System-Wide Master Plan

Phase I

Presentation to State Council of Higher Education
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What is the Master Plan – Phase I?

- Traces the demand and supply of higher education services in and identifies gaps between the two
- Lays the foundation for the 2002 System-Wide Strategic Plan
Summary of Findings

1) Virginia will experience a significant increase in enrollment demand between 2001 and 2010

- 38,296 additional students
- 10% increase in enrollment 2000 to 2010 vs. 6% increase 1990 to 2000
- Driven by “echo-boom”
- 83% of increased enrollment likely to be in public colleges and universities
2) Current enrollment capacity is insufficient to meet projected demand

- Enrollment will outstrip capacity by between 9,172 and 14,466 students in 4-yr. publics by 2010
- Enrollment will outstrip capacity by between 7,827 and 13,189 students in 2-yr. publics by 2010
- Private non-profit institutions report capacity to absorb an additional 18,000 students by 2010
Summary of Findings (cont.)

3) Enrollment rates in 4-yr. colleges and universities lowest in the Southwest and Southern Piedmont

• Lack of geographic access to 4-yr. colleges and universities explains a portion of this pattern

• Regional differences in employment opportunity and family income also play a role
Summary of Findings (cont.)

4) Potentially significant gaps between the demand and supply of graduates in two key areas

- **IT workers** (systems analysts, computer engineers, and computer support specialists)

- **Teachers** (preschool, elementary, and secondary)
Five Components

- Enrollment demand
- Capacity
- Underserved populations
- Economic development
- Technology
Number of 15 to 24 yr. olds Increasing

- Census Bureau projects a 156,578 person increase in the number of 15 to 24 year olds in Virginia between 2000 and 2010.
- This age group drives enrollment in 4-yr. publics, private non-profits, and private for-profits.
Number of 25 to 44 yr. olds Declining

- Census Bureau projects **22,788 person decrease** in the number of 25 to 34 yr. olds, and **150,437 person decrease** in the number of 35 to 44 yr. olds in Virginia between 2000 and 2010.

- These age groups drive **39%** of enrollment in 2-yr. publics.
Growth in High School Seniors Geographically Concentrated

- The Weldon Cooper Center projects a 5,870 increase in the number of high school seniors statewide between 2000 and 2005.

- Eight localities within the I-95/I-64 crescent will be responsible for 91% of this growth.

- These localities are: Chesapeake, Chesterfield, Fairfax, Henrico, Loudoun, Prince William, Spotsylvania, and Stafford.
Percentage of Students in Fall 2000 from the Eight High Growth Localities

GMU
VCU
MMC
JMU
VPSU
WM
UVA
LC
VOC
VJU
WMI
RBC
Private NP
RU
ODU
NSU
Private FP
CNU
UVA-W
System-Wide Enrollment Demand
Projected to Increase 38,296 by 2010
## Public Institutions Account for 83% of Increase

<table>
<thead>
<tr>
<th></th>
<th>Fall 2000</th>
<th>Fall 2010</th>
<th>Abs. Chg.</th>
<th>% Chg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-yr. Publics</td>
<td>175,742</td>
<td>194,641</td>
<td>18,899</td>
<td>10.8%</td>
</tr>
<tr>
<td>2-yr. Publics</td>
<td>138,039</td>
<td>150,751</td>
<td>12,712</td>
<td>9.2%</td>
</tr>
<tr>
<td>Private non-profits</td>
<td>50,635</td>
<td>56,203</td>
<td>5,568</td>
<td>11.1%</td>
</tr>
<tr>
<td>Private for-profits</td>
<td>7,891</td>
<td>9,008</td>
<td>1,117</td>
<td>14.2%</td>
</tr>
</tbody>
</table>
Summary: Enrollment Demand

- Between 2000 and 2010, system-wide enrollment demand will likely increase by \textbf{38,296} students.
- Public colleges and universities will likely account for \textbf{83%} of the projected increase.
- 2010 enrollments are likely to be \textbf{younger and more diverse} than in 2000.
Five Components

- Enrollment demand
- Capacity
- Underserved populations
- Economic development
- Technology
Capacity Estimate

- **Purpose** – to provide a credible estimate of the system’s ability to absorb projected enrollment increases

- **Used two methods to assess enrollment capacity** – quantitative analysis and surveys
Quantitative Assessment

- Used detailed space need and utilization data from public colleges and universities

- Analysis controls for differences in mission (discipline mix, undergraduate vs. graduate, scale economies) and utilization

- Only takes into account instructional and academic support space
4-Yr. Publics will be 9,172 to 14,466
Students Over Capacity by 2010*

*Based on analysis of instructional and academic support space only
2-Yr. Publics will be 7,827 to 13,189 Students Over Capacity by 2010*

*Based on analysis of instructional and academic support space only
Surveys: 4-Yr. Publics

- Other constraining factors: (dormitory space, telecommunications facilities, libraries, student services, land, and inadequate base funding)

- GMU, LC, ODU, RU, and VCU indicate significant enrollment growth is consistent with their institutional missions
Surveys: 2-Yr. Publics

- Other constraining factors: (insufficient number of faculty, over-reliance on part-time faculty, libraries, deteriorating infrastructure, and inadequate base funding)
Surveys:  Private Non-Profits

- Other constraining factors: (dormitory space, libraries, student services, physical plant, and limited operating resources)

- Indicated capacity to accommodate 6,500 additional students currently and 18,000 by 2010
Summary: Capacity

- By 2010, enrollment demand will outstrip capacity 9,172 to 14,466 students in the 4-yr. public colleges and universities, and 7,827 to 13,189 students in the community colleges.

- Private non-profit institutions indicate they can accommodate 18,000 additional students by 2010.

- All institutions report additional constraints to enrollment growth.
Five Components

- Enrollment demand
- Capacity
- Underserved populations
- Economic development
- Technology
Underserved Populations

• Used GIS technology to conduct a drive-time analysis for all institutions

• When combined with data on county-level enrollment rates, that analysis sheds light on whether there are underserved populations in Virginia
Aggregate College Enrollment Rates for 15 to 19 yr. olds Highest in the Southwest
Little Regional Variance in Aggregate College Enrollment Rates for 20 to 24 yr. olds
Little Regional Variance in Aggregate College Enrollment Rates for 25 to 34 yr. olds
4-Yr. Publics Draw Students from the I-95/I-64 Crescent

Enrollment Rate for 15 to 19 yr. olds

Enrollment Percentage by Jurisdiction
- 1% - 5%
- 6% - 10%
- 11% - 15%
- 16% - 20%
- 21% and above
4-Yr. Publics Draw Students from the I-95/I-64 Crescent

Enrollment Rate for 20 to 24 yr. olds
4-Yr. Publics Draw Students from the I-95/I-64 Crescent

Enrollment Rate for 25 to 34 yr. olds
Private Non-Profits Draw Students from the Valley and Southern Piedmont

Enrollment Rate for 15 to 19 yr. olds

Enrollment Percentage by Jurisdiction
- Less Than 1%
- 1%
- 2%
- 3%
- 4% and above
Private Non-Profits Draw Students from the Valley and Southern Piedmont

Enrollment Percentage by Jurisdiction
- Less Than 1%
- 1%
- 2%
- 3%
- 4% and above

Enrollment Rate for 20 to 24 yr. olds
Private Non-Profits Draw Students from the Valley and Southern Piedmont

Enrollment Rate for 25 to 34 yr. olds
2-Yr. Publics: Enrollment Rates for 15-19 yr. olds Highest in the Southwest
2-Yr. Publics: Little Region-Specific Variance in Enrollment Rates for 20-24 yr. olds
2-Yr. Publics: Enrollment Rates for 25-34 yr. olds Highest in the SW and Southern Piedmont
4-Yr. Publics: Geographic Proximity Affects Enrollment Rates

30 Minute Drive Time Analysis
## 4-Yr. Publics: Enrollment Rates as % of State-Wide Median

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<tr>
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<th>20 to 24 yr. olds</th>
<th>25 to 34 yr. olds</th>
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<tbody>
<tr>
<td>Localities within 30 minute drive</td>
<td>116%</td>
<td>106%</td>
<td>133%</td>
</tr>
<tr>
<td>Localities not within 30 minute drive</td>
<td>91%</td>
<td>96%</td>
<td>80%</td>
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Private Non-Profits: Geographic Proximity Affects Enrollment Rates

30 Minute Drive Time Analysis
Private Non-Profits: Enrollment Rates as % of State-Wide Median

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<tr>
<td>Localities within 30 minute drive</td>
<td>114%</td>
<td>110%</td>
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<tr>
<td>Localities not within 30 minute drive</td>
<td>93%</td>
<td>81%</td>
<td>66%</td>
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</table>
34 Localities are Not within 30 Minutes of a 4-Yr. Public or Private Non-Profit Institution
Only 14 Localities are More than 30 Minutes From a 2-Yr. Public College

30 Minute Drive Time Analysis
Local Economic Base Affects Enrollment Rates

Employment in Mining, Agriculture, and Manufacturing

Employment Percent by Jurisdiction
- 0 - 10%
- 11 - 20%
- 21 - 30%
- 31 - 40%
- 41% and above

Employment in Mining, Agriculture, and Manufacturing
Family Income Affects Enrollment Rates

Median Family Income in 2000

$20,000 - $29,999
$30,000 - $39,999
$40,000 - $49,999
$50,000 - $59,999
$60,000 and above
Summary: Underserved

- Enrollment in 4-yr. colleges and universities lowest in the Southwest and Southern Piedmont

- Enrollment in 2-yr. colleges highest in the Southwest and Southern Piedmont

- Drive Time Analysis shows that geographic access explains a portion of this pattern

- Local economic base and family income also have an effect
Five Components

• Enrollment demand
• Capacity
• Underserved populations
• Economic development
• Technology
Economic Development

- Higher education serves as an engine of economic development in at least three ways: research, commercialization of intellectual property, and providing an educated/skilled workforce.

- Analysis focused on latter -- potential labor market “bottlenecks”
Model

• Compared labor demand (projected annual job openings) to supply (number of college graduates) and identified gaps

• Used NOICC crosswalk to map occupations into instructional programs

• Similar method used in six other states
Potential “Bottlenecks” Identified in Two Key Areas

- IT workers (systems analysts, computer engineers, and computer support specialists)
- Teaching (preschool, elementary, and secondary)
Five components

- Enrollment demand
- Capacity
- Underserved populations
- Economic development
- Technology
Distance Learning is a Growth Industry in Virginia

- Enrollment in ODU’s TELETECHNET program has grown from 10,330 students in 1996 to 17,662 in 2000

- VCCS’ distance education enrollment has grown from 6,300 students in 1996 to 34,718 in 2000
Potential to Reach Underserved Areas

- Distance learning can increase access in underserved areas of the Commonwealth – particularly for “place-bound” traditional students.

- Distance learning can also reduce time to graduation by providing greater course scheduling flexibility to traditional on-campus students.
Summary of Findings

1) Virginia will experience a 38,296 student increase in enrollment demand between 2001 and 2010

2) Enrollment capacity in the public institutions, particularly VCCS, is insufficient to meet projected demand, while additional enrollment capacity is reported in the private institutions.
Summary of Findings (cont.)

3) Attendance rates in 4-yr. colleges are lower in the Southwest and Southern Piedmont and this is partly attributable to geographic access.

4) Potentially significant gaps between the demand and supply of graduates exist in two key areas – IT workers and teachers.
Potential Next Steps

1) Additional capital construction

2) Make better use of existing enrollment capacity within the system

3) Higher Education Centers, satellite campuses, and enhanced use of distance learning
Potential Next Steps (cont.)

4) Incentives to reduce out-of-state enrollment

5) Credit hour limit on in-state tuition

6) Reduce transaction costs in the relationship between higher education and business
5) Incentives to increase the number of graduates in critical fields