The Total Cost of Ownership (TCO) is the total of all costs generated over the useful lifespan of the facility (30–50 yrs.).

The goal of TCO is to determine a value that will reflect the true cost of the facility, including:

- planning and constructing
- equipping the facility
- operating cost over the useful life
Objectives of TCO

Utilize a systematic approach for the evaluation of college facilities:

- Maintain a database compatible with State reporting requirements (fusion – Space inventory)
- Updated annually
- Utilizes TCO to integrate facilities & IT into the college wide planning process
The initial cost to construct a building typically represents only a small portion of the actual cost to own the facility over its lifetime.

The Challenges of Managing Our Facilities & Technology

- Lack of Resources
- Increased Operational Costs
- Reactive Maintenance
- Deferred Maintenance
- Lack of Preventative Maintenance

Increased Operational Costs

Reactive Maintenance

Deferred Maintenance

Lack of Preventative Maintenance

Lack of Resources
<table>
<thead>
<tr>
<th>Equipment 1998</th>
<th>Equipment 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>450,000 S.F. (estimated)</td>
<td>800,000 S.F.</td>
</tr>
<tr>
<td>8,400 Int. Light Fixtures</td>
<td>15,000 Int. Light Fixtures</td>
</tr>
<tr>
<td>1,680 Exterior Light Fixtures</td>
<td>3,000 Ext. Light Fixtures</td>
</tr>
<tr>
<td>950 doors</td>
<td>1,741 doors</td>
</tr>
<tr>
<td>5 Boilers</td>
<td>18 Boilers</td>
</tr>
<tr>
<td>84 Furnaces</td>
<td>150 Furnaces</td>
</tr>
<tr>
<td>1120 Filters</td>
<td>2,000 Filters</td>
</tr>
<tr>
<td>11 Elevators</td>
<td>18 Elevators</td>
</tr>
<tr>
<td>220 Exhaust/Supply Fans</td>
<td>400 Exhaust/Supply Fans</td>
</tr>
<tr>
<td>213 Restroom Fixtures</td>
<td>552 Restroom Fixtures</td>
</tr>
</tbody>
</table>
## 30 Year old Bldgs.

<table>
<thead>
<tr>
<th>BUILDING</th>
<th>SQUARE FOOTAGE</th>
<th>YR. BUILT</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 ENROLLMENT SERVICES</td>
<td>15892</td>
<td>1962</td>
</tr>
<tr>
<td>200 THEATER MUSIC</td>
<td>34870</td>
<td>1962</td>
</tr>
<tr>
<td>400 SOCIAL SCIENCE</td>
<td>23784</td>
<td>1967</td>
</tr>
<tr>
<td>450 FORUM</td>
<td>11416</td>
<td>1967</td>
</tr>
<tr>
<td>500 BUS SOC SCIENCE</td>
<td>19287</td>
<td>1962</td>
</tr>
<tr>
<td>700 MATH ENGIN TECH</td>
<td>20707</td>
<td>1962</td>
</tr>
<tr>
<td>900 COLLEGE CENTER</td>
<td>30300</td>
<td>1962</td>
</tr>
<tr>
<td>1100 GYMNASIUM</td>
<td>43857</td>
<td>1962</td>
</tr>
<tr>
<td>1300 BUILDING TRADES</td>
<td>11748</td>
<td>1976</td>
</tr>
<tr>
<td>1400 COMPUTER LAB</td>
<td>9900</td>
<td>1976</td>
</tr>
<tr>
<td>1500 EARLY CHILD NURSING</td>
<td>17840</td>
<td>1976</td>
</tr>
<tr>
<td>1550 NURSING OFFICE</td>
<td>2510</td>
<td>1976</td>
</tr>
<tr>
<td>1600 PUBLIC SERVICES</td>
<td>8120</td>
<td>1979</td>
</tr>
<tr>
<td>2000 MAINT &amp; OPS</td>
<td>11719</td>
<td>1974</td>
</tr>
<tr>
<td>2020 GROUNDS SHOP</td>
<td>1400</td>
<td>1974</td>
</tr>
<tr>
<td>2050 VEHICLE/CUSTODIAL</td>
<td>1920</td>
<td>1974</td>
</tr>
<tr>
<td></td>
<td><strong>265,270</strong></td>
<td></td>
</tr>
</tbody>
</table>
Cabrillo’s Aptos Facilities Square Footage by Year

Square Footage (S.F.)

Years

S.F. Cumulative S.F.

1910 to 1959
1960 to 1969
1970 to 1979
1980 to 1989
1990 to 1999
2000 to 2010
Network Integration with Facilities Management

Devices on the Network

- Lighting controllers
  Safety

- Video cameras
  Security, Safety, Loss prevention

- Door locking systems
  Wired and wireless solutions

- Telecommunications
  Emergency & standard phones

- Smart Classrooms
  Benefit Instructors to help students

- HVAC systems
  Energy management

- Burglar alarms
  Security

- Fire alarms
  Safety

- Irrigation systems
  Keep campus green

- Student Computer Labs
  Provide student access to technology
Technology that Directly Supports Student Success

Smart Classrooms
In 2013 deployed 33 advanced rooms. An additional 40 – 50 Smart Classrooms should be designed or upgraded.

Student Computer Labs
Over 500 clients have been virtualized in 20 rooms. Additional rooms can be virtualized.

Network Infrastructure
Data Centers: Aptos needs Fire Suppression, Watsonville needs Fire & Generator, IDF's and wireless need upgrade.
Goal: Implement TCO, Integrate Planning

- Educational Master Plan
- Facilities Master Plan
- Technology Plan
- Facilities Planning & Plant Operations Program Plan
- Strategic Plan
Goal: Continue good stewardship of resources

- Provide a quality learning environment for students
- Maintain educational excellence
Questions?