

**MICHIGAN STATE**  
**UNIVERSITY**

# Project Plan

## SLA Management and Metric Reporting System

### The Capstone Experience

Team Spectrum Health

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Spring 2013



*From Students...  
...to Professionals*

# Project Overview

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- Metrics ensure business objectives are met
- System for defining, approving, tracking, reporting, and displaying metrics
- Many different types of users use system
- Leadership reviews color-coded scorecards
- Needs to be flexible to accommodate changing business objectives and processes



# Functional Specifications

- Manage Metrics
  - Add, remove, update
  - Metrics can have multiple measures
  - Metrics can belong to multiple scorecards
- Enter Monthly Data
  - Add, remove, update
  - Collect comments for yellow and red values
- Manage Scorecards
  - Add, remove, update, view
- Issues Log
- Control Permissions



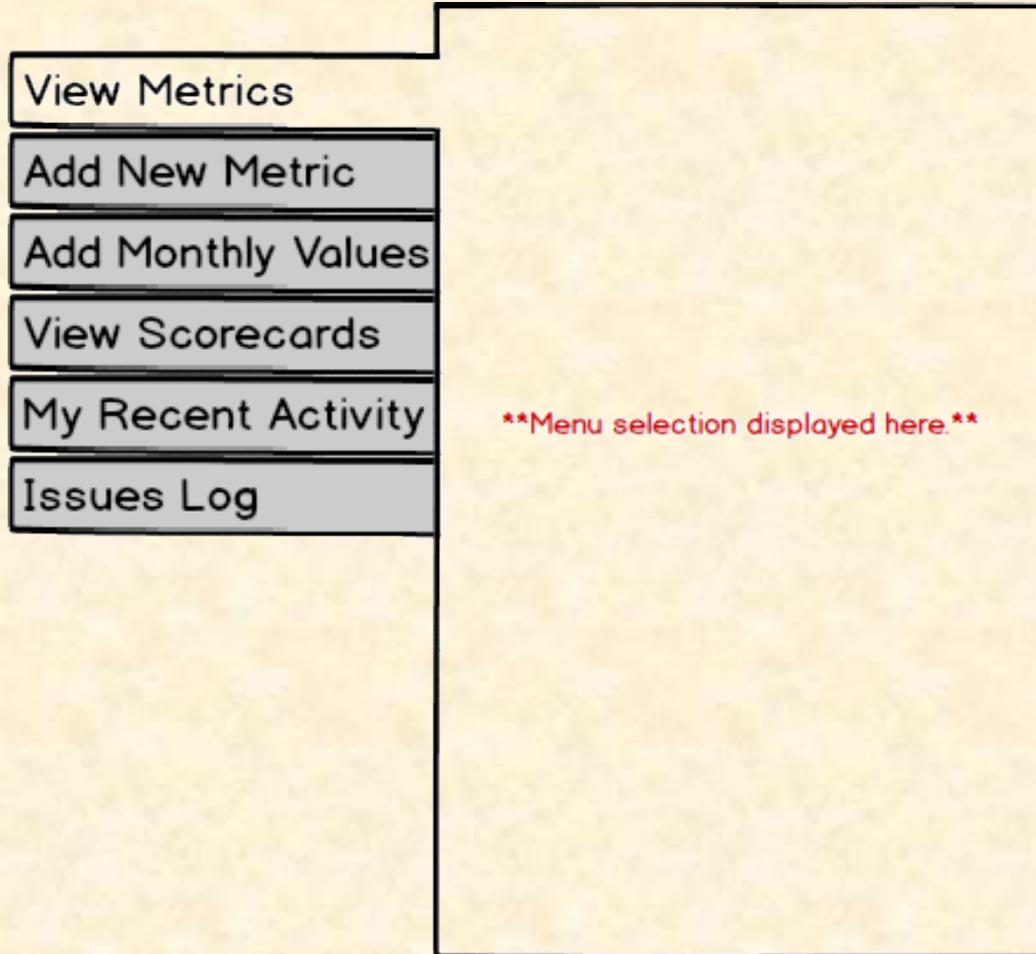
# Design Specifications

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- Navigation bar on every page
- Add, remove, update from one page for metric definitions, monthly values, scorecards
- Monthly value entry form detects value's color, collects comments if necessary
- Color-coded scorecard display with options to display comments and change scope
- Recent user activity page
- Sort and exclude options for issues log



# Screen Mockup: Navigation Bar



# Screen Mockup: View Metrics

## Add New Metric

**All Metrics**

Metric ID	Service Component	Metric Name	Owner	Effective Date	Actions
M100	financial	Metric ABC	Owner A	01-01-2013	<input type="button" value="Update"/> <input type="button" value="Delete"/>
M104	financial	Metric ADF	Owner B	09-20-2012	<input type="button" value="Update"/> <input type="button" value="Delete"/>
M002	operational	Metric XYZ	Owner A	06-23-2014	<input type="button" value="Update"/> <input type="button" value="Delete"/>
M844	project	Metric FFA	Owner A	04-21-2013	<input type="button" value="Update"/> <input type="button" value="Delete"/>
M333	relationship	Metric AAW	Owner C	05-27-2013	<input type="button" value="Update"/> <input type="button" value="Delete"/>

**Add Metric**

active  
 inactive  
 draft  
 normal  
 auto  
 obsolete

financial  
 operational  
 project  
 relationship

tier 1  
 tier 2  
 tier 3  
 tier 4

number  
 range  
 percent  
 tier

BSC  
 PH  
 SMDG  
 SMI3

\*\*Blank form with the same form fields above is appended to the bottom of the page\*\*

\*\*Upon clicking update, the metric definition is updated in the database\*\*

**All Metrics**

Metric ID	Service Component	Metric Name	Owner	Effective Date	Actions
M100	financial	Metric ABC	Owner A	01-01-2013	<input type="button" value="Update"/> <input type="button" value="Delete"/>
M104	financial	Metric ADF	Owner B	09-20-2012	<input type="button" value="Update"/> <input type="button" value="Delete"/>
M002	operational	Metric XYZ	Owner A	06-23-2014	<input type="button" value="Update"/> <input type="button" value="Delete"/>
M844	project	Metric FFA	Owner A	04-21-2013	<input type="button" value="Update"/> <input type="button" value="Delete"/>
M333	relationship	Metric AAW	Owner C	05-27-2013	<input type="button" value="Update"/> <input type="button" value="Delete"/>

**Add Metric**





# Screen Mockup: Add Scorecard

All Scorecards

Scorecard	Action		
BIC	View	Update	Delete
PH	View	Update	Delete
SHDS	View	Update	Delete
SHIS	View	Update	Delete
ZZZ	View	Update	Delete

**New Scorecard**

New Scorecard

Scorecard Name

Scorecard Owner

Number of Metrics

**Add Metrics**

**Submit**

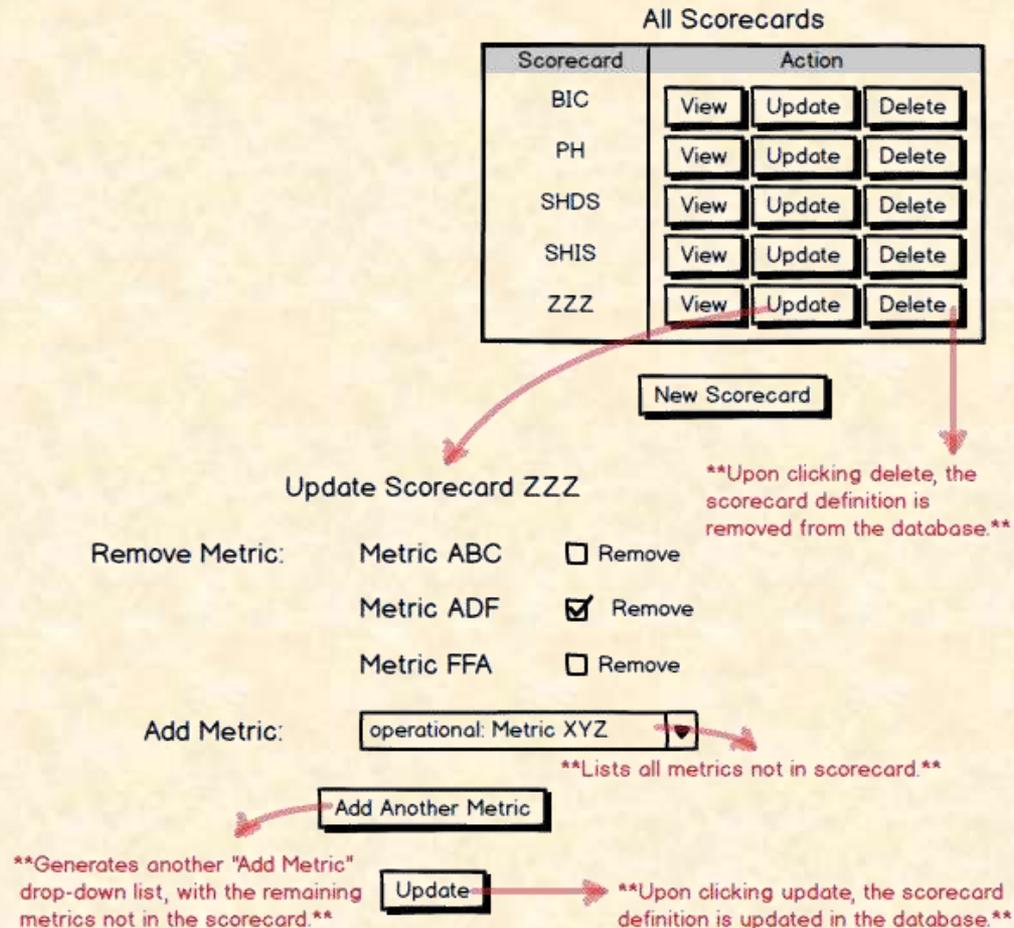
**\*\*This number is used to generate an appropriate amount of drop-down lists of metrics.\*\***

**\*\*A metric can only be selected in one drop-down list.\*\***

**\*\*Upon clicking submit, the scorecard definition is added to the database.\*\***



# Screen Mockup: Update Scorecard



# Screen Mockup: View Scorecard

All Scorecards

Scorecard	Action		
BIC	<input type="button" value="View"/>	<input type="button" value="Update"/>	<input type="button" value="Delete"/>
PH	<input type="button" value="View"/>	<input type="button" value="Update"/>	<input type="button" value="Delete"/>
SHDS	<input type="button" value="View"/>	<input type="button" value="Update"/>	<input type="button" value="Delete"/>
SHIS	<input type="button" value="View"/>	<input type="button" value="Update"/>	<input type="button" value="Delete"/>
ZZZ	<input type="button" value="View"/>	<input type="button" value="Update"/>	<input type="button" value="Delete"/>

ZZZ Scorecard

Change scope:  to

**Financial**

Metric Name	Metric ID	Measure ID	Measure	Target	Jan 2013	Feb 2013	Mar 2013	Apr 2013	May 2013	Jun 2013
Metric ABC	M.100	F123	Measure DEF	>90.0% but < 99.9%	89.9%	90.4%	40.5%	95.5%	60.4%	95.1%
Metric ADF	M.102	F199	Measure AAA	>0.0% but <= 4.0%	3.9%	20.5%	2.5%	0.4%	5.5%	6.6%
		F200	Measure BBB	>95.0%	93.5%	85.0%	68.3%	95.1%	96.8%	99.4%

**Metric ABC, Measure AAA**

Comments: AAA was not met because of this reason. \*\*Comments are displayed for this measure because it did not meet its target value.\*\*

Remediation: Fix this problem.

Planned Activities: Assign three workers to fix the problem.

**Project**

Metric Name	Metric ID	Measure ID	Measure	Target	Jan 2013	Feb 2013	Mar 2013	Apr 2013	May 2013	Jun 2013
Metric FFA	M.844	P009	Measure YYX	>85.7% but < 100.0%	79.3%	80.9%	95.0%	90.3%	97.7%	65%
		P010	Measure XXY	>97.0% but < 100.0%	88.8%	91.7%	70.0%	85.0%	99.5%	95.4%

**Metric FFA, Measure YYX**

Comments: YYX was not met because of this reason.

Remediation: Fix this problem.

Planned Activities: Assign three workers to fix the problem.

**Metric FFA, Measure XXY**

Comments: XXY was not met because of this reason.

Remediation: Fix this problem.

Planned Activities: Assign three workers to fix the problem.

Select All  
 Comments  
 Comments

*\*\*User can view data from other months.\*\**

*\*\*Like metrics are grouped together.\*\**

*\*\*If this checkbox is checked, comments for the measure are displayed below these comments here.\*\**



# Screen Mockup: My Recent Activity

## My Recent Activity

### My metric definition updates:

**\*\*All of the user's metric definition updates are listed here with links to update the metrics.\*\***

### My metric data updates:

**\*\*All of the user's metric data updates are listed here with links to update and delete the entries; these update and delete links disappear after the 10th of the month.\*\***

### My scorecard definition updates:

**\*\*All of the user's scorecard definition updates are listed here with links to update the scorecards.\*\***

### My issues log updates:

**\*\*All of the user's issue log updates are listed here with links to update and delete the entries.\*\***



# Screen Mockup: Issues Log

Issues Log

Sort by: Priority - High to Low ▼

Only show:

Priority

high

medium

low

Status

complete

hold

WIP

not started

Due Date

//

to

//

Metric ID

M.002 ▼

Metric Name

Metric ABC ▼

Contact Name

Contact 1 ▼

Metric ID	Metric Name	Issue	Actions	Contact	Priority	Status	Due Date	Date Started	Date Completed	Actions
M.333	Metric AAW	June 2013 values are incorrect.	Review values.	Contact 1	high	not started	07-10-2013	N/A	N/A	Update Delete
M.844	Metric FFA	April 2013 values are incomplete.	Complete values.	Contact 2	medium	WIP	07-08-2013	07-01-2013	N/A	Update Delete
M.002	Metric XYZ	Calculation in metric description is incorrect.	Fix calculation description.	Contact 1	medium	hold	07-13-2013	07-07-2013	N/A	Update Delete
M.844	Metric FFA	New measure needs to be added to metric.	Update Metric FFA.	Contact 3	medium	complete	07-04-2013	07-04-2013	07-04-2013	Update Delete
M.100	Metric ABC	Metric needs to be added to the new YYY	Get it to display on the scorecard.	Contact 4	low	not started	07-09-2013	N/A	N/A	Update Delete
M.002	Metric XYZ	Target values have changed.	Update the metric with the new target values.	Contact 5	low	WIP	07-08-2013	07-05-2013	N/A	Update Delete

New Issue

Update Issue

Metric ID

Metric Name

Issue

Actions

Contact

Priority

Status

Due Date

Date Started

Date Completed

Submit

Metric ID

Metric Name

Issue

Actions

Contact

Priority

Status

Due Date

Date Started

Date Completed

Submit

**\*\*The user can hide unwanted results.\*\***

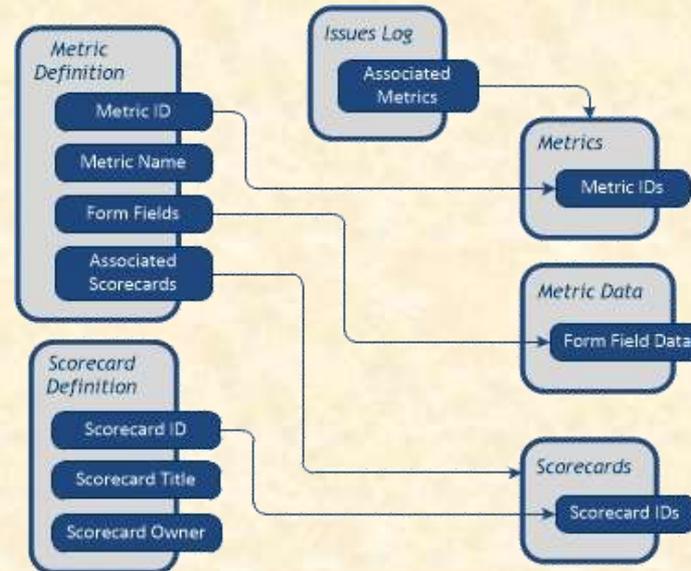
**\*\*The user can sort by any column.\*\***

**\*\*Upon clicking delete, the issue is removed from the issues log and database.\*\***



# Technical Specifications

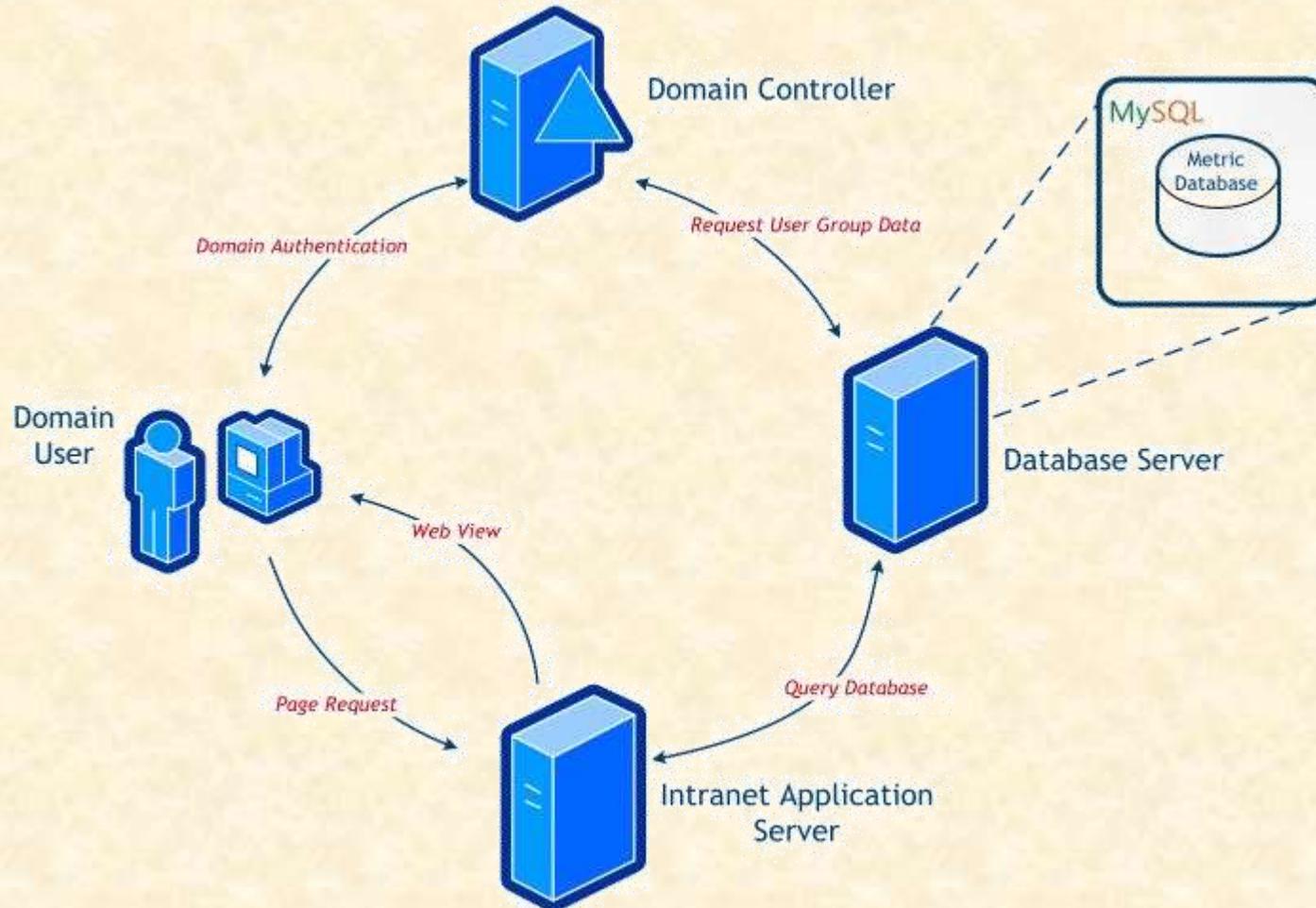
- Back-end database and a browser-based user interface
- Database design:



- View of website depends on Active Directory group
- Server specifications: Server runs on Windows Server 2008 R2, runs MySQL Server 5.5.29



# System Architecture



# System Components

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- Hardware Platforms
  - Servers based on x86-64 processor architecture
- Software Platforms / Technologies
  - Windows Server 2008 R2
  - MySQL server
  - PHP
  - HTML5 with CSS3
  - jquery



# Testing

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- Validate metric and score card data is stored and retrieved properly
- Work with client to extensively test for workflow and flexibility issues
- Create multiple user and group accounts in Active Directory to verify proper permissions are granted for each view of the website



# Risks

- Risk 1
  - Active Directory for permissions control
  - Mitigation - Researching methods for accessing user information
- Risk 2
  - Flexibility of the system
  - Mitigation – Working with client to determine the extent of the flexibility and rigorous testing
- Risk 3
  - Little experience with PHP/MySQL
  - Mitigation – Familiarizing ourselves with the technologies

