



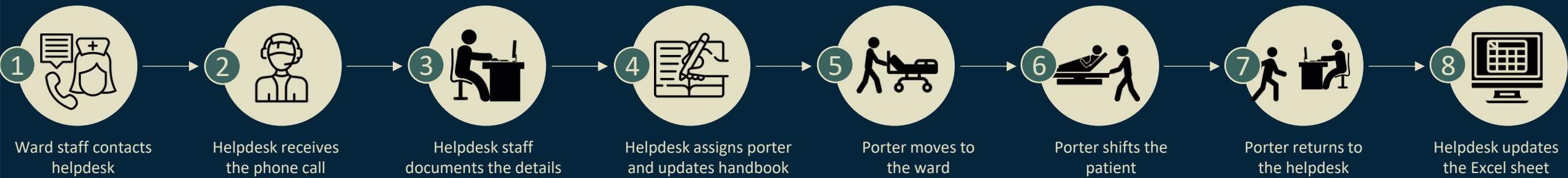
# Task Tracking System (TRANSPORTER)

Developed In-House\*



Christian Medical College Vellore, Ranipet Campus

“Designed to streamline porter movements in our 1200 bedded quaternary hospital with an average bed occupancy of more than 70%”



## CHALLENGES:

- \*Manual data entry.
- \*1,800+ daily calls with limited helpdesk.
- \*Engaged lines and excessive calls.

- \*Telephone lag for helpdesk staff.
- \*Documentation errors.
- \*Crisscross movements of porters.
- \*Deployment and tracking challenges.
- \*Accountability issues for manpower.

Process - **THEN**

Process - **NOW**

## HIGHLIGHTS:

- \*BLE tag synced with mobile.
- \*Automatic porter identification.
- \*Real-time location tracking.

- \*Systematic logging and tracking of requests.
- \*Improved porter accountability.
- \*Extensive data capturing.
- \*Reduced call acceptance time.
- \*User-friendly system.



## Cost Effectiveness

- ❖ One-time investment
- ❖ ROI within 2 months
- ❖ One Software for all Porter needs

**Outsourcing Software Estimate:**  
Rs. 30 Lakhs (One time Cost)  
&  
Annual recurrent cost > Rs. 10 Lakhs



**Inhouse cost Rs. 4.3 Lakhs  
(One time cost)**

### Investment Cost

Description	Qty	Cost per unit	Total Cost
BLE Tag	150	Rs. 900	Rs. 1,35,000
Android Mobile	42	Rs. 7000	Rs. 2,94,000
Total Cost			Rs. 4,29,000/-

### Expected Cost Saving

Category	No.	Unit Cost	Cost Per Month	Cost Per Annum
Porters	25	24000	6,00,000	72,00,000
Supervisors	6	28000	1,68,000	20,16,000
Total Cost Saving			7,68,000	92,16,000

**Note: We have already reduced 3 Supervisors and 6 Porters after the implementation of TTS in 70% of the hospital with an annual cost saving of Rs. 27,36,000/-**

## Advantages of TTS (Transporter):

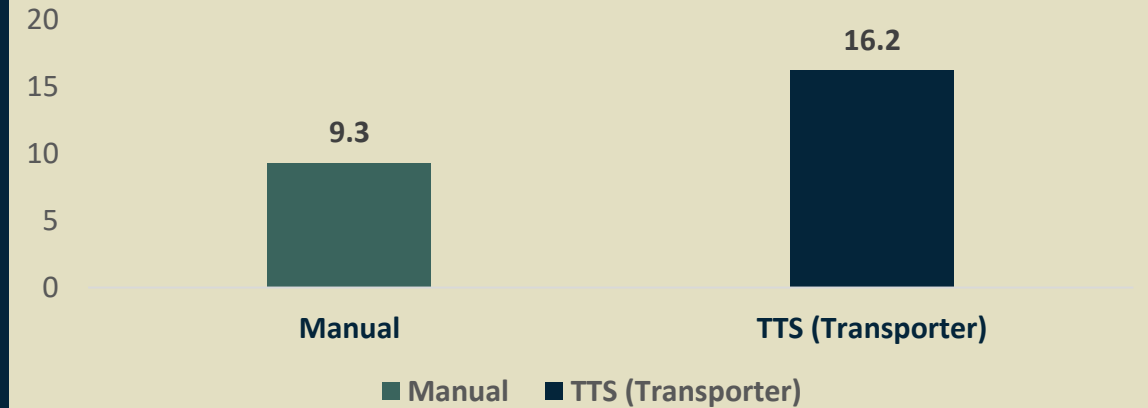
- In-house developed solution – nearest porter algorithm used using BLE and Wi-Fi technologies.
- Hospital database integration for storing porter details, task details, and logs.
- Secure login integration using a combination of hospital credentials with BLE tags.

## Impact of the Solution

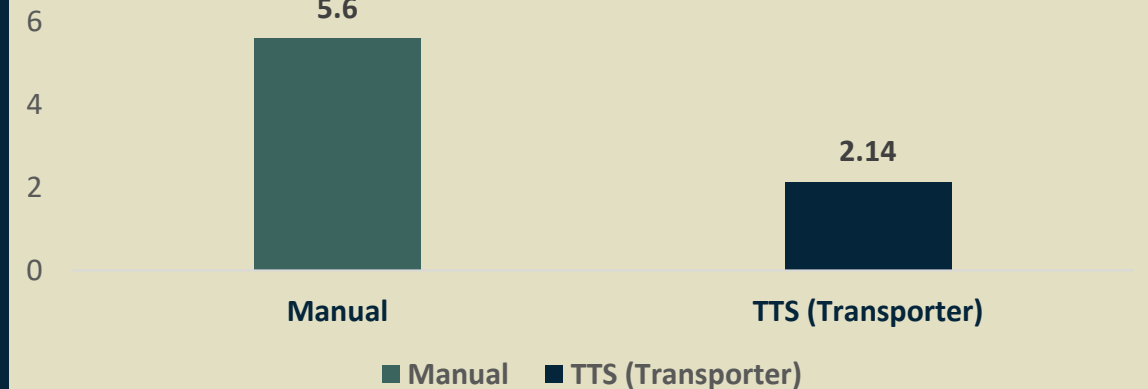
### Increased Efficiency:

- Average calls per porter increased from 9.3 to 16.2 per day
- Reduced response time for urgent & regular requests
- **Enhanced Productivity:** Seamless task transitions minimize idle time
- **Improved Patient Care:** Timely delivery of critical services

Average Calls per Porter (Manual vs TTS)



Response time (in mins) (Manual vs TTS)



# Key Features of the Solution

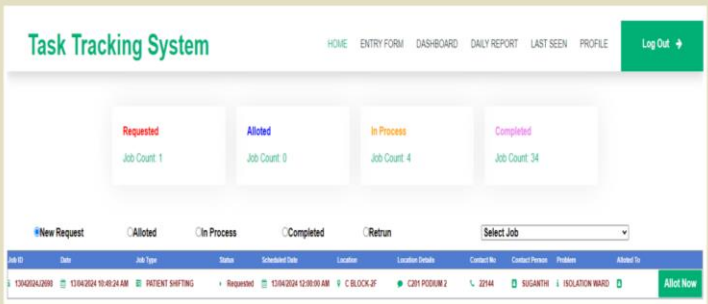
- ❑Nursing Interface: Request porter services with specific needs
- ❑Porter Interface: Real-time job alerts on mobile devices
- ❑Logistics Supervisor Interface: Monitoring and reporting of porter activities
- ❑Job Categorization: Eight job categories with prioritization of critical tasks

## USER END INTERFACE (WARD SIDE)

The screenshot shows a web interface for requesting porter services. It includes a form with fields for 'Current Location', 'Current Floor', 'System Name', 'Select Job Type', 'Select Group Type', 'Purpose', 'Problem/Request', 'Location in Details', 'Contact Person', 'Contact Name', 'Contact Number', 'Requester Name', and 'Priority'. Below the form is a table with columns: Job ID, Job Location Details, Job Type, Job Description, Date, Contact Person, and Status. The table lists several jobs, including 'PHARMACY', 'WARD SUPPLY', 'DOCUMENT SENDING', 'SLIP', 'BLOOD BANK', 'NDA PHARMACY', and 'PATIENT SHIFTING'.

Staff to raise the jobs from their respective wards

## BACK END INTERFACE



All new job requests are in one single window with other options

## Reports Generated

- Comprehensive daily report
- Group-Based report
- Time Interval reports
- Job-Specific Analytics report
- Hourly Call report
- Individual porter call report

## PORTER SIDE INTERFACE

The screenshot shows a mobile interface for a porter. It displays job details for 'PATIENT SHIFTING ISOLATION WARD' on '13/04/2024' at 'C BLOCK-2F( C201 PODIUM 2 )' for 'SUGANTHI( 22144 )'. Below the details is a button 'SEND MESSAGE' and a button 'COMPLET MY CURRENT JMS'. At the bottom, it shows 'Assigned Jobs - 0'.

Porter receive the message

## BACK END INTERFACE



Graph shows Hourly Call details



# Application to other Hospitals

**Scalability:** TTS (Transporter) can be adapted for hospitals of varying sizes

## **Benefits for Other Institutions:**

- Hassle free operations

- Enhanced operational efficiency

- Resource optimization

- Improved staff and patient satisfaction

- Streamlined logistics management, especially Porter Management in hospitals

**Conclusion:** TTS (Transporter) sets a new standard for hospital logistics, demonstrating a successful model for others to adopt.

**Transitioning from a conventional management system to a technologically enabled software solution has proven highly effective**