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#### Development of a Lean Management Program: A Pilot Program in the Li Ka Shing Library

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# Development of a Lean Management Program: A Pilot Program in the Li Ka Shing Library

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Tamera Hanken (SMU Libraries)

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ELEC - European Lean Educator Conference, Stuttgart 2014 September 17-19

Our Passion, Our Commitment, Your Advantage

### Agenda

- About Singapore Management University
- Background to the campus Lean Six Sigma initiative
- Library participation in initiative
- Concerns, challenges, staff feedback
- Introduction to Lean Management program
- Example of the first "clinic"
- Outcomes & next steps



## SMU Chronology

- 1997 Singapore government conceives SMU
- 2000 SMU opens to 300 students in Bukit Timah Campus
- 2005 Library opens its doors (2,500 students)
- 2006 Official opening as Li Ka Shing Library
- 2013 SMU 8,000+ students (ug and pg)



### **SMU Today**

- 6 Schools Business, Economics, Accounting, Information Systems, Law, Social Sciences
- Broad based education, small classes, interactive tutorial style learning
- International experience, community service, internship
- 6 buildings at the heart of Singapore





## **Singapore Art Museum**

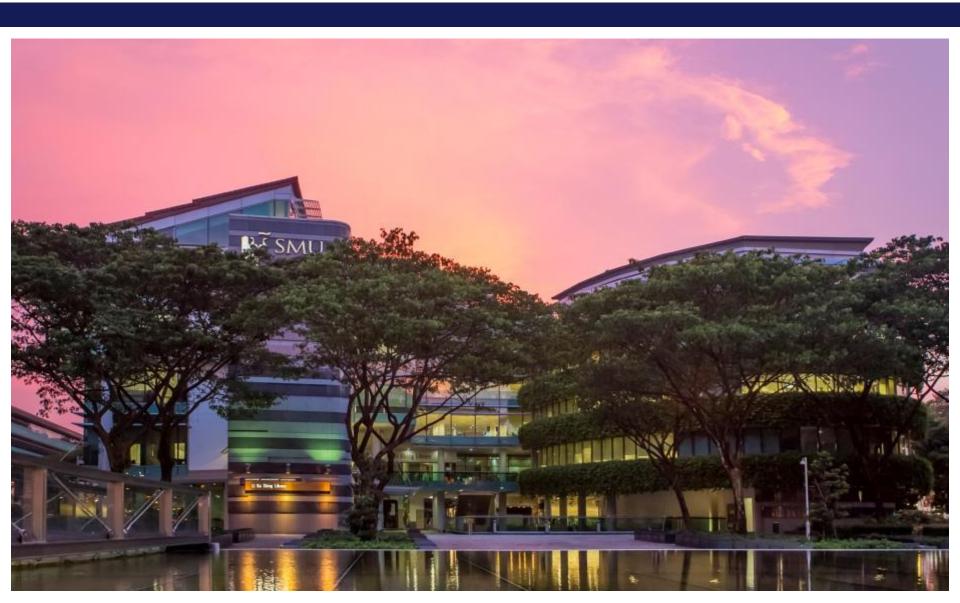
## **Singapore National Museum**





## Li Ka Shing Library





### 2012 State of the University Address

#### **New Initiative:**

#### Enhance Operational Strength

- -Business Process Improvement Programme (BPI)
- -Responsibility Centre Accounting (RCA)

http://www.smu.edu.sg/sites/default/files/smu/downloads/state of the university address 2012 transcript.pdf



## Current Approach & Status

#### **Current Approach**

#### **Deploying Improvement efforts**

#### For Black Belt (BB) projects

- Identification of issues
- Prioritization of project ideas
- Scope project through engagement

#### For Green Belt (GB) projects

 Projects related to GB department identified by GB & supervisor/HOD

#### **Programs**

- Lean Six Sigma Green Belt for staff
- MGT317 Talent Management Black Belt certification

#### Where are we today?

#### **Black Belt Projects**

- 3 completed
- 3 in Control phase
- 6 in Improve phase
- 3 in Define phase

#### **Green Belt training & certification**

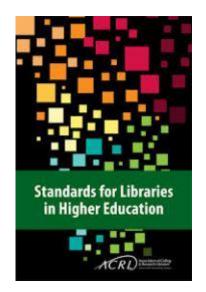
- 5 training waves (3 sessions x 2 days)
- Wave 6 Session 1 of 3 in Oct 2014
- 5 Green Belt certified in Mar 2014, anticipating 1 more batch of certification for 2014

Status as of 8 Sep 2014

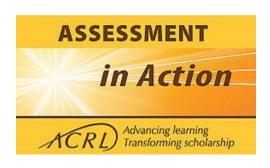


## 2013 Library Initiative Culture of Assessment

... an organizational strategy requiring decision-making based on "facts, research, and analysis, and where services are planned and delivered in ways that maximize positive outcomes and impacts for customers and stakeholders (Lakos & Phipps, 2004)."









## **Library Participation**

## We leveraged the Lean Six Sigma Green Belt training to:

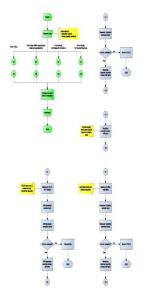
- Prepare for Responsibility Centre Accounting
- Culture of Assessment initiative
- Highlight professional development trends
  - -Building management competencies
    - -Planning, Organizing, Leading, Assessment
    - -Systems thinking, problem solving, visioning
    - Accountability, responsibility, transparency
    - -Collaboration, communication, continual learning
    - -Continuous improvement, Respect for people



## **Library Participation**

Since Fall 2013, approximately 55% of the library staff have completed the Lean Six Sigma Green Belt training and a project.

Workflow (After Improvement)



Tasks & Schedule

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#### Lean Improvements

Course Reserves : Process Review and Improvement

(Lean Green Belt Project)

Category Improvement  Inventory/5S  • Filter early to prevent unwanted items from piling up. • Remove untidy gift shelf which is no longer necessary.  Wait/pull/one piece flow  • In-tray ("Gifts for cataloging") within peripheral vision of Gifts Specialist (visual trigger).  • Electronic form notifies Gifts Specialist upon new entry.		
Remove untidy gift shelf which is no longer ne cessary.  Wait / pull / one piece flow  In-tray ("Gifts for cataloging") within peripheral vision of Gifts Specialist (visual trigger).	Category	Improvement
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Over-processing  Remove unnecessary confirmations.  Reduce the number of people involved in process.	Over-processing	•
Defect • Redesign and replace blue / white slip with an electronic form to reduce ambiguity, missing checks and human error	Defect	Redesign and replace blue / white slip with an electronic form to reduce ambiguity, missing checks and human errors.
Not using • Empower Gifts Specialist to make decisions a bout item suitability and bibliographic information.		· · · · · · · · · · · · · · · · · · ·





## Concerns & Challenges

#### **Staff Concerns**

- Increased workload
- Form of micromanagement
- Focus on output/efficiency



#### **Management Concerns**

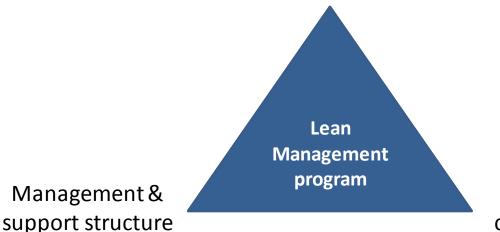
- Sustainability of continuous assessment & improvement
- Return on investment
- Continued development of competencies
- Change management
- Outcomes over output



## A Lean Management Program

A long term program organic to the department that drives continuous improvement efforts, culture change and development of the management and leadership competencies of staff at all levels

Lean best practices & Continuous Improvement



Developing competencies





## Why the clinic series?

- 1. To provide targeted sessions to deepen lean management capabilities
- To provide a start point to understand the different tiers of users and examine our end-to-end value streams for what can done more, what less or stop doing, and what can be done that has never been done before
- 3. To increase effectiveness in deploying improvement projects from both the users' (value) and library's perspectives (mission, cost to serve)
- 4. To build a culture of understanding value and continuous improvement from the user's perspective amongst library staff



#### How does the clinic series work?

- A clinic series comprises short interactive sessions that ultimately leads to a lean objective.
  - Example, defining value from the perspective of a selected group of users
- Each clinic session has follow-up actions and/or learning opportunities



### **Examples of Clinics**

- Defining Value
  - Voice of the Customer, Value Stream Map
    - Research Assistant, Faculty, Alumni
- Defining Current State
  - Gemba "Go See", Value Stream Map
    - Specific services (electronic resources, print resources, etc.)
- Defining Future State
  - Value Stream Map, Continuous Flow
    - Specific services, from perspective of selected user groups









#### First Clinic Example:

### Lean Management Clinic Series:

Defining Value | Research Assistants

Francis Lim (OBI)
Tamera Hanken (Library)
Kevin Koh (OBI)

## Agenda

- Objectives
- Overall plan
- Key Concepts
  - Lean 1<sup>st</sup> Principle
  - Voice of Customers
  - Value Streams
- Exercises



## **Objectives**

#### **Objectives of Defining Value clinic series**

- To understand the user space of selected group of users
- To map how the needs of the users are met by existing value streams
- To identify the needs of the users that can be met but not currently met by the library
- To acquire information for subsequent value stream evaluation on activities that does not seem to add value to the users

#### Objectives of this session

- 1. To outline the overall plan of this clinic series
- 2. To highlight the key concepts that will be applied in this clinic series

The first principle in Lean is to define value from the customers perspective.



#### **Overall Plan**

Interactions Between Focus Library staffs groups and selected 1<sup>st</sup> clinic session 2nd clinic session representative users Lean Introduction Debrief Training/Briefing **Training** Interviews Just-in-Time Extract key learning Q&A workshops Mini Surveys



### Key concepts

#### In the order of application

- Lean 1<sup>st</sup> Principle
- Voice of Customers (VOC)
- Value Streams



## Lean 1<sup>st</sup> Principle

## Define value

From customer's perspective

#### Map Value Stream

Understand
the current
state including
information
flow &
product/
service
transformation

## Create continuous flow

Of delivery of value to the customer

#### Pull value

When continuous flow is not possible but needed

## Strive for Perfection

When continuous flow is not possible but needed



## **Voice of Customers (VOC)**

- Primary sources
  - Interviews
  - Focus Groups
  - Surveys
- Secondary sources
  - Data from current feedback mechanism

- Subject Guides
- Course Guides
- Informational Guides

**Faculties** 

**Students** 

Research Assistants

Teaching Assistants

#### Value Streams • How do I use Bloomberg (79,516 views)

Example: Research Guide

Sequence of activities required to design, produce, and provide a specific good or service, and along which information, materials, and worth flows.

**Faculties Students** Research Assistants **Teaching Assistants** 

Some of the highly used Research Guides

between Jan to Dec 2013 are:

Business, Government and Society

How do I use Datastream (6,171 views)

(MGMT003) (6,788 views)

- Content Management System
- Integrated into the Online Catalog

Identify topic

Research

Compile

**Format** 

a. Research Guides

**Publish** 





#### Exercise – Part 1

Brainstorm on how the library services have helped or value-added in research work, for a research assistant (RA).

☐ Write on a Post-It-Notes for each help or value the library services provide.





#### Exercise – Part 2

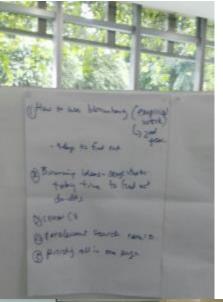
- A. Engage the guest RA to share the typical steps a RA takes to embark on a research work to its completion.
  - □ Capture each step on a Post-It-Note, get an idea of the effort and time spent.
- B. In which of these steps/areas do you use the library services? What are they?
  - ☐ Indicate for each Post-It-Note, a dot where library service is rendered and indicate what the service is.
  - □ Note & indicate non-library services or resources used.

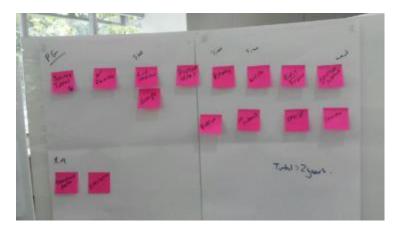


#### Exercise – Part 2

- C. If you are granted wishes for your research work, what would they be? What would you value the most? What would you like to see go away or minimized?
  - ☐ List them on a flip chart.
- D. Compare the outputs here with those from Part 1.









#### **Observations**

- Services geared toward undergraduate students
- Emphasis on teaching and learning
- Lack of awareness of the role, and research challenges, of the RA
  - There are sub groups: general post graduate, empirical vs. theoretical research support needs
- Services are traditional and 'described' or 'marketed' as such (ILL, DDS) – the value?
- The RA is not aware of some existing services
  - For example, Bloomberg Research Guide



## Just-in-Time workshops

Types of engagements	Characteristics								
Interviews	☐ Interview is done with one participant ☐ To learn about a specific customer's point of view ☐ Requires some facilitation								
Focus Groups	<ul> <li>Interview is done with a few</li> <li>Helps to organise information from the collective point of view of a group of customers that represent a segment.</li> <li>Requires greater facilitation to maintain conducive group dynamics, participation and momentum is discussion progress</li> <li>Synergy through sharing on common areas of interests</li> </ul>								
Surveys	<ul> <li>No face-to-face</li> <li>Measure the needs, importance or performance of a product, service, or attribute across an entire segment or group of segments</li> <li>Furnish quantitative data.</li> </ul>								



## Research Assistant Focus Groups

#### Stage 1:

- Respondents representing both theoretical and empirical modes of research
- Respondents representing the six schools (accountancy, information systems, social sciences, economics and law)

#### Stage 2:

 Research Librarians (subject experts) involved in gap analysis



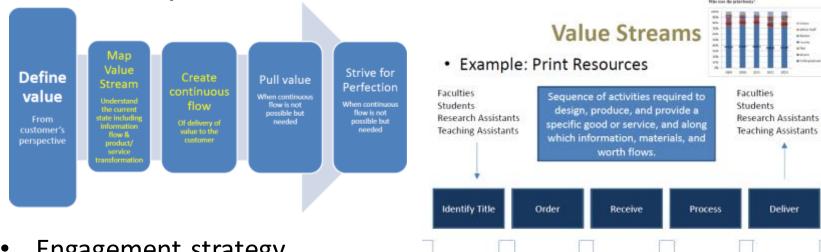
## Summary, Learning, Outlook

- What have we learned?
  - Our perceptions & assumptions, not always on target
  - Opportunities for improvement and new services designed from the RA's perception of value
  - Opportunities for more cross departmental collaboration, i.e., Office of Research
- What's next, future clinics?
  - Improvements & new services informed by the "Voice of the Customer"



### The clinic series continues ...

The RA involved in theoretical research values access to print resources



- Engagement strategy
- Resource discovery platform enhancements
- User-driven collection strategies
  - Print patron drive acquisitions
  - Enhanced Inter Library Loan and Document Delivery services





#### **QUESTIONS?**

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