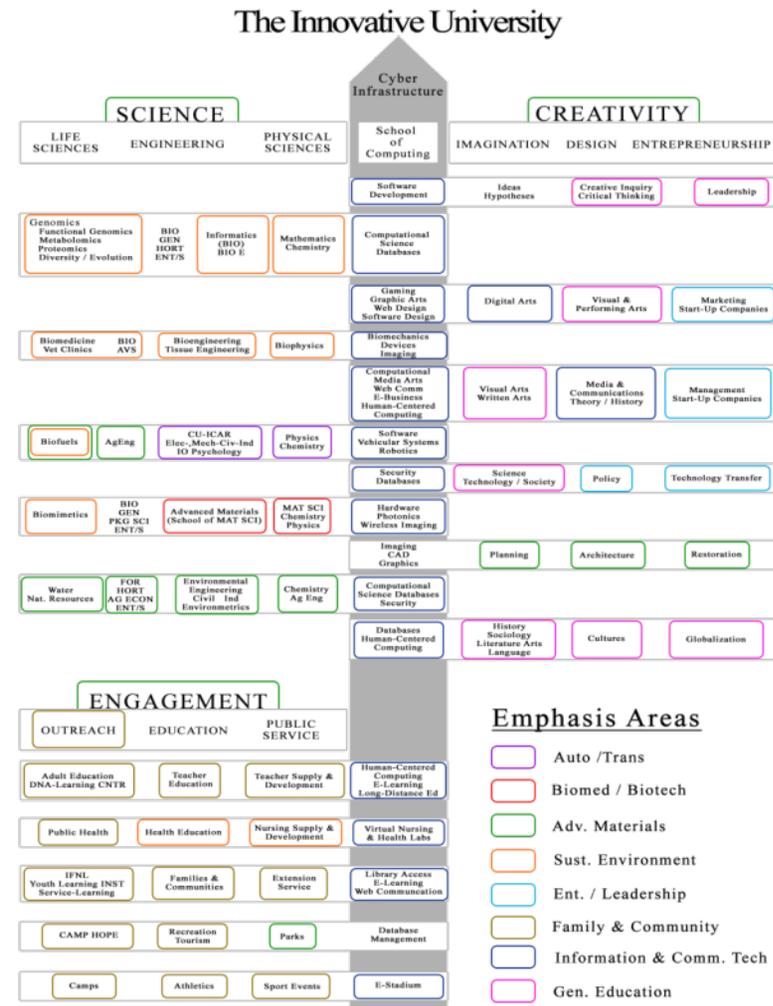# Cyberinfrastructure is strategic for Clemson
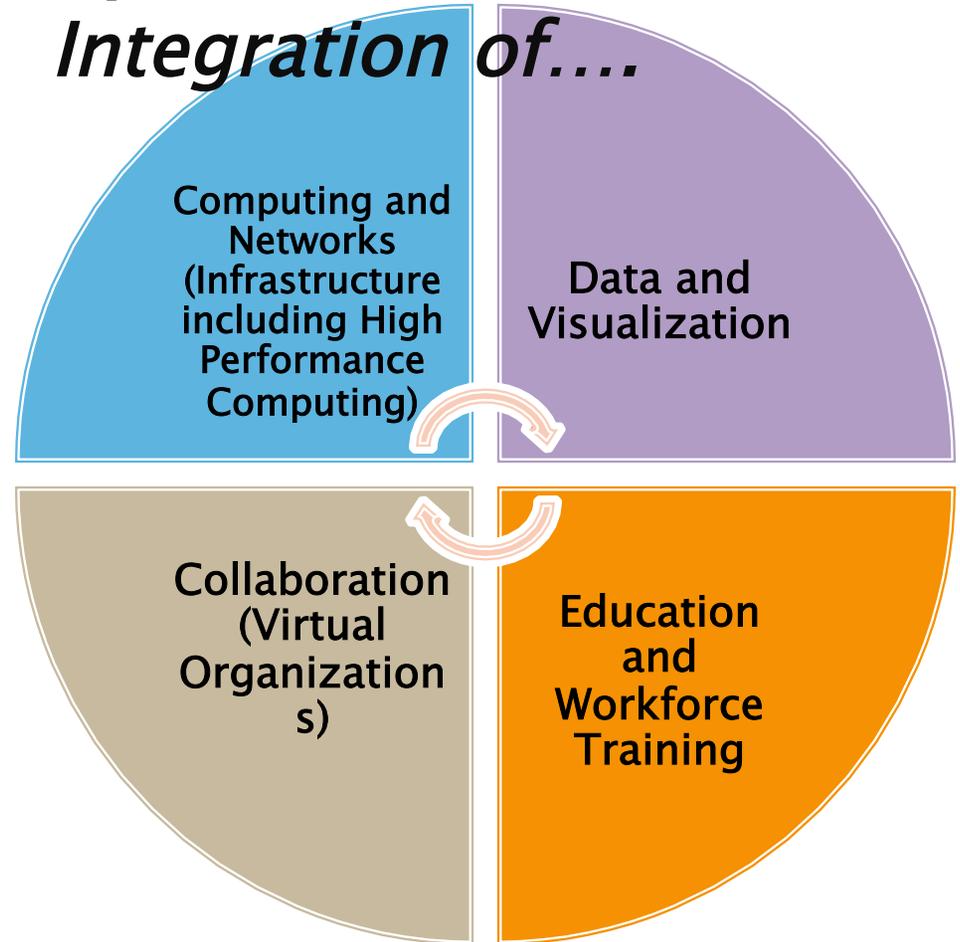
"Cyberinfrastructure is the primary backbone that ties together innovation in research, instruction, and service to elevate Clemson to the Top 20"

Dori Helms
Provost

Organizing Principle

Cyberinfrastructure is Integration of....

Computing and Networks (Infrastructure including High Performance Computing)

Data and Visualization

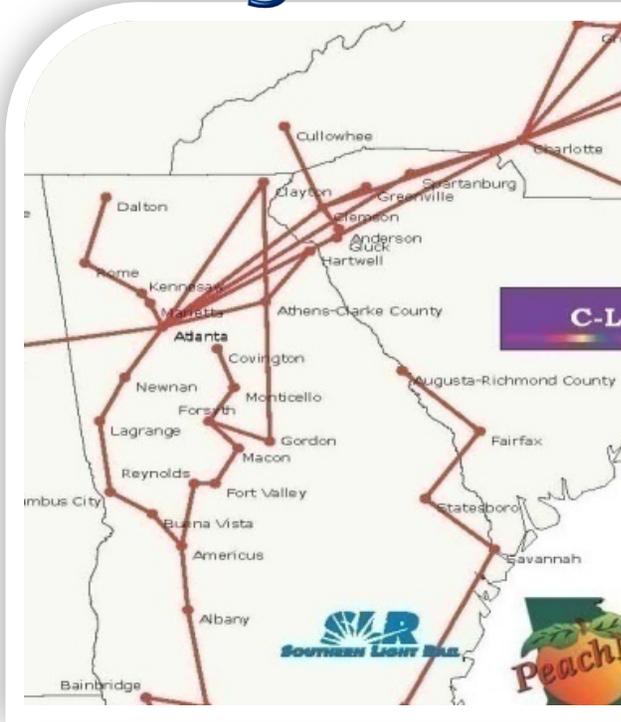Collaboration (Virtual Organizations)

Education and Workforce Training

Current Programs

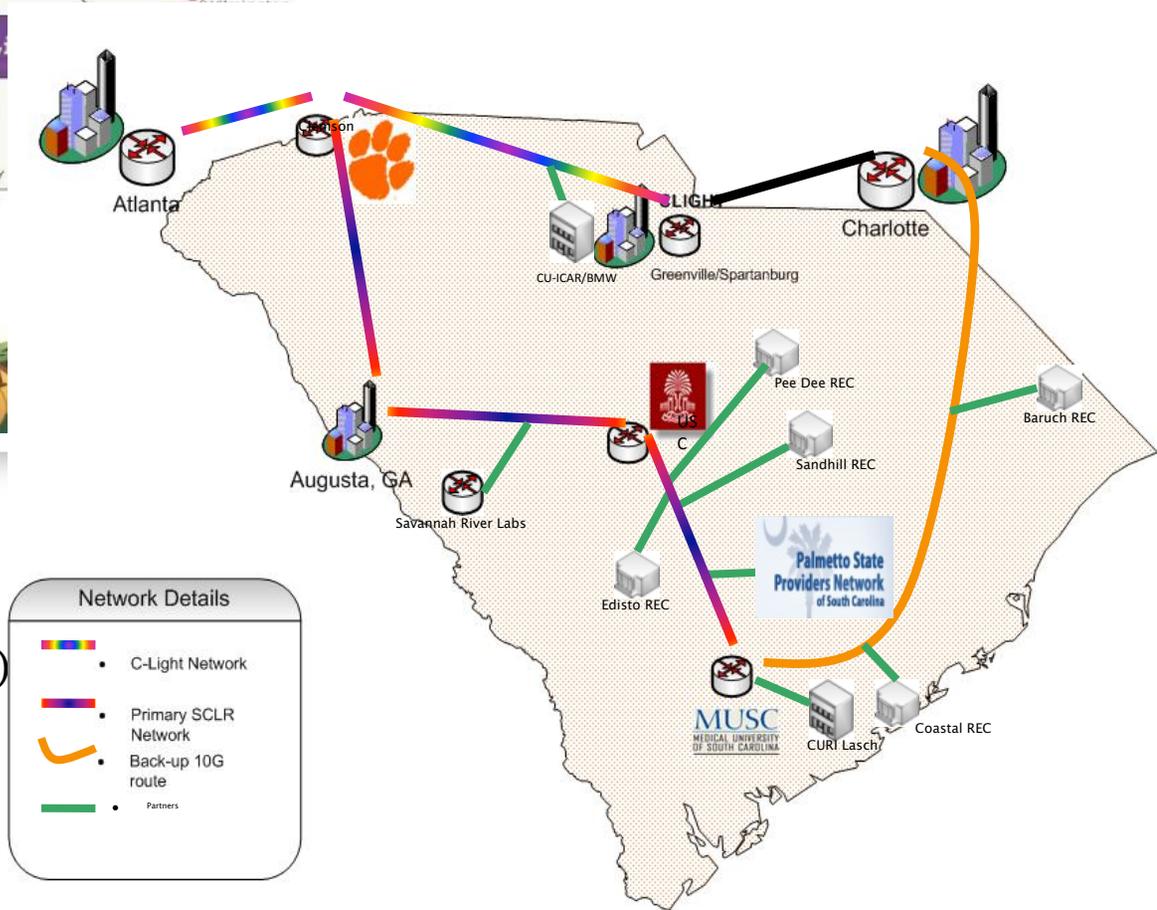- South Carolina Cloud TestBed (DoE $1.6M)
- EPSCoR RII Track 2 Cyberinfrastructure Award (NSF $6.0 M) – Partnership with Tennessee EPSCoR
- Intelligent River (Restoration Institute $1.5 M)
- Open Parks Grid ($53K)
- NSF GENI, Parallel Virtual File System and NSF CI-TEAM
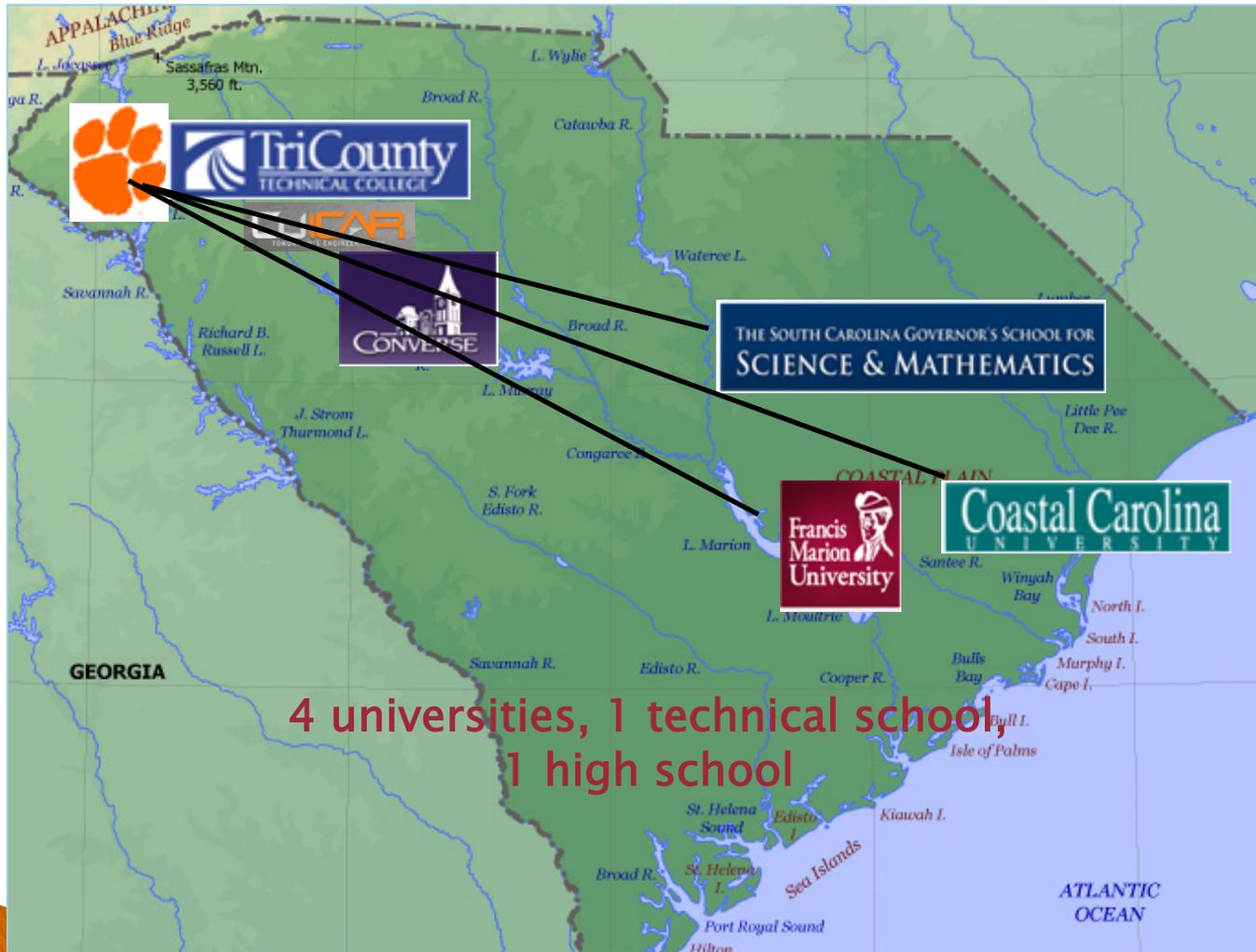
Change at Clemson – Infrastructure

South Carolina: An Evolving Network of Networks

- South Carolina Light Rail (statewide)
- C–Light (Atlanta to Charlotte)
- Palmetto Net
- EPSCoR CI and C2
- Broadband middle mile

Network Details

- C-Light Network
- Primary SCLR Network
- Back-up 10G route
- Partners

South Carolina Cloud:
STEM Teaching – Parallel Computing – Grid Classroom

4 universities, 1 technical school, 1 high school

EPSCoR RII Track 2 Cyberinfrastructure Award – $6.0 M

EPSCoR CI Participants

- **SOUTH CAROLINA**
  - Claflin University
  - The Citadel
  - Clemson University
  - Medical University of South Carolina
  - South Carolina State University
  - University of South Carolina
- **TENNESSEE**
  - Oak Ridge National Laboratory
  - University of Tennessee-Knoxville (NICS)
  - Vanderbilt University

EPSCoR CI Program Highlights

- Systems Biology Science Bench
- Advanced Materials tools
- Re-engineered application that scales to thousands of processors
- Education/Training in multi-processor, parallel, and hybrid architecture computation
- Facilitating access to TeraGrid through regional computation center

Future Direction & Sustainability

- Industry Partner Program
- Diversified Portfolio
- Growing grant portfolio
- Electronic Health Records/Modern Health Management
- Software product tech transfer
- HubZero Consortium member