

# Implementation of Academic Analytics for Evidence Collection of Student Learning

**Professor William KM Lee**

Associate Vice President (Academic Affairs) & Registrar

**Dr Fleming Woo**

Director of Information Technology Services Centre

**Mr Terence Kwok**

Assistant Information Manager

**Lingnan University**

# Agenda

- Who Are We?
- Background of the Project
- Implementation of Academic Analytics
- Project Timeline
- Some Technical Issues
- Examples of How Data is transformed to Information
- Challenges Encountered
- Conclusion & Recommendations
- Q & A Session

# Who Are We?

## Characteristics of Lingnan University

- A Publicly-funded Liberal Arts University in Hong Kong – 2,800 students
- Small Class Teaching – class size keeps at 35-40
- Multi-disciplinary Programmes to embrace liberal arts education
- High priority on Internationalization – 50% exchange-out rate
- Close to Full Residence
- First in Hong Kong to establish a Living & Learning Community
- Heavy emphasis on Experiential Learning through Service-Learning, Integrated Learning Programmes (ILP), Civic Engagement, Community Services, etc.

# Background of the Project

- Report of a Quality Audit of Lingnan in July 2010 - Recommendation from Quality Assurance Council

“To develop an Overarching Evaluation Framework to help focus and define appropriate Educational Indicators and to ensure the flow of empirical information for academic and management decision-making”

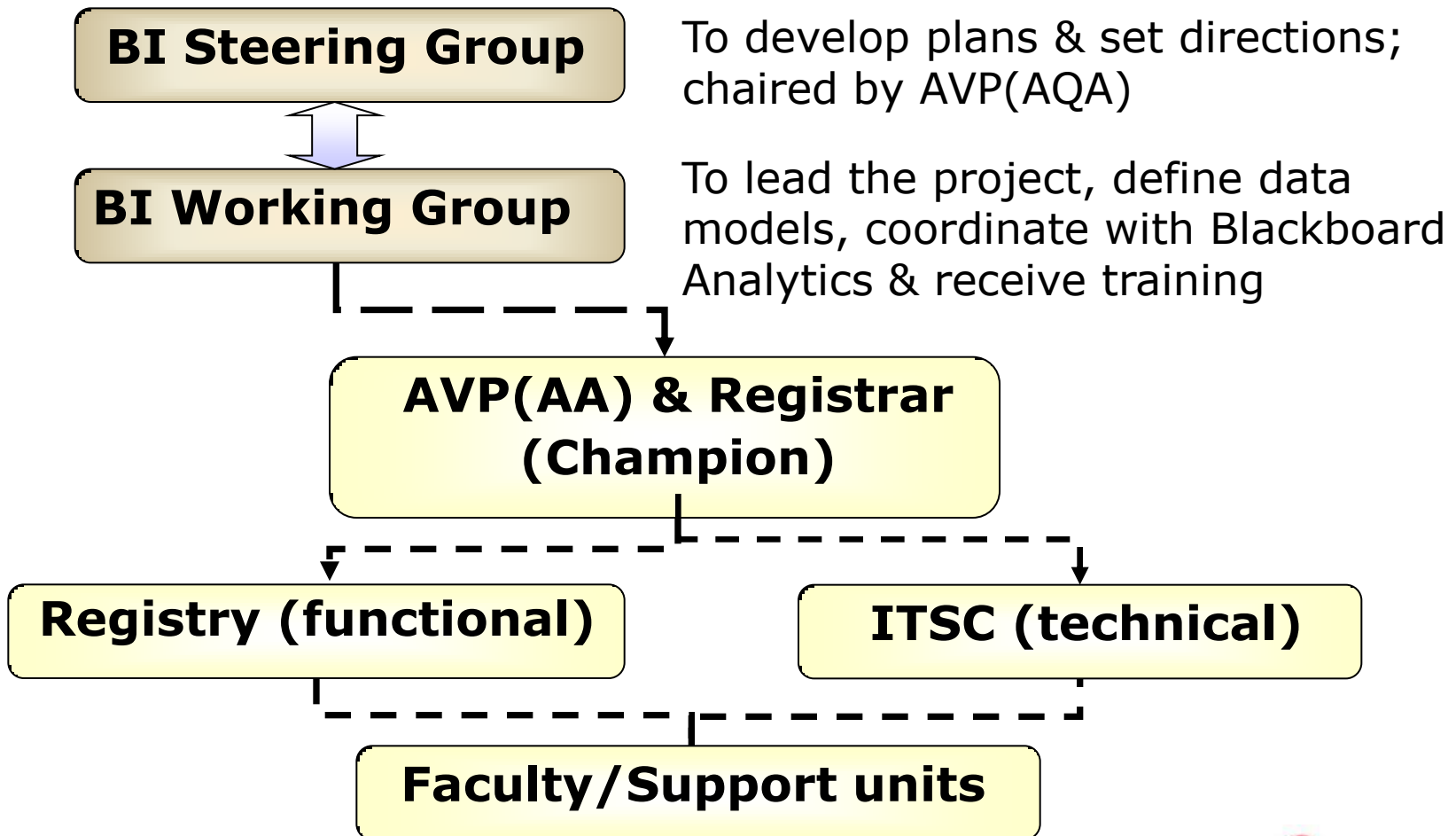
- Implementation of the new 4-year curriculum w.e.f. 2012-13
- A BI solution is therefore considered essential!!

# Implementation of Academic Analytics

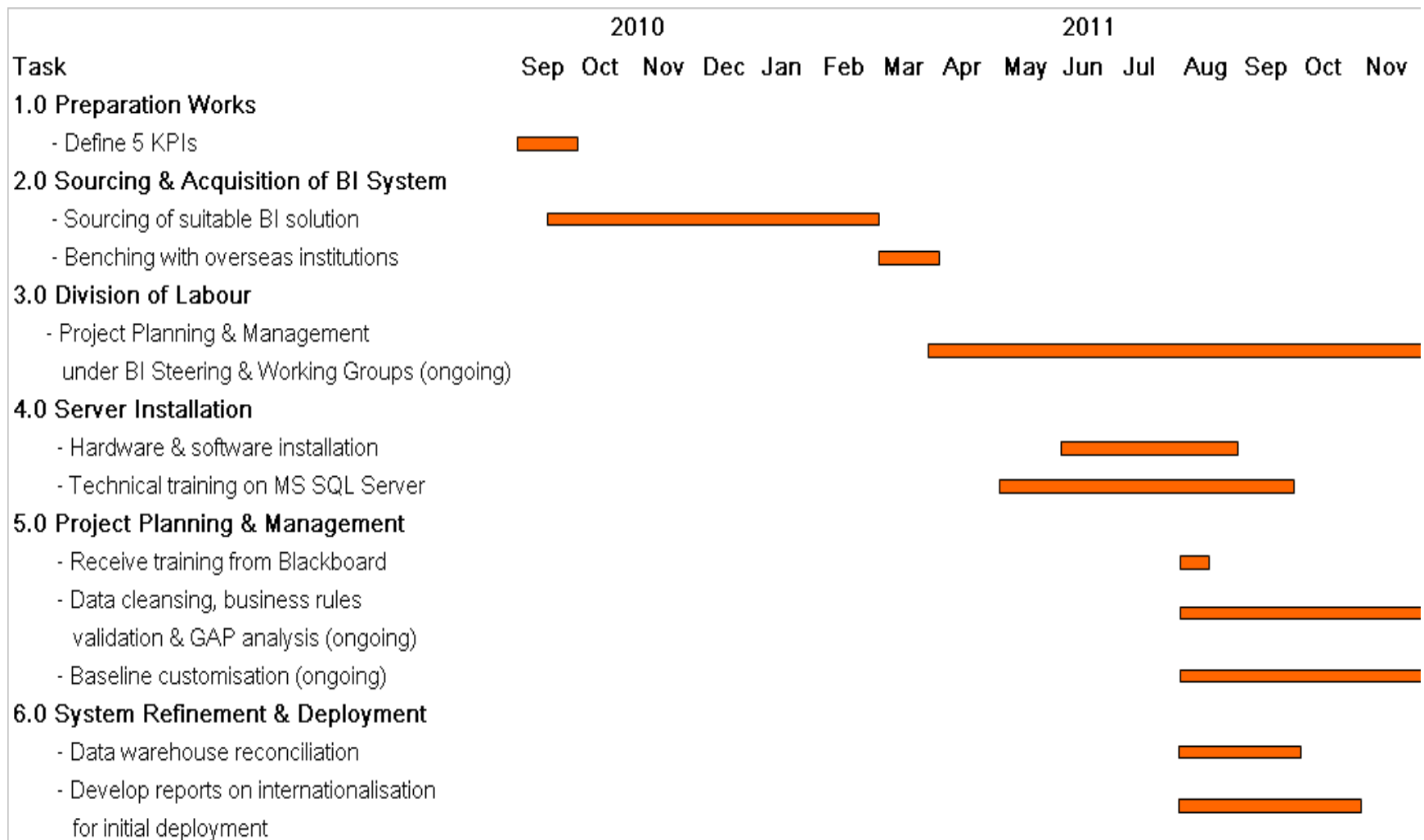
- Step 1 – Preparation Works
  - Step 2 - Acquisition of System
  - Step 3 – Division of Labour
  - Step 4 – Server Installation
  - Step 5 – Project Planning & Management
  - Step 6 – System Refinement & Deployment
  - Step 7 - GO LIVE on Internationalization KPI in October 2011!!
- (4 months from acquisition of the system)

# Implementation of Academic Analytics

## Organization



# Project Timeline



↑  
GO LIVE!!

# Implementation starts from building localized KPIs

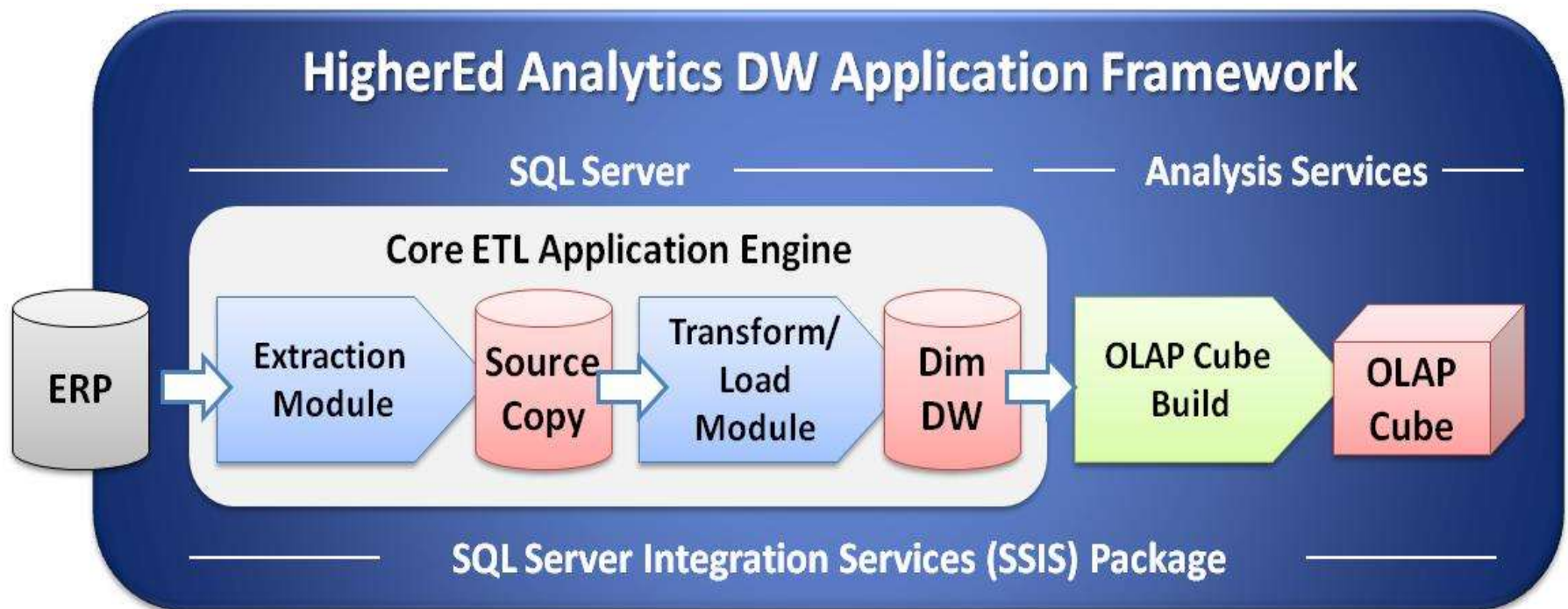
- Presume the BbA baseline model is valid as Lingnan has followed very closely to the Banner baseline in inputting student data
- Some essential reports are not covered in the baseline model
- Focus on customization instead of learning the baseline model



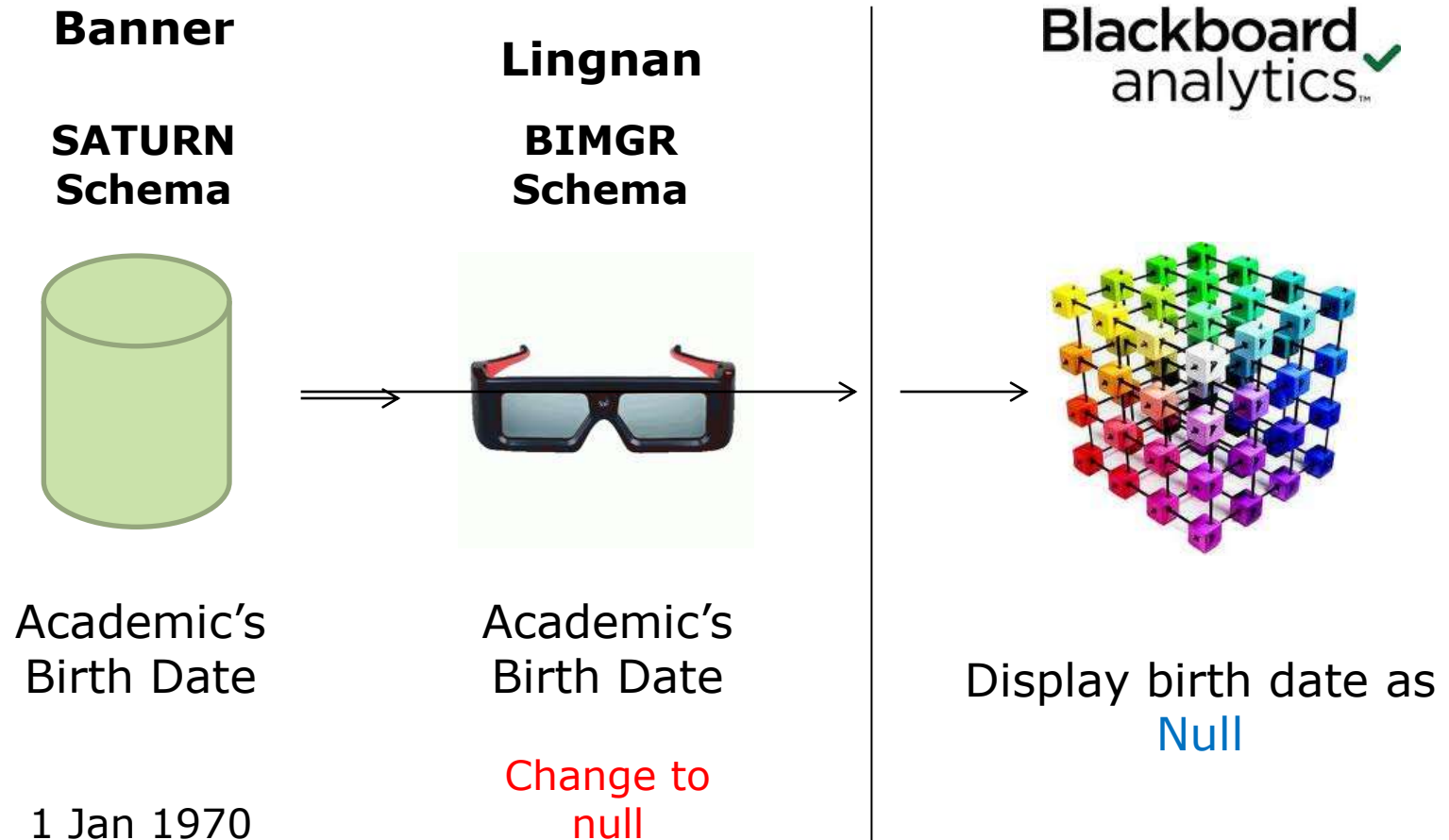


# Customize Data Warehouse

- Review the Technical Reference Guide provided by Blackboard on the specification on the ETL process

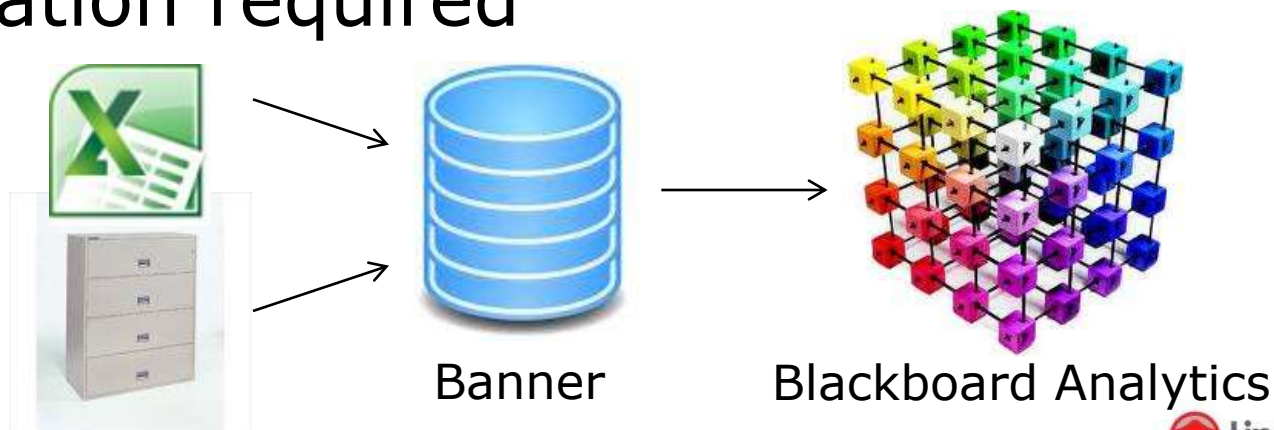


# Data Massaging in Banner



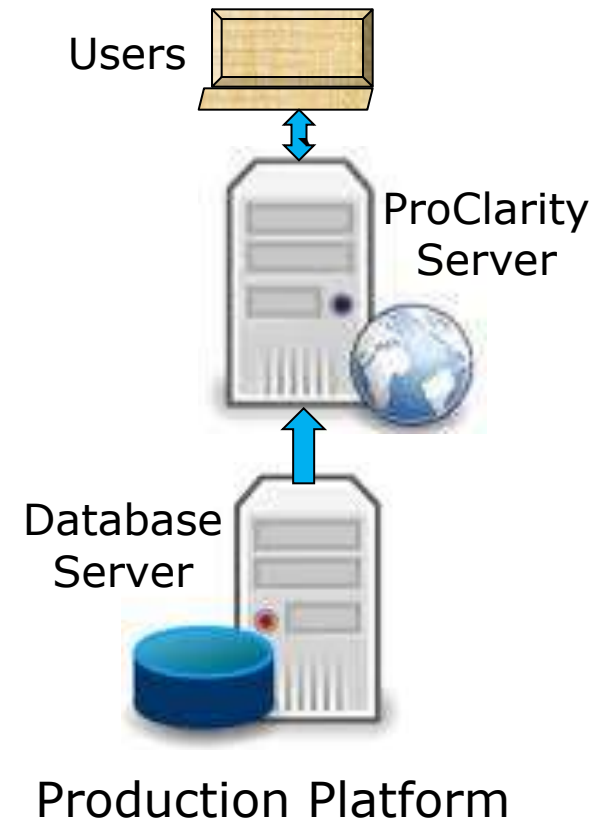
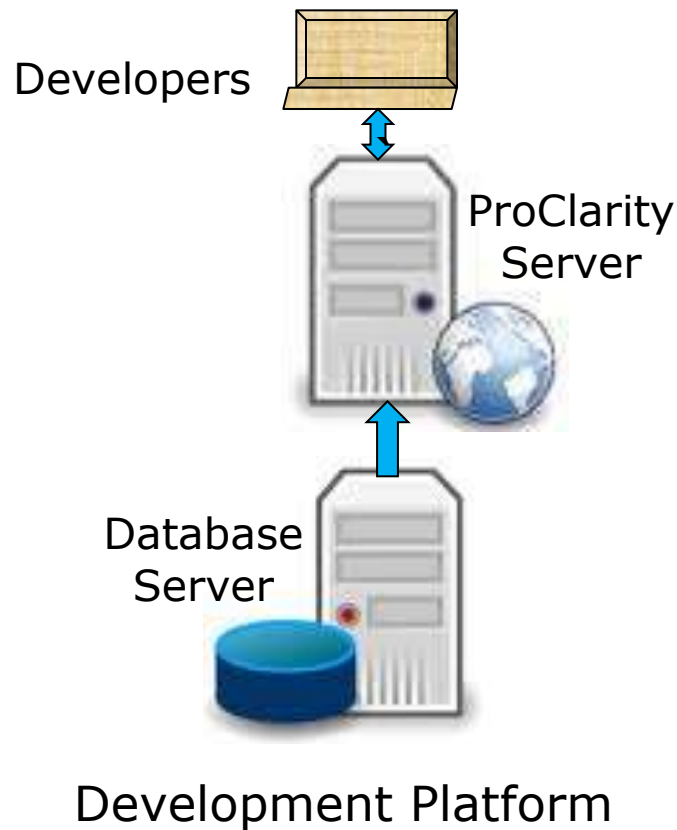
# Capture Non-Banner Data

- Most data are captured in Banner but some essential data are spread over Excel files and paper records
- Convert non-Banner data to Banner System
- Find places in Banner to store those data
- Extensive data cleansing and data validation required



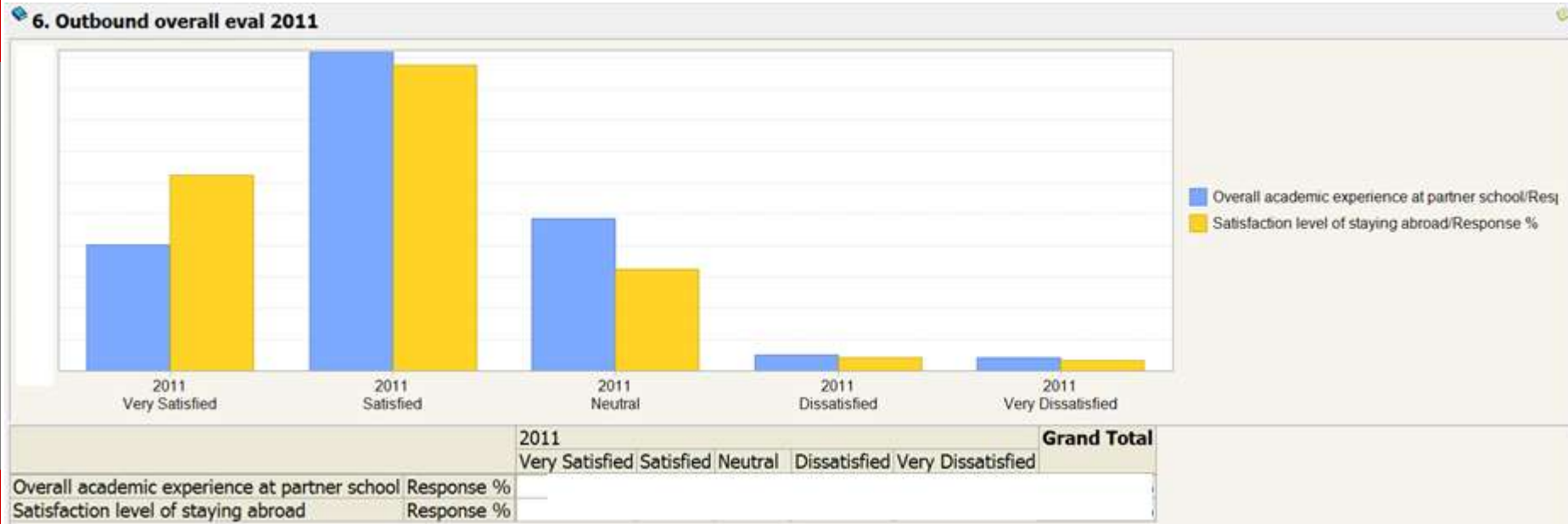
# Blackboard Analytics System Specifications

- 2 sets of platforms - 4 Physical servers





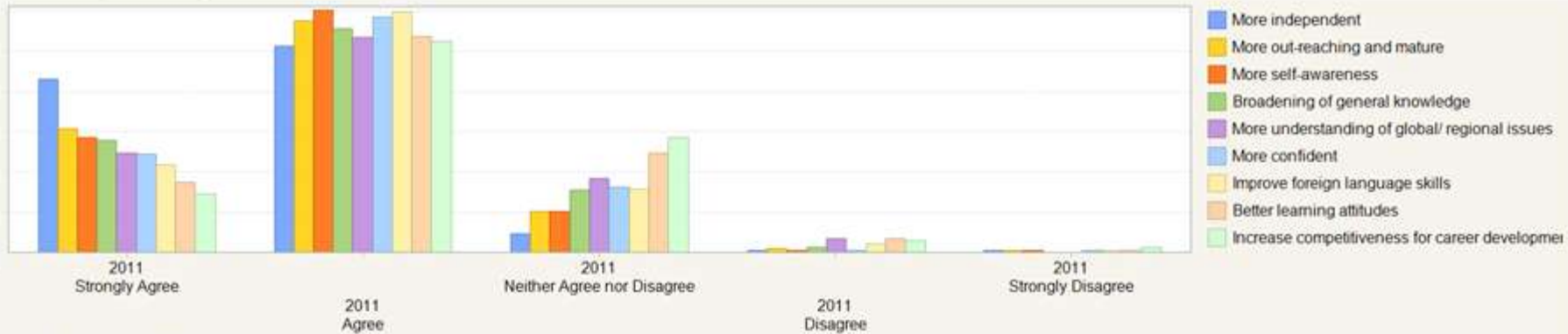
# Overall Evaluation of Outgoing Exchange Students





# Personal Growth for Outgoing Exchange Students

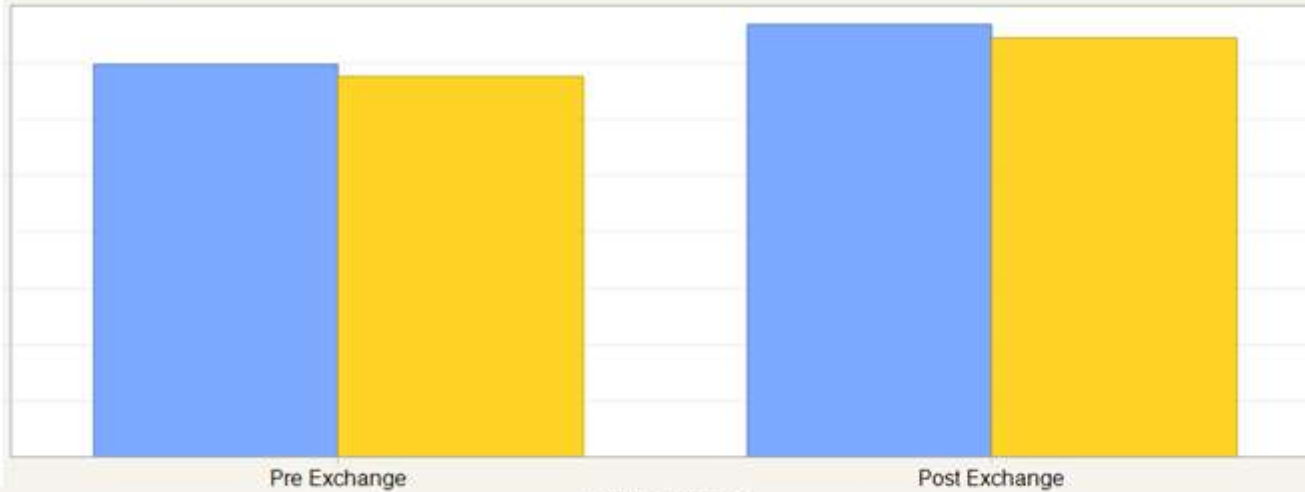
8. Outbound personal growth 2011



	2011					Grand Total
	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	
More independent						
More out-reaching and mature						
More self-awareness						
Broadening of general knowledge						
More understanding of global/ regional issues						
More confident						
Improve foreign language skills						
Better learning attitudes						
Increase competitiveness for career development						

# Impact on Interpersonal Skills & Communication Skills

Avg Survey Response for Scaled Response, 2011, Outbound Exchange Survey (Pre Post Indicator)



Sorted by Post Exchange

Avg Survey Response for Scaled Response, 2011, Outbound Exchange Survey (Pre Post Indicator)

		Pre Exchange	Post Exchange	% Change Pre Post
Self Evaluation (Pre & Post Exchange)	Interpersonal Skills	65	85	31%
	Communication Skills	60	80	33%



# Impact on the Institution

- Change on workflow – more efficient
- Use evidence to make decision – more effective
- More proactive bringing policy to deal with change
- Streamlining the collection of important information



# Challenges Encountered

- Cultural Differences – U.S. vs Hong Kong
- Implementation starts from KPI but not Baseline
- Data spread through everywhere
- Change of mindset



# Conclusion & Recommendations

- Management Support
- Leadership
- Technology Partner
- Right Tools
- Develop In-house Expertise
- Start from Small and Expand
- Recruit a Champion

**Thank You**

Q & A Session