Realizing The BB Vision
An Internationally Recognized 21st Land-Grant University

Beyond Boundaries

A FRAMEWORK FOR THE FUTURE

GOALS
The Beyond Boundaries thematic groups were tasked with creating a future vision for Virginia Tech that would prepare the university for two related goals:

Advance as an internationally recognized, global land-grant university

Strategically address the challenges and opportunities presented by the changing landscape of higher education

Thanassis Rikakis,
Executive Vice President and Provost

Virginia Tech
Invent the Future®
A distinguishing characteristic for Virginia Tech that

- Builds on the university’s strengths and tradition
- Allows the university to tackle the complexity of 21st century education, research and engagement in a unique manner
- Facilitates recruitment of talented students and faculty
- Graduates 21st century work force; addresses gaps/needs
- Advances the development of partnerships
- Diversifies our financial portfolio
- Promotes communities of learning
VT-Shaped Individuals

Solid Disciplinary Preparation

Interdisciplinary Collaboration

Technology Expertise

Experiential Learning

Ut Prosim

Partnerships
VT-Shaped Framework

Solid
Disciplinary
Preparation
VT-Shaped Framework

Colleges:
• Customized benchmarking
  o Global leader in select areas of excellence
  o Regional leader in areas of strength
  o Measured investments in other areas
• Significant annual budget increases to colleges (total $150M by 2022)
VT-Shaped Framework
VT-Shaped Framework

- Rich network of interdisciplinary efforts at VT
  - Institutes
  - IGEPs
  - Pathways Gen Ed Curriculum
  - Centers
  - Destination Areas
Destination Areas Enrich Our Interdisciplinary Network

• Leading universities are developing cross-university signature initiatives around current complex problems

• Focused on each university’s distinguishing strengths

• Opportunity for collaborations and outcomes of large-scale and scope
Destination Areas Enrich Our Interdisciplinary Network

Our strategy

1. Explore synergies among strengths of colleges and institutes
2. Convene faculty design teams to propose transformational vision and explore participation interest
3. Validate with external audiences
4. Build faculty clusters around areas of greatest synergy and potential for attracting talent globally
5. Develop signature cross-cutting research, education, and experiential learning around promising destination area faculty clusters
Destination Areas and Themes

**Data Analytics and Decision Sciences**
- general methodology
- health analytics
- financial resilience analytics
- infrastructure analytics
- security analytics
- social analytics

**Integrated Security**
- interface between cyber-physical and human agents
- security governance policy and practices
- national security and preparedness

**Global Systems Science**
- sustainable food systems
- water for health
- contagions and infectious disease

**Intelligent Infrastructure for Human-Centered Communities**
- autonomous vehicle systems
- smart design and construction
- energy, intelligent/ubiquitous mobility

**Adaptive Brain and Behavior**
- decision-making
- healthy development
- comparative neuro-oncology
Strategic Growth Areas and Themes

Innovation and Entrepreneurship
• Curriculum available to 10% of our students
• Develop cross University scholarship in the area

Creative Technologies and Experiences
• Curriculum available to 10% of our students
• Develop cross University scholarship in the area

Materials
• Focus on additive manufacturing

Policy
• Cross-disciplinary knowledge for meaningful public policy

Equity and Social Disparity in the Human Condition
• Pathways Curriculum
• Develop cross University scholarship in the area
VT-Shaped Framework
Our students will graduate with significant technology expertise.

Our students will recognize and consider the human context in decision and action.
VT-Shaped Framework

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Partnerships
VT-Shaped Knowledge Generation Requires Diverse Communities of Learning

- Being where the knowledge and experiences are:
  - Blacksburg/Roanoke
  - National Capital Region
  - Extension/Experiment Stations
  - Joint labs with industry
  - Global and regional gateways

- Inclusion as a key to excellence in 21st century complexity

- Adaptive pedagogy and curriculum
VT-Shaped Framework Requires Participatory Management and Iterative Design

• Effective leadership in this complex framework requires collective cognition, group genius and continuous adaptation and improvement

• Moving Leadership from Collegial to Collaborative
  o Being aware of your organization and of the relevant broader context
  o Developing collective cognition through collective leadership practices

  o Iterative design and innovation
    • Be aware of changing environment – continuous redesign
      ➢ nothing is final; living, breathing process
    • Distinguish group level/high level design from detailed design (happens in units)
    • Share early and often with all relevant stakeholders
      ➢ constructive criticism, willingness to evolve, build and maintain trust
    • Integrate and redesign
    • Evaluate and restart design cycle – continuous improvement
Iterative, Participatory Design Activity I - A VT Shaped Framework Budget Model

• Development and implementation of new budget model (PIBB) that
  o Supports VT-shaped research, education and engagement
  o Is outcome-based (with national benchmarks)
  o Is data supported and transparent
  o Is adaptive
  o Promotes quality and rewards impact (of all kinds)
Iterative, Participatory Design Activity II - Continuous Collaborative Strategic Visioning

• Exploration of synergies between college, institute and Destination Area faculty cluster plans and iterative improvement of plans

• Exploration of synergies between VT-integrated plans and external partners (industry, government, community, students, alumni) and iterative improvement of plans

• What does success look like – second stage of BB and new scorecard – and iterative improvement of plans
Change Management and Communication

• The Beyond Boundaries evolution of the university requires culture change

• Need to evolve all key structures together to avoid conflicting messages

• Acknowledge rate and scope of change and related challenges (and ask for patience and support)

• Communicate, communicate, communicate

• Consistency in message and materials (and related actions)

• Improve information flow (and related actions)

• Enhance contact points