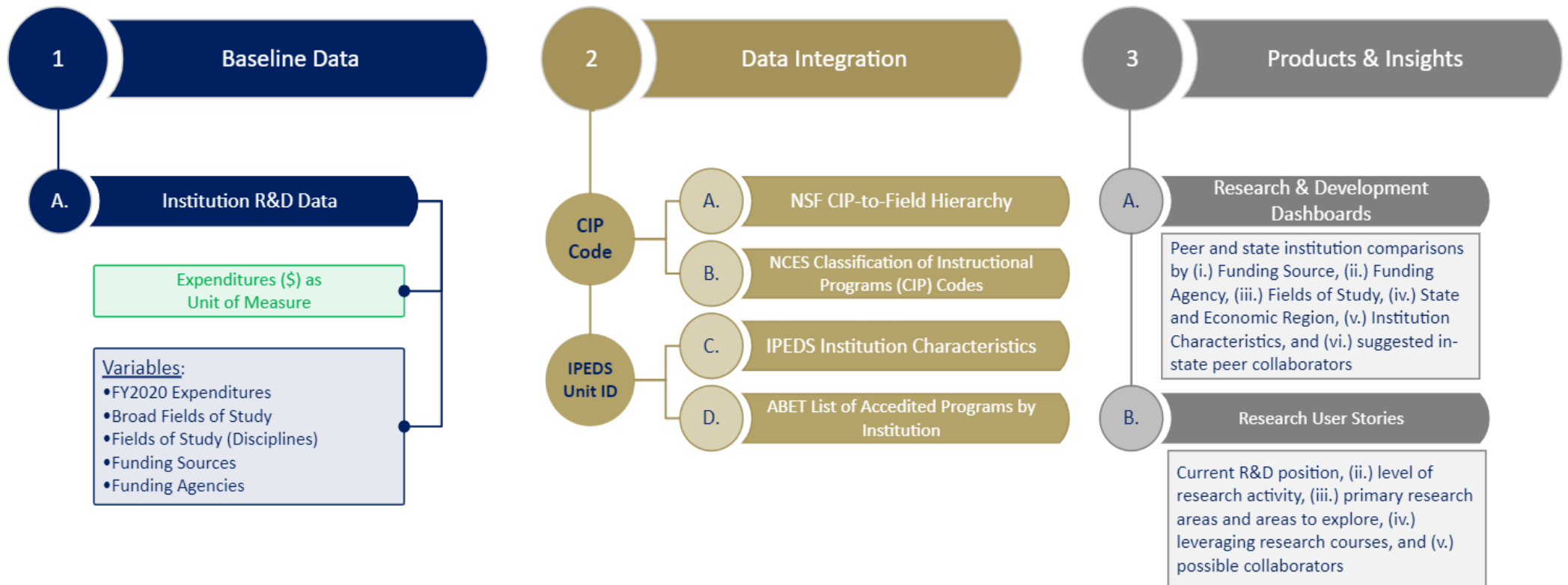


Methodology: Research & Development Dashboards, Clusters, and User Stories

URL: <https://irp.gatech.edu/nsf-rd-expenditures>



Methodology: Collaborators in Georgia

Hierarchical Clustering was used to group institutions by similarity using (a.) Research & Development (R&D) Expenditures reported for FY2020, (b.) Broad Fields of Study, (c.) Detailed Fields of Study, (d.) Carnegie Classification, and (e.) Research Activity based on R&D expenditures. For this report, institutions were grouped using Research & Development (R&D) data reported to the National Science Foundation's (NSF) National Center for Science and Engineering (NCSES) via the Higher Education Research and Development (HERD) survey.

***Disclaimer:** *Collaboration Clusters are NOT representative of all possible collaborations, nor do they guarantee collaboration or sponsorship. Instead, clusters should be used as a suggestive list of collaborative peer institutions based on similarity factors and the variables outlined in the methodology and taxonomy.*

Cluster A

- **Program Similarity Based on Field of Study and Corresponding CIP Code**
- **R&D Expenditures Reported for FY2020**
 - Doctoral University with *High to Very High* research activity, OR
 - Baccalaureate Colleges and Master's Colleges & Universities with increased research activity in FY2020 based on R&D expenditures
- **Research activity primarily in STEM fields**
 - Two or more ABET accredited programs, OR
 - High or increased activity in Engineering and Science in FY2020 based on R&D expenditures

Cluster B

- **Program Similarity Based on Field of Study and Corresponding CIP Code**
- **R&D Expenditures Reported for FY2020**
 - Doctoral University with *High to Very High* research activity, OR
 - Baccalaureate Colleges and Master's Colleges & Universities with increased research activity in FY2020 based on R&D expenditures
- **Research activity primarily in Non-S&E Fields, Social Sciences, Psychology, Science, and Mathematics**

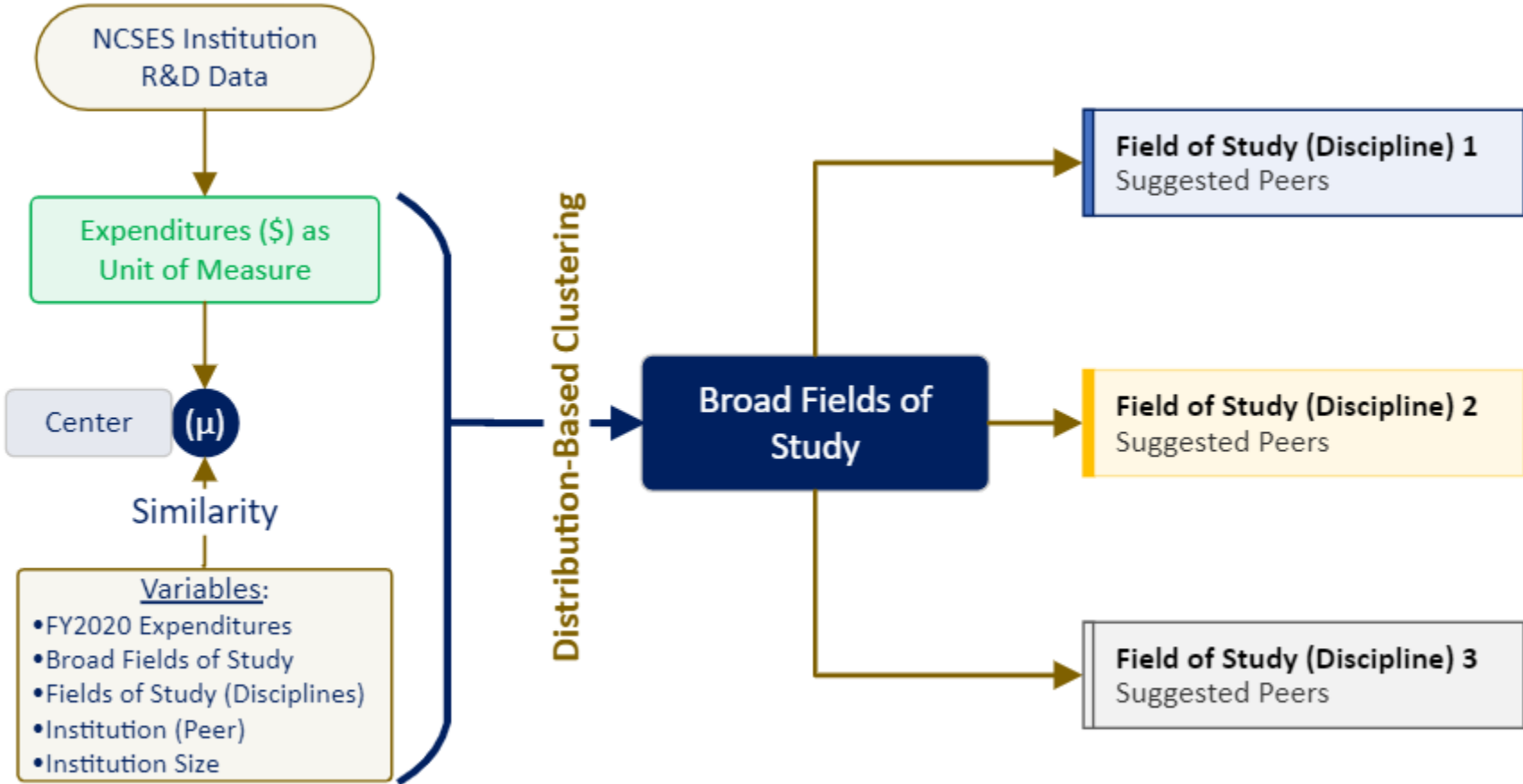
Broad Field of Study

Detailed Field of Study

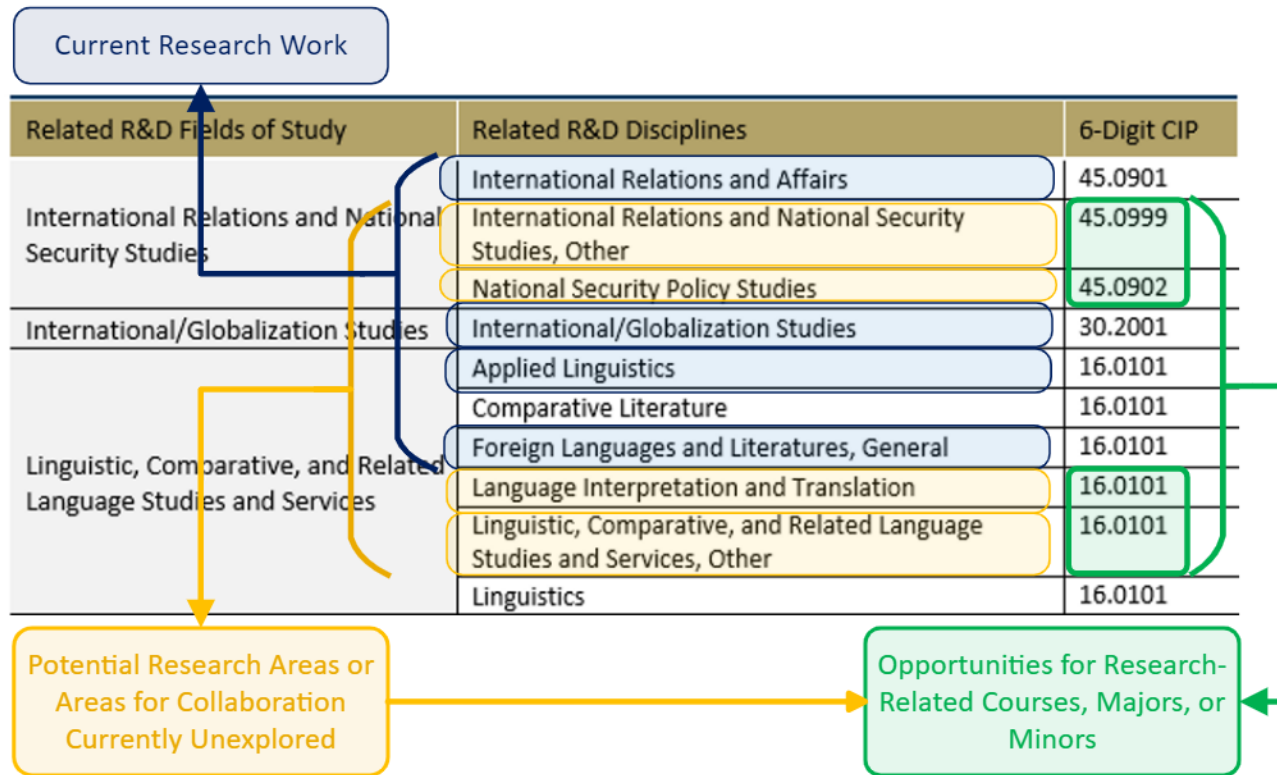
Collaborative Peers

Methodology for Suggested Peer Collaborators

This information could help key decision-makers with a list of disciplines for which research opportunities should be explored and may increase research and development (R&D) activity in fields that have little research activity. When coupled with sponsored awards and expenditures, this information may also highlight gaps in funding, disparities, and potential opportunities for areas with increasing or high research activity based on awards and expenditures.



Use-Case Instructions for Identifying Research Opportunities



1. **Identify** current research work by:
 - a. *Field of Study* based on R&D Expenditures reported externally through the National Center for Science and Engineering (NSF-NCSES) Higher Education Research and Development (HERD) survey (See <https://irp.gatech.edu/nsf-rd-expenditures>), **OR**
 - b. *Division and/or Department* (School of Study) based on [Sponsored Expenditures](#) reported internally at Georgia Tech (See 'Research' on <https://lite.gatech.edu>).
2. **Compare** current work to the full list of related *Fields of Study* and *Detailed Fields (Disciplines)* shared in this report to identify:
 - a. **Potential Research Areas or Areas for Collaboration** currently unexplored, and
 - b. Opportunities for Research-Related Courses, Majors, or Minors