The National Consortium for SDG Impact and Geodesign (NCSIG)

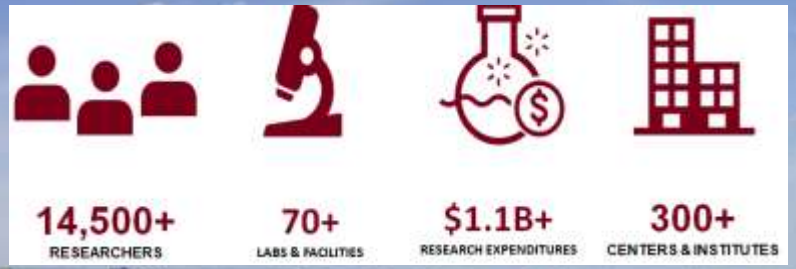
Shashank Priya
Vice President for Research

UNIVERSITY OF MINNESOTA
Driven to Discover®
Crookston Duluth Morris Rochester Twin Cities

University of Minnesota Research and Innovation

THE IMPACT RANKINGS

 # 8 in the US



How Minnesota Ranks

Business climate. Workforce. Innovation. Infrastructure. Quality of life. Minnesota consistently ranks at or near the top of all the factors important to business success.

https://mn.gov/deed/joinusmn/

University of Minnesota System

Crookston
Ag Innovation campus; NXT GEN AG;
NW Rsrch & Outreach Ctr.

Duluth
Natural resource and water research;
Outdoor recreation hub

Morris
Top public liberal arts campus;
Innovative wind energy research;
NASNTI

Twin Cities
Largest campus; AAU, APLU, R1, AANAPISI
18 Fortune 500 Companies

Rochester
Innovative health-focused undergrad program, NXT GEN MED
Partnership with Mayo Clinic

42,212
undergraduate students

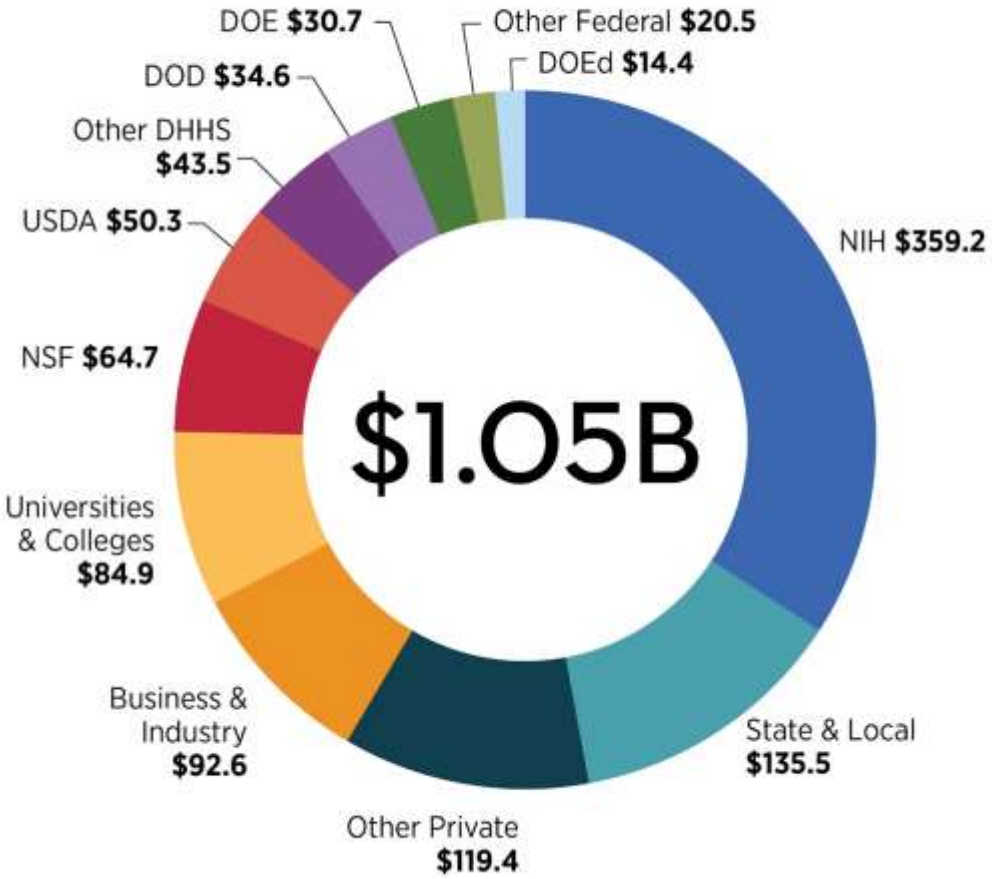
16,780
graduate & professional students

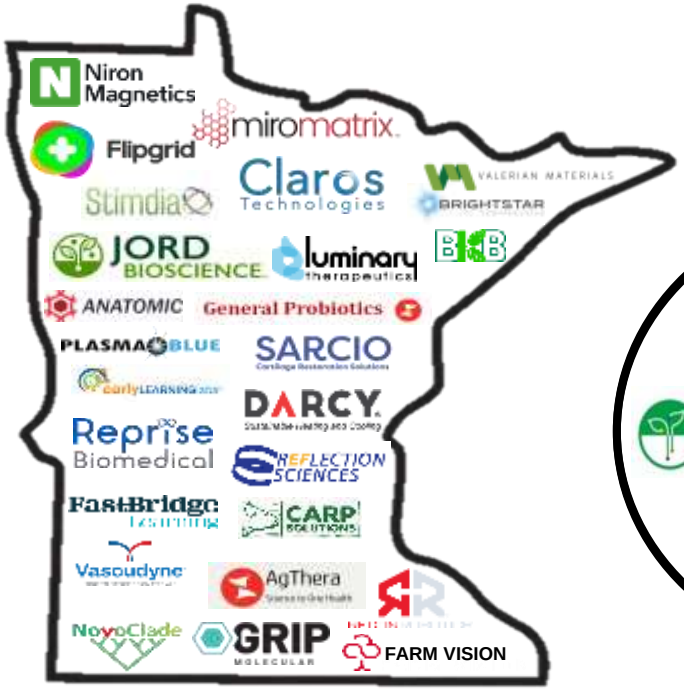
26,000
employees

UMN Awards by Source

FY22, $ in millions

- **Second largest** sponsored award total in history
- 59% of awards from **direct federal sources**
- **DoD/Nat'l Security** an area of focus for us which includes Geospatial mapping
- Identify ways for us to **leverage** each others portfolio
- Create industry – government – university **partnerships**





Jord BioScience delivers custom microbial solutions for the world's leading ag companies.

MiroMatrix is on a mission to eliminate the organ donor waitlist, by pioneering a technology that creates fully transplantable human organs.

Claros Technologies conducts PFAS remediation testing and analyzing, capturing, destroying, and monitoring of PFAS and other pollutants.

228 Startups Launched (ref. 2006)
71% Headquartered in MN
$1.8B+ Additional Investment

What does it mean to think Spatially?

Spatial science employs spatial technologies to understand people, places, and processes on the earth. Geographic Information Science (GIS) or Spatial Science is being discovered by a wide array of disciplines as both an integrative approach and research topic in and of itself. Tens of thousands of scholars employ spatial approaches that recognize the spatiotemporal nature of people, places, and processes through concepts such as location, space, scale, and distance.

Maps tell the story

Shiga prefecture

How is the weather throughout the year? What are the demographics? What type of food? What type of jobs exits here? What is average cost of living? How is the traffic? How is medical system? What are sight-seeing places?

Google Maps

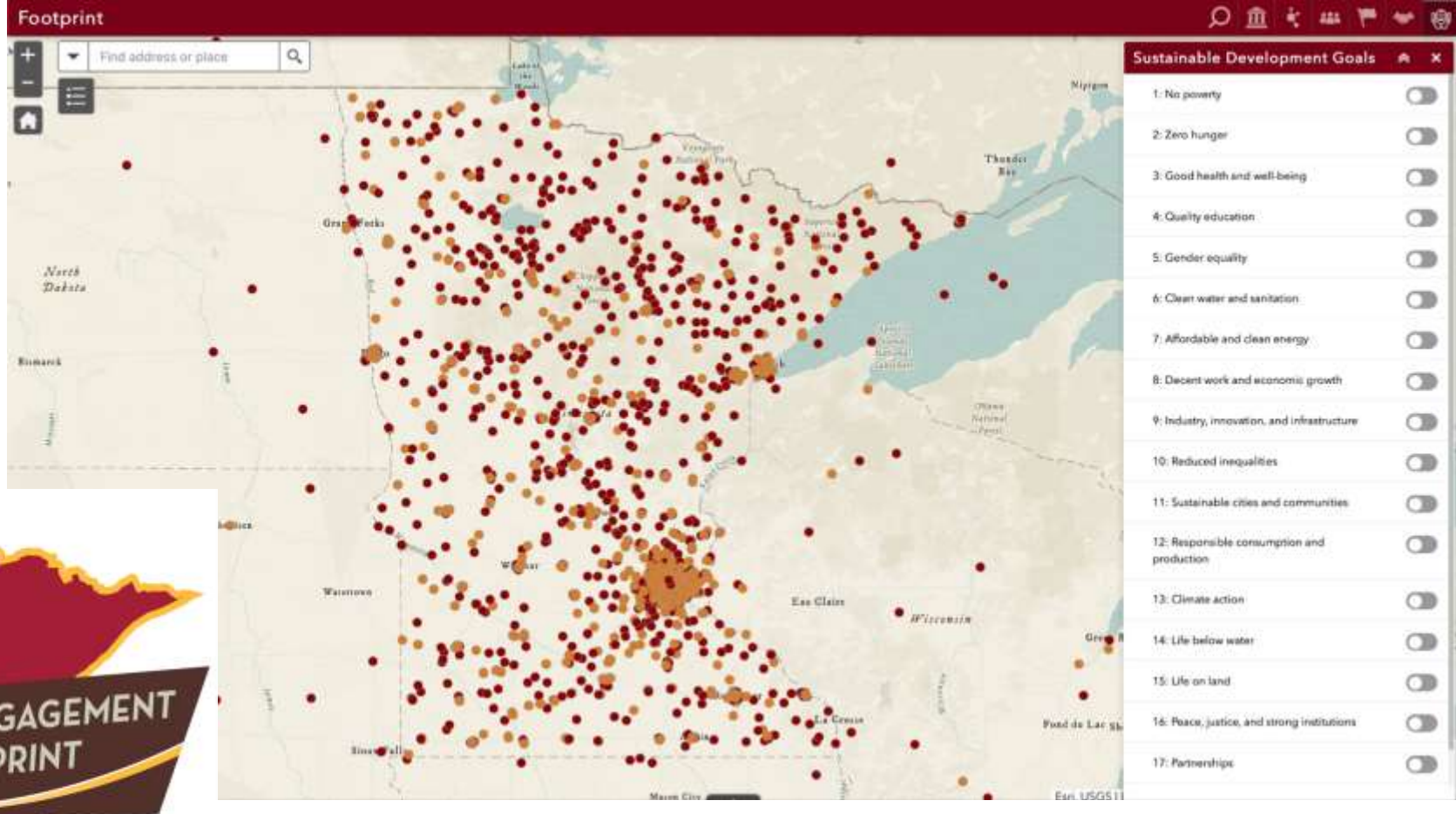
UMN SDG Initiative: Mobilizing the University for SDG Action

SDG Tools and Resources
A Growing Portfolio

Mapping the Course Catalog

Course Number	Course Name	Subject	Campus	Goals
AGEC 1004	Introduction to Agribusiness	Agricultural Economics	Crookston	
AGRO 3660	Plant Genetic Resources	Agronomy and Plant Genetics	Twin Cities	
AGRO 4605	Strategies for Ag Production & Management	Agronomy and Plant Genetics	Twin Cities	
AGRO 2573	Entomology	Agronomy	Crookston	
AGRO 4888	Issues in Sustainable Ag	Agronomy and Plant Genetics	Twin Cities	

Mapping Research Impact (example: SDG 3: Good Health and Well Being

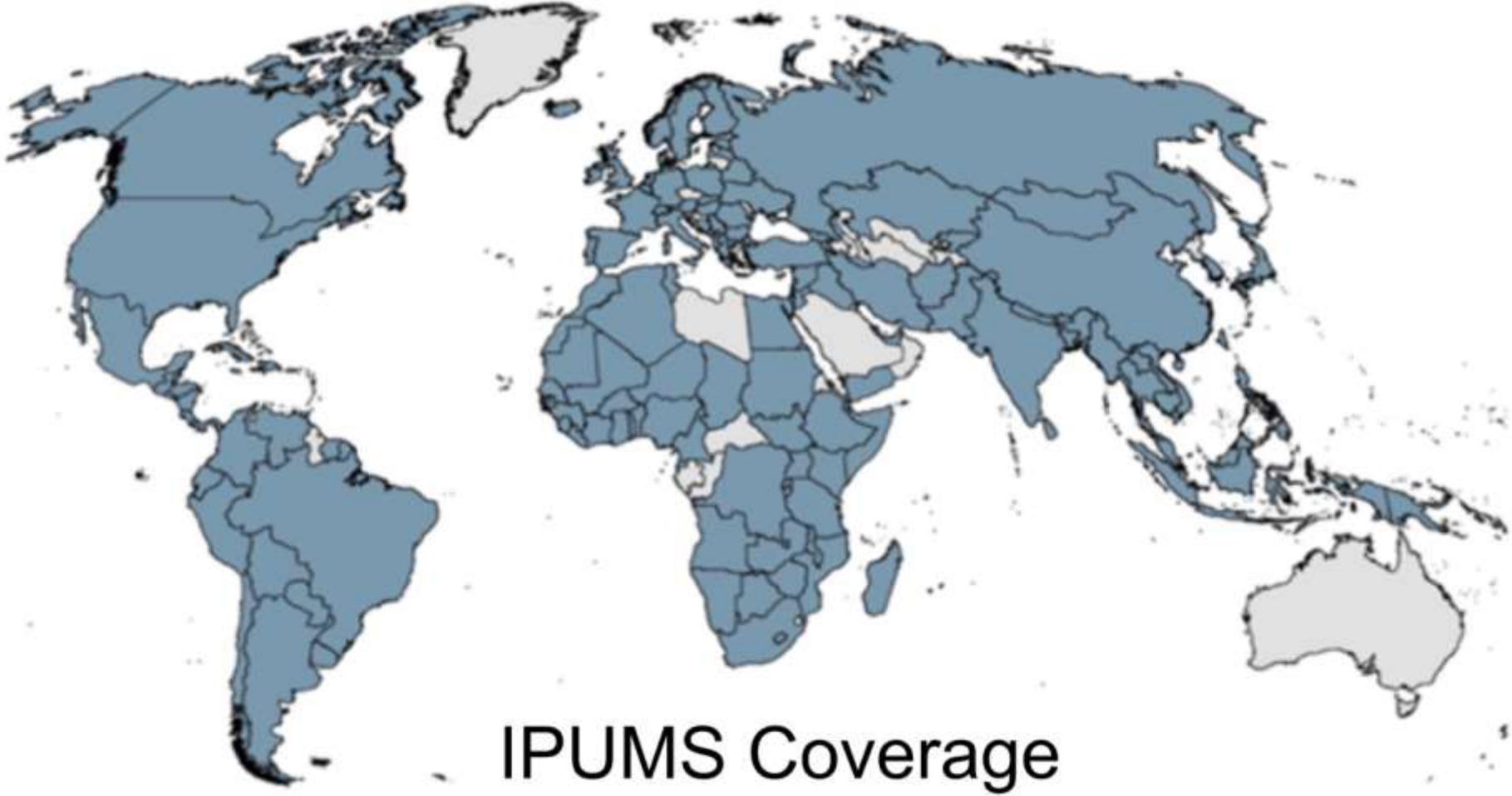


PUBLIC ENGAGEMENT FOOTPRINT

IGC International Geodesign Collaboration

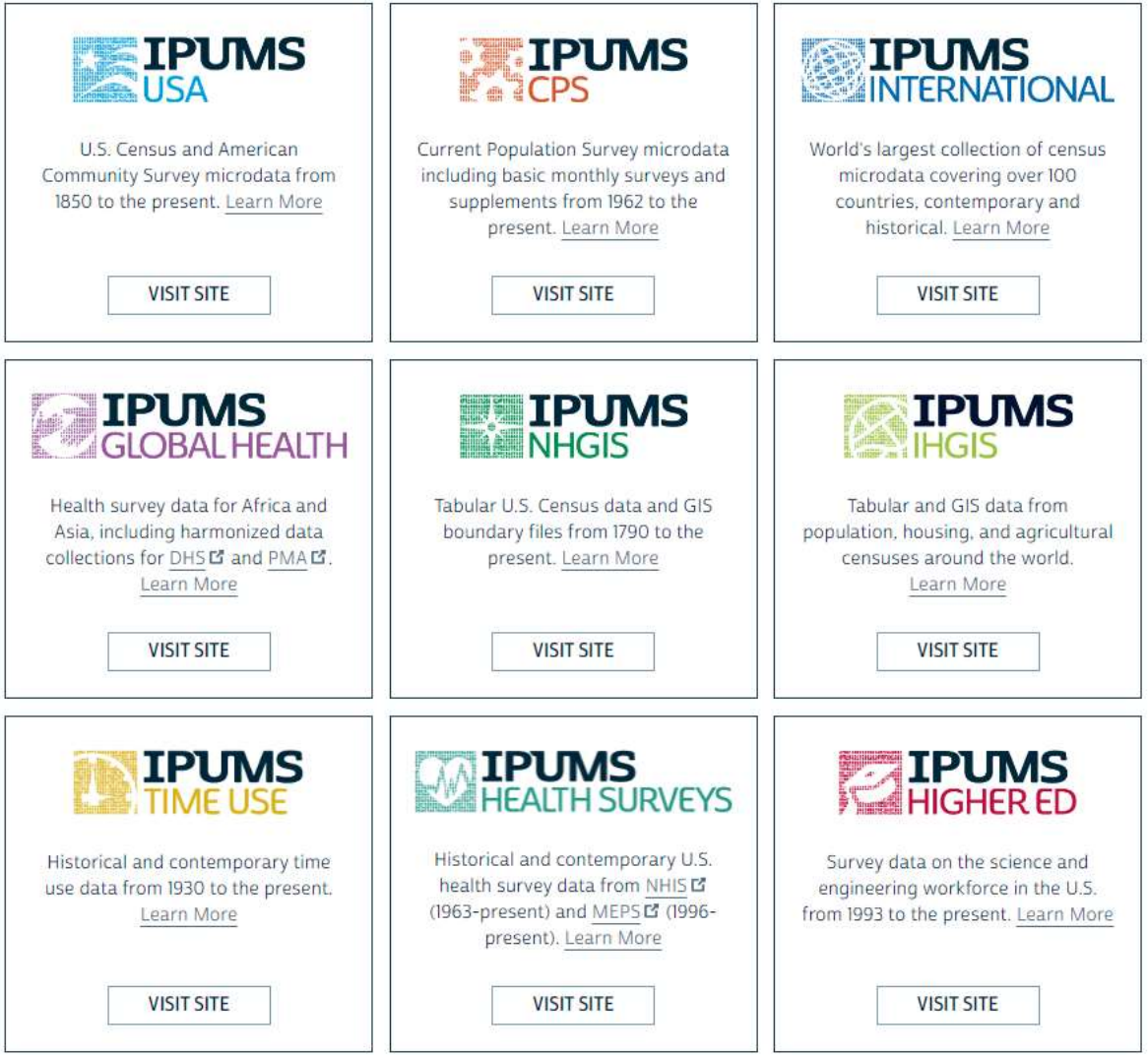
The Global Climate Geodesign Challenge

https://www-igcollab.hub.arcgis.com/pages/gcgc


IPUMS Coverage

IPUMS enables SDG-related measurement around the globe

- IPUMS provides researchers with access to high-density samples of census microdata, spanning multiple decades for most countries
- In partnership with UNICEF and the DHS organization, IPUMS harmonizes and disseminates survey data
- For both censuses and surveys, IPUMS makes global, national, and subnational GIS boundary files corresponding to the sub-national geographic units
- IPUMS has worked with UNFPA and ESRI to calculate indicators
- IPUMS has run capacity building workshops
- IPUMS maintains relationships with more than 120 countries around the world



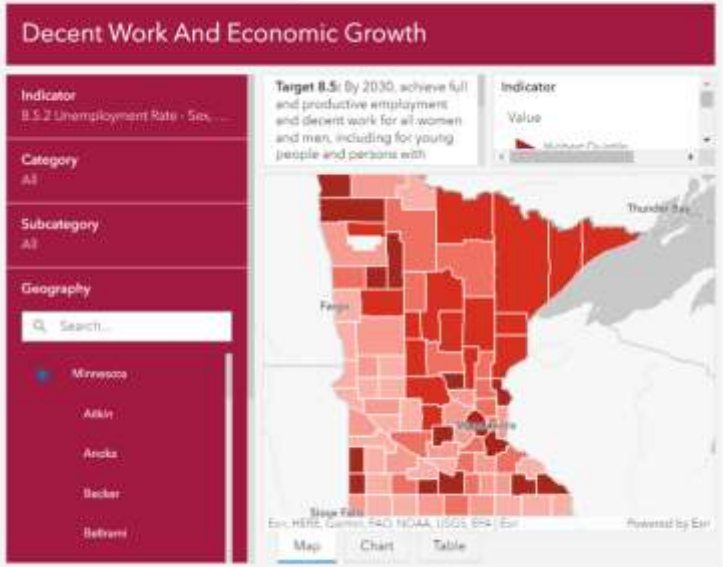
Developing a hub that can be used for SDG-centered community sustainability

SDG DATA ALLIANCE

West Central Initiative

PUBLIC FOUNDATION

esri THE SCIENCE OF WHERE



Establishing a Local and Global Hub for Data-Driven SDG Implementation and Action

Leveraging 4 existing institutional pillars at UMN

- Sustainable Development Goal Initiative
- MN Design Center and IGC
- IPUMS
- U-Spatial

Build on partnerships established

Using engagement tools and approaches to mobilize action informed and fostered through the Hub

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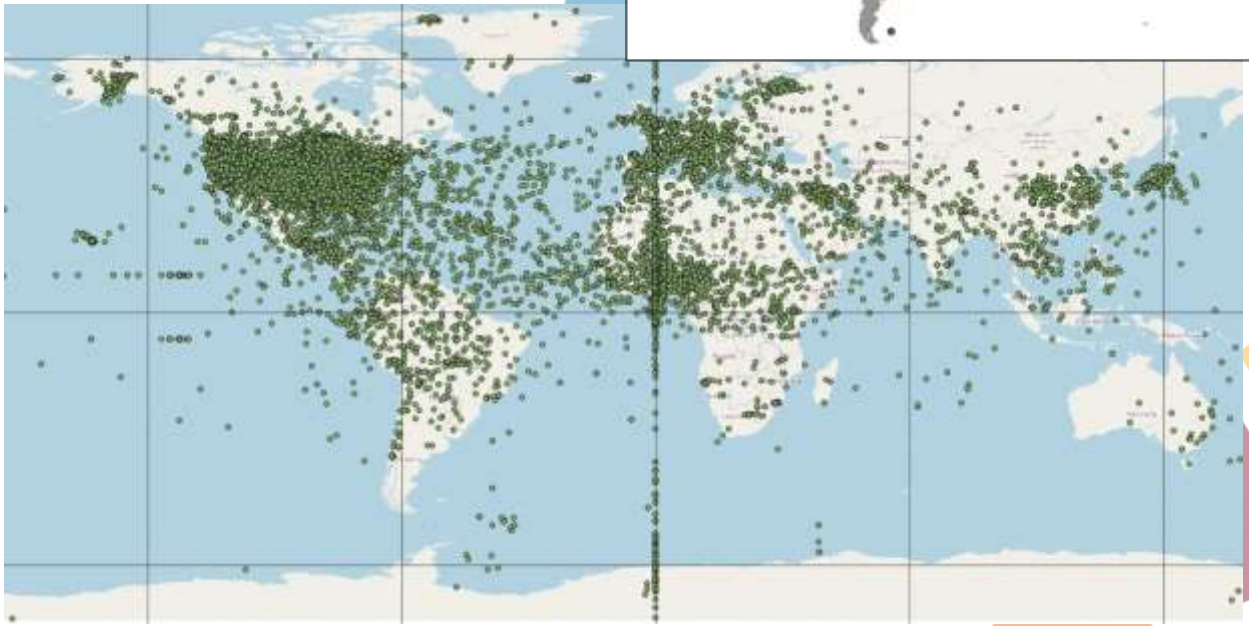


ArcGIS Online

19,280	143,056
Students & faculty creating maps	Maps & apps

ESRI

Objective 1

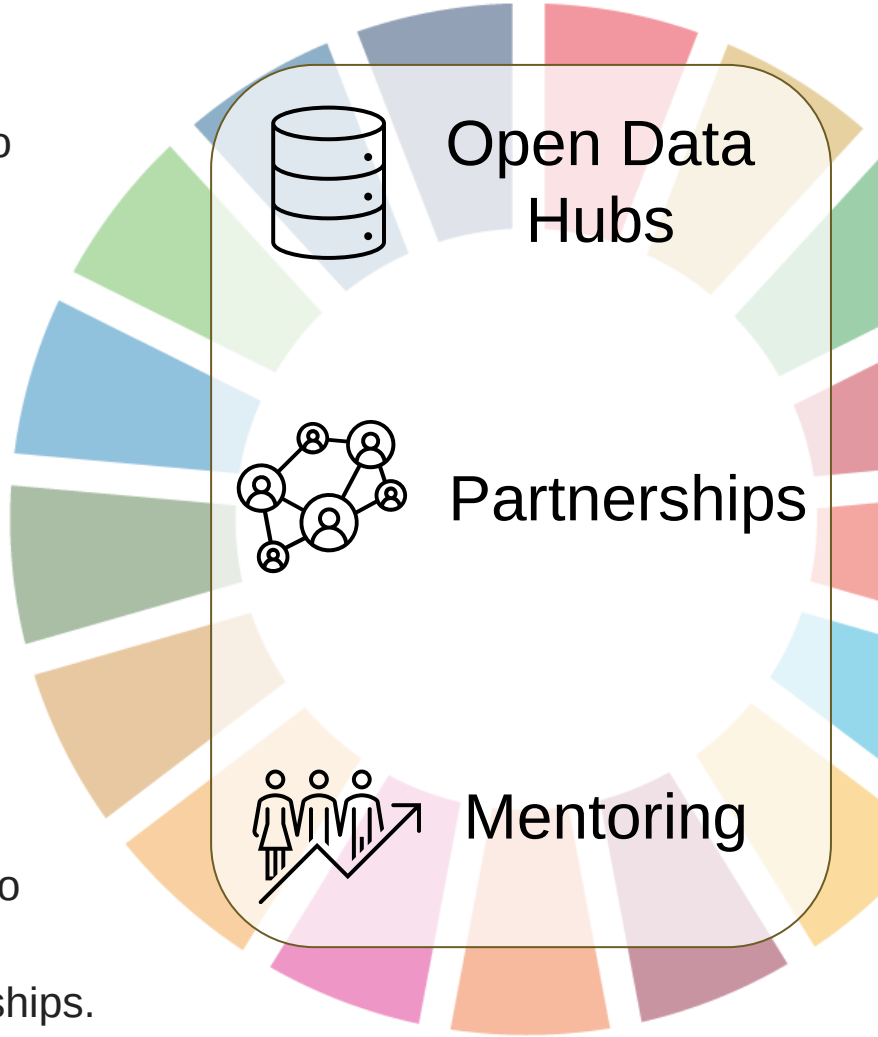
Establish a university-based Geodesign Impact Hub to serve the nation and the world's most vulnerable communities, states and nations.

Objective 2

Develop new US partnerships to foster a global NCSIG Impact Network to support data-driven decision making and implementation and achieve global SDG targets.

Objective 3

Collaborate with some of the world's most vulnerable countries, states and communities and support them to advance SDG implementation through data sharing, training programs, exchange opportunities and fellowships.



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