

The Center for Research Computing (CRC) is one of more than 20 core facilities and research resources at Notre Dame. Available to on-campus and external users, the CRC is supported by Notre Dame Research and the Colleges of Arts and Letters, Science, and Engineering.

Mission & Vision

MISSION The Notre Dame Center for Research Computing facilitates multidisciplinary discoveries through advanced computation, software engineering, data analysis, and other digital research tools.

VISION To become internationally recognized for facilitating and accelerating discovery through innovative applications of cyberinfrastructure and multidisciplinary research.

Organization

The CRC is comprised of three main groups with complementary expertise:

CS: Computational Scientists

Primary initiators of collaboration between CRC groups and external researchers. Act as principal investigators alongside faculty and industry partners to develop innovative research environments that support advanced data and information processing services.

SD: Software Development

Agile, security-oriented, programming teams that empower research through innovative solutions for sharing, processing, analyzing, and visualizing data.

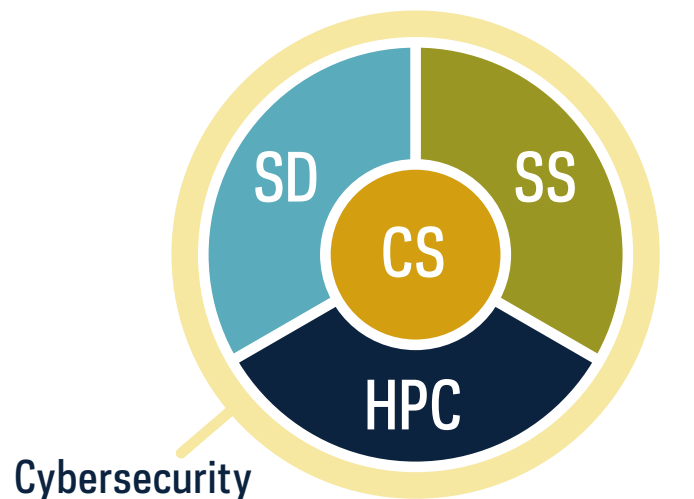
SS: Sensor Systems

Engineers develop in-house full stack sensor system solutions (IoT, drones, edge compute, etc.) from custom endpoint sensory devices creation, through data logging, error correction, analytics, and archive.

HPC: High Performance Computing

Engineers design, deploy and operate state of the art computational infrastructure, with comprehensive user support for associated hardware and software. Provide scientific workflow and performance optimization expertise to ND researchers and collaborators on both ND hosted and national computational resources.

The CRC includes experts in cybersecurity and visualization, as well as a Business Office.



Domains in which CRC Operates and Serves

CS	SD	SS	HPC	Domain
●	●	●	●	Computational Research <i>In all Colleges</i>
○	○	○	○	Non-comp. Research/Scholarship <i>Requiring SD and/or data mgmt.</i>
●	○	○	○	Cyberinfrastructure Development <i>Across campus and nationally</i>
○	○	○	○	Remote Sensing & Data Management
○	○	○	○	Help & Training

● Major Involvement
○ Minor Involvement

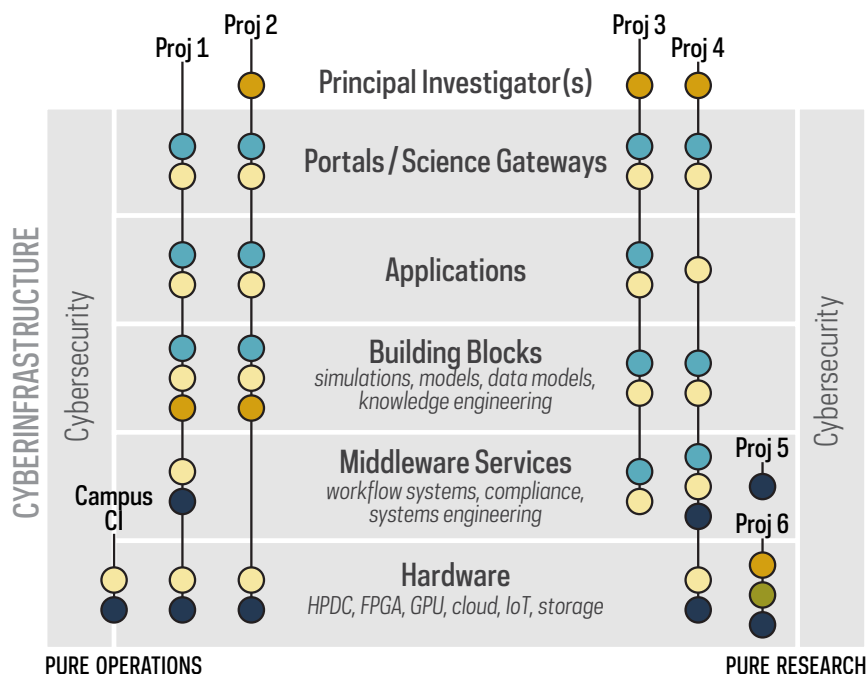
Science Team Approach

Modern cyberinfrastructure— research environments connecting advanced instruments, laboratories, data, computers, and people— involves multi-layered integration of services and resources (gray boxes). CRC personnel from different groups with different expertise form **multi-disciplinary science teams** spanning the layers of cyberinfrastructure required for a project.

Some projects may focus on one or two layers, while others span them all.

CRC People

- Computational Scientists
- Software Development
- Security Experts
- Sensor Systems
- HPC



Core Values

Building on ND and NDR's missions, visions, and values, the CRC strives for a well-defined, pervasive culture that supports the Center's work, people, and place in the University.



INNOVATIVE

The Center encourages new ideas, and individuals are able to move ideas through the organization.

AGILE

The Center's flexible structure responds and adapts to opportunities.

SECURITY CONSCIOUS

The Center is mindful of cybersecurity needs and how fulfilling those needs enables research and makes the Center more competitive.

ORGANIZATIONALLY LEAN

De-emphasize bureaucracy; emphasize efficiency. Dedicated, accountable staff own their jobs and have independence to make decisions regarding their work without micromanagement.

COMMUNICATIVE

As a Center, we strive to send, receive, and understand the information necessary to work effectively. We encourage candor.

COLLABORATIVE

Team members are open and willing to cooperate, share, respect, and work well together.

PEOPLE FOCUSED

The Center is a comfortable workplace where people have the resources and guidance to be effective in their work, as well as resources to support wellness and maintain physical and mental health.

PERFORMANCE ORIENTED

People know what determines success in their roles, and achievements are recognized. Leaders are actively engaged in positioning people for growth at the intersection of their passions and the needs of the organization.

PURPOSE DRIVEN

Strong team players understand the wider impact of their work and are motivated through progress toward individual and collective goals.