



## 1 Vision

- We believe that a university education should not only develop students that can create and impact the future through their work, but also help them to see the implications for the society of the future that they will contribute to.

## 2 Program Construct

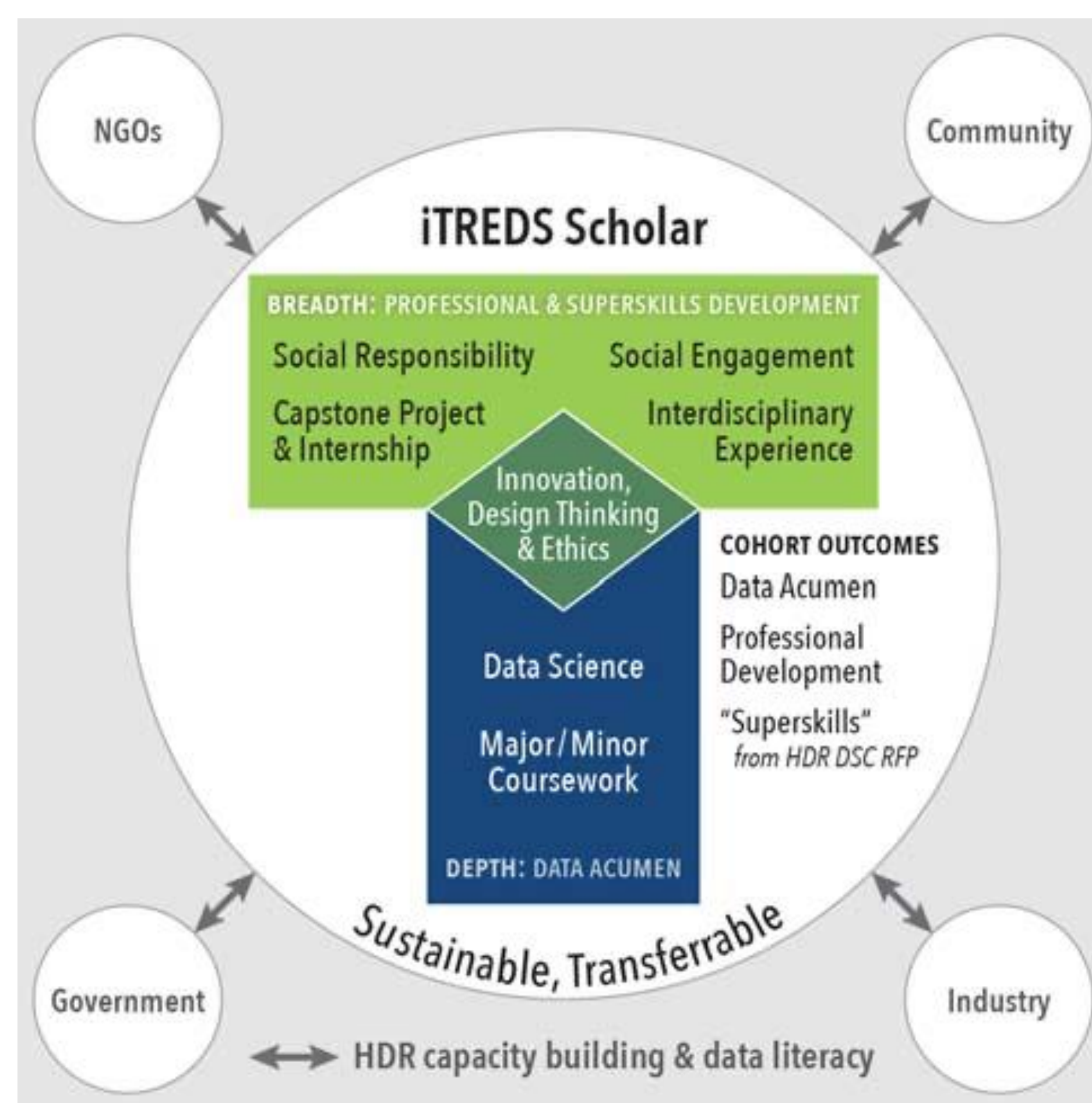
- Develop an interdisciplinary and experiential learning program for undergraduate students that enables them to “think and work together” with stakeholders on data-driven problems, while learning relevant skills and concepts.

## 3 Key Contribution

iTReDS lies at the intersection of data-centered and human-centered approaches. We hope to instill in the “21st century data-capable workforce” a mindset that helps paint a more comprehensive understanding of the problem at hand, and then begin the journey of the data-driven approach towards actionable outcomes.

## 4 OVERALL FRAMEWORK

The University of Notre Dame (coordinating and implementation organization) and Saint Mary's College (implementation organization, focused on the education of women) will together achieve this vision with an eye towards the outcomes of data acumen, social responsibility, social engagement, and gaining of “superskills” that include teamwork, entrepreneurship, creativity, critical thinking, collaboration, and ethics.



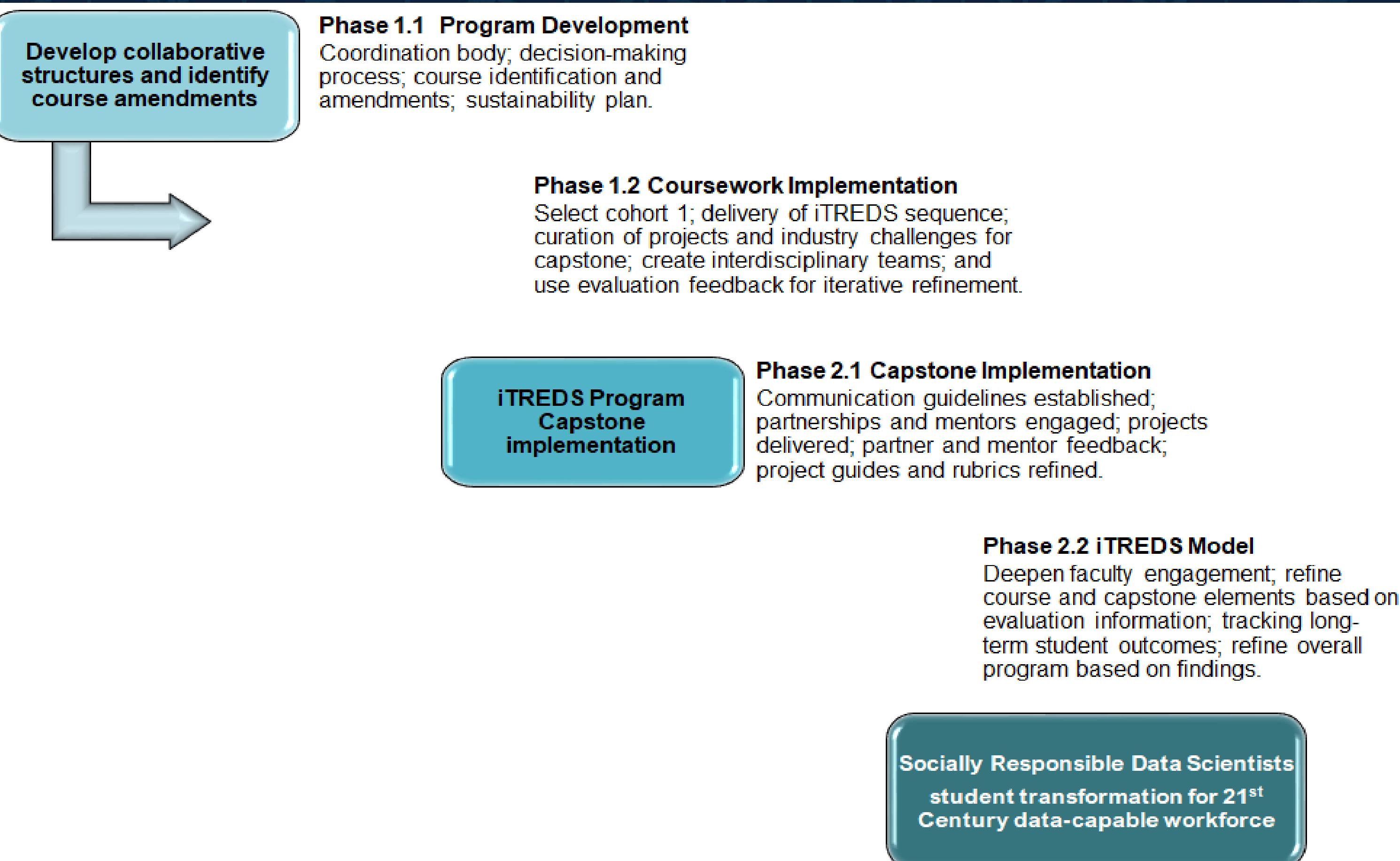
The **T-shaped** construct represents a student's **depth** in data science and major / minor (data acumen), and the **breadth** in activities involving social engagement, social responsibility, and interdisciplinary and experiential learning through the capstone project and internship (professional development and superskills). Design thinking and ethics form the linchpin of this “T”.

SOPHOMORE YEAR	JUNIOR YEAR		SUMMER	SENIOR YEAR	
	FALL	SPRING		FALL	SPRING
<b>Cohort Selection</b> St. Mary's: 10 Notre Dame: 15 A&L: 8, CSE: 7	<b>Data Science</b> <b>Design Thinking</b>	<b>Data Science Elective</b> <b>Innovation &amp; Ethics</b>	<b>Internship</b>	<b>2-credit Capstone</b>	<b>1-credit Capstone</b>
	<b>OBJECTIVES</b> DA Data Science Fundamentals PD SS Capstone Topic, Stakeholder Engagement Team, Stakeholder	<b>OBJECTIVES</b> DA Data Science Depth Incorporating Ethics & Social Responsibility in Capstone PD SS Capstone Project Proposal	<b>OBJECTIVES</b> DA PD SS Experiential Learning PD SS Hands-on Training	<b>OBJECTIVES</b> Social Responsibility & Stakeholder Engagement DA PD SS	<b>OBJECTIVES</b> Social Responsibility & Stakeholder Engagement DA PD SS

PD Professional Development DA Data Acumen SS Superskills

## 5 Curricular Model

## 6 Evaluation Plan



## 7 Key Highlights

- Recruited three cohorts: 71 in total
- 66% women and 19% underrepresented groups
- Capstone projects co-mentored by faculty and community partners
- Students won awards for their research presentation
- Developing sustainable and replicable model

<https://lucyinstitute.nd.edu/education/itreds-program/>