THE INNOVATION CENTER
Purposeful & Enabling

Innovation Center Vision

- Create an intellectual center for interactive student engagements.
- Provide an agile interdisciplinary science and technology environment to enable education and innovation.
- Support the university objective to attract and retain the highest caliber of students and faculty.
- Enhance student academic learning experience by immersing them in critical thinking scenarios.
- Establish industry, government and academic partnerships to support programs of mutual interest.
- Establish an infrastructure of virtual interactive networks.

Essential Features of a Learning Space Center

- All learning spaces will include support offices and flexible studios which encourage student interactive engagements.
- Community spaces will include collaboration and academic research areas.
- Collaboration, experimentation, complex problem solving and virtual connectivity will be supported by S&T advances.

Clemson's future is a complex map of interactive networks that must constantly mutate and reshape the fabric of the institution. The new central campus innovation center must accommodate student-centered learning through our campus S&T advances.

Source Reference – Jeanne L. Narum PKAL Volume III Structures for Science, 1995

Operational Concept
Support Functions and Applications

Fiber & Wireless Networks Throughout all Internal Connectivity

- Virtual Interactive Connections and wideband Networks
- High Performance Computing
- Shared Data Center and Storage Facilities
- S&T Infrastructure

Distributed Systems External Connectivities

- Engaged Student Modules
- Scientific Instruments, Analytics & Scientific Developments
- Academic, Industry & Government Partnerships
- Research & Academic Assessments
- Student-Centered Learning, i.e., deeply programmable and federated with virtualized slices

Planning & Control Center

- Academic Resource Center
- Collaborative Experimental Studios
- Creative Inquiry and Special Project Areas
- Research & Scale-up Areas
- Several Laboratories such as Cyber Fusion & Next Generation Computing
- Academic & Research Virtual Connectivity Center
- Control/S&T Support Center
- Simulator & Emulation Clusters

Academic & Support Space

21st Century Education

- What are the critical skills our undergraduate students need?
- Technical depth in a particular field
- Creativity and innovation
- Entrepreneurial outlook
- Communication skills
- Ability to work well as a member of a diverse team
- Global knowledge and experience
- Commitment to lifelong learning

New facility must reinforce

CLEMSON UNIVERSITY

Innovation Center Enabling Facilities

Science and Technology Focus Areas

Academic quality and experimental learning activities require rigorous S&T and scholarly research.

- Advanced Material Development & Fabrications
- Cyber Fusion and Software Defined Networks
- Medical and Healthcare
- Scientific Analytics
- Informational Knowledge and Discovery
- Leadership, Economic Constraints, Policy and Global Disruptions
- Architecture Technology and Sustainability
- Computational Biology and Technology Applications

Innovation Center Enabling Facilities

- Technology Demonstration Studios
- Skills Development Studio
- Immersive Visualization Areas
- Project and Collaboration Areas
- Scientific Analytics and Leadership Studios

- Scale-Up Cross-Discipline Interactive Learning Spaces
- Science and Technology Scenario Assessment Area
- Agile and Reconfigurable Fusion Laboratories
- Simulation and Modeling Support (3D) Equipment Areas

Innovation Center Enabling Facilities

- Rapid Prototyping Area Collaborations Dedicated to Partnerships
- Meeting Rooms (Small, Medium and Large)
- Control Center and Academic Resource Center

- Large Auditorium and Atrium for Supporting Academic Research and Partnership Activities
- Terrace Rooftop to Support Scholarly and Social Interactions

Innovation Center Academic Focus

- Interactive Learning
- Student Engagements
- Technology Demonstrations
- Collaboration Across Disciplines
- Partnerships and Scholarly Research
- Creative Inquiry and Special Projects
- Creativity and Emerging Technologies
- Progressive Use of Autonomous Processes
- Virtual Utilization of Interactive Infrastructure

Innovation Center Basic Features

- Broadband fiber and wireless controllable IT grid
- Raised flooring with modular wiring and air flow systems
- Flexible interconnectivities and modular interior walls
- LED lighting and controlled daylight harvesting sensors
- Agile interdisciplinary science & technology areas
- Industry/academic partnership areas

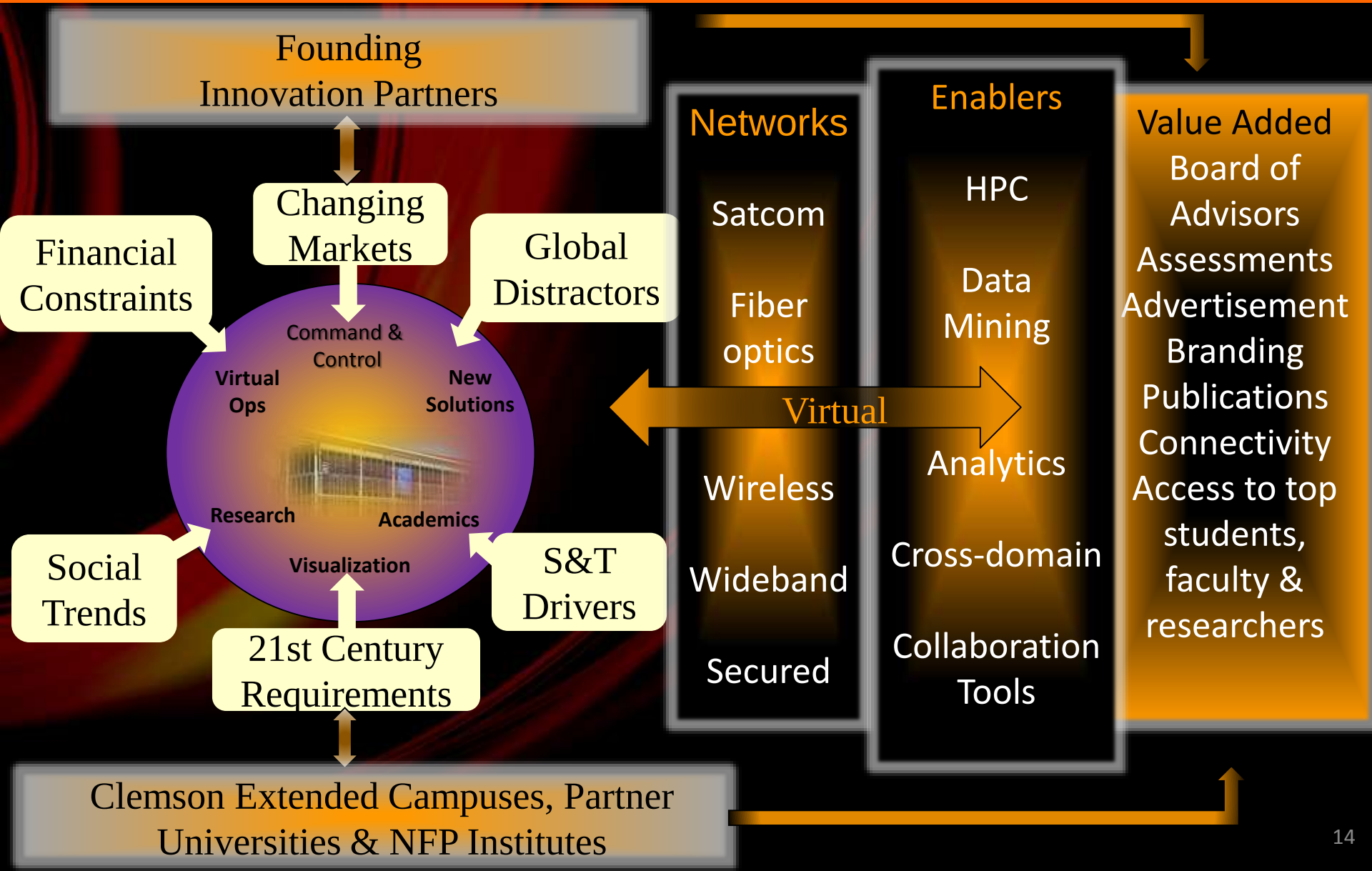
Innovation Center Basic Features

- Visualization systems throughout the building including classrooms, laboratories and special project areas
- Centralized control room for electronic delivery of interactive educational engagements
- Deeply programmable software modules
- Virtual connectivities to remote assets, extended operations and partnerships

Unique Innovation Features

- Support creation of dynamic interactive learning centers with other universities, industry and government utilizing virtual connectivity
- Improve student engagements and scale-up product development prototyping
- Creation of intelligent data to support global business environments that embrace growth and sustainability
- Advance complex problem solving solutions driven by economic assumptions and policies
- Science and technology assessments to explore business opportunities related to market dynamics

Innovation Center Connectivity



Summary

- Educational advancements are about providing the critical skills our students need to be successful in the workplace.
- Emphasis is on cross-disciplinary collaboration, innovation, & partnerships enabled by advanced technologies.
- An essential part of cost effective operations is virtual connectivity to critical assets and collaborative partners.