Data Driven Decisions:
Using Data to Inform and Influence Decision-makers

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Seattle Pacific University (WA)

2005 AACRAO SEM Conference
November 15, 2005
Session Overview

1. What are the institutional environmental factors that leads to utilizing data to drive decision?

2. To support data-driven decisions, what are the strategic business questions that should be addressed?
   - Institutional Perspective
   - Enrollment Perspective

3. When placed in context, how may data inform and influence decision makers?
Seattle Pacific University

Engaging the Culture, Changing the World

1998 Common Curriculum
1999 / 2000 – Selectivity
2002 / 2003 – Institutional assessment formalized
  - Institutional Strategic Indicators
  - Informs strategy and resource allocation
2005 – New Strategy for merit aid under-development

- Early 90’s – Enrollment Plan, changed annually
- 1995- New President → vision; new structures
  - Student Success Strategies

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Institutional Factors → Data Driven Decisions

- **Clear Mission and Vision**

- **Administration Promotes Culture of Evidence**
  - Strategic Performance Indicators
  - Assessment → Cycle for Improvement
  - Resources follow Institutional Priorities

- **Data Management Structures = Data Integrity & Reliability**
Strategic Business Questions –
Overall Institutional Perspective

Where is your sphere of influence?

- Mission
  - Vision

- Areas of Comparative Advantage

- Geographic Service Area

- Goals & Objectives

- Faculty, Programs, Services

- Clientele

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Higher Education as a Business

The Top 10 Factors: Where is your sphere of influence?

1. Revenue Structures
2. Expenditure Structures
3. Current Fund Rev & Expenditures
4. New Student Selectivity &/or Yield
5. Faculty Workload
6. Discount Rates
7. Tenure Status
8. Mission and Program Mix
9. Maintenance Backlog
10. Alumni Giving
Business Drivers for Higher Ed

- Competitive landscape - shrinking markets
- New markets and business opportunities
- Aggressive higher education marketplace
- Return on investment
- New services, products, and strategies are possible
What are Your Institution’s Enrollment Strategic Business Questions?

Achieving enrollment goals supports institutional mission & financial viability

Goals/Strategies

- Enrollment Size
- Enrollment Mix
- Student Academic Quality
- Outcomes – Student & Revenue
Enrollment Leaders Transform Data into Meaning by Placing Information into Context

**Context:** Since 2000, while EDU Majors have increased by 2%, the % of Men has increased by 10% due to .....
Placing Trends in Context

Early Action Yield by Academic Ability

- 50% in All EA
- 55% in Trustee
- 52% in President
- 49% in Provost
- 50% in Medium Ability
- 49% in Lower Ability

Non-Early Action Yield by Academic Ability

- 34% in All Non EA
- 35% in Trustee
- 27% in President
- 33% in Provost
- 34% in Medium Ability
- 37% in Lower Ability

2002 2003 2004 2005 - 3-YR Avg Yield

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To Inform & Influence Decisions

Identify the Strategic Questions

1. What kinds of decisions do we make?
2. What information do we need to make informed decisions?
3. What data do we need to create good information?
4. What is the best way to obtain that data?
5. Who should receive the results? When? How?
1. What kinds of **decisions** do we make for enrollment?

- Size
- Mix
- New Student Profile
- Admissions Strategy
- Financial Aid Strategy
- Student Services Programs
- Program Mix and Class Availability
- Outcomes to be Achieved
SPU Enrollment Strategies:

**Decision are tied to ---**

**Undergraduate Enrollment**
- Recruitment & Admissions
- Price
- Financial Aid
- Student Success Strategies
- Service

**Graduate Enrollment**
- Marketing
- Price
- Service

**Challenge**: Annually Compete for Limited Resources

FTE / Operational Dollars / Space
SPU’s Enrollment Model

Competing Demands for Limited Resources

**Education Plan**
- Faculty to Support Growth
- Faculty Development
- Ethnic Diversity
- Graduate Programs
- Learning Resources
- Staff to Support Growth

**Enrollment Plan**
- Growth from Increased Retention & New Students
- SPU Financial Aid - Endowment
- Positioning & Marketing
- Selectivity
- Student Mix Goals
- Staff to Support Growth

**Facilities Plan**
- Classrooms
- Residential Facilities
- Parking
- Study Spaces

- Office Space – Faculty/Staff & Student Services
- IT and other Infrastructures
- Dining Services
- New Construction/Buildings

8 Proj10Years Capacity Planning.xls

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2. What **information** do we need to make informed decisions? 

**Determine what to measure.**

<table>
<thead>
<tr>
<th>Functional Area</th>
<th>Objective</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diversity</td>
<td>Increase</td>
<td>% Min - Max</td>
</tr>
<tr>
<td>Learning</td>
<td>Progression</td>
<td>Graduation Rate, Persistence</td>
</tr>
<tr>
<td>Resource Management</td>
<td>Increase in Revenues</td>
<td>Net Revenue, Financial Aid Expenditure, Enrollment –FT vs. PT</td>
</tr>
</tbody>
</table>
## KPI’s Related to Persistence to Graduation:

### During Selection and Entrance:
- GPA, SAT
- Running Start
- Institutional Fit
- Competency Exams
- Financial Aid & Affordability

### Connection Through Graduation:
- Quarterly GPA
- Academic Probation/Dismissal
- Connection with Faculty Advisor
- Timely Declaration of Major
- Active Involvement
- Financial Aid
3. What **data** do we need to create good information? ➔ **Consider data integrity**
Enrollment Management:

- Retention rates
- Graduation rates
- Registration stats
- Student satisfaction
- Facility capacity
- Faculty availability
- Cost of delivery for strategic services
- Net Revenue

Build Comparative Data:

- Volume
- Institutional Data / Trends
- Comparable institutions
4. What is the best way to obtain that data?

➔ Identify how to measure; frequency.

- **By Time Period**
  - Weekly, Monthly, by Term, etc.

- **By Data Source**
  - Transactional system, Warehouse, etc.

- **By Type of Measurement:**
  - **Effectiveness:** Outcomes relative to purpose & mission
  - **Efficiency:** Amount of output per resource used
  - **Reliability/Satisfaction:** Consistently produce quality
  - **Utilization:** Amount of activity in business process
5. Who should receive the **results**?

→ When and in what format?

**Audience**
- Tailor the report to the audience

**Message**
- What do you want to say?
- What is the best way to say it?
- Consider skill level of audience
- Say it succinctly
- What is most important – *prioritize*

**Medium**
- Written report
- Web
- Chart / Graph
- Table of data
- Presentation

**Purpose**
- Inform
- Influence
- Inform & Influence

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Characteristics of Effective Reports

Good Charts

- Accurate
- Simple
- Clear
- Appearance
- Structure

- Draw attention to important points
- Shows relationships / trends

An Effective Report Transforms Data into Information.

**Pie charts** – shows proportional relationship – separating out a slice emphasizes that segment

**Column charts** – show frequency, sums, averages

**Stacked bar chart** – show cumulative and comparative sums

**Horizontal bar charts** – show proportional relationships, especially if there are more than 5 or 6 variables – order by biggest or smallest

**Line charts, Area/Surface charts** – depicts change over time

5 Charts example CreditTrends.xls
Characteristics of Effective Reports

Written Reports

- Clear, direct, understandable
- Logically structured
- Provided information needed or requested
- Depicts data accurately & appropriately
- Matches style and sophistication of intended audience

- Summary highlights important points (uses words & numbers)

- Create White Space
“Closing the Planning Loop”
The Enrollment Plan:
Assessment of Goals / Strategies

<table>
<thead>
<tr>
<th>Goal</th>
<th>Strategy</th>
</tr>
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<tbody>
<tr>
<td>Undergraduate</td>
<td>Managed Growth</td>
</tr>
<tr>
<td>3000 by Year 2010</td>
<td></td>
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</table>

**Assessment Process**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>What is assessed</th>
<th>Methodology/Tool</th>
<th>Results</th>
</tr>
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<tbody>
<tr>
<td>Annually</td>
<td>A. Fall quarter headcount</td>
<td>A. 10th day official statistics</td>
<td>A. Headcount achieved</td>
</tr>
<tr>
<td></td>
<td>B. Capacity issues</td>
<td>B. Review Enrollment Model and Strategy</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>C. University Planning Group reviews data after Fall Quarter Tenth Day</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(includes university relations, university services, academics, student life &amp; residence life)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>D. Situational Analysis - persistence</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>B. Capacities issues emerge to influence enrollment plan, strategies and institutional resources</td>
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**Adjustment to Goals/Strategies**

Fall 2001 — See Enrollment Plan Adjustments for 2002; UG Executive Summary; 10-Year Enrollment Model
What are some examples?

7 FR Proj Models.xls
Fall Census - FinAidStgRpt (ScannellKurz)v2.xls
FinAidTrack2005-sept06.xls
Challenges:

- **Change**
  - In leadership or priorities
  - Problems change, requiring new strategies
  - Pace of change
  - Technology changes

- **Too many competing strategies without coordination**

- **Insufficient resources** or not directed at institutional priorities (five-year plan)

- **Lack of benchmark data** or assessment plan --- "close the loop"
### Strategic Analysis Steps

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<th>Describe the strategy</th>
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Chart from Association of Institutional Research
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<th>People</th>
<th>Facilities</th>
<th>Data &amp; Information</th>
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<tr>
<td>Number, roles, knowledge, skills, abilities, time</td>
<td>Space, hardware, software</td>
<td>Functional areas, essential elements of information</td>
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## Strategic Analysis Steps

**Describe the strategy**
- **Opportunities**: What specific events are doable?
- **Tasks**: What is the set of activities in the strategy?
- **Assumptions**: What specific conditions of the barrier are relevant?
- **Objectives**: What goal objectives are the focus of the strategy?

**Identify the resources**
- **People**: Number, roles, knowledge, skills, abilities, time
- **Facilities**: Space, hardware, software
- **Data & Information**: Functional areas, essential elements of information

**Restructure activities as methodology**
- **Procedures**: What analyses need to be performed?
- **Process**: What methodology steps structure or constrain the strategy?
- **Policies**: What general organizational practices must be followed?
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### Influence through use

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<th>Success Factors</th>
<th>Restructuring Reality</th>
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<td>How will progress toward the goal be measured?</td>
<td>Process to insure use of results to improve.</td>
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Session’s Outcomes:

Identifying institutional environmental factors that support data driven decisions

Need to focus on clarifying strategic business questions before data gathered

Placing data in context to inform and influence decision makers

----- and useful examples
Data Driven Decisions: Using Data to Inform and Influence Decision-makers

Janet Ward
Associate Vice President, Information & Data Management

jward@spu.edu
### Handouts that accompany presentation:

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<th><strong>ENR Strategic Indicators:</strong></th>
<th>Excel document for tracking history and future goals.</th>
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<tr>
<td><strong>Peer Group Selection Criteria:</strong></td>
<td>Factors to consider.</td>
</tr>
<tr>
<td><strong>Charts:</strong></td>
<td>Examples for combining narrative with charts to address strategic business questions (2 pages).</td>
</tr>
<tr>
<td><strong>Enrollment Tracking Report:</strong></td>
<td>Word document with imbedded charts useful for decision makers in understanding net revenue based on new FR headcount by academic ability and financial need.</td>
</tr>
<tr>
<td><strong>Freshmen Projection Model:</strong></td>
<td>Demonstrates one method on how history may assist in projecting future goals (applications; completed applications) and illustrates primary drivers in the model.</td>
</tr>
<tr>
<td><strong>10-Year Projection Model</strong></td>
<td>Combines enrollment with capacity challenges for classroom, housing and faculty.</td>
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