Project Title

Enhancing ePorter Functions to Improve User Experience

Project Lead and Members

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Organisation(s) Involved

Singapore General Hospital

Healthcare Family Group Involved in this Project

Allied Health

Applicable Specialty or Discipline

Support Services (Transportation Department)

Project Period

Start date: August 2021

Aims

- To reduce the time taken by Staff to fetch back and cancel cases by 30%.
- To shorten Porters' time in completing their round trip cases by 30%.
- To provide Controllers with 30% more quality time for delivery of services.

Background

See poster appended/ below

Methods

See poster appended/ below

Results

See poster appended/ below

Conclusion

See poster appended/ below

Project Category

Care & Process Redesign

Productivity, Manhour Saving

Quality Improvement, Job Effectiveness, Workflow Redesign

Keywords

Smartphone, ePorter Nursing Module and Mobile App

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# Enhancing ePorter Functions to Improve User Experience

1. Introduction

Everyday, the Transportation Department controllers handle an average of 2,400 central pool cases and manage two 24-hour hotlines which cater to hospital staff and porters.

Specifically, staff were required to call the extremely busy hotlines to request *(1) Fetch-Back* inpatients who had completed their procedures at the departments or clinics, *(2.1) Cancel* a submitted ePorter request due to a need to amend task details and *(2.2) Re-create* that cancelled task with updated details. Upon completing specimen or bed-transfer tasks, porters were also required to contact controller to activate *(3) Return Trip* to send back document (e.g., despatch book) or equipment (e.g., trolley-bed).

To improve the workflows and user experiences, the ePorter Nursing Module and Mobile App on issued smartphone (SP) were enhanced to empower the users to execute the functions fully by themselves, without the hassle of repeatedly trying to get through the engaged hotlines.

2. Aims

The objectives of the improvement project are:
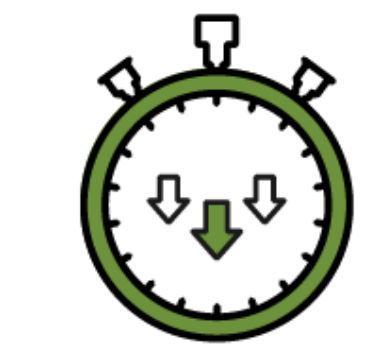
➢ To reduce the time taken by Staff to fetch-back and cancel cases by 30%.
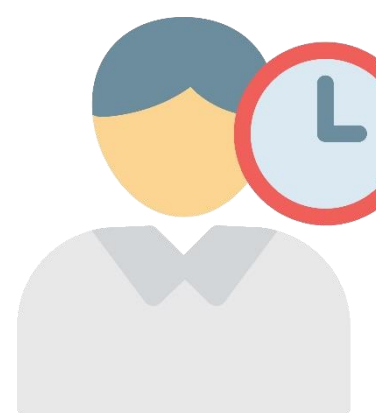
➢ To shorten Porters' time in completing their round-trip cases by 30%.

➢ To provide Controllers with 30% more quality time for delivery of services.
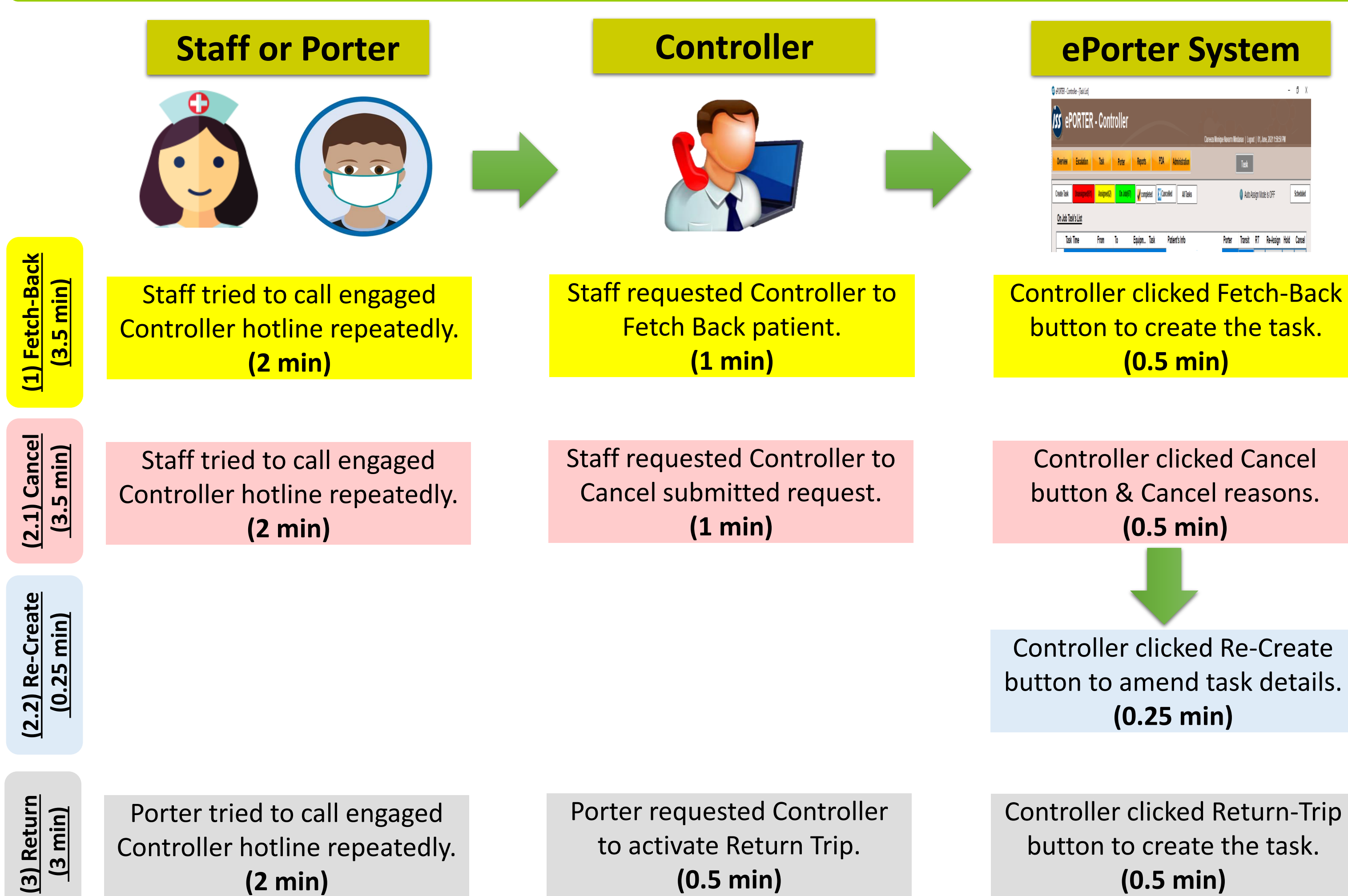
3. Methodology

The PDCA methodology was utilized to improve ePorter user experience. Representatives from the Transportation Department set up a project team to study the workflows, enhance ePorter Nursing Module & ePorter App on SP to streamline the workflows, execute the measures in August 2021 and review their effectiveness.
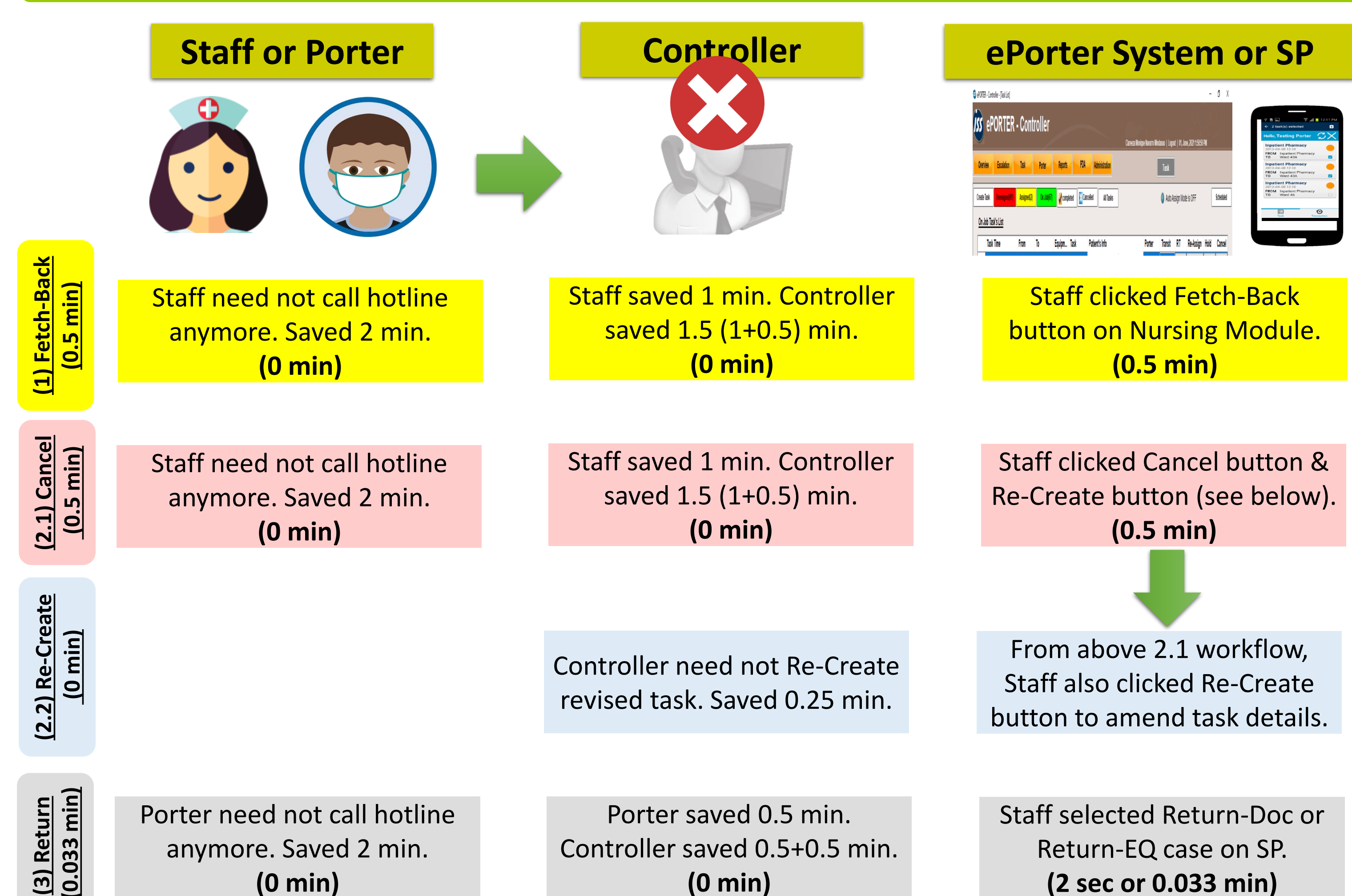
5. Results

After the enhancement, SGH staff could now handle fetch-back, cancel and re-create functionalities available in the ePorter system while Porters were empowered to return items directly.

Percentage of Time Saved under Different Processes
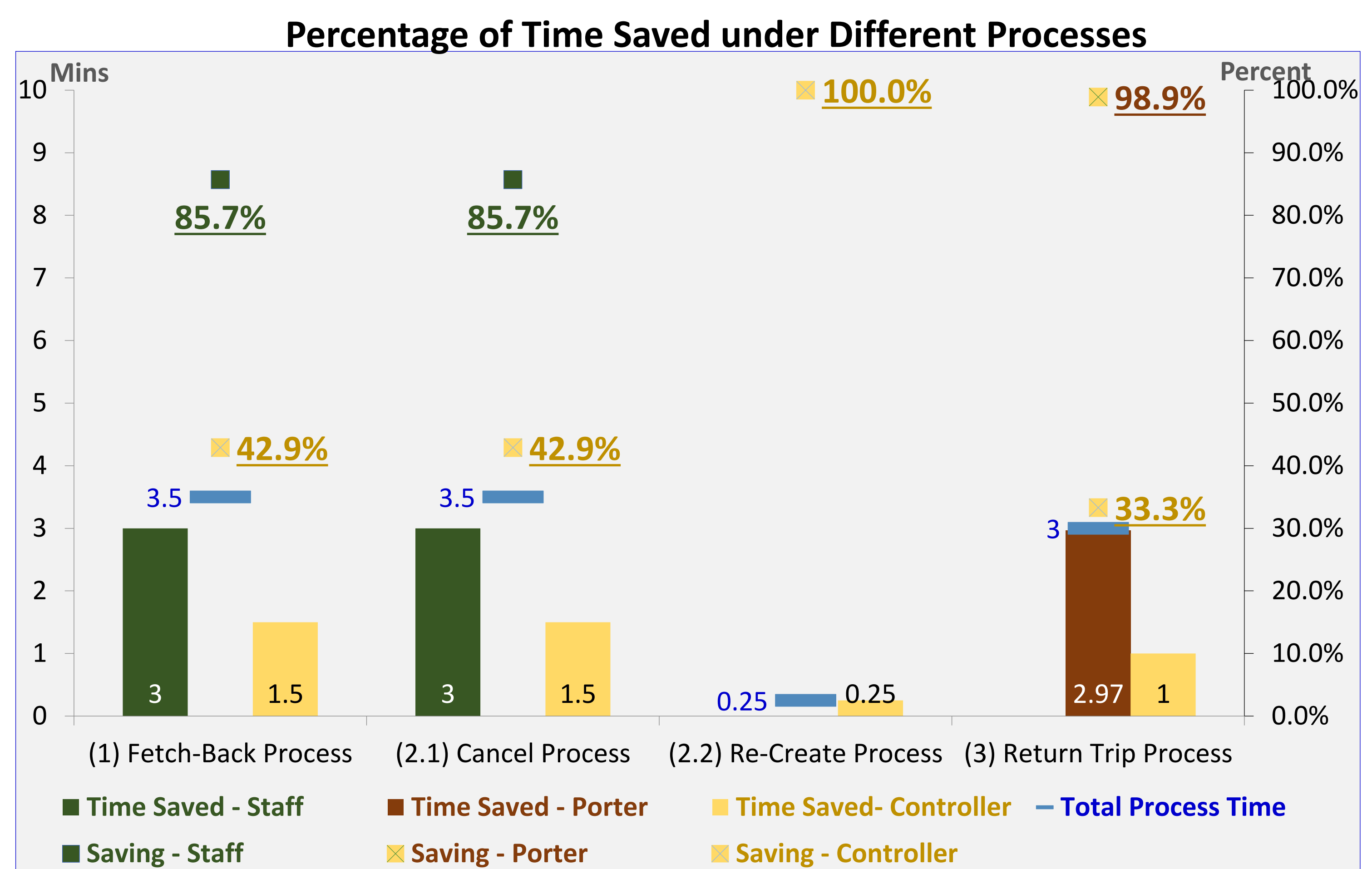
6. Conclusion

Enhanced Nursing Module and ePorter mobile app afforded SGH staff, controllers and porters more flexibility and time to provide respective services that would lead to greater user experience and patient satisfaction. For example, nurses would have more time to attend to their patients and deliver higher quality patient-centric care. A more conducive working environment for staff and porters is created as the frustrations of experiencing busy hotlines are also addressed.

Project is scalable to portering sector. Future research directions include identifying more interactional processes to be further streamlined by leveraging on ePorter system and enhancing ePorter system to deliver more value-added services.

4. Intervention

Old Workflow (includes Time Duration)

Staff or Porter	Controller	ePorter System

(1) Fetch-Back (3.5 min)
- Staff tried to call engaged Controller hotline repeatedly. **(2 min)**
- Staff requested Controller to Fetch Back patient. **(1 min)**
- Controller clicked Fetch-Back button to create the task. **(0.5 min)**

(2.1) Cancel (3.5 min)
- Staff tried to call engaged Controller hotline repeatedly. **(2 min)**
- Staff requested Controller to Cancel submitted request. **(1 min)**
- Controller clicked Cancel button & Cancel reasons. **(0.5 min)**

(2.2) Re-Create (0.25 min)
- Controller clicked Re-Create button to amend task details. **(0.25 min)**

(3) Return (3 min)
- Porter tried to call engaged Controller hotline repeatedly. **(2 min)**
- Porter requested Controller to activate Return Trip. **(0.5 min)**
- Controller clicked Return-Trip button to create the task. **(0.5 min)**

New Workflow (enhanced ePorter Nursing Module and Smartphone)

Staff or Porter	Controller	ePorter System or SP

(1) Fetch-Back (0.5 min)
- Staff need not call hotline anymore. Saved 2 min. **(0 min)**
- Staff saved 1 min. Controller saved 1.5 (1+0.5) min. **(0 min)**
- Staff clicked Fetch-Back button on Nursing Module. **(0.5 min)**

(2.1) Cancel (0.5 min)
- Staff need not call hotline anymore. Saved 2 min. **(0 min)**
- Staff saved 1 min. Controller saved 1.5 (1+0.5) min. **(0 min)**
- Staff clicked Cancel button & Re-Create button (see below). **(0.5 min)**

(2.2) Re-Create (0 min)
- Controller need not Re-Create revised task. Saved 0.25 min.
- From above 2.1 workflow, Staff also clicked Re-Create button to amend task details.

(3) Return (0.033 min)
- Porter need not call hotline anymore. Saved 2 min. **(0 min)**
- Porter saved 0.5 min. Controller saved 0.5+0.5 min. **(0 min)**
- Staff selected Return-Doc or Return-EQ case on SP. **(2 sec or 0.033 min)**