Summary

OPPORTUNITY	▪ Deploy RFID technology solution readily available to the industry in order to
	  ✓ ↓ Employee wait time to pick up uniforms
	  ✓ ↓ Man-hours used to distribute uniforms to employees; reallocate freed up employees
	  ✓ Systematically manage uniform inventory through better data collection

ACTION	▪ Identified and implemented an RFID Uniform Distribution System to automate process of uniform pick-up and drop-off.
	▪ Quick facts:
	  ✓ Roll-out period of 3 months
	  ✓ Estimated project cost of S$150,000

RESULTS	▪ 76-82% ↓ in uniform pick-up wait time to ~44 seconds (previously 3-4 minutes) ▪ 40% ↓ in manning required for uniform and linen room to 3 staff (from 5) ▪ Expansion in employee job scopes and redeployment to other value-added activities (upwards wage adjustment)

OPPORTUNITY — UNIFORM DISTRIBUTION AND PICK-UP: A LABOURIOUS PROCESS

Holiday Inn Singapore Atrium boasts a uniformed-staff strength of more than 200 employees – each with several sets of tailored uniforms specific to their measurements. This, together with additional uniforms for seasonal and part time staff, meant the hotel holds an inventory of more than 1,000 various sets of uniforms. The process for each of these employees to pick-up and drop-off their uniforms is heavily reliant on manpower, a common situation with many hotels.

Typically, before starting their shifts, employees pick up uniforms at the Uniform Room. They would tell the uniform attendant their uniform identification (ID) number; the attendant would then walk through the uniform racks, find the uniform and hand it to the employee. Uniform drop-off was similarly labour-intensive. Employees would come to the window and drop off their worn uniform; staff would manually register the dropped-off pieces, physically count, and sort the pieces before sending them to be laundered.

During peak hours, such as shift changes, employees could wait in line as long as 3 - 4 minutes before getting their uniforms. During lull times, uniform attendants still needed to be stationed at the window, just in case an employee arrived to retrieve or return uniforms.

There was scope to streamline this routine, manual process of picking-up and dropping-off of uniforms through automation, with opportunities for the hotel to maximise productivity and reduce manpower reliance.

The process of automating the uniform distribution process was started by Mimi Assik, the Executive Housekeeper, who identified an opportunity to implement an RFID Uniform Distribution System to maximise productivity and reduce manpower reliance at the uniform window. Also, it was opportune that the hotel's laundry vendor, Zero Spot Laundry Service, was able to provide and deploy the solution. The integration was seamless as the vendor was familiar with the hotel's system.

With the RFID system, an attendant is not required to be stationed at the window. An employee picking up uniform only needs to tap the staff pass on a reader, which will match the employee to the uniform. The conveyor belt then rotates to bring up the matched uniform to the transparent panel door on the right which slides open for the employee's hand to reach in.

Staff name and details appear

Reach through door opening to grab uniform

Tap card here

Photo 1: Panel door (on the right) opens with the matched uniform brought up

To return uniforms, employees just need to feed them through a chute with a RFID reader. This removes the need for a human staff to note and count the drop-offs.

The idea was endorsed by senior management and solution installation completed in 3 months.

Staff name and uniform registered

Photo 2: Uniform returned and registered by RFID reader

Key Steps

- **Hardware installation:** While renovating the uniform room to incorporate RFID readers, the hotel temporarily converted its staff recreation room and other nearby areas to house uniforms, allowing management to leverage existing resources and avoid additional costs.

- **Tagging the uniforms:** Concurrently, linen and housekeeping staff tagged more than 1,000 uniform pieces in inventory with an RFID chip each. These chips identify employees' ID umbers and uniform type (e.g. jacket or trousers).

- **Obtaining employee buy-in:** Full support from linen staff and room attendants was essential to the successful daily adoption of the system. The management articulated the system's benefits and long-term impact for the company (e.g. lowered business cost) and also resulting benefits for employees.

Key Success Factors

- **Sponsorship from senior management:** The Executive Housekeeper's on-the-ground experience ensured the solution would be feasible in addressing real needs, and her efforts were championed by a committee of senior and middle management to support employees, ensure implementation was on track, and oversee the success of the system as a whole. This multi-level commitment provided accountability and the project was executed quicker than expected (less than 3 months).

- **Enabling employees to take ownership:** Linen and room attendants were involved early in the implementation and taught how to use the system. They were also provided with new identification cards, encrypted with uniform ID numbers—the chance to take new ID photos was very well-received as a fun, social event. "Training and on-boarding of employees to the new system was seamless and effortless," said Mimi. "This was largely due to the fact that we had done our homework to get buy-in from the employees, so that they were motivated and ready to embrace the change."

> *"As a result of their participation, employees were motivated to excel at training and to successfully learn how to use the system."*
>
> *-- Mimi Assik*
> *Executive Housekeeper*
> *Holiday Inn Singapore Atrium*

Project period: The RFID Uniform Distribution System was **adopted and integrated over a 3month period**, including the installation of the RFID hardware and software, the overhaul of the distribution room, and the required training and employee communications.

Estimated cost: The adoption and implementation of the system cost the hotel S**$150,000**. This includes the purchase of the RFID chips, the necessary software and hardware (e.g. fitting readers into the chutes).

RESULTS	INCREASING EFFICIENCY FOR REDEPLOYMENT AND DATA ANALYSIS

- **Reduced manpower requirements:** Now, attendants do not need to be stationed at the window full-time, nor do they have to manually search the racks and count uniform that are dropped off, allowing the hotel to do more with drop-off—the number of staff deployed to the uniform and linen department can be reduced to 3, down from 5 (~40% reduction).

- **Broadened employee skillset and experience:** Employees who used to operate the window have less menial tasks and can now multi-skill to support other housekeeping roles (e.g. room cleaning). This widens job scopes and they benefit from a wage adjustment.

- **Reduced time wasted waiting:** For other employees, they were able to pick-up uniforms and get to work faster, reducing time wasted on waiting. With the RFID system, employees wait only an average of 44 seconds for their uniform – a significant drop from the previous wait time of up to 3 - 4 minutes (a 76-82% reduction).

- **Higher-level data analysis:** The new system enhanced inventory management through automated data collection, enabling analysis. For example, the hotel can now study how many uniform sets it actually needs to supply employees. This type of visibility and data analysis was not previously possible with the manual process.