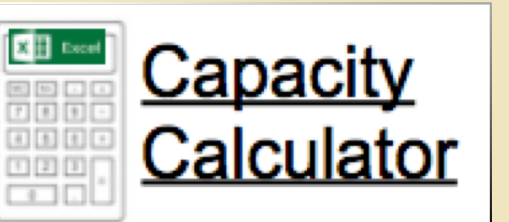
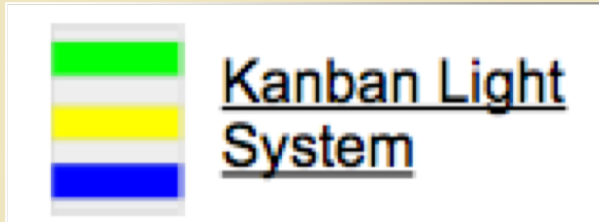
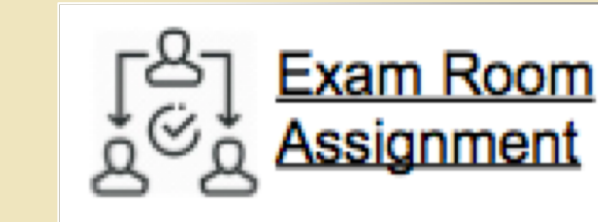
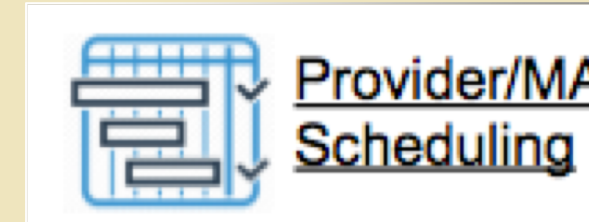
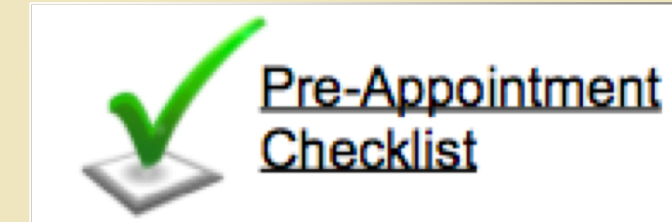


## Research Objective & Scope:

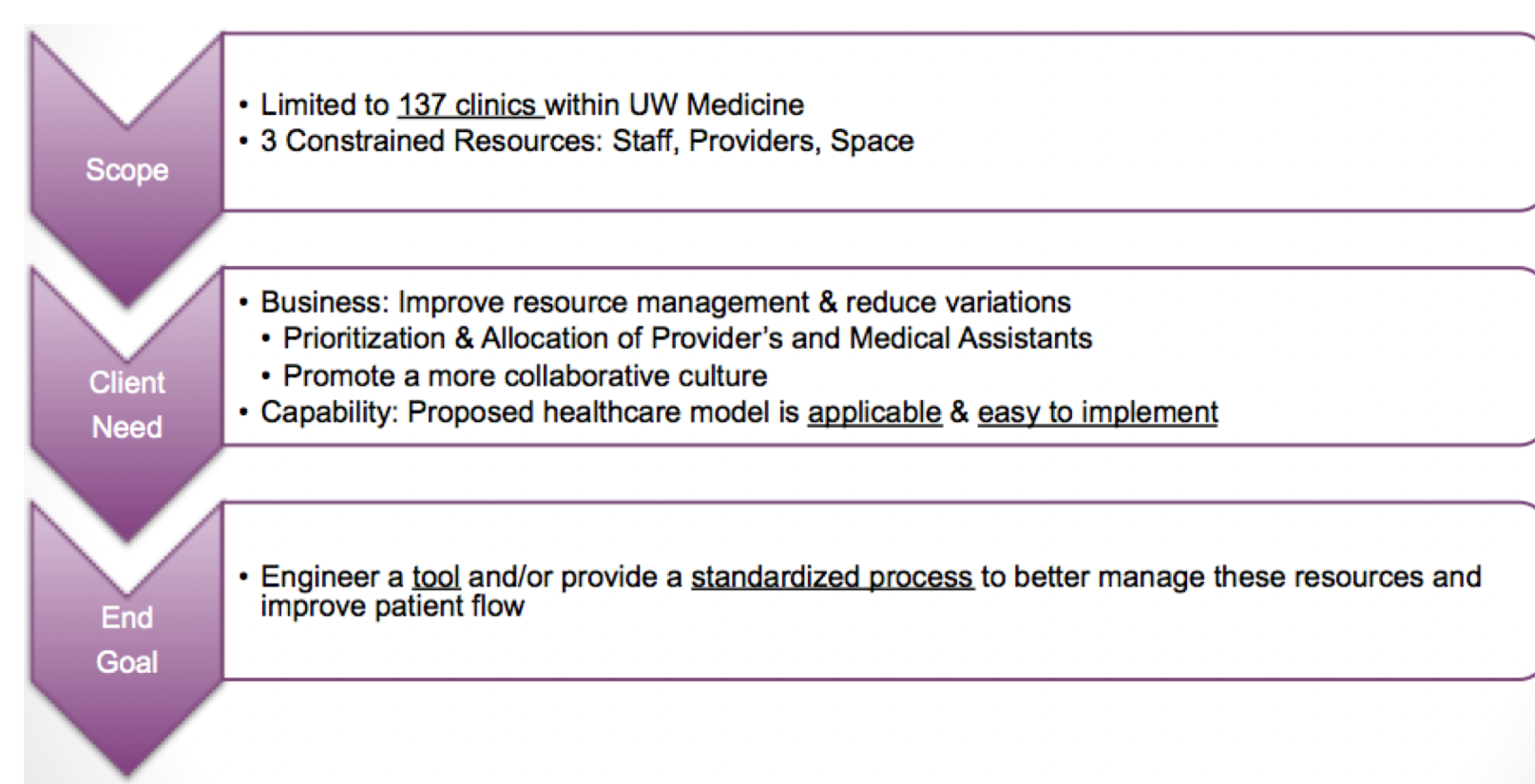
Develop a tool or a standardized process to help effectively and efficiently manage three main resources in clinic operations: Staff, Providers and Space while maintaining a high applicability rate for all 137 clinics and improving patient flow.

## Proposed Solutions:

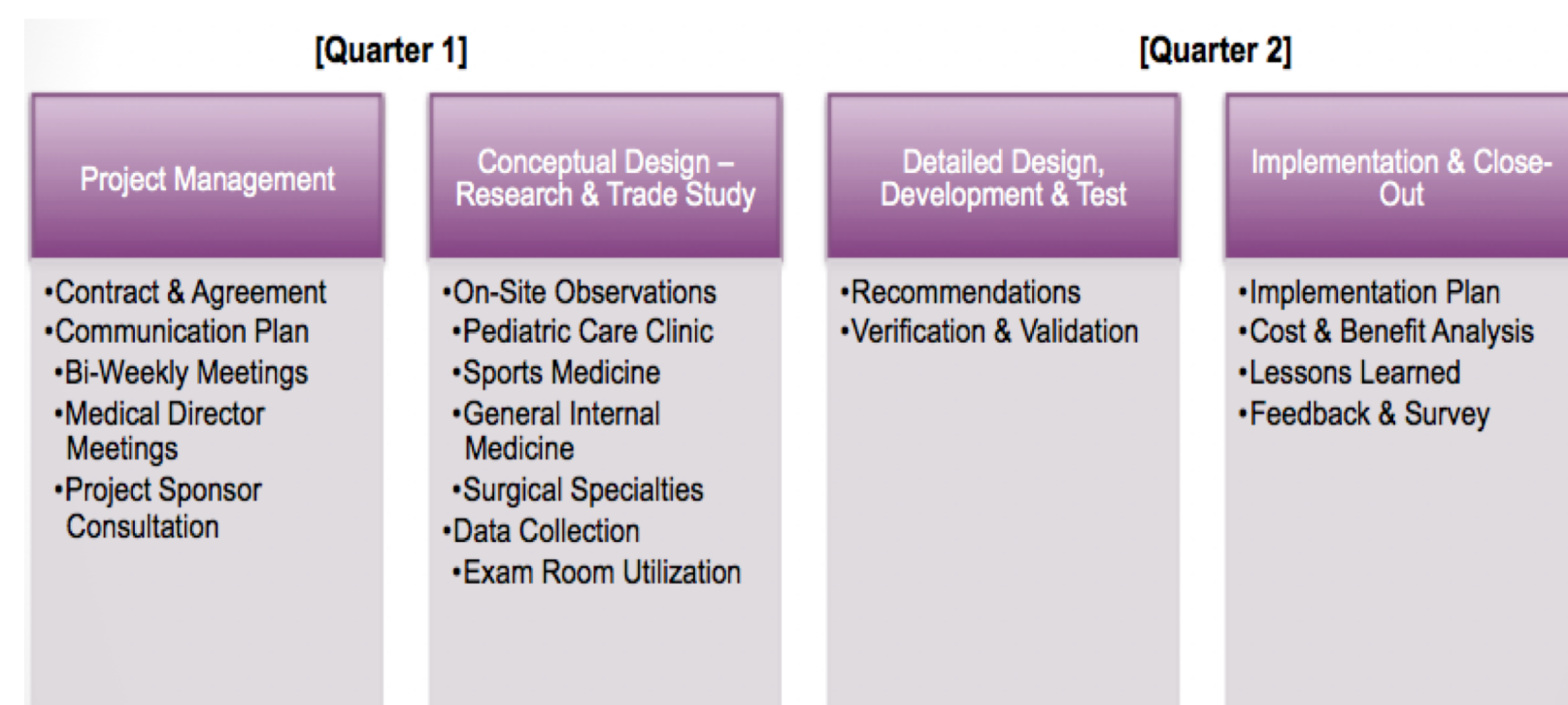


## Background

### Project Overview



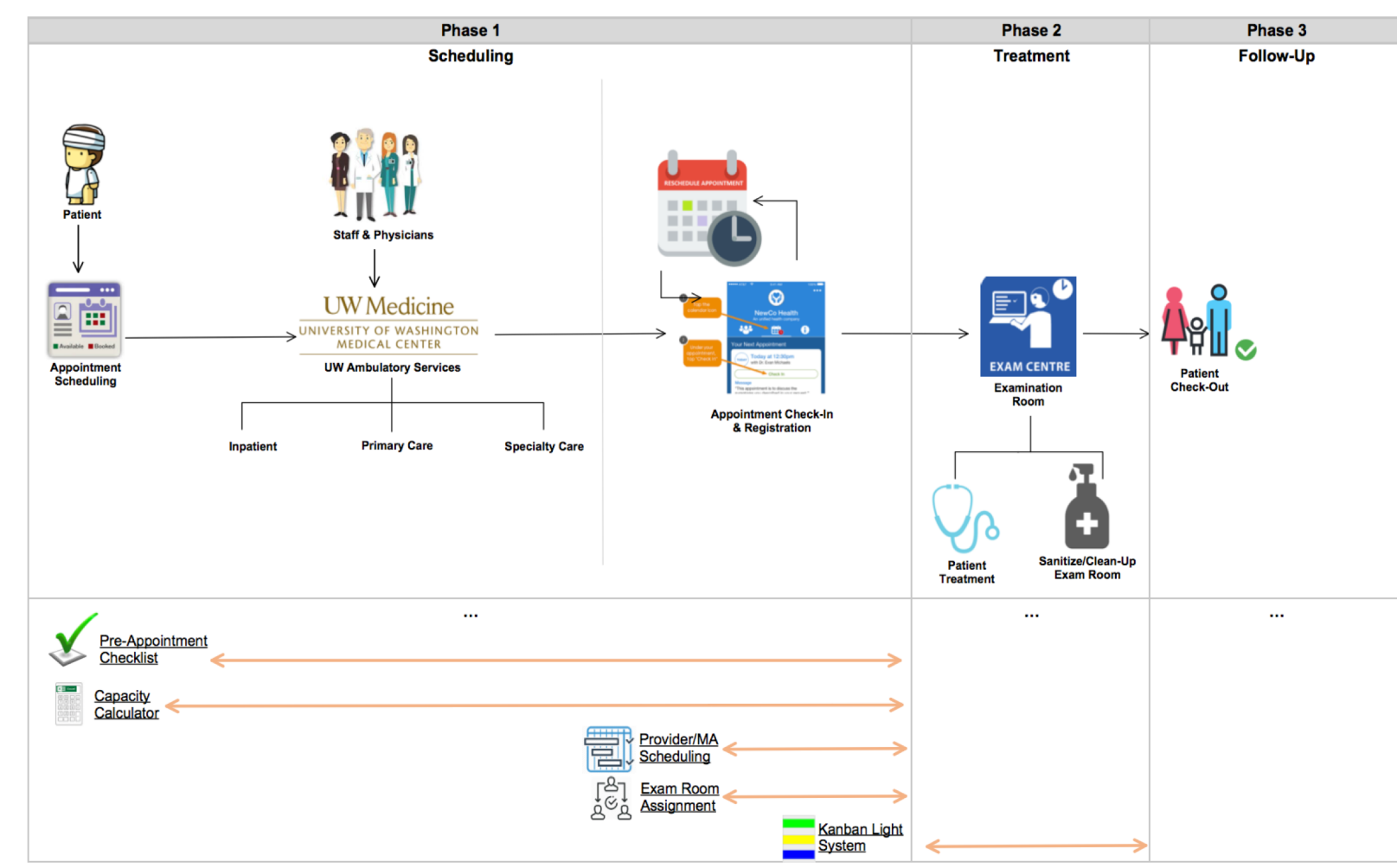
### High-Level Project Structure



### List of General Assumptions

- Provider and MA shifts assigned are consistent
- Clinic statistics are accurate and reflect standard operations of UWMC
- MA to provider ratio is consistent across all clinics
- No overtime for Staff and Providers
- Staff and Providers are expected to utilize all of their FTEs

### Functional Diagram - Proposed Implementation



## Main Recommendations: Development & Test

### Capacity Calculator

**About:** Pre-determined formulas set in place that only requires user input of past clinic data to calculate

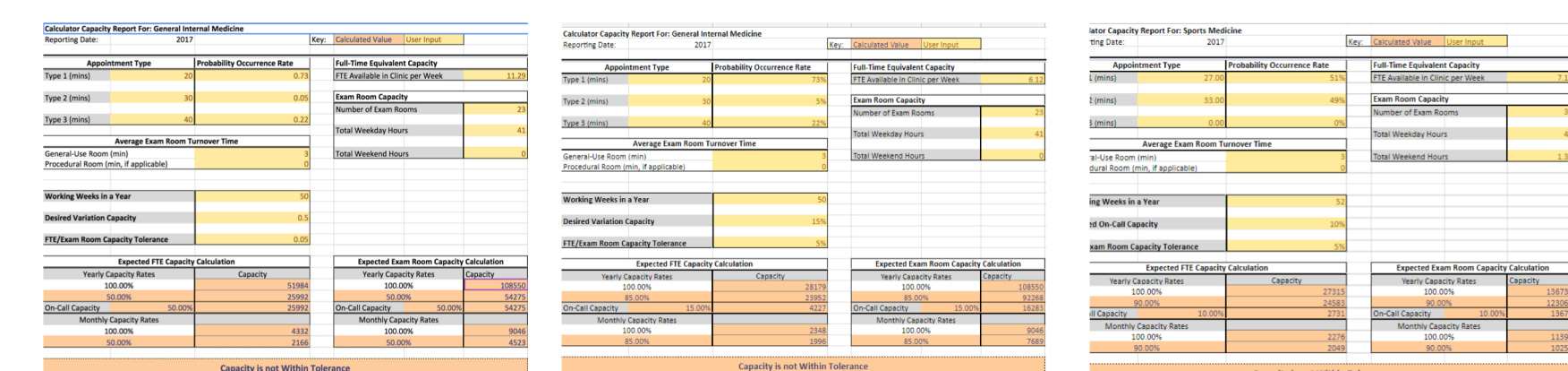
- FTE & Exam Room capacity
- Monthly/yearly basis
- Within 0-10% tolerance

**Business:** Quantitatively measure clinic resource utilization

**Capability:** Easy to navigate

**Verification:** Tested user input data from other clinics

- General Internal Medicine: predicted value is 3% higher than past value
- Sports Medicine: predicted value is 11% higher than past value



### Exam Room Assignment

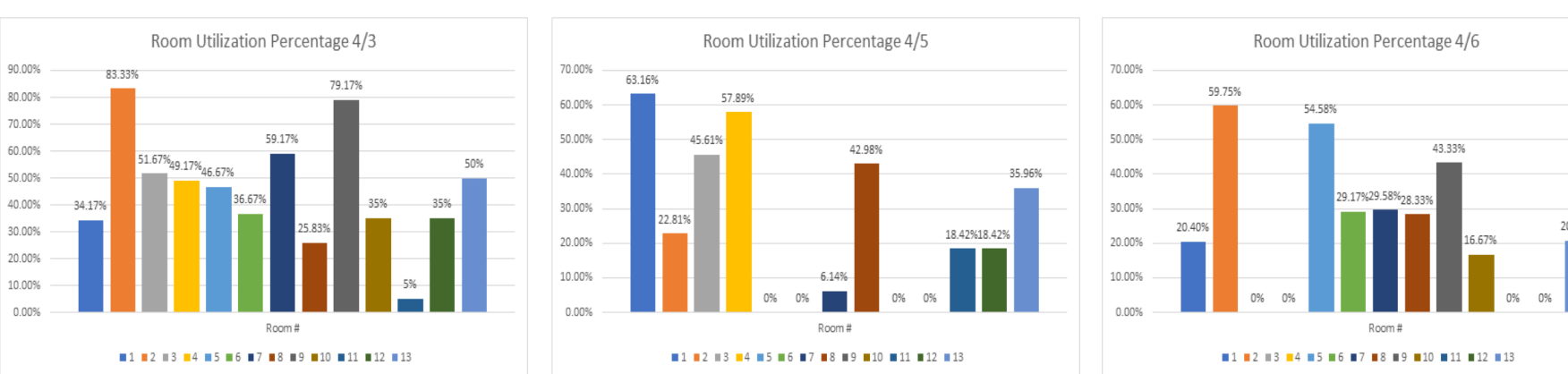
**About:** Based on providers busiest one-period of appointments

- Assigned in the morning on a daily basis

**Business:** Improve level-load utilization of exam rooms

**Capability:** Provide a new standard across all clinics

**Verification:** Pediatric Care Clinic sample data results illustrates uneven distribution of room utilization over the 3 different days of observations



## Recommendations

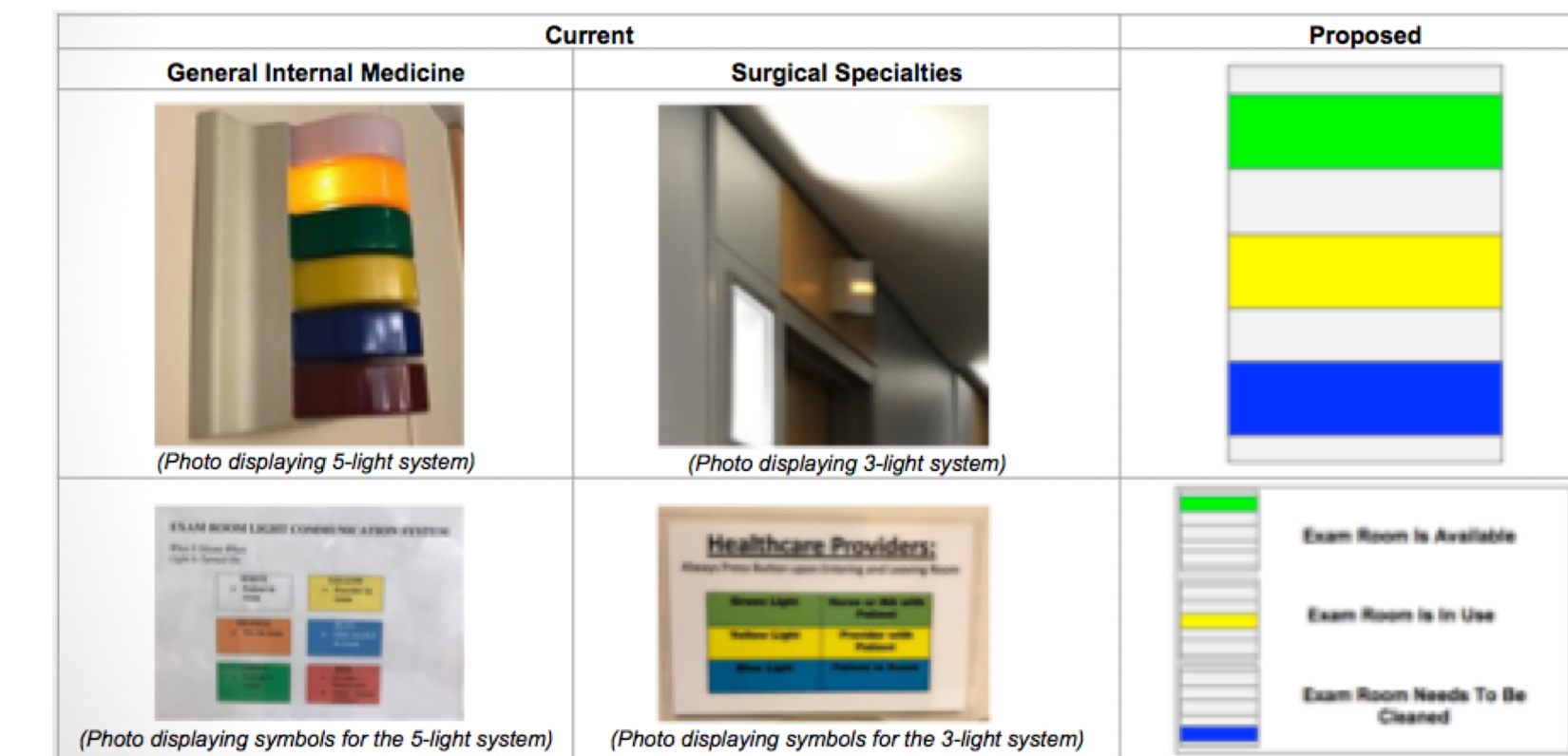
### Kanban System for Exam Room Status

**About:** Visual signals defined to indicate exam room status

**Business:** Reduce complexity & improve exam room turnover rate

**Capability:** Provide a standard across all clinics

- Classic Card System - accommodate for less technologically advanced clinics
- Epic System - simplify current process



### Patient Appointment Checklist

UW Medicine | eCare

Welcome!

Chanel Messaging Visits Health Billing

Appointments and Visits

Schedule an Appointment

**About:** Transitions paperwork to an online process

- Must be completed prior to patient appointment
- Enable easy access to medical info. for patients
- Centralize information storage via cloud
- Digital paperwork can be accessed through Kiosks or mobile app
- Encourage more patients to sign-up for e-care

**Business:** Streamlines paperwork process, increase provider-patient time & improve overall patient flow

**Capability:** Increase utilization of e-care for clinics and patients

### Off-Days Provider Scheduling

**About:** Prioritization model for off-day scheduling

- Determine on 6-week basis

**Business:** Reduce provider off-days variability

- Prioritize by need then seniority

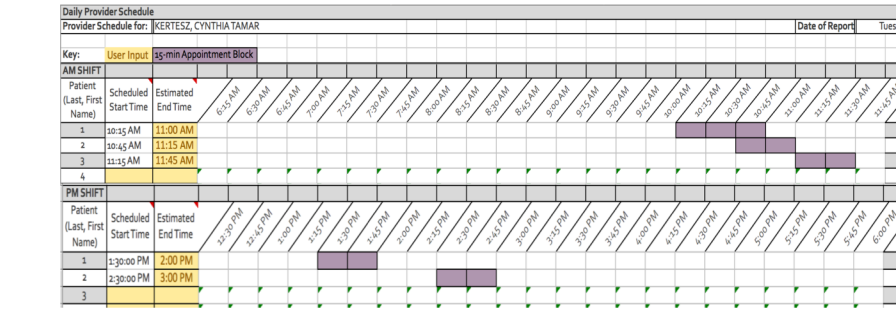
**Capability:** Provide a new standard across all clinics

### Daily AM/PM Provider's Patient Schedule

**About:** Pre-determined coding commands that simultaneously draw provider's patient appointment by reading user input

**Business:** Increase productivity in morning huddles, efficiency & coordination with MA's

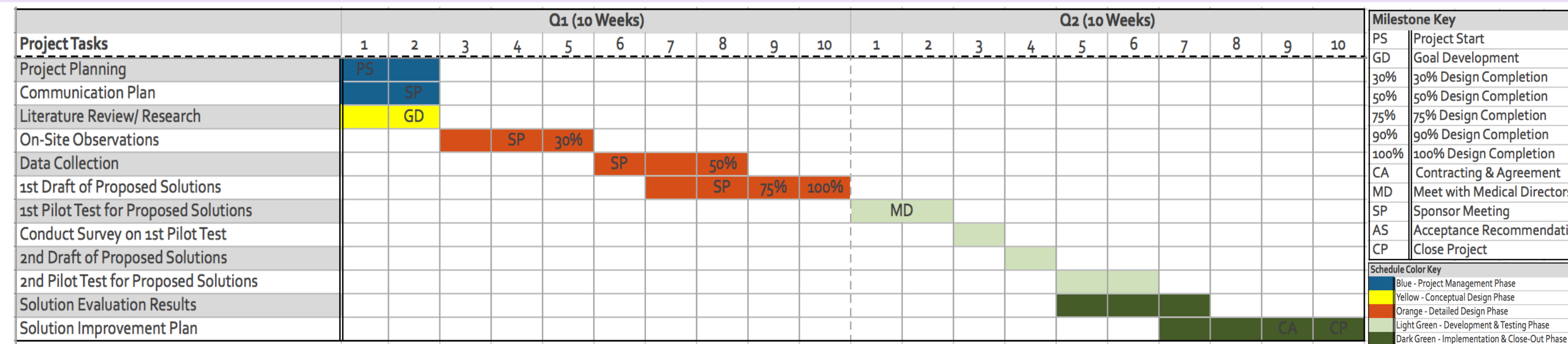
**Capability:** Quick & easy method to visualize appointments in 15-minute blocks



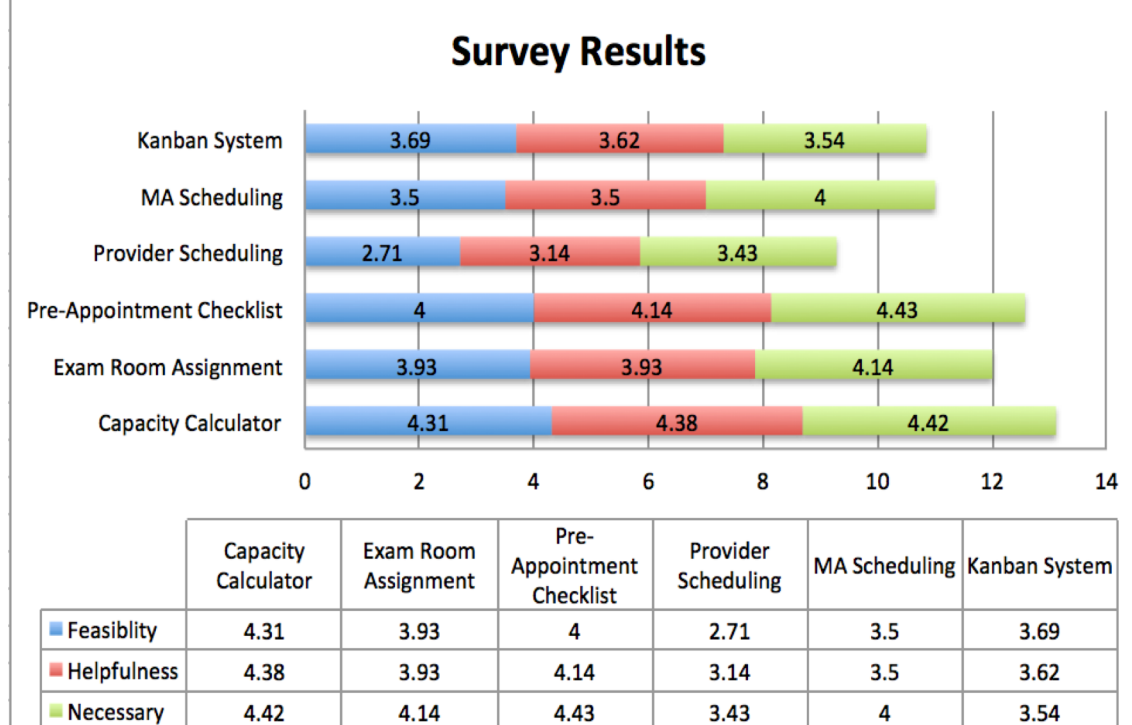
## Proposed Project Schedule

### Lessons Learned

To conclude our research, it is recommended that future consultants follow our proposed project schedule. Illustrated in the diagram to the right are the key milestones defined for the next iterations.



## Results



To gauge our client's satisfaction with our recommendations, a survey was conducted in 3 areas to measure its feasibility, helpfulness and necessity.

## Lessons Learned

### Communication

- Need to provide a project summary that lays out clear and specific objectives to the clinics selected for on-site observations
- Need a quicker follow-up response to schedule on-site observations because our hesitation delayed our progress

### Trade Studies

- Not enough time allotted for data collection and on-site observations due to time constraint and communication issues
- Discrepancies in our data collection were realized after the fact concerning the exam room status from black to other colors. However, we decided to keep our data to represent the general distribution of exam room utilization to avoid having to discard all data

## Acknowledgements

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