two nursing homes and has been running smoothly for the past 2 years.
3	Smoke-analyser to Track & Expedite Actions and Decision to Eliminate Smoking (STEADeS)	STEADeS is a portable, low-cost smoke analyser that detects the amount of exhaled carbon monoxide of a smoker. Traditional smoke analysers are expensive and not readily available. STEADeS can be used by family, friends and healthcare providers to support smoking cessation efforts.
4	Hands Free Electrolarynx	The conventional Electrolarynx requires users to use their hands to operate it. The hands-free version allows users to wear it as a neck band. This one-piece, integrated system is battery-operated and uses an innovative voice actuator.
5	Open Loop Kinetic Chain Prototype	Commercial rehabilitation machines can only perform one non-weight bearing exercise but physiotherapists recommend knee-replacement patients to perform five. The OKC prototype can help patients perform all five exercises. This will help patients regain mobility after surgery and reduce rehabilitation time.

6	Low Sugar/No Added Sugar Gelato	<p>In line with the national fight against diabetes, ITE worked with a company to develop a low-sugar/no sugar added gelato. Four flavours have been developed and launched in the market so far.</p>
7	Pastry Glazing Machine	<p>Glazing machines currently available are not able to produce the desired even spread and glossy effect on pastries. Hand-glazing, on the other hand, is labour intensive.</p> <p>This Pastry Glazing Machine can be configured to achieve different levels of gloss for different types of pastries. It is able to handle glazes that are sticky or viscous so glazing is precise and even. The number of workers required to glaze pastries can be cut down to just one.</p>
8	Bee Hoon Folding Machine	<p>The company that commissioned this project was unable to fulfil bigger orders as the bee hoon production process is very labour intensive. This is despite having their workers work overtime. Drying and folding the bee hoon to form the desired shape before packaging is a main bottleneck.</p> <p>With this customised Bee Hoon Folding Machine, the company is able to improve productivity by reducing the number of workers required to fold bee hoon from 10 to only two! The workers could now be deployed to take on other tasks and still end work at 5pm while the company is now able to take on bigger orders and fulfil orders more quickly.</p>
9	Smart Shelf Solution	<p>The Smart Shelf Solution helps businesses to automatically keep track of inventory. Real-time tracking allows retailers to monitor which items are more popular so they can stock fast-moving items more quickly.</p> <p>The Solution will also help retailers understand</p>



		their customers' buying pattern, how they will buy more, and determine the best positions on shelves. It will also remind retailers to position their products at the exact location where it sells most.
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