

# **Louisiana's Research Infrastructure Improvement Strategy 2010-2015**

## **Project Overview**

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Louisiana Board of Regents

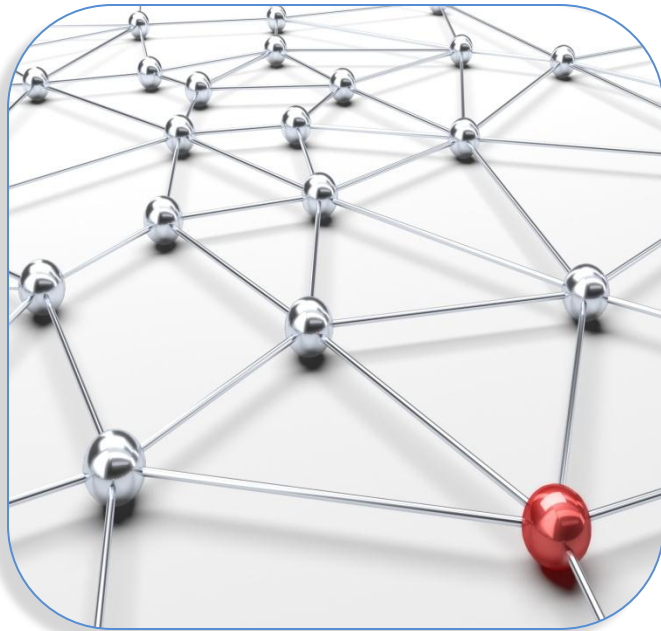
# LA EPSCoR



# LA EPSCoR: Catalyst for Collaboration



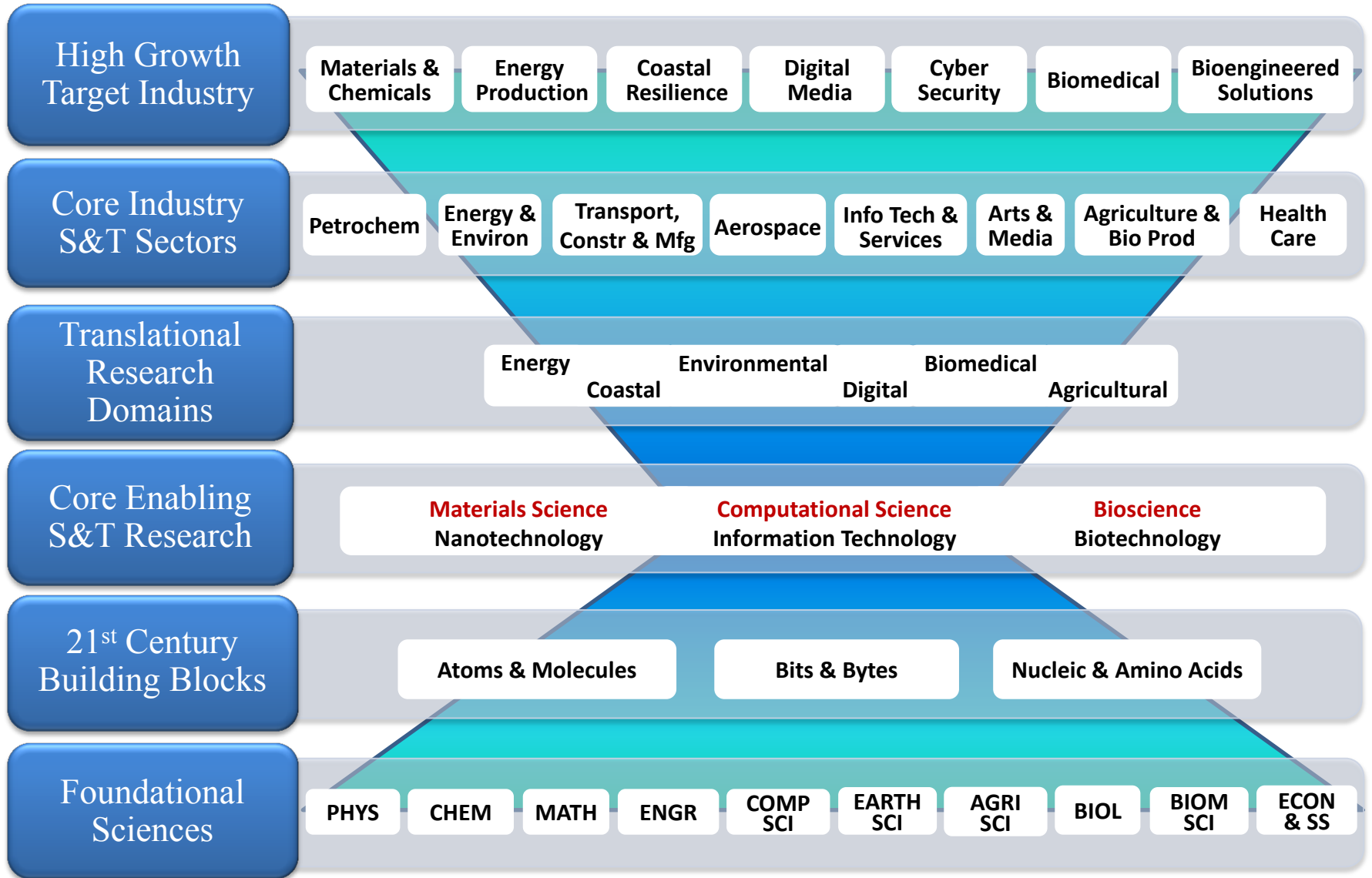
Prior to EPSCoR, Louisiana institutions competed against each other for research funding.



LA EPSCoR is a proven catalyst for achieving increased statewide collaboration and national competitiveness.

LA EPSCoR has broken down boundaries between campuses.

# S&T Framework and Alignment





We are on the cusp of a second Information Technology revolution that in the words of Arden Bement\*

**“...may well usher in a new technological age that will dwarf, in sheer transformational scope and power, anything we have yet experienced in the current information age.”**

\*Cyberinfrastructure: The Second Revolution,  
Chronicle of Higher Education, Jan 3, 2007

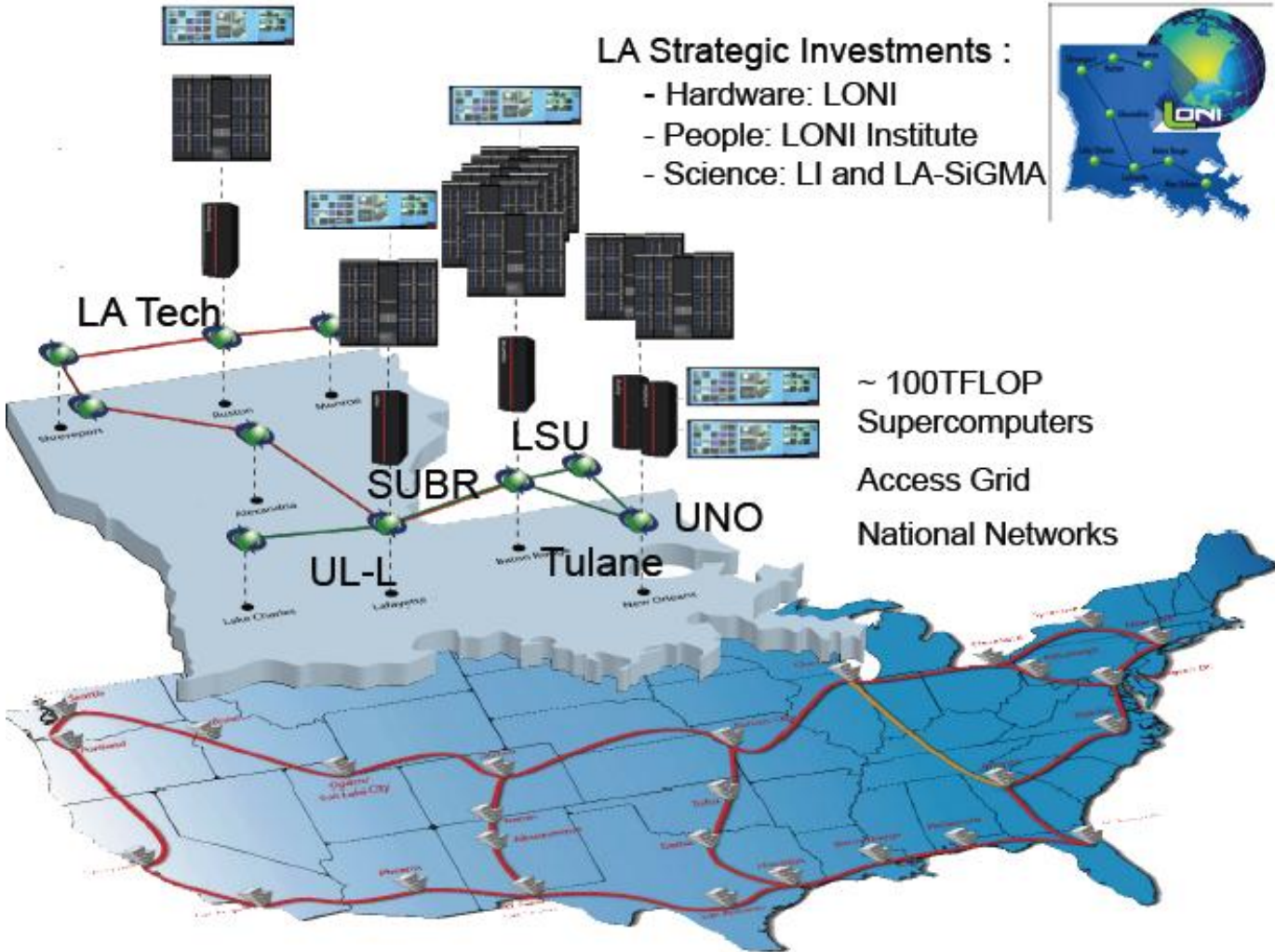


At the heart of this revolution is peer-to-peer collaboration, new modes of research and education, and virtual organizations that work across institutional boundaries.

This is the premise of our RII research.



# Louisiana Optical Network Initiative (LONI) and Statewide LONI Institute



# NSF RII Award (2010-2015) Statewide Research Focus



Establishment of...

LA-SIGMA

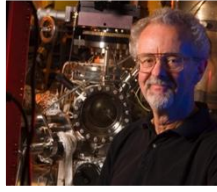
Louisiana Alliance for Simulation-Guided Materials Applications

Louisiana Alliance for Simulation-Guided Materials Applications

LA-SIGMA



# Participants



**54**  
Faculty



**5**  
Post-Doc



**44**  
Graduate

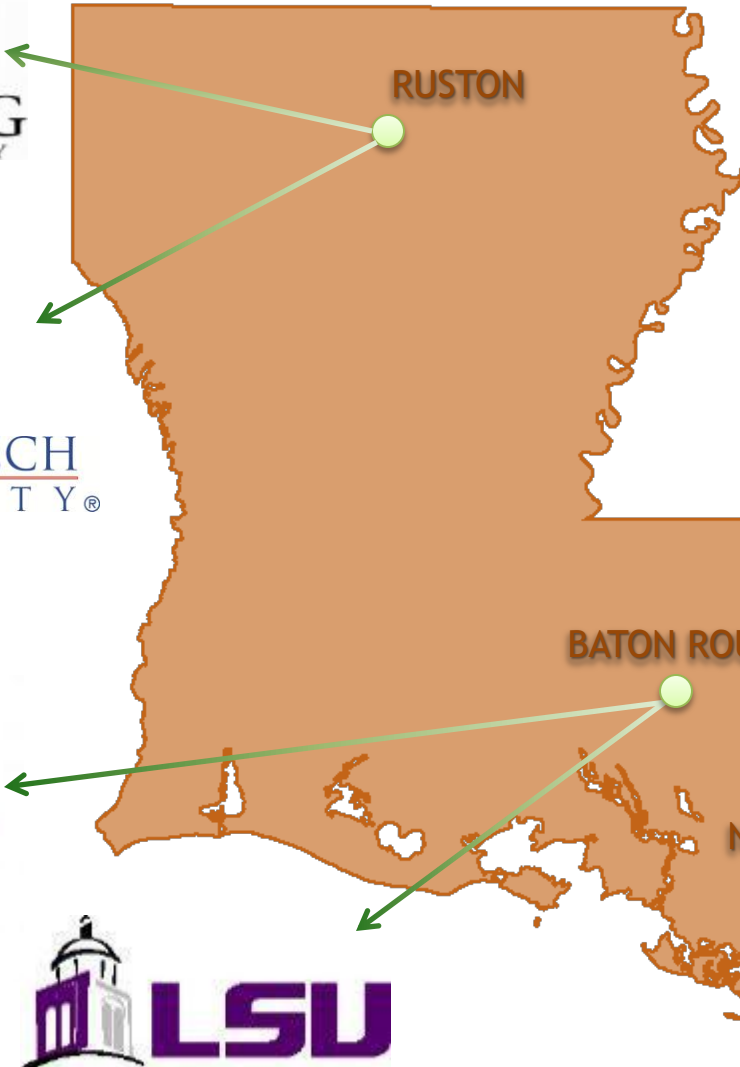


**58**  
Undergraduate



**18**  
Technical / Non-Technical Staff

# Partnering Institutions



# LA-SiGMA Vision



To make transformative advances in materials science research and education through a sustained multi-disciplinary and multi-institutional alliance of researchers.

# Realizing the Vision



## Strategies

- Science Drivers
- Cyberinfrastructure & Common Computational Tools
- Diversity
- Workforce Development
- External Engagement
- Sustainability

## Year 1 Activities: On Target and On Time

Strategic Planning

Recruitment

Industrial Liaison Committee

Diversity Advisory Council

Initiate Research

Delivery of Courses

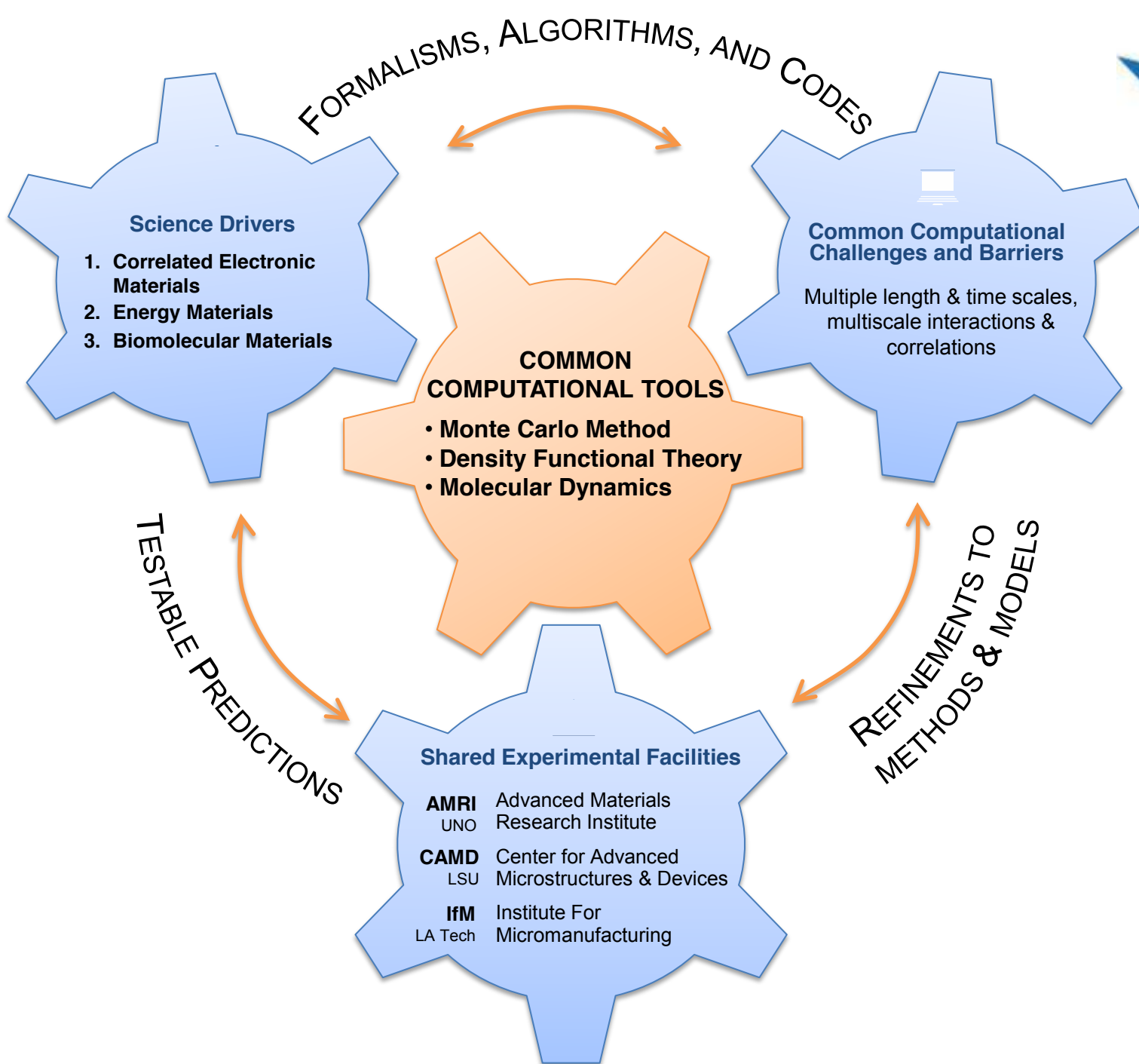
External Review Board

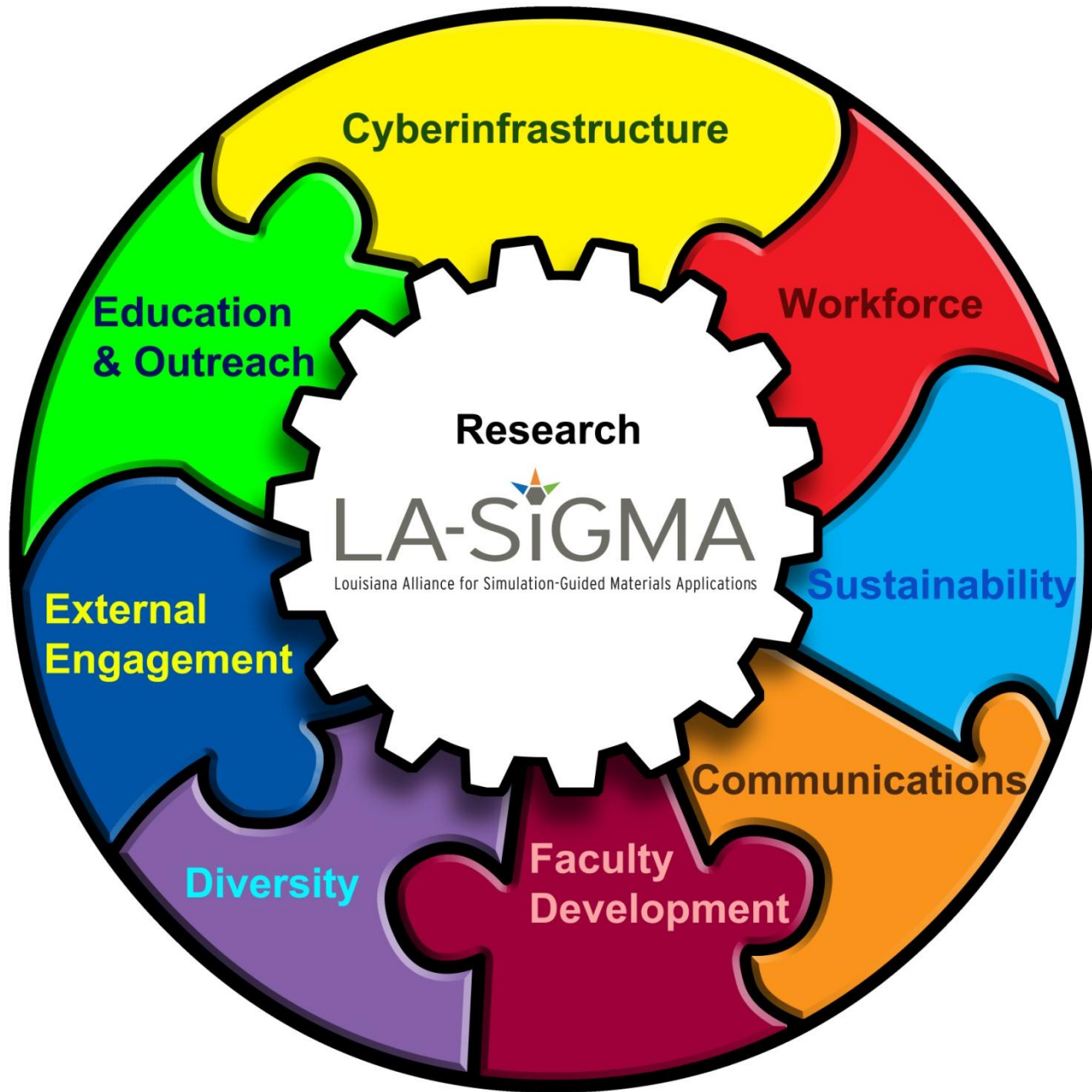
# Scientific and Technological Challenges



Addressing multiscale complex phenomena calls for:

Unprecedented collaboration of computer scientists, applied mathematicians, scientists, and engineers with expertise at each scale from sub-nanometer to millimeters in length and from femtoseconds to several seconds in time.





# LA-SiGMA Consortium

Faculty Development



Statewide  
Outreach



# Faculty Development Programs



- Pilot Funding for New Research (Pfund) Grants
- Preliminary Planning Grants for Major Initiatives
- Planning Grants for Major Initiatives
- Supervised Undergraduate Research Experience (SURE)

- SBIR/STTR “Phase Zero” Grants
- Speaking of Science (SoS)
- Travel Grants for Emerging Faculty (TGEF)
- Industrial Partnership (OPT-IN)
- Links with Industry, Research Centers, and National Labs (LINK)

