Agency for Science, Technology and Research
SINGAPORE
CREATING AN INNOVATION ECONOMY

MTI MINISTRY OF TRADE AND INDUSTRY SINGAPORE

For immediate release

MEDIA RELEASE

PRESTO DRYCLEANERS TAPS ON RFID TECHNOLOGY FOR PRODUCTIVITY GAINS

Mr S Iswaran, Minister (Prime Minister's Office), Second Minister for Home Affairs and Trade & Industry, visited local dry-cleaning and laundry specialist, Presto Drycleaners to witness how the company has adopted RFID technology to improve its processes and business operations.

RFID technology to cut down manual and time-consuming work processes

2 Presto DryCleaners is one of the fastest growing dry-cleaning & laundry specialists in Singapore. Its core business is to provide personalised dry-cleaning and laundry services to the public and institutions.

3 Earlier this year, the company adopted the Dry Cleaning Retail Management System, an RFID-based system which automatically tracks garments, and improves laundry sorting for delivery. Prior to this, the company had to contend with manual tracking and sorting of the large laundy output on a daily basis.

4 As a result of the technology adoption, time-consuming tasks such as tracking and sorting laundry became less so for the employees. For instance, employees would have taken between three and five days to find misplaced garments before the RFID tags were put in place. With the new tracking capability, overall search time is reduced by as much as 75 per cent. More information on the technology that Presto adopted is at Annex A.

5 Mr Chan Chek Yeow, Chief Executive Officer of Presto Drycleaners said, "With consultation with A*STAR and the new RFID system, our business operations have improved tremendously. In addition, support from agencies such as e2i and SPRING Singapore have made this technology more accessible for SMEs like us. We have reduced time wastage and improved efficiency among our staff, which means we can provide better quality customer service and work on business expansion plans. The

system is also easy for our mature workers to use, which is important as they make up about 35 per cent of our staff."

6 Minister S Iswaran said, "Presto Drycleaners is an excellent example of a local Small-and-Medium Enterprise (SME) that is using technology to improve its productivity. We hope more SMEs will harness technology to upgrade their capabilities to help them deliver better business outcomes."

Developing RFID Technology for Broader Adoption

7 "To encourage more companies to come onboard, I am pleased to announce that the Government will adapt the RFID-based garment counting system into a ready-to-go (RTG) package under the Technology Adoption Programme (TAP) for use by hotels, restaurants and fitness clubs. This will enable more SMEs to benefit from the available technology. For funding support, they can tap on Government schemes such as the Capability Development Grant (CDG), administered by SPRING Singapore,"", Minister Iswaran added.

8 Dr Tan Geok Leng, Executive Director of the Science and Engineering Research Council, A*STAR, said, "A*STAR's multi-prong engagement strategy with SMEs has helped many companies develop new products and improve processes. A*STAR will continue to work closely with industry to help local SMEs access technology for greater productivity."

Enclosed:

Annex A - List of technologies adopted by Presto DryCleaners

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About the Agency for Science, Technology and Research (A*STAR)
The Agency for Science, Technology and Research (A*STAR) is Singapore's lead public sector agency that fosters world-class scientific research and talent to drive

economic growth and transform Singapore into a vibrant knowledge-based and innovation driven economy.

In line with its mission-oriented mandate, A*STAR spearheads research and development in fields that are essential to growing Singapore's manufacturing sector and catalysing new growth industries. A*STAR supports these economic clusters by providing intellectual, human and industrial capital to its partners in industry.

A*STAR oversees 18 biomedical sciences and physical sciences and engineering research entities, located in Biopolis and Fusionopolis, as well as their vicinity. These two R&D hubs house a bustling and diverse community of local and international research scientists and engineers from A*STAR's research entities as well as a growing number of corporate laboratories.

For more information on A*STAR, please visit www.a-star.edu.sg.

About Presto Drycleaners

Presto Drycleaners was established in 1992 and is one of the fastest growing dry-cleaning & laundry specialists in Singapore. Currently, Presto Drycleaners employs about 60 experienced staffs, operating in a 7000 sq ft Production Plant in Toa Payoh Industrial Park.

Presto Drycleaners' core business is to provide personalised dry-cleaning and laundry services to public and institutions. It also provides a wide range of services such as specialised care for leather & suede cleaning; stains removal; sewing/mending and alterations of garments to their customers' requirements, as well as on-site dismantling and re-installation of curtain and sofa covers for our customers.

About National Radio Frequency Identification (RFID) Innovation Platform

The Agency for Science, Technology and Research (A*STAR) has launched the National Radio Frequency Identification (RFID) Innovation Platform through the National RFID Centre (NRC) to position Singapore as an early adopter of RFID technologies. The platform was announced on 1 February 2008.

Supported by the Ministry of Trade and Industry (MTI), the platform encourages organisations in both the public and private sectors to conceptualise and pilot process innovation projects leading to greater cost efficiency, higher productivity and better service standards. A sum of $4.5 million has been set aside over four years as part of this platform to co-fund 30 RFID pilot projects.

The platform is expected to expand the RFID industry by growing existing and new home-grown RFID companies, as well as attracting Multinational Corporations to be based in Singapore. This move will also stimulate further research and development in advanced RFID technologies through collaboration between industry, A*STAR and local

universities. Stronger interests in the RFID technology will stimulate the growth engines across different industries.

ANNEX A

LIST OF TECHNOLOGIES ADOPTED BY PRESTO DRYCLEANERS

1. Laundry RFID Labels

Laundry RFID labels are attached to the garments at retail outlets. The RFID labels has a read distance of up to 5 metres. The labels are specially designed to be waterproof, chemical resistant and heat resistant. This is required as the labels will be attached to the garment throughout the entire laundry operation where dry-cleaning chemicals and high heat are applied. These labels can be reused up to 20 wash cycles. A barcode that matches the RFID's ID is also printed on the label.

Figure 1.1: Laundry RFID Labels

2. Check-In Station

A Check-In station consists of a UHF EPC GEN 2 fixed reader and a Windows terminal. The station is used when there is transfer of garments, for example during delivery from the outlets to the production plant. The Check-In station will check that the number of garments scanned matches the expected number of garments.

Otherwise, exceptions will be raised and the missing garments will be prompted to the user. After checked in, the status of the garments will be updated. Check-In stations are linked wirelessly up to the cloud based backend servers.

3. Work-In-Progress Stations

A Work-In-Progress station consists of a barcode scanner and an Android terminal. The equipments are installed at existing workstations, for example hand-wash station and ironing station. The station is used to display important garment information to the operator, as well as to track the status and location of the garment. At the same time, the identity of the operator is also captured to facilitate accountability and productivity measurement. Work-In-Progress stations are linked wirelessly up to the cloud based backend servers.

4. Laundry Conveyor Sorter

The Laundry Conveyor Sorter is a mechanical machinery that helps to sort cleaned garments before packing. Sorting is done based on outlet and customer. It consists of a barcode scanner and a Windows terminal.

At the Laundry Conveyor Sorter, an operator scans a piece of garment to be sorted. The garment is identified and the system will identify a slot on the conveyor for hanging. The system will automatically traverse the allocated slot to the operator for the garment to be hung. Once an entire order is fulfilled, the system prompts the operator to collect the garments in the order. After the collection, the garments are sent for packing.

Figure 1.2 Laundry Conveyor Sorter

5. HQ Production Plant Management System

The HQ Production Plant Management System is a software system installed at the Production Plant for the management's usage. It delivers visibility to the entire plant's operations, to assist management to identify bottlenecks, to provide the status of each piece of garment, both present and past and warns the management in the event of late deliveries. CRM features are also available to better manage customers.

Integrated with the POS systems, the system allows the management to view all current and past outstanding orders, look for individual laundry item, track orders, view the current state of each outlet, calculate sales revenue with different parameters such as by outlet, by timeslot, by house call operator, manage user access to POS, perform price adjustments, generate daily or monthly reports etc.

6. Cloud Based Backend Servers

The Cloud based backend servers consist of a suite of virtual servers that hosts business logic processors and databases. All data are stored and processed securely on the cloud. These ensure that the system is scalable, have high availability and redundancy built in. With Platform as a Service, the computing capability of the system can be increased without software changes or redeployment when needs arise in future. A high percentage of uptime is also assured. Multiple firewalls have been installed on different tiers of the servers to enforce security.