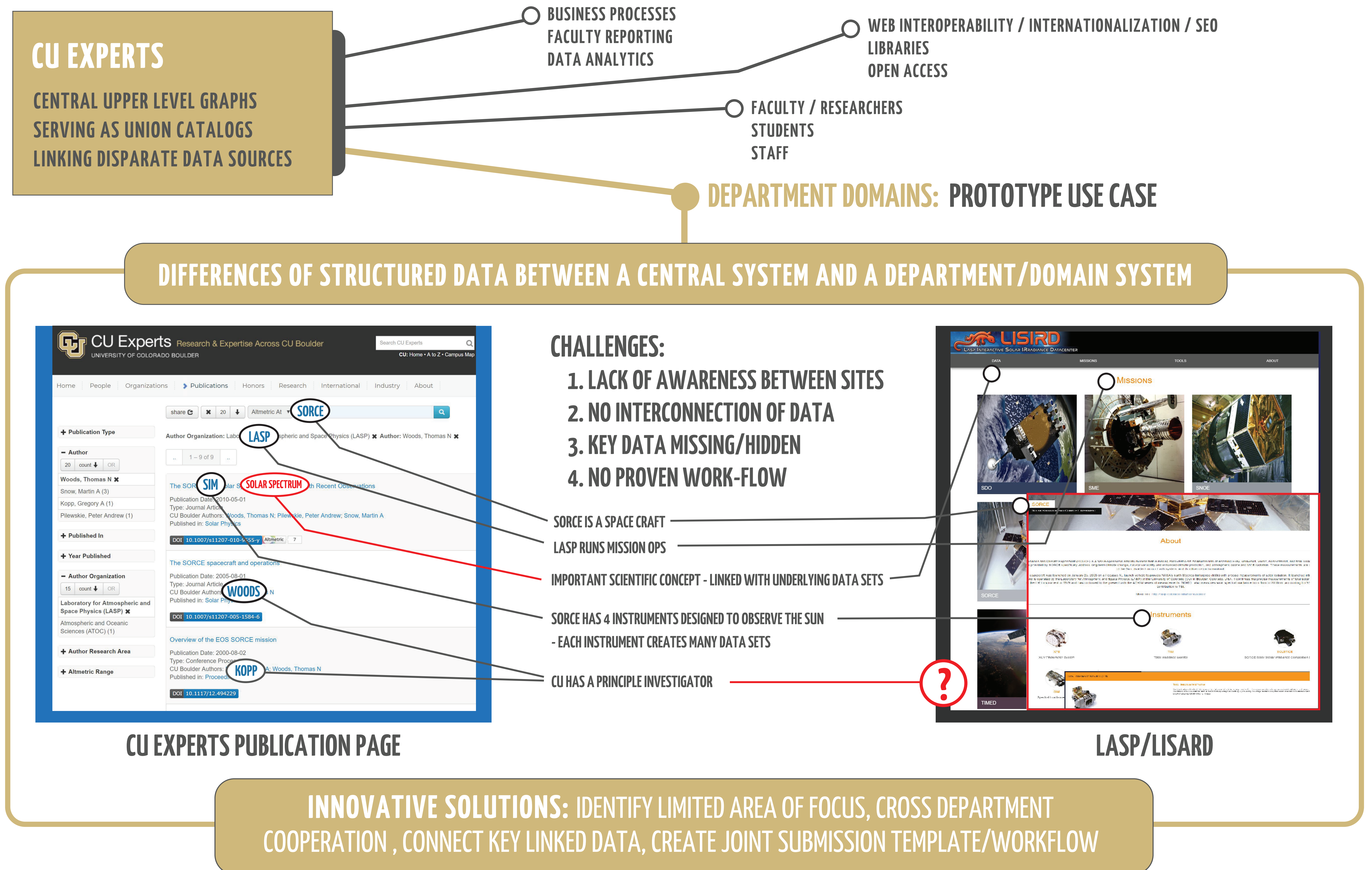# OPPORTUNITIES FOR INTRA-INSTITUTIONAL LOD
TOWARDS A CAMPUS KNOWLEDGE GRAPH WITH VIVO

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PROPOSAL: DEVELOP A LINKED OPEN DATA (LOD) PROTOTYPE THAT CREATES AND SURFACES RELATIONSHIPS BETWEEN THE HIGH LEVEL META-DATA RESIDING WITHIN THE CU EXPERTS VIVO AND DEPARTMENTAL DOMAIN SPECIFIC META-DATA SITES. THIS INFORMATION, WHEN MAXIMIZED, CREATES VALUE ACROSS THE UNIVERSITY. THE PROTOTYPE WILL DEMONSTRATE THE VALUE IN RECIPROCALLY CURATING META-DATA TO IMPROVE THE DEPTH AND BREADTH OF KNOWLEDGE IN PARTICIPATING SYSTEMS RATHER THAN TRADITIONAL SYSTEMS WHICH DUPLICATE AND HARVEST DATA TO A CENTRALIZED SOURCE.

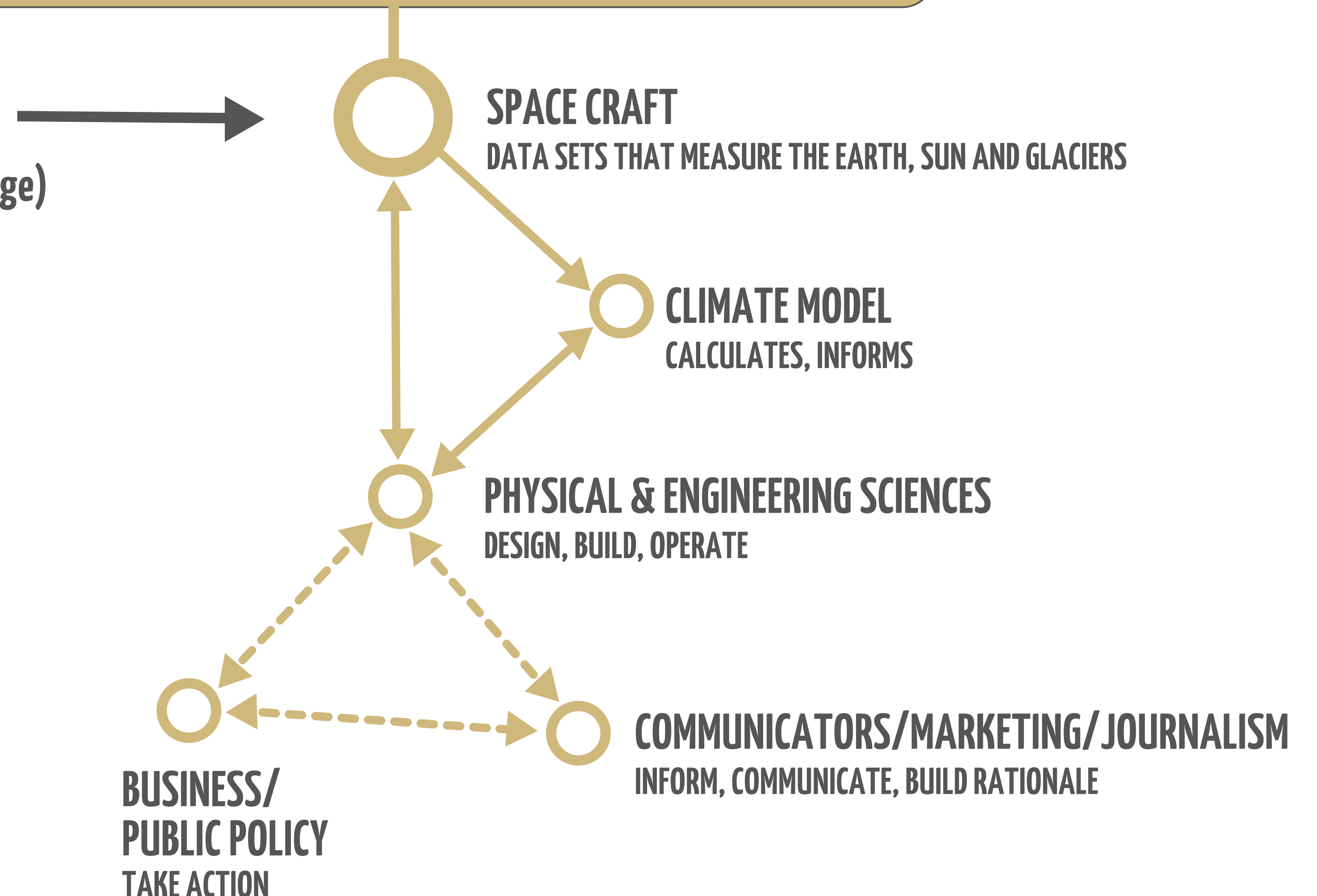## START WITH SMALL STEP INNOVATION: CONNECTIVITY OPPORTUNITIES ACROSS DEPARTMENTS

CU EXPERTS

CENTRAL UPPER LEVEL GRAPHS
SERVING AS UNION CATALOGS
LINKING DISPARATE DATA SOURCES

BUSINESS PROCESSES
FACULTY REPORTING
DATA ANALYTICS

WEB INTEROPERABILITY / INTERNATIONALIZATION / SEO
LIBRARIES
OPEN ACCESS

FACULTY / RESEARCHERS
STUDENTS
STAFF

DEPARTMENT DOMAINS: PROTOTYPE USE CASE

DIFFERENCES OF STRUCTURED DATA BETWEEN A CENTRAL SYSTEM AND A DEPARTMENT/DOMAIN SYSTEM

CHALLENGES:
1. LACK OF AWARENESS BETWEEN SITES
2. NO INTERCONNECTION OF DATA
3. KEY DATA MISSING/HIDDEN
4. NO PROVEN WORK-FLOW

SORCE IS A SPACE CRAFT
LASP RUNS MISSION OPS

IMPORTANT SCIENTIFIC CONCEPT - LINKED WITH UNDERLYING DATA SETS

SORCE HAS 4 INSTRUMENTS DESIGNED TO OBSERVE THE SUN
- EACH INSTRUMENT CREATES MANY DATA SETS

CU HAS A PRINCIPLE INVESTIGATOR

CU EXPERTS PUBLICATION PAGE

LASP/LISARD

INNOVATIVE SOLUTIONS: IDENTIFY LIMITED AREA OF FOCUS, CROSS DEPARTMENT COOPERATION , CONNECT KEY LINKED DATA, CREATE JOINT SUBMISSION TEMPLATE/WORKFLOW

FUTURE IMPACT & OPPORTUNITIES

(Example of potential link data opportunities regarding climate change)

CU Boulder can become a nexus for innovation, creating opportunities for tomorrow's leaders by building and supporting an institutional network graph. The results of which will positively impact humanity.

The first step is to start with an achievable goal such as linking spacecraft, instruments, and the domain of solar sciences with the CU Experts.
Then build outward to include most if not all departments at CU Boulder, external Universities and organizations.

SPACE CRAFT
DATA SETS THAT MEASURE THE EARTH, SUN AND GLACIERS

CLIMATE MODEL
CALCULATES, INFORMS

PHYSICAL & ENGINEERING SCIENCES
DESIGN, BUILD, OPERATE

BUSINESS/ PUBLIC POLICY
TAKE ACTION

COMMUNICATORS/MARKETING/JOURNALISM
INFORM, COMMUNICATE, BUILD RATIONALE

HOW WOULD YOU CHARACTERIZE THESE RELATIONSHIPS?