COMMISSION ON UNIVERSITY SUPPORT
MEETING
March 18, 2021
Videoconference (via Zoom)

Present: Judy Alford, John Benner (Chair), Michael Borowski, William Dougherty for Scott Midkiff, Martha Glass, Kristie Caddick for Charles Phlegar, Jon Clark Teglas for Chris Kiwus, Jeff Earley, Polly Middleton, Debbie Greer for Ken Miller, Phil Miskovic, Connie Stovall, Robert Sumichrast,

Absent with Notice: Bradley Klein, Ryan Speer

Absent: Patrick Pithua

Guests: Denny Cochrane, Susan Duncan, Alisha Ebert, Christina King, April Myers

Recorder: Teresa Thompson

1. Welcome and Roll Call

Commission Chair, John Benner, called the meeting to order at 2:00 p.m.; initiated introductions and roll call. A quorum was present.

2. Approval of Agenda

Proper motion was made, seconded, and unanimously passed to accept the March 2021 agenda.

3. Approval of the February 2021 meeting minutes

Chair Benner noted that these minutes have been voted on electronically and can be publicly accessed on the Governance Information System on the Web (http://www.governance.vt.edu).

4. Old Business

No old business for discussion.

5. New Business

Dr. Susan Duncan, Associate Director of the Virginia Agricultural Experiment Station provided her presentation on the CALS SmartFarm Innovation Network/Center for Advanced Innovation in Agriculture which is attached and incorporated herein as part of the minutes.

6. Updates from Committee Representatives

Campus Development Committee – Christina King reported committee has nothing new to report.
Energy and Sustainability Committee – Denny Cochrane reported the committee met on January 25, 2021; no new minutes for Commission review to date; work continues with the process and recommendation for 2020 Climate Action Commitment Resolution that will be presented at the March 2021 Board of Visitors meeting for approval; they initiated Virginia Tech’s 5th STARS submission on February 18 and awaiting review; Green RFP update: 18 student proposals have been prioritized; Earth Week (April 18-24, 2021) update; coordination efforts are ongoing to finalize the schedule of events. Look for announcements in the near future.

IT Services and Systems Committee – William Dougherty shared that Google services will be implementing changes with G Suite by spring/fall; meetings are ongoing and he will share updates from those discussions and way ahead as this develops. Virginia Tech’s license with Qualtrics will expire May 2021. They are looking into options for the university and additional information will be shared in the near future.

Transportation and Parking Committee – Nothing new to report.

7. **Acceptance of Committee Minutes**

Campus Development Committee – no new minutes submitted to the Commission.

Energy and Sustainability Committee – January 25, 2021 minutes approved by the Commission.

IT Services and Systems Committee – IT Services and Systems March 5, 2021 minutes approved by the Commission.

Transportation and Parking Committee – February 3, 2021 minutes were received and shared for information purposes. Since no representatives for the committee could attend this meeting, the Commission will review and vote on them at the April meeting.

8. **Next Meeting Date**

Next meeting date April 15, 2021 and will include a presentation by John Ignosh, Specialist with Biological Systems Engineering and Virginia Cooperative Extension, on Virginia Cooperative Extension programs on solar projects and programs.

9. **Adjournment**

There being no further business, proper motion was made to adjourn the meeting at 2:58pm.

Respectfully submitted,
Teresa Thompson
SmartFarm Innovation Network™
Harnessing Technology to Drive Future Economies
caia.cals.vt.edu
U.S. Agriculture and the 4\textsuperscript{th} Industrial Revolution

The McCormick Farm was central to the \textbf{agricultural technology revolution} in the 19\textsuperscript{th} century.
U.S. Agriculture and the 4\textsuperscript{th} Industrial Revolution

The McCormick Farm was central to the \textit{agricultural technology revolution} in the 19\textsuperscript{th} century.

- Convergence of digital, physical, and biological innovations
- Transformational technologies
- Artificial intelligence, genome editing, robotics, 3-D printing, augmented reality,.....
- Systematic change across many sectors
USDA Priorities – Food and Agriculture Cyberinformatics and Tools Initiative

• Data science

• Enable systems and communities to effectively utilize data

• Improve resource management

• Integrate new technologies and approaches

• Examine value of data for variety of stakeholders
The VT SmartFarm Innovation Network

- VT campus + 11 ARECS + VCE + industries
- Testbeds for creating technologies
- Implementing Networks
- Securing data for agriculture, food, natural resource industries
- Experiential learning
- Workforce training
- Translation into practice for small businesses and corporate enterprises
ARECs connect VT to the Virginia Communities
ARECS ANNUALLY ENGAGE WITH OVER 300 STAKEHOLDER GROUPS
(2018; N=312)

- Large Corporate: 25% (n=79)
- Small/Medium Business: 29% (n=92)
- Commodity Groups: 13% (n=40)
- Local/State Agencies: 16% (n=51)
- Federal Agencies: 5% (n=14)
- Other Universities: 12% (n=36)
- Small/Medium Business: 29% (n=92)
In 2018, ARECs were supported by 147 different funding sources.

- **7 federal programs**: USDA NIFA, APHIS, SARE, NRCS, ARS, others
- **13 local/state**: cities, counties, VDACS, Chesapeake Bay Fdtn, VA Ag Council, VA Farm Bureau, VA Tobacco Commission
- **46 Corporate entities**: Altria, BASF, Bayer, Corteva/Dow, FMC, Koch, Merck Animal Health, Monsanto, Philip Morris International, Smithfield Foods, Syngenta, Valent
- **18 Small/Medium businesses**: seed companies, equipment companies, energy companies, banks
- **11 Commodity groups**: Associations, Boards, Foundations
- **52 In-Kind Contributions**: corporate, small businesses, local/state agencies, commodity groups, farmers/producers
Private Industry Funding

Virginia Tech
- Federal/State/Local: 77%
- Other Funding Sources: 23%

ARECs
- Federal/State/Local: 60%
- Other Funding Sources: 40%

2015 Office of Sponsored Programs Data
NEEDS AND ISSUES

• Failing structures
• No classroom spaces for groups
• Wireless connectivity challenges
• Outdated field equipment
• Limited capacity for smart technologies, equipment, and data analytic
The Plan Covers Four Major Strategic Areas

- Capital Project Needs
  - Top Immediate Priorities
- Infrastructure and Land Needs
- Comprehensive Preventive Maintenance Plan
- IT, Connectivity, Wi-Fi Availability, A/V Needs, and Signage
# Summary of Capital Projects & Land Needs

<table>
<thead>
<tr>
<th>Core Facility Type</th>
<th>No. Projects</th>
<th>New Cons. (ft²)</th>
<th>Renovation (ft²)</th>
<th>Est. Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Support</td>
<td>35</td>
<td>97,510</td>
<td>27,000</td>
<td>$21,560,000</td>
</tr>
<tr>
<td>Extension/Outreach</td>
<td>6</td>
<td>27,500</td>
<td>2,500</td>
<td>$8,363,000</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>25</td>
<td>150</td>
<td>500</td>
<td>2,930,000</td>
</tr>
<tr>
<td>Admin/Office</td>
<td>2</td>
<td>--</td>
<td>900</td>
<td>199,000</td>
</tr>
<tr>
<td>Housing</td>
<td>12</td>
<td>14,200</td>
<td>24,700</td>
<td>4,671,000</td>
</tr>
<tr>
<td>Grand Total</td>
<td>80</td>
<td>139,360</td>
<td>55,600</td>
<td>$37,723,000</td>
</tr>
<tr>
<td>Land</td>
<td>3</td>
<td>350 acres</td>
<td>--</td>
<td>$3,150,000</td>
</tr>
</tbody>
</table>
## High Priority Capital Projects by AREC

<table>
<thead>
<tr>
<th>AREC</th>
<th>Item</th>
<th>Estimated Cost</th>
<th>Est. Sq. Ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. H. Smith</td>
<td>Pesticide Storage (R)</td>
<td>$675,000</td>
<td>5,400</td>
</tr>
<tr>
<td>Eastern Shore</td>
<td>Tenant House (N)</td>
<td>$240,000</td>
<td>1,200</td>
</tr>
<tr>
<td>Eastern Virginia</td>
<td>Seed Drying and Experiment Bldg (R)</td>
<td>$195,000</td>
<td>1,100</td>
</tr>
<tr>
<td>Hampton Roads</td>
<td>Classroom Expansion (N)</td>
<td>$812,500</td>
<td>2,500</td>
</tr>
<tr>
<td>MARE Center</td>
<td>Animal Teaching/Outreach (N)</td>
<td>$1,050,000</td>
<td>7,500</td>
</tr>
<tr>
<td>Reynolds Hstd</td>
<td>Basement upgrade (R)</td>
<td>$310,000</td>
<td>1,240</td>
</tr>
<tr>
<td>S. Piedmont</td>
<td>Lab facility (N)</td>
<td>$1,125,000</td>
<td>2,500</td>
</tr>
<tr>
<td>Shen. Valley</td>
<td>Multipurpose building (N)</td>
<td>$937,500</td>
<td>7,500</td>
</tr>
<tr>
<td>Southwest</td>
<td>Livestock facility Expansion (N)</td>
<td>$625,000</td>
<td>5,000</td>
</tr>
<tr>
<td>Tidewater</td>
<td>MPB and Smart greenhouse (N)</td>
<td>$1,850,000</td>
<td>13,000</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>$7,820,000</strong></td>
<td><strong>46,940</strong></td>
</tr>
</tbody>
</table>
## IT Infrastructure Upgrade at ARECs

<table>
<thead>
<tr>
<th>Component</th>
<th>Fixed-One Time Cost</th>
<th>Annual Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Router Upgrade</td>
<td>$55,000</td>
<td>--</td>
</tr>
<tr>
<td>Building Re-wiring</td>
<td>$850,000</td>
<td>--</td>
</tr>
<tr>
<td>Interior Wi-Fi Upgrade</td>
<td>$132,000</td>
<td>--</td>
</tr>
<tr>
<td>RTK (GPS Accuracy)</td>
<td>$190,000</td>
<td>$14,000</td>
</tr>
<tr>
<td>Exterior Wi-Fi Network</td>
<td>$1,030,000</td>
<td>--</td>
</tr>
<tr>
<td>Communication (A/V)</td>
<td>$195,000</td>
<td>--</td>
</tr>
<tr>
<td>Annual Service Cost</td>
<td>--</td>
<td>$414,000 ($117,000)</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$2,452,000</strong></td>
<td><strong>$428,000</strong></td>
</tr>
</tbody>
</table>
Maintenance Reserve Projects:
Recent Actions & Discussions

<table>
<thead>
<tr>
<th>MR Project Type</th>
<th>No. of Projects</th>
<th>Cost (Million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moisture Penetration</td>
<td>17</td>
<td>$1.824</td>
</tr>
<tr>
<td>MEP Systems</td>
<td>12</td>
<td>$1.444</td>
</tr>
<tr>
<td>Structure</td>
<td>8</td>
<td>$1.130</td>
</tr>
<tr>
<td>Other</td>
<td>13</td>
<td>$0.828</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>50</strong></td>
<td><strong>$5.226</strong></td>
</tr>
</tbody>
</table>

- **Maintenance Reserve Funds**
  - Allocation: $250,000/YR
  - Actual: $395,000/YR
  - On-going discussion to increase allocation for future years

- **CALS Expenditure:**
  - 2010-2018: $601,000/YR
Summary

- SmartFarm Innovation Network™ is the testbed for transformational agricultural technologies.
- ARECs are the gateway to VT for many communities, particularly in rural areas.
- Impressive level of engagement with private industry.
- CALS and VT investment in ARECs, while significant, is not keeping up with the needs.
- Significant need for preventive maintenance, connectivity, infrastructure and capital projects.
- Developing different policies/mechanisms for procurement and delegated authorities for ARECs.
Workforce development key for Virginia’s rural communities, governor says during Virginia Tech visit

Gov. Ralph Northam also stressed the need for technological investments in rural communities

September 25, 2019

Rural Virginia Initiative - Economic Development

HTTPS://VTNEWS.VT.EDU/ARTICLES/2019/09/CALS-GOVERNORSSUMMIT.HTML