MULTI-VIEW SCHEDULER

USER RESEARCH FINDINGS

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HOOK∞LOOP

WHAT'S INSIDE

IF THE USER IS HAVING A PROBLEM **IT'S OUR PROBLEM.**

— STEVE JOBS

INTRODUCTION

Infor MVS (Multi-View Scheduler) is a platform for Scheduling Managers and other staff with similar responsibilities. The insights from this study will help expose user pain points and challenges, fueling an informed design process.

We were able to recruit three organizations that currently use the Workbrain MVS platform and conducted eight interviews in total (three from Queensland Health, three from PHSA, and two from the State of South Dakota). The roles of the users interviewed ranged from Nursing Directors to Portfolio Clerks to Lab Assistant Coordinators. Each role used the MVS platform to some capacity.
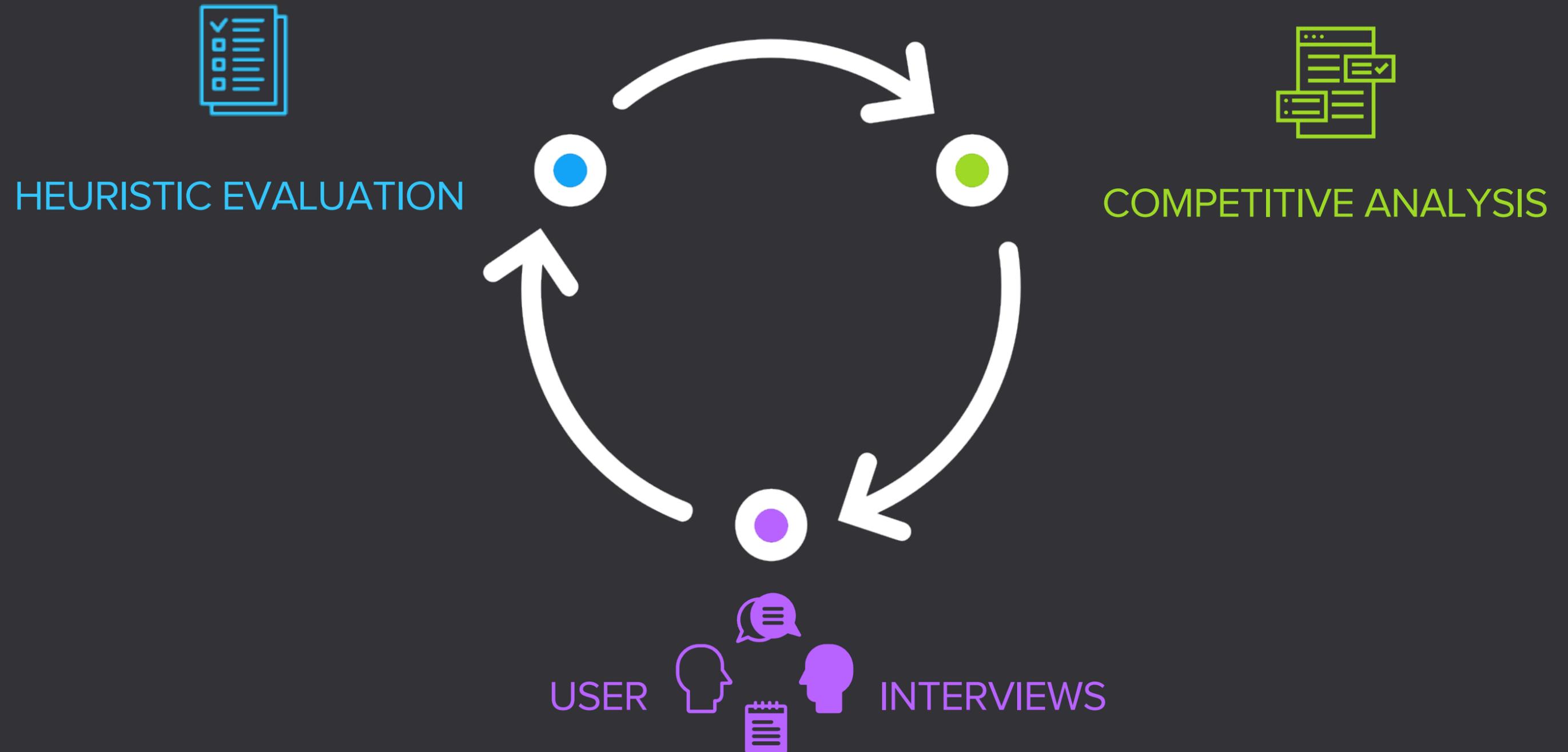
HEURISTIC EVALUATION

A heuristic evaluation is a usability inspection method for computer software that helps to identify usability problems in the user interface (UI) design. It specifically involves evaluators examining the interface and judging its compliance with recognized usability principles (the "heuristics").

Benefit:

Each observed usability problem is explained with reference to an established usability principle, it is fairly easy to generate fixes. It is a good method for finding both major and minor problems in a user interface.

COMPETITIVE ANALYSIS

A Competitive Analysis is an assessment of the strengths and weaknesses of current and potential competitors.

Benefit: A competitive analysis can be beneficial on two fronts; one it can help establish market understanding and two it can help to see how similar products are approaching the problem and solution.

OUR METHODOLOGY:
USER INTERVIEWS

As a first step in the design process, Hook & Loop conducted a series of contextual interviews over WebEx where we asked users to describe their roles and responsibilities and how their organization manages scheduling. We then watched and listened as they walked us through their installed version of MVS and asked them how they would go about completing certain tasks.

Benefit: The results we observed from these interviews were primarily to learn about the end-user, their roles and responsibilities and how MVS fits into their daily workflow. Users were encouraged to voice their thoughts as they went through the MVS which gave us insights on the platform such as pain points, technical issues, workflows, etc.

KEY INSIGHTS

KEY INSIGHTS:
LACK OF
COMMUNICATION
INEFFICIENT WORKFLOW
USABILITY ISSUES
EXCEL DEPENDENCY
TECHNICAL CHALLENGES
MISSING ROLE

LACK OF COMMUNICATION: TAXONOMY

Naming conventions are confusing and often illegible.

Each organization has their own method of naming shifts.

LACK OF COMMUNICATION:
NOTIFICATIONS

No system or confirmation notifications

Error notifications and system messaging unclear/non-existent

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KEY INSIGHTS:

LACK OF COMMUNICATION

INEFFICIENT WORKFLOW

USABILITY ISSUES

EXCEL DEPENDENCY

TECHNICAL CHALLENGES

MISSING ROLE

INEFFICIENT WORKFLOWS:
OVERALL

Too many steps to complete various tasks

Must go outside tools to find nurse to backfill shifts (can be lengthy process)

Inconsistent workflow when creating, assigning, booking off and selecting from relief queue

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INEFFICIENT WORKFLOWS:
NAVIGATION

To assign shifts the user needs to navigate away from master rotation and then navigate back again

INEFFICIENT WORKFLOWS: DIFFERENT METHODS OF BACKFILL SHIFTS

Each organization had a different way of backfilling shifts: PHSA "Employee Pool", Queensland Health "Relief Queue", S. Dakota "Needs List"

INEFFICIENT WORKFLOWS:
INEFFICIENT DROPPING / PICKING UP

Managers rely on inefficient and slow methods to communicate with available nurses and other staff (ie: phone calls, text messaging, emails)

KEY INSIGHTS:

LACK OF COMMUNICATION

INEFFICIENT WORKFLOW

USABILITY ISSUES

EXCEL DEPENDENCY

TECHNICAL CHALLENGES

MISSING ROLE

USABILITY ISSUES: OVERALL UI

Not enough relevant content visible on screen

Icons and text are often too small and illegible

USABILITY ISSUES:
DIFFICULTY WITH MAIN TASKS

Screen real estate in master rotation screens causes excessive horizontal scrolling

Shift labels can't be created by users and instead have to use the JIRA ticketing system

Assigning & plotting shifts is time consuming

KEY INSIGHTS:
LACK OF COMMUNICATION
INEFFICIENT WORKFLOW
USABILITY ISSUES
EXCEL DEPENDENCY
TECHNICAL CHALLENGES
MISSING ROLE

EXCEL DEPENDENCY: OVERALL

Excel spreadsheets are still widely used in shift scheduling process, often being used to view staff member's schedule

KEY INSIGHTS:
LACK OF COMMUNICATION
INEFFICIENT WORKFLOW
USABILITY ISSUES
EXCEL DEPENDENCY
TECHNICAL CHALLENGES
MISSING ROLE

TECHNICAL CHALLENGES:
OVERALL

Users found the system difficult to use for various reasons including long loading times, opening the current session in multiple tabs causing errors, and being timed-out while waiting for data to process.

KEY INSIGHTS:
LACK OF COMMUNICATION
INEFFICIENT WORKFLOW
USABILITY ISSUES
EXCEL DEPENDENCY
TECHNICAL CHALLENGES
MISSING ROLE

MISSING ROLE:
NURSES/EMPLOYEES

Individual employees do not have access which prevents them from being able to utilize the system to log dropped shifts, pick up shifts, or even view their schedules.

As a result of this, individual employees still refer to printed schedules

MISSING ROLE:
NURSES/EMPLOYEES

Queensland Hospital particularly would like individual employees to have access, create potential schedules that need to get approved and have access to drop and pick up shifts. Unlike North America, Nurses in Australia have more autonomy to select their own schedules.

COMPETITOR INSIGHTS

COMPETITOR INSIGHTS: MATRIX

	Infor Nurse Scheduling Tool	Humanity	NurseGrid	Deputy	Homebase	Shiftboard	TrackSmart	When I Work
CORE FEATURES								
Attendance Monitoring		✔						✔
Automated Scheduling		✔			✔	✔	✔	✔
Calendar Integration (Google Cal, iCal, Outlook, Exchange)			✔					✔
Calendar Management			✔		✔	✔		
Cloud Platform			✔		✔	✔	✔	✔
Desktop App	✔							
Drag-and-Drop				✔	✔			✔
Email integration (Gmail, Outlook, Exchange, Yahoo)			✔					
Employee Database			✔		✔	✔		✔
Event Planning			✔					
GPS	✔							✔

COMPETITOR INSIGHTS: MATRIX

	Infor Nurse Scheduling Tool	Humanity	NurseGrid	Deputy	Homebase	Shiftboard	TrackSmart	When I Work
CORE FEATURES								
In-App Messaging		✔	✔	✔	✔			
Leave / Vacation Tracking				✔	✔	✔		✔
Mobile Application		✔	✔	✔	✔	✔		✔
Report Builder		✔		✔	✔			
Report Viewing	✔			✔	✔			
Responsive UI								
Shift Scheduling	✔	✔	✔	✔	✔	✔	✔	✔
Third-Party Integrations		Address Book, Facebook, Google Apps	Facebook, Email	POS/Payroll providers, live weather feed		Payroll and HR Systems Integration		
Time Clock		✔			✔			
Time Tracking/Timesheets		✔		✔	✔	✔	✔	✔
Web-based App	✔		✔			✔		

COMPETITOR INSIGHTS:
SCHEDULE MANAGEMENT

Deputy

NurseGrid

Homebase

COMPETITOR INSIGHTS:
SCHEDULE MANAGEMENT

Ability to quickly view staffing and schedule details

**Easily review, edit, and distribute the schedule
to staff calendars as it changes**

COMPETITOR INSIGHTS:
INTELLIGENT STAFFING

NurseGrid

COMPETITOR INSIGHTS:
INTELLIGENT STAFFING

Ensure proper staffing levels while managing overtime costs

Access real-time data on staff availability and scheduled hours to make mutually beneficial staffing decisions

Quickly fill Open Shifts, summon On Call staff members, and share resources between departments

COMPETITOR INSIGHTS:
TEAM COMMUNICATION

NurseGrid
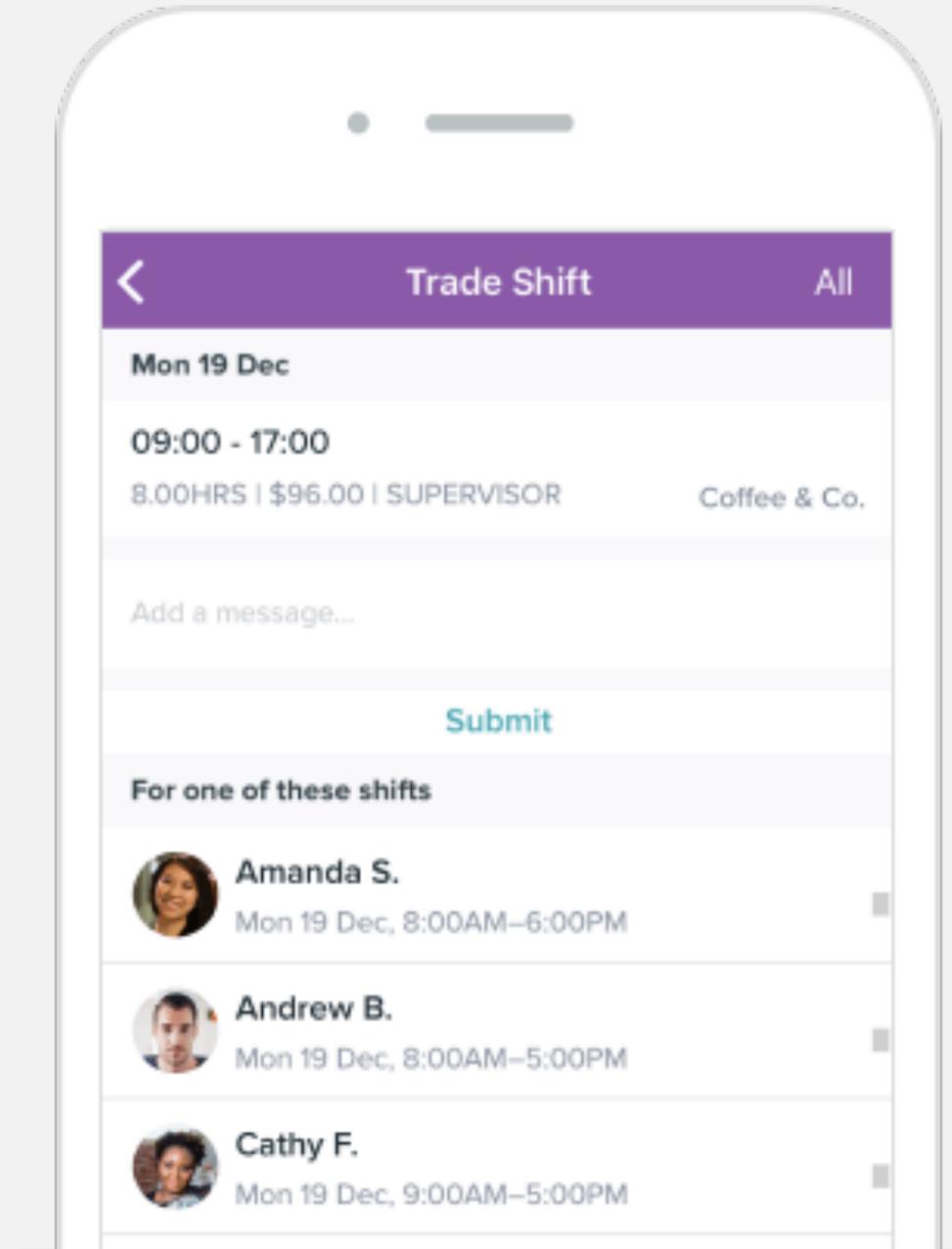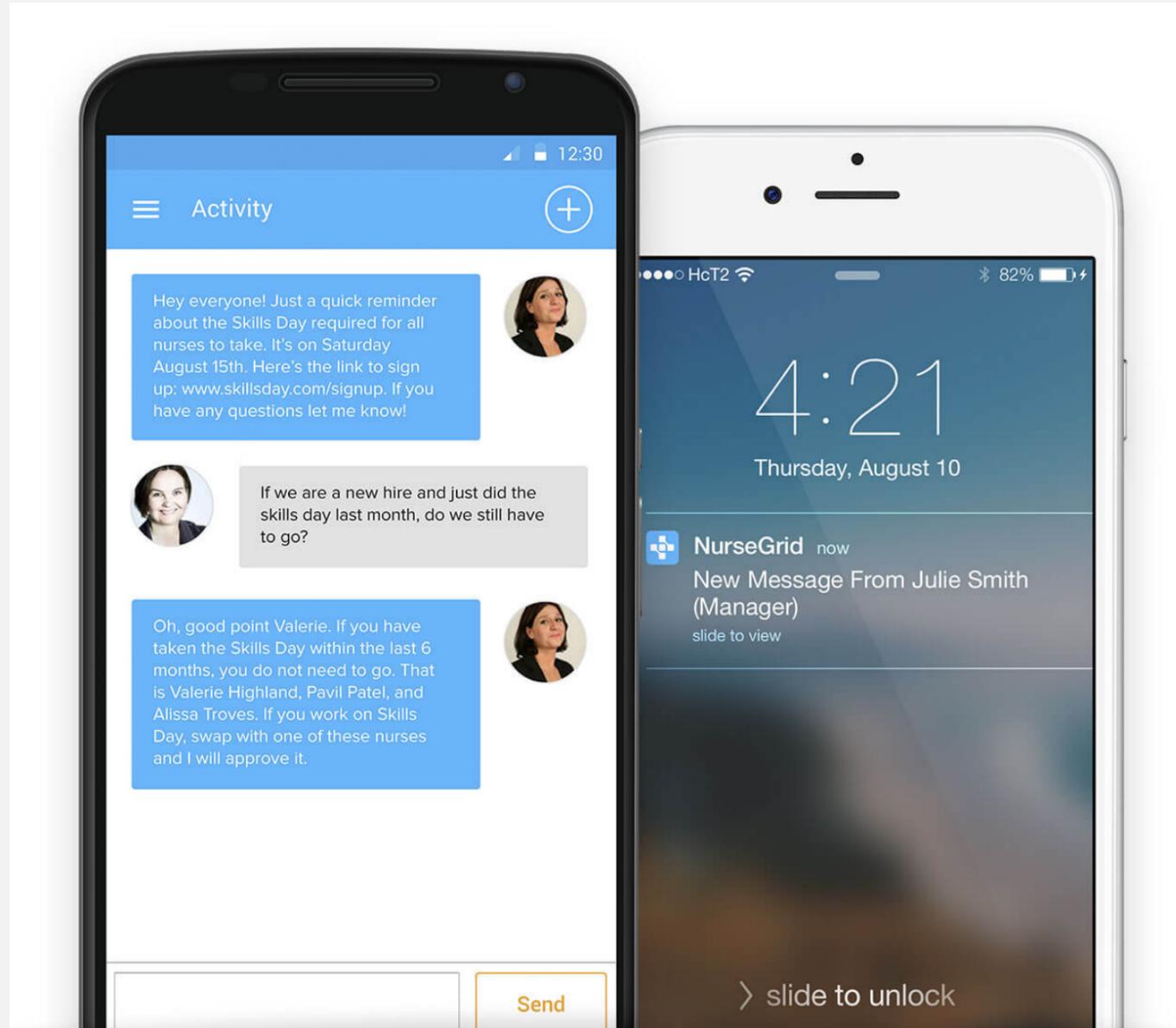
Homebase

COMPETITOR INSIGHTS:
TEAM COMMUNICATION

In-app messaging system

Quick filtering helps managers reach the right staff

COMPETITOR INSIGHTS:
MOBILE-FRIENDLY

NurseGrid

Deputy
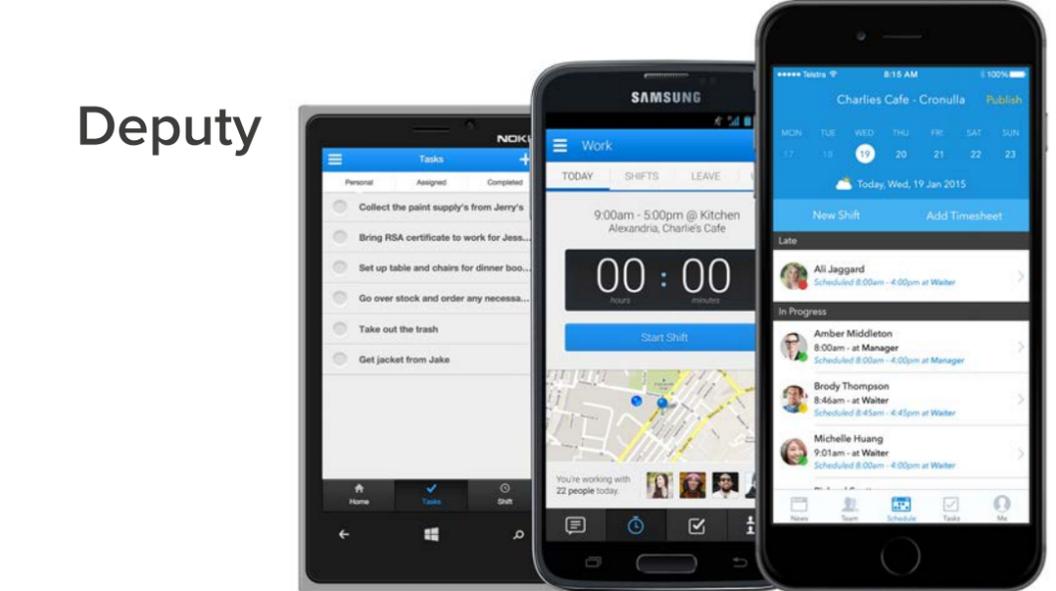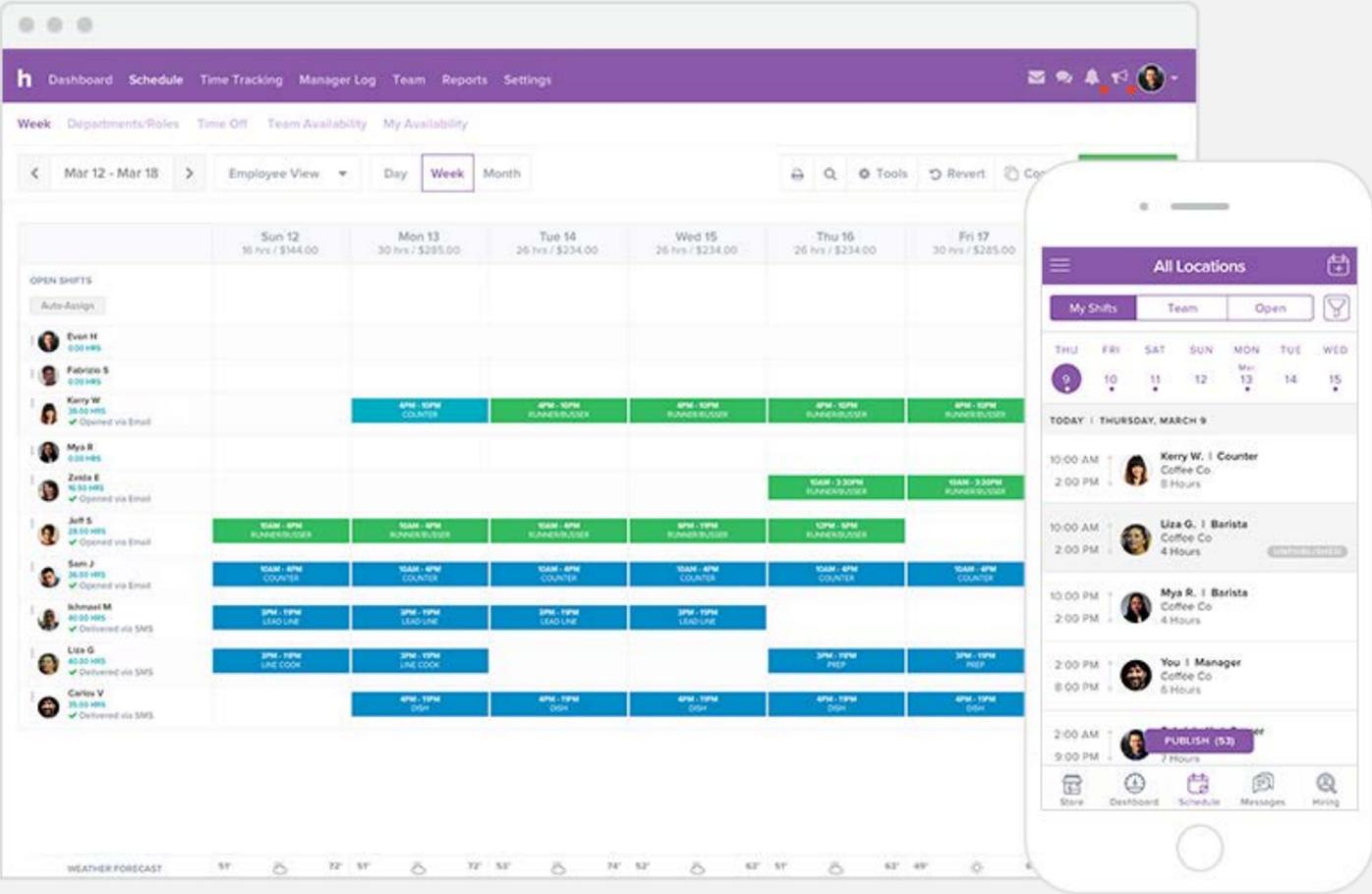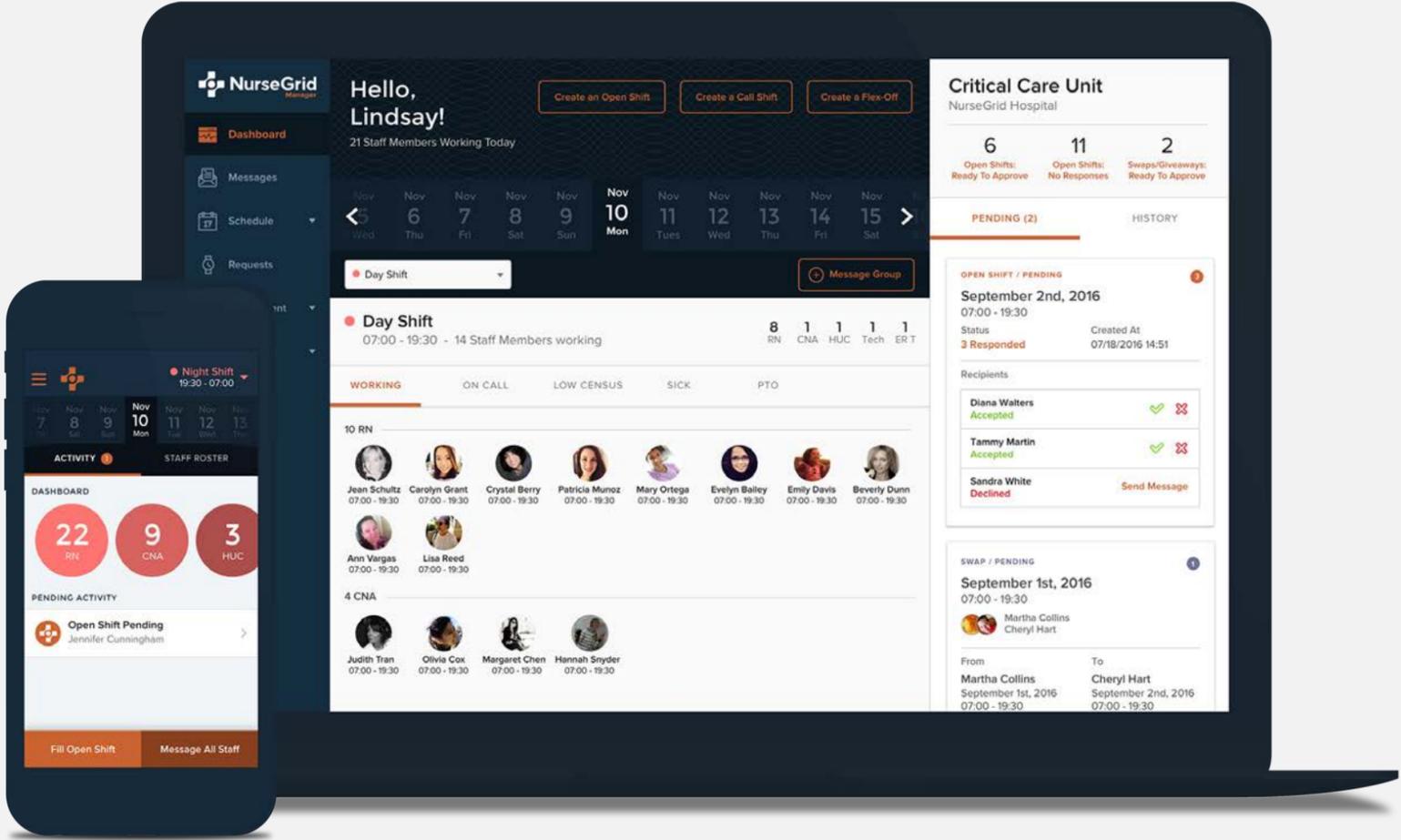
Homebase

COMPETITOR INSIGHTS:
MOBILE-FRIENDLY

Staff can swap shifts and receive responses directly on their phones

RECOMMENDATIONS

THERE ARE TWO APPROACHES TO ENHANCING MVS

Short term usability fixes on the current tool or a rehaul of the workflows in MVS

APPROACH A: IMPROVEMENTS ON CURRENT TOOL

APPROACH A: IMPROVEMENTS ON CURRENT TOOL

LOAD TIME

Resolve challenges with load time

REVIEW

Review Heuristic Evaluation to address challenges and opportunities

TACTICS

Review Short Term Recommendations Matrix for tactical changes

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APPROACH B: MVS REVAMP

APPROACH B: MVS REVAMP

USER ROLES

Establish user roles (Identify if Nurses or Employees will get access to MVS)

- Introducing "Nurse roles" to the system would address challenges around repeat work, manager workload, relief management.

  – Mobile-First approach

WORKFLOWS

Recreate process workflows to inform navigation, content hierarchy, and reduce time required to complete tasks

NOMENCLATURE

Establish user-friendly nomenclature

APPROACH B: MVS REVAMP

NOTIFICATIONS

Introduce notifications and in-context/predictive error messaging

FUNCTIONALITY

Redesign all functionality leveraging insights from research around usability challenges and user needs

NEXT STEPS

APPROACH A

NEXT STEPS: APPROACH A

SOHO XI

Reach out to SoHo Team and implement SoHo Xi

WFM

Reach out to Workforce Management team to engage with a design team

APPROACH B

NEXT STEPS: APPROACH B

NURSE ROLES

Evaluate from Product standpoint the benefits of introducing Nurse roles into MVS

WFM

Reach out to Workforce Management team to engage with a design team

DESIGN TEAM

Work with design team to build out process workflows and content maps inclusive of notifications and error messaging.

NEXT STEPS: APPROACH B

COPY

Work with copywriter/UX writer to conduct research and identify user-friendly nomenclature

WIREFRAMES

Create wireframes for new workflows

USER RESEARCH

Continuous User Research: 1) Nurse end-user research 2) Usability Tests on new designs

QUESTIONS?

APPENDIX

APPENDIX A:

Heuristic Evaluation

Create New Rotation

Desktop

Home   Messages(31)   Timesheet   Maintenance   My Reports   Scheduling   My Approval   Supervisor Approval   Weekly Timesheet   Payroll Close Wizard   Time Off Approval

Welcome Support, Workbrain

A

1

2

3

4

📋 0   ⚠ 28   📅 0   🕐 0   👥 0
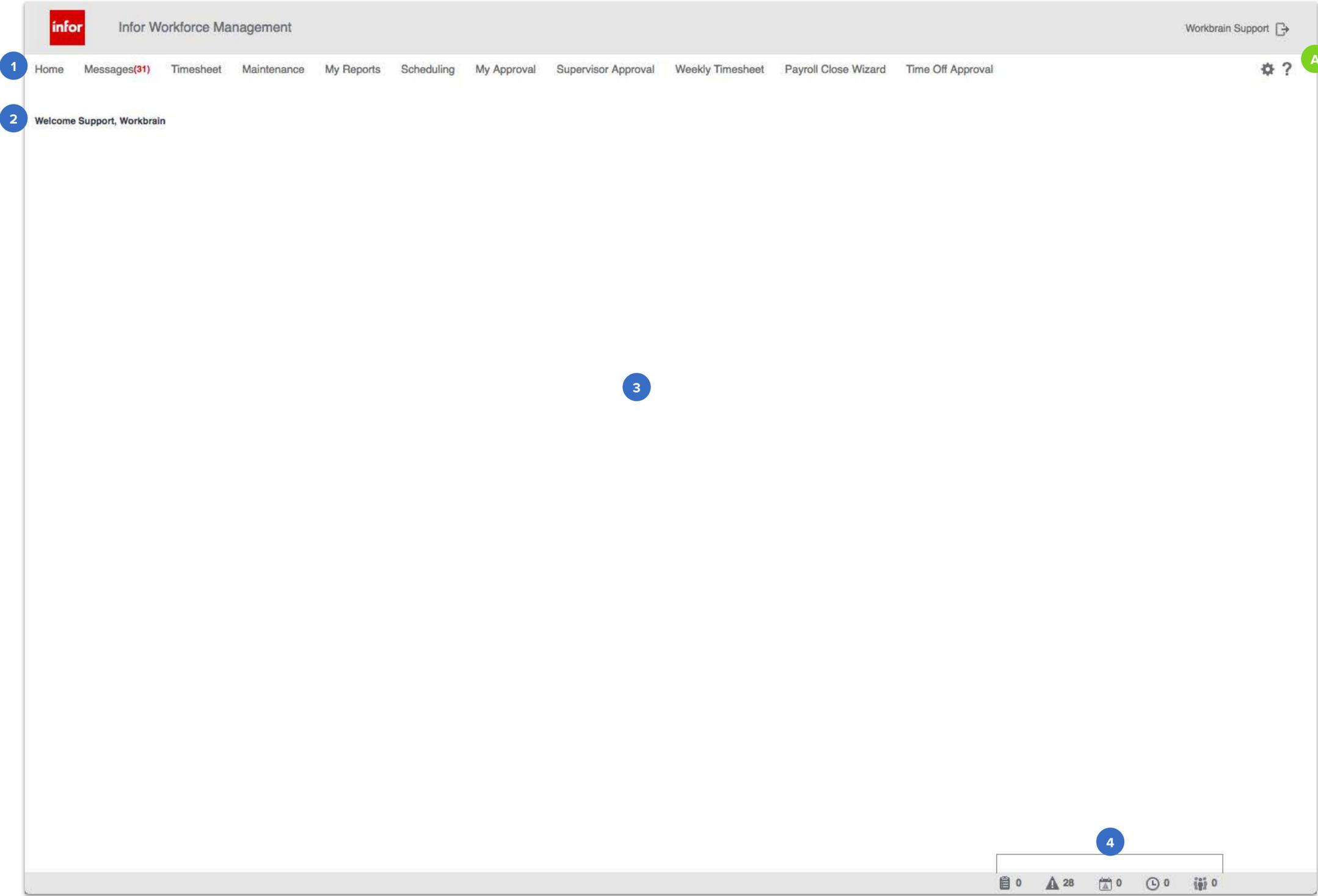
Notes

A Helpful system CTA icons are visible and accessible to the user at all times.

1 Some of the nav items sound like they can be grouped together (ie: My Approval and Supervisor Approval).

2 Page header text very small on page.

3 Too much white space.

4 Not sure what these icons are for or how important they are being that they are located at the very bottom of the screen.

Create New Rotation

Desktop

(1) Home Messages**(31)** Timesheet Maintenance My Reports Scheduling My Approval Supervisor Approval Weekly Timesheet Payroll Close Wizard Time Off Approval ⚙ ?

(1) Scheduling > Multi-view Scheduler > Master Rotation

📂 **Scheduling**
  📁 Schedule Optimization
(1) 📁 Self-Scheduling
  📁 Auto-assignment
  📂 Multi-view Scheduler
      📁 Advanced Settings
      📁 Enhanced Schedule View
(A) 📂 Master Rotation
          📄 Master Rotation - Create New Rotation
          📄 Master Rotation - Plot Shifts, Edit Row Details, Create New version
          📄 Master Rotation - Assignment
          📄 Master Rotation - Inactivation
      📁 Relief Management
      📁 Shift History
      📁 One-time Schedule
      📁 Schedule Template
      📄 Multi-view Scheduler
      📄 Staffing Center
  📁 Shift Billboard

📋 0   ⚠ 28   📅 0   🕐 0   👥 0

Notes

A Use of iconography accurately is consistent.

1 A global top nav bar is displayed at the top of the screen at all times making it unnecessary to have an entire page be utilized for a navigation tree. It is also nessecary to display the navigation as a breadcrumbs at the same time.

Create New Rotation

Desktop

Infor Workforce Management

Workbrain Support

Scheduling > Multi-view Scheduler > Master Rotation > Master Rotation - Create New Rotation

1 Create New Entry

Master Rotation - Create New Rotation   [   ] Find ⌄   **2**

	Name	Description	Length in Days	Start Date	Default No. of Rows	Team	Publish Status
Edit	PERF_MR01	PERF_MR01	7	06/01/2015	100	EMVS_PERF	UNPUBLISHED
Edit	RN REGULAR		14	04/24/2017	8	CARDIO	PUBLISHED
Edit	RN SUPPLEMENTARY		14	04/24/2017	3	ICU	PROCESS REQUIRED
Edit	VERSIONS	test activations	7	07/03/2017	2	ANAESTHETICS	UNPROCESSED
Edit	ANA DRAFT		7	06/05/2017	2	ANAESTHETICS	UNPROCESSED
Edit	FIRST SHIFT	First Shift	7	05/28/2017	10	CARDIO	UNPROCESSED
Edit	CLERKS		7	07/03/2017	4	ICU	PUBLISHED
Edit	DEMO	description for demo	14	07/24/2017	5	ICU	UNPROCESSED
Edit	TEST		14	04/24/2017	8	CARDIO	UNPROCESSED
Edit	NEW CLERKS		7	07/03/2017	4	ICU	UNPROCESSED

A

Related Links

➕ Master Rotation - Plot Shifts, Edit Row Details, Create New version

📄 0   ⚠ 418   📅 0   🕐 0   👥 0

Notes

A UI Follows Soho 10x patterns consistently

1 Create new CTA is too small compared to the rest of the screen. It also appears above what might be the title of the page "Master Rotation – Create New Rotation"

2 The search field is separated from the list of existing rotations by a divider line so it doesn't really look like it's associated with the list its searching though. Also, this search field in in-line with the page title which what ends with "Create New Rotation" making it look like using the field is part of how a new rotation is created.

Other notes
Some of the nav items sound like they can be grouped together (ie: My Approval and Supervisor Approval).

Related Links don't look like links or that they are clickable.

New Rotation Details Form

Desktop

Notes

1 No explanation of certain fields for clarification

2 Save button should appear on the right side of the form. Grey background for these CTAs is unnecessary.

3 The title and the breadcrumb display 2 different page names; "Details" and "Create New".

Other notes
On creation it seems like new rotations are already assigned a publish status (UNPROCESSED). Does clicking "Return to form listing" save any of the information entered in the form fields or does it discard this record?

New Rotation – Initial View
Desktop

infor

Infor Workforce Management

Workbrain Support

Home   Messages(428)   Timesheet   Maintenance   My Reports   Scheduling   My Approval   Supervisor Approval   Weekly Timesheet   Payroll Close Wizard   Time Off Approval

Scheduling > Multi-view Scheduler > Master Rotation > Master Rotation - Create New Rotation > Create New > Details

Master Rotation UX-DEMO (demo of ux)

Unit:		ICU	Start Date:		07/31/2017	Length (days):		14
Version:		1	Effective Date:		07/31/2017	End Date:		01/01/3000
Version Desc:			No. Rows		5	Status:		DRAFT

	Row	Job	Calc Grp	SC Group	Docket	Dept	Project	Week 1 Mon Day-1	Tue Day-2	Wed Day-3	Thu Day-4	Fri Day-5	Sat Day-6	Sun Day-7	Week 2 Mon Day
	1														
	2														
	3														
	4														
	5														

Edit   Copy   Add   Save   Validate   Activate   Copy Rotation   Print

Shift / Coverage Info

Job   Shift Coverage   Shift

Turn Shift Copy On

Display Label*	Effective-dated Changes	Description	Start Time	End Time	Activity Name

Add Shift Label   Copy Shift Labels to Rotation

Add   Copy

0   418   0   0   0

Notes

A Color is helpful in diferentiating days in table (weekends, new weeks, etc)

1 No page title. Now the breadcrumbs says "Details" whereas the last page's title said "Details" (new rotation form). Inconsistent language

2 Data is sometimes unreadable because of inconsistent spacing.

3 Lack of context to row of CTAs do other than their labels.

4 The initial view of this panel has the 3rd tab open by default.

Other notes
This page struggle with appropriate grouping and visual hierarchy.

Shift Label Lookup Popup

Desktop

1 Add Shift Label popup is cramped and placed in the bottom corner of the screen.

2 Breadcrumbs disapears after opening "Add Shift Label" popup.

Screen content

infor

Infor Workforce Management

Workbrain Support

Home | Messages(428) | Timesheet | Maintenance | My Reports | Scheduling | My Approval | Supervisor Approval | Weekly Timesheet | Payroll Close Wizard | Time Off Approval

Master Rotation UX-DEMO (demo of ux)

Unit:	ICU	Start Date:	07/31/2017	Length (days):	14
Version:	1	Effective Date:	07/31/2017	End Date:	01/01/3000
Version Desc:		No. Rows	5	Status:	DRAFT

Row	Job	Calc Grp	SC Group	Docket	Dept	Week 1 Mon Day-1	Tue Day-2	Wed Day-3	Thu Day-4	Fri Day-5	Sat Day-6	Sun Day-7
1												
2												
3												
4												
5												

Edit | Copy | Add | Save | Validate | Activate | Copy Rotation | Print

Add Shift Label Popup

Find / Clear

	Shift Display Label	Esshift Desc	Team	Esshift Start Time	Esshift End Time	Activity Name
	Day	0900-1700	ICU	09:00a	05:00p	WRK
	Eve	1700-0100	ICU	05:00p	01:00a	WRK
	Night	0100-0900	ICU	01:00a	09:00a	WRK
	7D8	0700-1530	ICU	07:00a	03:30p	WRK
	15E8	1500-2300	ICU	03:00p	11:00p	WRK
	23N8	2300-0730	ICU	11:00p	07:30a	WRK
	730D	0730-1930	ICU	07:30a	07:30p	WRK
	1930N	1930-0730	ICU	07:30p	07:30a	WRK
	8D7	0800-1500	ICU	08:00a	03:00p	WRK
	7D4	0700-1100	ICU	07:00a	11:00a	WRK

< Prev | 1 | Next > | Submit | Reset

Remove

Activity Name
WRK
WRK

0 | 418 | 0 | 0 | 0

Copy Shift Label

Desktop

Infor Workforce Management

Workbrain Support

Home | Messages(428) | Timesheet | Maintenance | My Reports | Scheduling | My Approval | Supervisor Approval | Weekly Timesheet | Payroll Close Wizard | Time Off Approval

Master Rotation UX-DEMO (demo of ux)

Unit:	ICU	Start Date:	07/31/2017	Length (days):	14
Version:	1	Effective Date:	07/31/2017	End Date:	01/01/3000
Version Desc:		No. Rows	5	Status:	DRAFT

	Row	Job	Calc Grp	SC Group	Week 1 Mon Day-1	Tue Day-2	Wed Day-3	Thu Day-4	Fri Day-5	Sat Day-6	Sun Day-7	Week 2 Mon Day-8	Tue Day-9	Wed Day-10	Thu Day-11	Fri Day-12	Sat Day-13	Sun Day-14
	1				D	D	D	D				D	D	D				
	2								D	D	D				D	D	D	D
	3																	
	4																	
	5																	

①

Shift / Coverage Info

Edit | Copy | Add | Save | Validate | Activate | Copy Rotation | Print

Job | Shift Coverage | Shift

Turn Shift Copy Off

	Display Label*	Effective-dated Changes	Description	Start Time	End Time	Activity Name
🗑	D		0700-1900	7:00 AM	7:00 PM	WRK
🗑	N		1900-0700	7:00 PM	7:00 AM	WRK

Add Shift Label

[ ] Add

Copy Shift Labels to Rotation

[ ] Copy

📄 0   ⚠ 418   📅 0   🕐 0   👥 0

**① ** The split screen tables don't look resizeable until the cursor is hovered over a particular pixel on the draggable bar

Other notes

The Shift display label that is copied to each of the rows does not show any other information in the table such as the description, start time, end time or activity name.

The shift D shows that it only covers a shift from 7am – 7pm yet fills a whole day in the weekly table. Does this mean that a new row has to be used for the remaining hours not covered on a particular day? How to I know how many hours are left that need to be covered? Is there any way easy way to tell if there are shifts that overlap?

Various icons in the platform are too small (ie: delete "trash can", copy "page stack").

The fields in the right table are editable and display a text cursor when focused on but cannot be typed into. Why is an input field used here if it doesn't allow for typable text to be inputted?

Edit Row(s) Popup
Desktop

infor

Infor Workforce Management

Workbrain Support

Home | Messages(428) | Timesheet | Maintenance | My Reports | Scheduling | My Approval | Supervisor Approval | Weekly Timesheet | Payroll Close Wizard | Time Off Approval

Master Rotation UX-DEMO (demo of ux) - Your changes have been saved.

Unit:	ICU	Start Date:	07/31/2017	Length (days):	14
Version:	1	Effective Date:	07/31/2017	End Date:	01/01/3000
Version Desc:		No. Rows	5	Status:	DRAFT

Row | Job | Calc Grp | SC Group | Docket | Dept | Project | Week 1 | Tue | Wed | Thu | Fri | Sat | Sun

EDIT LABOR METRICS

Row	Job	Calc Grp	SC Group	Docket	Dept	Project	Pin FTE	Prj Hrs	Off Days	Stat Days
1								0.0	7	0
2								0.0	7	0

Submit   Cancel

Edit | Copy | Add | Save | Validate | Activate | Copy Rotation | Print

Shift / Coverage Info

Job | Shift Coverage | Shift

Turn Shift Copy On

	Display Label*	Effective-dated Changes	Description	Start Time	End Time	Activity Name
🗑	D		0700-1900	7:00 AM	7:00 PM	WRK
🗑	N		1900-0700	7:00 PM	7:00 AM	WRK

Add Shift Label | Copy Shift Labels to Rotation

Add | Copy

📋 0   ⚠ 418   📅 0   🕐 0   👥 0

Notes

1 To edit any of the fields in the labor details table user must check off 1 or more items in the list and click the edit button in the middle-right portion of the screen. A popup appears with all the same fields visible from the labor details table but in an editable state.

Other notes
The column labels are center aligned to the width of the column yet the field widths in each column are not of the same width.

Why is the word group sometimes abreviated and sometimes spelled out?

Copy Row Popup

Desktop

Notes

1 Columns that have been filled in with data can be cut off by the split screen tables.

2 Both the left and right tables lack proper labeling and the only way the user knows which is which is on the copy popup in the type dropdown. The left is the "Labor Metrics" table and the right is the "Shift Cells" table.

Other notes
The copy button is located very far from what is being copied (which is the rows in the Labor Metrics table)

Popups shouldn't be draggable.

Add Row Popup
Desktop

Infor Workforce Management

Workbrain Support

Home Messages(428) Timesheet Maintenance My Reports Scheduling My Approval Supervisor Approval Weekly Timesheet Payroll Close Wizard Time Off Approval

Master Rotation UX-DEMO (demo of ux)

Unit:	ICU	Start Date:	07/31/2017	Length (days):	14
Version:	1	Effective Date:	07/31/2017	End Date:	01/01/3000
Version Desc:		No. Rows	5	Status:	DRAFT

	Row	Job	Calc Grp	SC Group	Docket	Dept	Week 1 Mon Day-1	Tue Day-2	Wed Day-3	Thu Day-4	Fri Day-5	Sat Day-6	
	1	LPN			HCEMPDOCKA	DEPT A	D	D	D	D			
	2	LPN			HCEMPDOCKA	DEPT A			D	D	D	D	
	3	LPN			HCEMPDOCKA	DEPT A			D	D	D	D	
	4												
	5												

Add Row

○ Add New Row

○ Insert New Row Into Position

Position: Before ▼

Target Row: ▼

Add Cancel

Shift / Coverage Info

Job Shift Coverage Shift

Turn Shift Copy On

	Display Label*	Effective-dated Changes	Description	Start Time	End Time	Activity Name
	D		0700-1900	7:00 AM	7:00 PM	WRK
	N		1900-0700	7:00 PM	7:00 AM	WRK

Add Shift Label   Copy Shift Labels to Rotation

Add   Copy

(buttons partially visible: Add Save Validate Activate Copy Rotation Print)

0   418   0   0   0

Notes

1 Too much space between form controls and form labels makes the content in this popup menu hard to read.

2 There doesn't seem to be a difference between the 2 options of "Add New Row" and "Insert New Row Into Position" since the "Position" and "Target Row" dropdowns are still visible regardless.

Other notes
Not sure popup is necessary. This feature could be accomplished with a much simplier flow such as a CTA or dropdown.

Error in Row – Shift Overlap

Desktop

Notes

A Confirmation message is displayed after user takes certain actions.

1 When master rotation is in "Draft" mode user cannot edit rows directly (no input field displayed).

2 Shift labels don't display enough information to user in shifts table to prevent errors (such as shift overlap).

3 Text fields don't allow users to text into them like normal text fields, only paste labels into.

4 As user fills in each row there is data that gets cut off in other columns that require the user to scroll horizontally yet there are other columns that don't have any data at all taking up large portions of the table.

Other notes
The system doesn't alert the user to this error unless they try to save the Master Rotation by clicking the "Save" CTA. There is no other error prevention before or during action that caused the error.

Master Rotation – Active State

Desktop

Notes

1 Minimal visual difference between "Active" mode and "Draft" mode. "Active" mode makes all editable fields in right table read-only while all the data in the left table remained read-only in both modes.

Other notes
Is there any way to get back to "Draft" mode?

Master Rotation — Assignment

Desktop

infor

Infor Workforce Management

Workbrain Support

Home   Messages(0)   Timesheet   Maintenance   My Reports   Scheduling   My Approval   Supervisor Approval   Weekly Timesheet   Payroll Close Wizard   Time Off Approval

Scheduling > Multi-view Scheduler > Master Rotation > Master Rotation - Assignment

Rotation Assignment

Master Rotation

○ Select Start & End Dates

○ Select Start Date & Number of Weeks

Go

0   0   0   0   0

Notes

1 "Rotation Assignment" label (under breadcrumbs) —> is this a page header? If so, then this is the first screen to display a page header like this.

2 The labels for these input fields are either displayed too far away from the element or don't have a label at all (ie: end date field and No. of weeks field).

3 "Start date" is required regardless of which option is chosen so it does not need to be repeated in the form.

Other notes
There is a lot of empty space on this screen.

Master Rotation – Assignment

Desktop

Infor Workforce Management

Workbrain Support ⟶

Home | Messages(6) | Timesheet | Maintenance | My Reports | Scheduling | My Approval | Supervisor Approval | Weekly Timesheet | Payroll Close Wizard | Time Off Approval   ⚙ ?

Scheduling > Multi-view Scheduler > Master Rotation > Master Rotation - Assignment

Master Rotation - Assignment

Rotation Name:	UX-DEMO	Unit:	ICU		
Length (days):	14	Start Date:	08/04/2017	End Date:	08/31/2017
Ver. & Eff. Dates:	1 - 07/31/2017	Publish Status:	UNPROCESSED		

	Row	Job	Pln FTE	Employee	ES MRA START DATE	ES MRA END DATE	P/T	Leave Reason	Thu 08/24	Fri 08/25	Sat 08/26	Sun 08/27	Mon 08/28	Tue 08/29	Wed 08/30	Thu 08/31
✎	1	LPN		Unassigned	07/31/2017	01/01/3000							D	D	D	D
✎	2	LPN		Unassigned	07/31/2017	01/01/3000			D	D					D	D
✎	3	LPN		Unassigned	07/31/2017	01/01/3000				D	D	D				
✎	4	LPN		Unassigned	07/31/2017	01/01/3000			D	D					D	D

🟩 Book Offs   🟪 Relief Cells

RELIEF | RNN | QUEUE | Process | Export To PDF | REFRESH

📋 0   ⚠ 6   📅 0   🕐 0   👥 0

Notes

1 Not much difference in design or layout that it could be mistaken the New Master Rotation screen at first glance.

2 CTA labels are inconsistent in font style. Some are in all caps while others are in camel-case.

Edit Row Assignment

Desktop

Notes

A Organization of content and buttons follows standard modal patterns.

1 Popup appears in a random position on the screen and not the center. Size of popups don't follow consistent sizing patterns throughout the site. The sizes range fitting inside content with little-to-no extra space for padding to being much bigger than inside content with extra blank space left either on the right side or bottom.

2 The content at the top of this popup is displayed in data list format with the label bolded and stacked on top of associated content in a horizontal layout separated by light gray borders but only contains 1 row of actual data.

3 The labels in the right column of this form are not aligned properly and therefore make it difficult to read and/or fill out.

Employee Details Tooltip

Desktop

Infor Workforce Management

Workbrain Support

Home | Messages(6) | Timesheet | Maintenance | My Reports | Scheduling | My Approval | Supervisor Approval | Weekly Timesheet | Payroll Close Wizard | Time Off Approval

Scheduling > Multi-view Scheduler > Master Rotation > Master Rotation - Assignment

Master Rotation - Assignment

Rotation Name:	UX-DEMO	Unit:	ICU		
Length (days):	14	Start Date:	08/04/2017	End Date:	08/31/2017
Ver. & Eff. Dates:	1 - 07/31/2017	Publish Status:	UNPROCESSED		

	Row	Job	Pln FTE	Employee	ES MRA START DATE	ES MRA END DATE	P/T	Leave Reason		Fri 08/04	Sat 08/05	Sun 08/06	Mon 08/07	Tue 08/08	Wed 08/09	Thu 08/10
✏	1	LPN		Helmut, Zemo	07/31/2017	01/01/3000	P		rc				D	D	D	
✏	2	LPN		Elks, Basil						D	D				D	D
✏	3	LPN		Unassigned						D	D	D	D			
✏	4	LPN		Unass						D	D				D	D

Elks, Basil

Employee 3052
Status Active
Pay Group 1
Calc Group HOURLY

Jobs	Name	Start Date	End Date	Preferred Job
	LPN	01/01/2005	01/01/3000	☑

Skills	Name	Start Date	End Date
	CLINICAL RECORDS	01/01/2003	01/01/3000
	TRIAGE	01/01/2003	01/01/3000

Book Offs   Relief Cells

RELIEF | RNN | QUEUE | Process | Export To PDF | REFRESH

Notes

1 CTAs are styled the same as non-CTA text (ie: Employee name & start/end date columns). No way of knowing what is interactive and what isn't.

2 In this section the labels are styled the same as the associated text and in the last line of content the "Calc Group" label almost runs into the "HOURLY" text.
Note: There's 2 different ways the labels and associated text is style in the same popup. In this section its side-by-side and in the section below it's stacked (with bolded labels). This makes the content look disorganized and sloppy.

3 Tooltips that appear on hover should not contain additional controls because popups like this are supposed to disappear once the mouse moves away form the element.

Re-edit Row Assignment

Desktop

1 The popup that is displayed when clicking the "edit" CTA (pencil icon) shows different content depending on whether the targetted row is filled in or not. Because the same icon is being used for both cases the expected behavior is to display consistent content. The icon should change somehow to differentiate the differing behaviors.

2 The "Edit Type Assigned" dropdown is displayed as if it were the 2 row of data in relation to the content directly above it. Because of this the text "Edit Type Assigned" looks like it's data for the "Unit Name" column and the dropdown looks like it belongs to the "Rotation Name" column.

3 No appearant reason why this particular section of content is in it's own bordered container since there are editable fields inside and outside of the container. It also it takes up more space than necessary and pushes the primary CTA buttons even further down the screen.

Re-edit Row Assignment – Error

Desktop

Notes

A   Accurate error messaging

1   When an error appears it's displayed under the oversized bordered content container, pushing the bottom CTAs down and causing the entire popup window to scroll.

2   The contextual CTAs for the error are in the same style as the main popup CTAs.

Additional Generated Rows

Desktop

Notes

1 Additional rows are generated under certain conditions (ie: when an employee has sick leave during a rotation). The additional rows are not numbered and the first generated row will duplicate all the date from the row above it (the original numbered row) with the addtion of filling in the "Leave Reason" column. This duplicated row is unnecessary since it could be represented in the original row and have the "Leave Reason" filled in instead of blank.

Re-edit Row Assignment – Put Employee on LTA

Desktop

1 Popup scrolling bug when the content is updated and isn't necessary for scrolling the top header bar gets cut off and the popup gets stuck in this state.

2 The content displayed for different selections in the "Edit Type Assignment" dropdown isn't displayed in a bordered container like the default option. Lack contistant layout design.

One Time Schedule – Edit Template

Desktop

Infor Workforce Management

Workbrain Support

Home   Messages(6)   Timesheet   Maintenance   My Reports   Scheduling   My Approval   Supervisor Approval   Weekly Timesheet   Payroll Close Wizard   Time Off Approval

Scheduling > Multi-view Scheduler > One-time Schedule > OTS - Plot Shifts, Edit Row Details, Assignment

One Time Schedule

Template   PERF_OTS01

OTS Period

Edit   Cancel

0   6   0   3   0   0

Notes

1   Form is positioned in the upper left corner while the rest of the page is mostly unused and blank.

OTS – Edit Template
Desktop

Home   Messages(6)   Timesheet   Maintenance   My Reports   Scheduling   My Approval   Supervisor Approval   Weekly Timesheet   Payroll Close Wizard   Time Off Approval

Scheduling > Multi-view Scheduler > One-time Schedule > OTS - Plot Shifts, Edit Row Details, Assignment

One Time Schedule

OTS Name:	LPN 12HR-07/31/2017		Description:		Unit:	CARDIO
Template:	1 - 07/31/2017		# Rows:	8		
Start Date:	07/31/2017		End Date:	08/27/2017	Status:	READY

	Row	Job	Pln. FTE	Employee	Start Date	End Date	P/T	Leave Reason	Mon 07/31	Tue 08/01	Wed 08/02	Thu 08/03	Fri 08/04	Sat 08/05	Sun 08/06	Mon 08/07
	1	LPN	1.000	Frost, Emma	07/31/2017	01/01/3000			730D	730D	730D	730D				1930N
	2	LPN	1.000	Frost, Jack	07/31/2017	01/01/3000							1930N	1930N	1930N	
	3	LPN	1.000	St.Croix, Marius	07/31/2017	01/01/3000							730D	730D	730D	
	4	LPN	1.000	Power, Katie	07/31/2017	01/01/3000			1930N	1930N	1930N	1930N				730D
	5	LPN	1.000	Paris, Bennet du	07/31/2017	01/01/3000					730D	730D	730D	730D		
	6	LPN	1.000	Rolfson, Autumn	07/31/2017	01/01/3000			1930N	1930N					730D	730D
	7	LPN	1.000	Callasantos, Maria	07/31/2017	01/01/3000					1930N	1930N	1930N	1930N		
	8	LPN	1.000	Ramirez, Tomas	07/31/2017	01/01/3000			730D	730D					1930N	1930N

Book Offs   Relief Cells   Add Row   Copy Row   Edit LM   Edit Shifts   Validate   Save   Process   Queue   Print   Refresh

Job   Shift Coverage   Shift

	Display Label*	Effective-dated Changes	Description	Start Time	End Time	Activity Name
	730D		0730-1930	7:30 AM	7:30 PM	WRK
	1930N		1930-0730	7:30 PM	7:30 AM	WRK

Add Shift Label

Add

Notes

1 Breadcrumbs is visible but isn't on New Master Rotation screen even though both pages are similar in design and layout.

2 Delete and Split CTAs (trash and plus icons) are displayed once at the top of the list instead of repeated in each row like in the New Master Rotation screen.

3 CTAs are displayed in a different position compared to New Master Rotation screen even though several of the CTAs displayed in both.

OTS – Edit Row Assignment

Desktop

1 Clicking the edit CTA (pencil icon) opens the Edit Row Assignment popup in a new browser window instead of a popup element even though the content is the same compared to the edit popup in New Master Rotation.

Create New One Time Schedule

Desktop

Infor Workforce Management

Workbrain Support

Home   Messages(6)   Timesheet   Maintenance   My Reports   Scheduling   My Approval   Supervisor Approval   Weekly Timesheet   Payroll Close Wizard   Time Off Approval

Scheduling > Multi-view Scheduler > One-time Schedule > OTS - Create New One-Time Schedule

OTS Creation

Template*	LPN 12HR
Last Publish Date	08/27/2017
Last OTS Date	08/27/2017
OTS Start Date*	08/28/2017
# days in OTS*	28

Go   Cancel

Notes

1 Form is positioned in the upper left corner while the rest of the page is mostly unused and blank.

2 Whenever the system asks the user how long a rotation or schedule they want displayed it's either in number of days or number of weeks. For New Master Rotation its "Length in days", for Rotation Assignment (in Master Rotation) it's Number of Weeks and in One Time Schedule it's "# days in OTS". The unit of measurement used throughout the tool should be consistent (exceptions when necessary) and the language used to label these fields should be consistent as well.

OTS – Plot Shifts + Edit

Desktop

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infor Infor Workforce Management

Workbrain Support

| Home | Messages(6) | Timesheet | Maintenance | My Reports | Scheduling | My Approval | Supervisor Approval | Weekly Timesheet | Payroll Close Wizard | Time Off Approval |

Scheduling > Multi-view Scheduler > One-time Schedule > OTS - Plot Shifts, Edit Row Details, Assignment

One Time Schedule

OTS Name:	LPN 12HR-08/28/2017		Description:			Unit:	CARDIO
Template:	1 - 07/31/2017		# Rows:	8			
Start Date:	08/28/2017		End Date:	09/24/2017		Status:	UNPROCESSED

	Row	Job	Pln. FTE	Employee	Start Date	End Date	P/T	Leave Reason	Fri 08/25	Sat 08/26	Sun 08/27	Mon 08/28	Tue 08/29	Wed 08/30	Thu 08/31	Fri 09/01
	1	LPN	1.000	Frost, Emma	07/31/2017	01/01/3000						730D	730D	730D	730D	
	2	LPN	1.000	Frost, Jack	07/31/2017	01/01/3000			730D WRK	730D WRK	730D WRK					1930N
	3	LPN	1.000	St.Croix, Marius	07/31/2017	01/01/3000			1930N WRK	1930N WRK	1930N WRK					730D
	4	LPN	1.000	Power, Katie	07/31/2017	01/01/3000						1930N	1930N	1930N	1930N	
	5	LPN	1.000	Paris, Bennet du	07/31/2017	01/01/3000			1930N WRK					730D	730D	730D
	6	LPN	1.000	Rolfson, Autumn	07/31/2017	01/01/3000				1930N WRK	1930N WRK	1930N	1930N			
	7	LPN	1.000	Callasantos, Maria	07/31/2017	01/01/3000			730D WRK					1930N	1930N	1930N
	8	LPN	1.000	Ramirez, Tomas	07/31/2017	01/01/3000				730D WRK	730D WRK	730D	730D			

■ Book Offs   ■ Relief Cells   [Add Row] [Copy Row] [Edit LM] [Edit Shifts] [Validate] [Save] [Process] [Queue] [Print] [Delete] [Refresh]

| Job | Shift Coverage | **Shift** |

	Display Label*	Effective-dated Changes	Description	Start Time	End Time	Activity Name
	730D		0730-1930	7:30 AM	7:30 PM	WRK
	1930N		1930-0730	7:30 PM	7:30 AM	WRK

Add Shift Label

[ ] [Add]

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APPENDIX B:

Competitive Analysis

MVS Competitive Analysis

	Infor Nurse Scheduling Tool	Humanity	NurseGrid	Deputy	Homebase	Shiftboard	TrackSmart	When I Work
		Direct Competitors		Indirect Competitors				
Core Features								
Attendance Monitoring		✔						✔
Automated Scheduling		✔			✔	✔	✔	✔
Calendar Integration (Google Cal, iCal, Outlook, Exchange)								✔
Calendar Management			✔		✔	✔		
Cloud Platform			✔		✔	✔	✔	✔
Desktop App								
Drag-and-Drop				✔	✔			✔
Email integration (Gmail, Outlook, Exchange, Yahoo)								
Employee Database			✔		✔	✔		✔
Event Planning			✔					
GPS	✔							✔
In-App Messaging		✔	✔	✔	✔			
Leave / Vacation Tracking				✔	✔	✔		✔
Mobile Application		✔	✔	✔	✔	✔		✔
Report Builder		✔		✔	✔			
Report Viewing				✔	✔			
Responsive UI								
Schedule Templates								
Shift Scheduling	✔	✔	✔	✔	✔	✔	✔	✔
Third-Party Integrations		Address Book, Facebook, Google Apps		POS/Payroll providers, live weather feed		Payroll and HR Systems Integration		
Time Clock					✔			
Time Tracking/Timesheets		✔		✔	✔	✔	✔	✔
Web-based App	✔					✔		
Voice-to-Text								

MVS Competitive Analysis

Direct Competitors:

- Humanity
- NurseGrid

Indirect Competitors:

- Deputy
- Homebase
- Shiftboard
- TrackSmart
- When I Work

Direct Competitors

"Embrace Your Potential"

Website: http://www.humanity.com
Founded: 2014 (Crunchbase) / 2010 (LinkedIn Page)
Headquarters: San Francisco, California
Employees: 51 - 200
Social:
Facebook: https://www.facebook.com/humanityapp
Instagram: https://www.instagram.com/humanityapp/
LinkedIn: https://www.linkedin.com/company-beta/3798316/
Twitter: https://twitter.com/HumanityApp
YouTube: https://www.youtube.com/channel/UCT1yjbpgPhA4znXlHBlZykA

Overview:
The company launched its original shift scheduling platform in 2010 under the name "ShiftPlanning" and then rebranded as "Humanity," debuting it as a new platform in January 2016. With a starting price of $49 per month for up to 20 employees, Humanity is among the more expensive shift scheduling softwares in the market.

"Nurse scheduling for the 21st century."
"Scheduling and communication | For Nurses, By Nurses"

Website: http://www.nursegrid.com
Headquarters: Portland, Oregon
Founded: 2013
Employees: 11 - 50
Social:
Facebook: https://www.facebook.com/NurseGrid
Instagram: https://www.instagram.com/nursegrid/
LinkedIn: https://www.linkedin.com/company-beta/3319590/
Twitter: https://twitter.com/nursegrid

Overview:
Founded by nurse and physician technology entrepreneurs, NurseGrid set out to build a better way to manage time-consuming administrative tasks, giving nurses and nurse managers more time to focus on achieving work-life balance and delivering excellent patient care.

NurseGrid Mobile is a free mobile app used by over 240,000 nurses in thousands of hospitals to connect with their colleagues and manage their busy schedules on a calendar made just for them.

NurseGrid Manager is a web application that seamlessly integrates with NurseGrid Mobile and allows managers to simplify team communication, staffing, and schedule management, saving time and money and making their departments happier and more productive.

Indirect Competitors

"Love your business again."

Website: https://www.deputy.com
Headquarters: Surry Hills, New South Wales
Founded: 2008
Employees: 51 - 100
Social:
Facebook: https://www.facebook.com/deputyapp/
Google+: https://plus.google.com/+DeputyApp
LinkedIn: https://www.linkedin.com/company-beta/2451628/
Twitter: https://twitter.com/deputyapp
Vimeo: https://vimeo.com/deputy

Overview:
Deputy is a cloud-based workforce management solution that streamlines scheduling and modernizes the relationship with their employees.

Website: https://joinhomebase.com/
Headquarters: San Francisco, California
Founded: 2014
Employees: 11 - 50
Social:
Facebook: https://www.facebook.com/HomebaseHQ
LinkedIn: https://www.linkedin.com/company-beta/6464539/
Twitter: https://twitter.com/joinhomebase

Overview:
Homebase helps to reduce the administrative burden of hourly work by automating scheduling, timesheets, and communication between employees. The basic tools are free, with tiered pricing options for additional features.

"The Dynamic Scheduling System for staffing the best teams"

Website: http://www.shiftboard.com
Headquarters: Seattle, Washington
Founded: 2002 (Crunchbase) / 2005 (LinkedIn)
Employees: 11 - 50
Social:
Facebook: https://www.facebook.com/Shiftboard/
LinkedIn: https://www.linkedin.com/company-beta/235879/
Twitter: https://twitter.com/shiftboard

Overview:
Shiftboard provides online scheduling software (SaaS) to a broad range of business services and staffing companies, municipal governments, educational institutions, and non-profits. Shiftboard's customers conduct scheduling and people management operations around the globe. Shiftboard's software is web-based, can be launched on short timelines, serves from 25 to 100,000 users and is easy for workers to use.

Shiftboard's workforce management platform includes a robust, developer-ready API for interfaces to existing systems and content. Partners including ISVs, technology resellers, content providers and others

can leverage the Shiftboard platform for rapid expansion of product offerings, market footprint, and other business objectives.

Website: http://wheniwork.com
Headquarters: Minneapolis, Minnesota
Founded: 2010
Employees: 101 - 250
Social:
Facebook: https://www.facebook.com/wheniwork
Twitter: https://twitter.com/wheniwork
LinkedIn: https://www.linkedin.com/company-beta/1106813/

Overview:
When I Work is an employee scheduling and communication app using the web, mobile apps, text messaging, social media, and email. The program provides a powerful tool for employers to communicate with employees and ensure schedules are properly communicated.

APPENDIX C:

User Interview Script / Moderator's Guide

Multi-View Scheduler (MVS)
Interview Guide

August 7- August 11, 2017 | Round 1
August 14 - August 17, 2017 | Round 2

MVS Team

Brian Chui, MVS Business Analyst

Mary Curren, H&L UX Researcher

Angela Fagg, H&L UX Designer

Lenya King, H&L Senior UX Designer

Alexander Kress, MVS Lead Developer

Isha Shukla, H&L UX Team Lead

Overview:

Infor MVS (Multi-View Scheduler) is a platform for Scheduling Managers and other staff with similar responsibilities.

As a first step in the design process, Hook & Loop is conducting a usability study of MVS, primarily to learn the process of creating master rotation schedules and assigning staff to shifts. We will be observing end-users complete tasks on the application, while capturing time-on-task, task completion rate, error rate and ease-of-use metrics.

The insights from this study will help expose user pain points and challenges, fueling an informed design process.

Testing Plan

The usability session will be a one-hour Webex session conducted on the live application with Scheduling Managers in the healthcare space.

FEATURES COVERED IN TESTING:

- Master Rotation Scheduling
  - Plotting Shifts
  - Changing Shifts
- Assigning staff members to a shift
- One-time scheduling

KEY GOALS OF TESTING:

QUALITATIVE

- Preliminary interview questions to learn about roles, responsibilities and process.
- Observations of user pathways through each task
- Think-aloud feedback on tasks

Moderator's Guide:

INTRODUCTION

Thank you for participating in our feedback session for Workforce Management. To kick things off, I'd first like to ask you a few questions about your job and the scheduling process for the State of South Dakota. Then for the last 30 minutes, we were hoping you could share your screen to show us how you use Workforce Management for your scheduling needs. Essentially, we want to understand how the system is currently used, and look for areas of improvement.

We would also like to record this session if that is okay with you. The recording is only for our own internal note-taking purposes and won't be shared outside of our small team.

Do you have any questions before we get started?

PARTICIPANT INFORMATION

- Tell us a bit about what you do at your organization?
- *How long* have you been using MVS?
- *What* do you use MVS for?
- *Who* are you scheduling?
- Are you responsible for creating new shift rotations?

IF YES,

- *How often* do schedule shifts at your organization?
- What is the standard length of a rotation in your organization?
- How do you go about creating a shift rotations in your organization?
  - What information do you need to create shift rotations?
- What are the different types of issues you encounter when scheduling staff, if any?
- Is a master rotation created for the entire organization or do different **units** have their own rotations?

TESTING SCRIPT

Now we're going to shift gears a bit and have you open up MVS and share your screen [Quick Start tab > Share Screen icon]

We would love for you the think-aloud to the best of your ability while showing us some the system. Since this project aims to improve the usability of MVS hearing your honest reactions will be a big help to us, so please know you're in a safe space to be as candid as you would like.

Task Scenario 1 | Creating a new master rotation

- How do you create a new master rotation?

Task Scenario 2 | Plotting Shift Patterns

- How do you plot shift patterns in your rotation?
  - How would you look-up a shift from the available shifts for your department?

Task Scenario 3 | Assigning Shifts

- How do you assign staff to a shift?

Task Scenario 4 | Making Changes to Shift Rotation

- How do you make changes to a shift rotation?
- What are the reasons you would need to make a change to a rotation?
    - How do you communicate to the scheduled staff if there is a shift change?
- How do nurses ***drop or pick-up a shift?***
    - ***Would that happen in WFM? Where?***

CLOSING QUESTIONS

- What are some of the challenges you currently face scheduling staff at your organization?
- Would you be open to participating in another usability session with some MVS re-designs in the near future?

APPENDIX D:

Affinity Diagram

Load Time	Communications – Taxonomy	Communications – Notifications	User Role – Nurses	MANAGER: Information Needed to Schedule
Slow load time	Naming conventions not readable – lack of details shown in list views	special days off = word of mouth	No access for individual employees	Need to see level of employee to schedule
Reports take too long to run	Nomenclature is confusing	error notifications are not clear	QH wants nurses to self-schedule	Need to see how many people in what position need to be scheduled
Slow System	Job coverage vs. shift count	No confirmation notifications	Nurses still refer to printed schedules & don't have a way of accessing MVS platform	Need to know who is available (isn't working/enough time lapses)
Publishing/editing rotations can take up to a day	Various ways of measuring time – # of weeks vs. # of days	No system notifications		Schedulers need to see labor metrics clearly when plotting shifts
Opening multiple tabs in same session can cause a system error. Users need to open a new window and login again.	Name shift based on location, time	System doesn't keep log of last changes made by user or other users – hard to tell where you last left off		Can't see more than one rotation at once
Long lists are slow to load	Each org has own method of naming shifts			Employees scheduled based on contract
System times out before data can run				Color code shifts to indication location of shift
				Have to copy & paste labor metrics for each line, even if same for all employees
				Number of people in shift changes week to week
				Typically needs to schedule four weeks at a time/want to see four weeks

Manager Responsibilities	Usability Observations	Inefficient Workflows – Navigation	Inefficient Workflows	Inefficient Workflows – Different Methods of Backfill Shifts
Manager schedule shifts daily	One user got confused, someone else took over	Must leave MR to assign shift then return	Lots of clicks to do certain things (ex. "turn on shift plotting" link, click tiny icon, etc.	Varied methods of scheduling employees to shifts
QH negotiations with nurses to fill unwanted shifts	Lots of background whispering to help participant		Too many steps to complete each (some) task	PHSA "Employee Pool"
Schedule needs to be accurate (it affects pay)			Lots of repetitive tasks (c&p labor metrics)	QH "Relief Queue"
			Creating, assigning, booking off and selecting from relief queue flows are broken up	S of S.D. "Needs List"
			Must go outside system to find nurse to pick up shift – can be lengthly process	PHSA "Employee Pool" QH "Relief Queue" S of S.D. "Needs List"

Inefficient Workflows – Inefficient Dropping/Picking-up	Excel Dependency	Misc. Usability Issues	Usability Issues – Sizing	Heuristic Evaluation – Master Rotation
Employees call/email to drop shift	Users have to rely on Excel to view all schedules because MVS doesn't support need; can view multiple units in Excel, not MVS	Too many modal windows	Icons are too small	MR shift table doesn't display enough info about shift to prevent errors like overlap.
Nurses call/text each other to pick up / drop shifts	Often department will create schedule then IT will input into system	System doesn't update shift need counts in real-time. User has to click save.	Some text is too hard to read (too small)	In MVS, can't view 24 hr schedule at once
Manager has to update if people drop or pick up shifts	Excel spreadsheets are still widely used in shift scheduling process	Need to keep all rotations open shifts up and refresh to remain accurate.	Hard to read	Screen real estate in MR screens
Look at relief queue to schedule open shifts	Excel document used to view staff member's schedule	Struggled with team lookup		Lots of scrolling
Call list 100's of items long – time consuming		Not optimized for laptop sized screens even though some users work from home on laptops		Multiple panels in MR view is jarring UX
		Unable to view entire shift on full screen		
		Not enough relevant content visible on screen		

Heuristic Evaluation – Shift Creation	Heuristic Evaluation – Plotting Shifts
Shift labels can't be created by users; JIRA ticketing = slow turnaround	Assigning & plotting shifts is time consuming
Can't edit/delete shift after creation	No easy (if any) ability to make changes on multiple shifts.
It's rare for schedulers to make changes to Master Rotation once created	Plotting shifts requires"turning off" shifts and selecting icon first.
Shift creation doesn't happen often	
Once Master Rotation template has been saved, it can't be deleted or edited	

APPENDIX E:

Insights & Recommendations

MVS Usability Insights and Recommendations

Key Insight	Recommendation
USABILITY ISSUES	
Too many modal windows	Simple tasks can be reworked to be inline components that are displayed when certain conditions are met (ie: editable fields in shift rows and copying shifts for rows)
System doesn't update shift need counts in real time. User hase to click 'Save' in order for system to update	Need counts should be recalculated whenever there's an update to a table cell being counted
Need to keep all rotations open shifts up and refresh to remain accurate.	System should display updated information in real-time without needing to refresh page
Interface is not optimized for laptop sized screens even though some users work from their laptops at home.	Interface should be responsive for a wide range of screen sizes including mobile, tablet, laptop, desktop and large displays
Unable to view entire shift at full screen	Interface should be responsive for a wide range of screen sizes including mobile, tablet, laptop, desktop and large displays
Not enough relevant content visible on screen	Evaluate what information is the most important to display to the user in each scenario
Icons are too small	Icons that are used as CTAs need to be big enough for user to be able to interact with them. Icons should also scale in size relative to the screen's size.
Some text is too small and hard to read	Provide a setting for the user to adjust the font size.
MASTER ROTATION	
Shift table doesn't display enough info about shift to prevent errors (ie: overlap)	Displaying the start and end times of the shift in each cell will let the user know when shifts are covered and therefore will minimize overlap
Can't view 24 hr schedule at once	Provide an Hour View for users when plotting shifts
Screen real estate in master rotation screens causes excessive scrolling	Determine which fields are most important for each row and minimize how much horizontal real estate each row takes up
Having multiple panels displayed on the same screen makes the experience very jarring	Consolidate information so user doesn't have to manage multiple views at the same time and have to multitask.
SHIFT CREATION	
Shift labels can't be created by users and instead have to use the JIRA ticketing system.	Provide a user role with permissions that allow for shift creation OR let users manually plot shifts using custom time ranges
Can't edit/delete a master rotation shift after creation	It was mentioned that the ability to delete ACTIVE master rotations could be a payroll/HR issue so providing a way to archive non-ACTIVE master rotations could solve this; keeping the data in the system but removing it from the list of other master rotations and reducing clutter in the UI
It's rare for schedulers to make changes to Master Rotation once created	Reordering how this item is displayed in global nav based on how often it's utilized by the user.
Shift creation doesn't happen often	Some organizations don't create shifts too often and may benefit from a way to quickly access shifts they used the most
Once Master Rotation template has been saved, it can't be deleted or edited	It was mentioned that the ability to delete ACTIVE master rotations could be a payroll/HR issue so providing a way to archive non-ACTIVE master rotations could solve this; keeping the data in the system but removing it from the list of other master rotations and reducing clutter in the UI
PLOTTING SHIFTS	

MVS Usability Insights and Recommendations

Key Insight	Recommendation
Assigning & plotting shifts is time consuming	Optimize the UI so it's more of a seamless experience will speed up the amount of time the user spends on each tasks; minimizing number of modals, consolidating tables and panels, system messaging and communication, etc
No easy (if any) ability to make changes on multiple shifts.	
Plotting shifts requires"turning off" shifts and selecting icon first.	Toggle components should not be styled as hypelinks. Refer to Soho guidelines for proper use of toggles

APPENDIX F:

Personas

Rachel Williams

Bio

Rachel's primary objective at work is to maintain shift schedules for the 8 rotations she is responsible for. She generally schedules the bulk of shifts monthly for four weeks at a time, but everyday there is someone dropping a shift for personal reasons. This requires Rachel to stay up to day and quickly find nurses to pick up available shifts. Not being able to keep up with her job has implications on finances and patient care.

"A quotation that captures this user's personality."

Goals

- Main accurate scheduling so it does not affect nurse pay
- Schedule shifts quickly and efficiently
- Fill unwanted shifts with successful negotiations with nurses

Age: 40
Work: Nurse Manager
Location: South Dakota

Frustrations

- Challenges in finding nurses to fill open shifts
- Duplicating work
- Having to spend additional time on a task because of technology

Frequency of Tools Used

(Low to High)

Infor Workforce Management

Excel

Text

Phone calls

Email

Information Needed

For Scheduling Shifts

1. Level of Employee (Position/Rank)
2. How many people need to be scheduled for given shift and in which roles (position)
3. Who is available to work (Hasn't worked recently and enough time has lapsed between last shift)
4. Labor metrics for each employee or contract hours
5. Need to see multiple rotations at once
6. Need to be able to identify location of shifts
7. Open shifts (nearest to furthest)
8. Shifts for up to four weeks at a time

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