WORKFORCE EMPLOYER NEEDS
2020 ASEE Engineering Deans
Public Policy Colloquium

Feb. 4, 2020
Who is Michael Cox?

- Leader in complex environments
- Strategic and solutions oriented
- Trusted advisor & influencer
- Depth of experience in:
  - Change management
  - Diversity, equity and inclusion
  - Demand & capacity balancing
  - Operational excellence
  - Business and financial acumen
  - Culture and organizational design
  - Global workforce optimization
What we do today

Commercial airplanes, defense, space & security, global services, capital corporation

$76.6B
in 2019 revenues

150 countries

Products and services support to customers in more than
More than 160,000 employees around the world

Global workforce presence in over 65 countries

72,455 positions filled in the past three years

Over 56,000 engineers, enterprise-wide
Engineering talent deep dive...

### Engineering by Function

<table>
<thead>
<tr>
<th>Function</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical</td>
<td>9,754</td>
</tr>
<tr>
<td>Production</td>
<td>6,772</td>
</tr>
<tr>
<td>Electrical</td>
<td>6,194</td>
</tr>
<tr>
<td>Systems</td>
<td>5,869</td>
</tr>
<tr>
<td>Software</td>
<td>5,496</td>
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<tr>
<td>Flight</td>
<td>2,818</td>
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</tbody>
</table>

### Engineering by Level

<table>
<thead>
<tr>
<th>Level</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry level</td>
<td>9,567</td>
</tr>
<tr>
<td>Mid-level</td>
<td>42,881</td>
</tr>
<tr>
<td>Management</td>
<td>12,332</td>
</tr>
</tbody>
</table>

(Other engineering functions not listed above account for 19,614 of total workforce)
Biggest talent challenges...

Global competition for talent

Generational values

Talent shortages for specific skills

Barriers to hiring

Immigration challenges

Efforts to increase diversity
At Boeing we are…

- Investing in STEM education
- Inspiring innovation in education, our industry and our workforce
- Partnering with universities to build core aerospace engineering competencies through hands-on capstone projects (AerosPACE)
- Financing advanced learning solutions for current and future employees (MIT, NSF, others)
- Improving equity and diversity through policy and benefits that fosters and retains a diverse workforce
- Collaborating with universities and providing funding to support low-cost, scalable online certifications
How you can help…

- Continue to advocate legislation change that encourages higher education
- Influence the proper investment in programs that fund higher education
- Reduce regulatory requirements on types/locations of workers
- Equip students with life skills to encourage good culture and organizational citizens
- Partner to create a real-life view of what the roles actually do and the value they create