



Improvement of Defects Reporting Process through Digitization

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Introduction

Every day, housekeepers will carry out routine inspections and record defects such as stained ceiling boards and mouldy toilets on the fix-it report form.

The defects will then be transcribed and entered into the CMMS (Computerized Maintenance Management System) via the computer terminals at Housekeeping Office. The supervisor will create work orders for all the defects and the system will transmit them to the facilities maintenance teams for rectification.

As the use of hardcopies is both cumbersome and time-consuming, there is a need to streamline the defects reporting process to become more efficient and at the same time provide seamless communication between Housekeeping and Facility Management departments.

Objectives

To improve the efficiency of defects reporting through:

- 1) Removal of hardcopy reporting;
- 2) Improve the time taken to report a defect and updating of status;
- 3) Allow easy retrieval of historical data; and
- 4) Allow auto report generation for analyses.

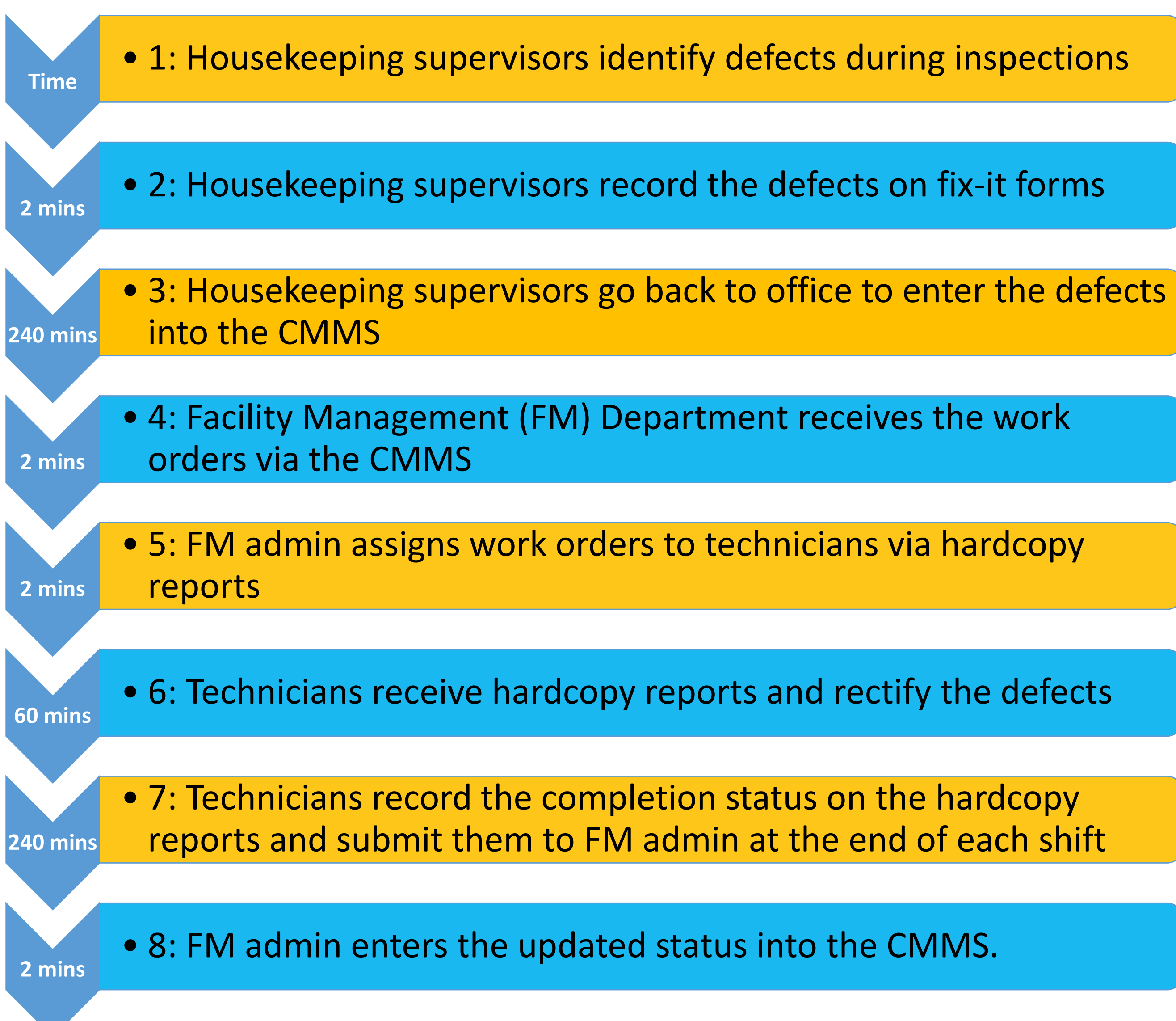
Methodology (DMAIC – 5 phases of Lean Six Sigma)

Define

Manual way of reporting is time consuming and inefficient. Thus the aim is to streamline the process.

Measure

Baseline: Number of steps and time taken to complete the current process versus the improved process. Current process takes **8 steps** and a total process time of **548 mins** to complete.



Analyse

Eliminate non-value added transcribing process and remove hardcopy defects recording process.

Improve

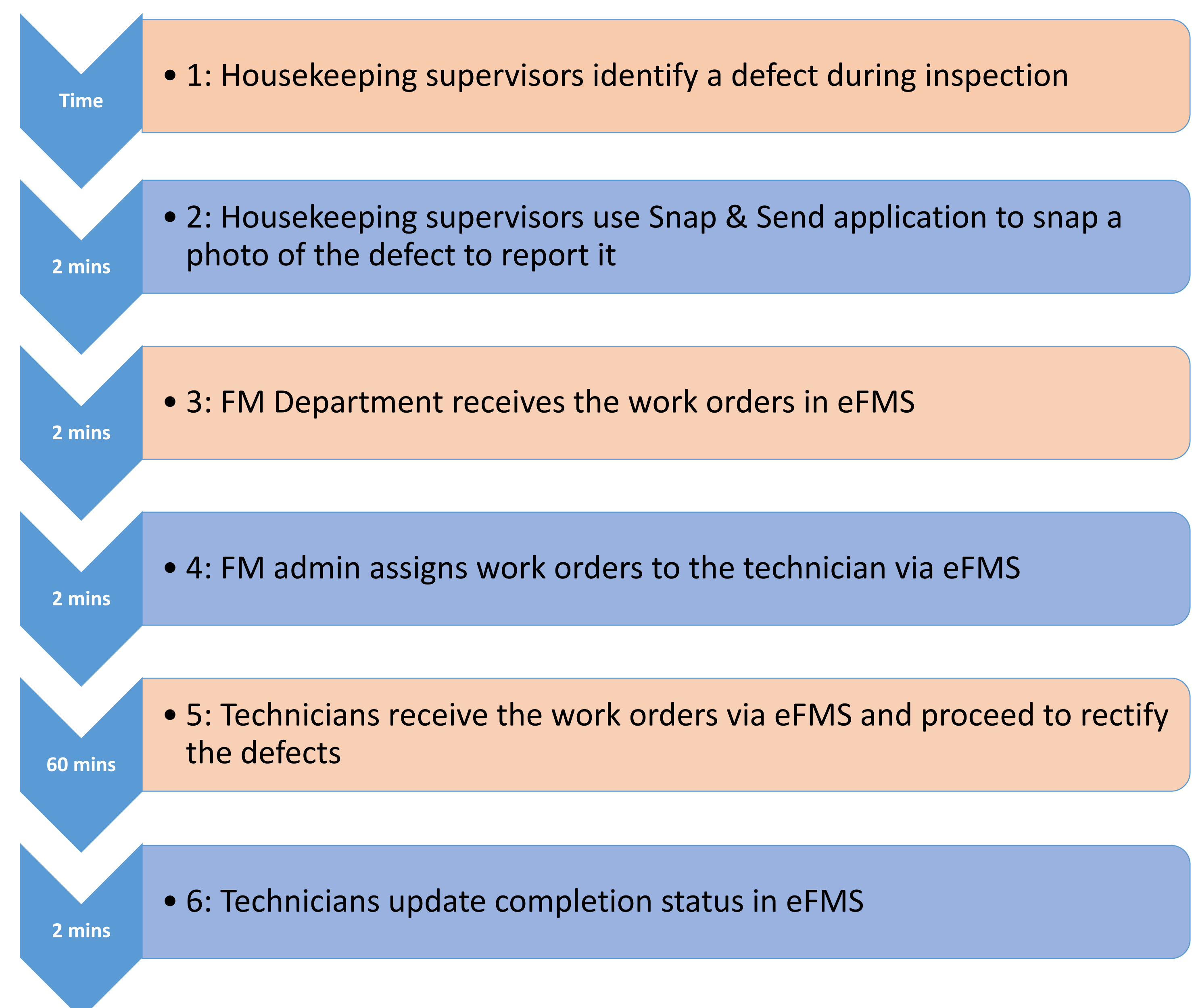
Implement a closed loop digitized platform known as **Snap & Send smartphone application - eFacility Management System (eFMS)** for defects reporting and updating of defects completion status.

Control

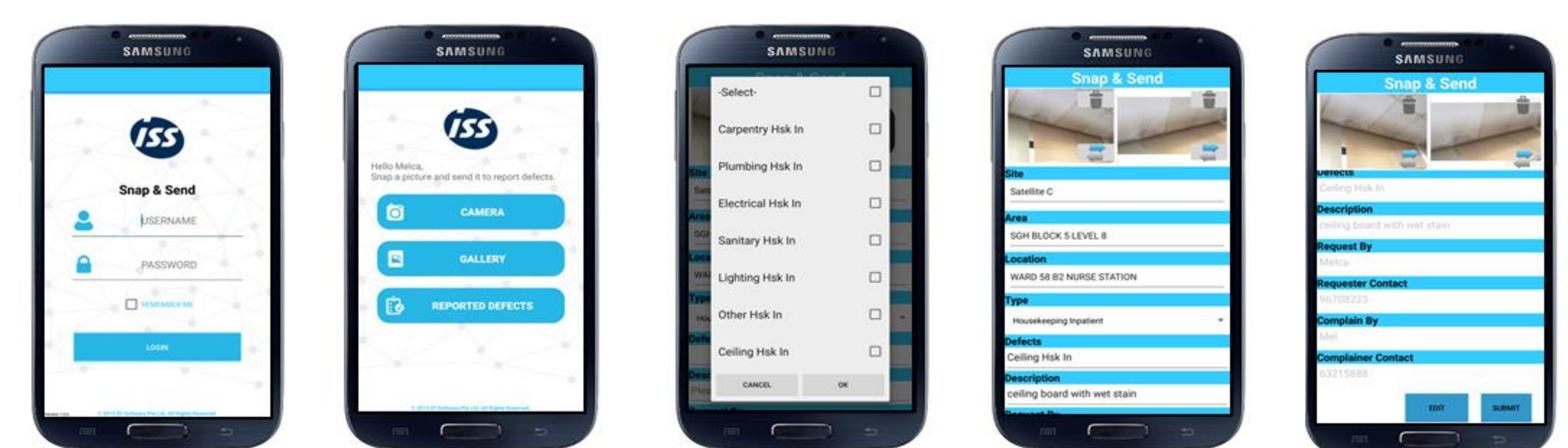
Provide new system training, monitor the new workflow and gather user and customer feedback.

Results

1) Reduction in time and number of steps taken from reporting a defect to status completion. The improved process takes **6 instead of 8 steps** and the total process time was reduced by **87% to 68 mins**.



Snap & Send Application User Interface



2) Paperless system allows easy retrieval of historical data and report generation

Case No	Task Date	Completed Date	Area	Location	Task Type	Fault List	Fix
2016063068	03/06/2016 11:43		Satellite A-SGH BLOCK 6 LEVEL 2	BLOCK 6 L2 ENDO RECEIPTN COUNTER	Housekeeping	Building Defect	Outside Endoscopic Singage wall
20160604011	04/06/2016 11:08		Satellite A-SGH BLOCK 8 BASEMENT 1	BLOCK 8 B1 TUNNEL	Housekeeping	Building Defect	Wall cracked at 0165 B1 outside t
20160605003	05/06/2016 8:39		Satellite A-SGH BLOCK 8 LEVEL 2	BLOCK 8 L2 RECEPTION 9	Housekeeping	Building Defect	Outside Left Lobby Wall Cracked
20160607020	07/06/2016 9:27		Satellite A-SGH BLOCK 7 LEVEL 1	BLOCK 7 L1 PORCH AREA	Housekeeping	Other	frosted film torn on slide door
20160607021	07/06/2016 9:31		Satellite A-SGH BLOCK 7 LEVEL 1	BLOCK 7 L1 CLINIC "C" MUSCULO SKELETAL CTR	Housekeeping	Building Defect	ceiling board drip above drinking
20160607022	07/06/2016 9:33		Satellite A-SGH BLOCK 7 LEVEL 1	BLOCK 7 L1	Housekeeping	Carpentry	swing door at counter is noisy
20160610001	10/06/2016 7:42		Satellite A-SGH BLOCK 6 BASEMENT 1	BLOCK 6 B1 TUNNEL	Housekeeping	Building Defect	wall is chip
20160610045	10/06/2016 15:40		Satellite A-SGH BLOCK 1 LEVEL 1	BLOCK 1 L1	Housekeeping	Building Defect	02C Vase 1 floor Spoiled
20160612009	12/06/2016 15:55		Satellite A-SGH BLOCK 6 LEVEL 1	BLOCK 6 L1	Housekeeping	Building Defect	public Female Toilet All cubicle d
20160612010	12/06/2016 15:59		Satellite A-SGH BLOCK 6 LEVEL 1	BLOCK 6 L1	Housekeeping	Carpentry	Female Public Toilet Mirror Edge
20160613023	13/06/2016 11:34		Satellite A-SGH BLOCK 4 LEVEL 1	BLOCK 4 L1 RETAIL PHARMACY	Housekeeping	Building Defect	Near dispenser area wall paint p
20160613037	13/06/2016 14:19		Satellite A-SGH BLOCK 4 LEVEL 1	BLOCK 4 L1 PUB MALE TOILET	Housekeeping	Building Defect	Air vent damage
20160615006	15/06/2016 9:13		Satellite A-SGH BLOCK 4 LEVEL 2	BLOCK 4 L2	Housekeeping	Building Defect	Opposite discharge Pharmacy w
20160617018	17/06/2016 9:11		Satellite A-SGH BLOCK 6 LEVEL 1	BLOCK 6 L1	Housekeeping	Other	skirting came loose below dust t
20160617019	17/06/2016 9:12		Satellite A-SGH BLOCK 6 LEVEL 1	BLOCK 6 L1	Housekeeping	Other	aircon grille faulty in Male toilet b
20160617021	17/06/2016 9:13		Satellite A-SGH BLOCK 4 LEVEL 1	BLOCK 4 L1 PUB FEMALE TOILET	Housekeeping	Building Defect	wall Body Stain inside the wall M
20160622029	22/06/2016 11:27		Satellite A-SGH BLOCK 6 LEVEL 2	BLOCK 6 L2 ACUPUNCTURE CTR	Housekeeping	Building Defect	78 Cleaner store ceiling crack
20160625007	25/06/2016 10:57		Satellite A-SGH BLOCK 7 LEVEL 3	BLOCK 7 L3	Housekeeping	Other	ceiling board torn at corner
20160625010	25/06/2016 13:48		Satellite A-SGH BLOCK 7 LEVEL 1	BLOCK 7 L1	Housekeeping	Building Defect	MSC Room 11 outside 3 Pillar P
20160625011	25/06/2016 13:50		Satellite A-SGH BLOCK 4 LEVEL 1	BLOCK 4 L1	Housekeeping	Building Defect	wall Body Cracked and Paint Pe
20160628041	28/06/2016 14:45		Satellite A-SGH BLOCK 4 LEVEL 2	BLOCK 4 L2	Housekeeping	Building Defect	wall guard came out
20160628001	28/06/2016 7:42		Satellite A-SGH BLOCK 4 LEVEL 1	BLOCK 4 L1	Housekeeping	Other	marble floor with hole in front of
20160629011	29/06/2016 9:46		Satellite A-SGH BLOCK 7 LEVEL 3	BLOCK 7 L3	Housekeeping	Building Defect	78 Cleaner store ceiling crack
20160712022	12/07/2016 10:56		Satellite A-SGH BLOCK 7 LEVEL 1	BLOCK 7 L1	Housekeeping	Building Defect	Wall Guard Rusty and Wall Paint
20160712041	12/07/2016 14:27		Satellite A-SGH BLOCK 7 LEVEL 1	BLOCK 7 L1	Housekeeping	Building Defect	MSC Room 16 wall Cracked
20160713009	13/07/2016 8:57		Satellite A-SGH BLOCK 4 BASEMENT 1	BLOCK 4 B1 DISPOSAL RM	Housekeeping	Other	water seepage from the wall
20160715006	15/07/2016 9:04		Satellite A-SGH BLOCK 4 LEVEL 1	BLOCK 4 L1	Housekeeping	Other	ceiling outside Hyperbaric centre
20160715007	15/07/2016 9:09		Satellite A-SGH BLOCK 4 LEVEL 1	BLOCK 4 L1	Housekeeping	Other	floor to paint
20160721001	21/07/2016 7:57		Satellite A-SGH BLOCK 7 BASEMENT 1	BLOCK 7 B1	Housekeeping	Carpentry/Other	the door can not close fully as it
20160721002	21/07/2016 8:06		Satellite A-SGH BLOCK 1 BASEMENT 1	BLK 7 B1 TUNNEL	Housekeeping	Building Defect	Fire emergency door top hose tu

3) Seamless integration between housekeeping and FM departments leading to better customer experience and satisfaction

"Supervisor Li Yan & Mr Kovan provided prompt action taken to ensure water flooded in room 23 & 25 resolved within an hour."

Feedback from Senior Nurse Manager from Ward 55B



Conclusion

Digitizing the defects reporting process has significantly reduced the time taken from defect reporting to completion. More importantly, the new process created operating synergies between housekeeping and FM departments, thus leading to work done more efficiently and effectively. Both customer and user satisfaction have also improved tremendously with the introduction of the Snap & Send smartphone application – eFacility Management System.