



Award #:1441963

# SI2-SSI: SAGE2 - Scalable Amplified Group Environment

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# SAGE2™

[sage2.sagecommons.org](http://sage2.sagecommons.org)

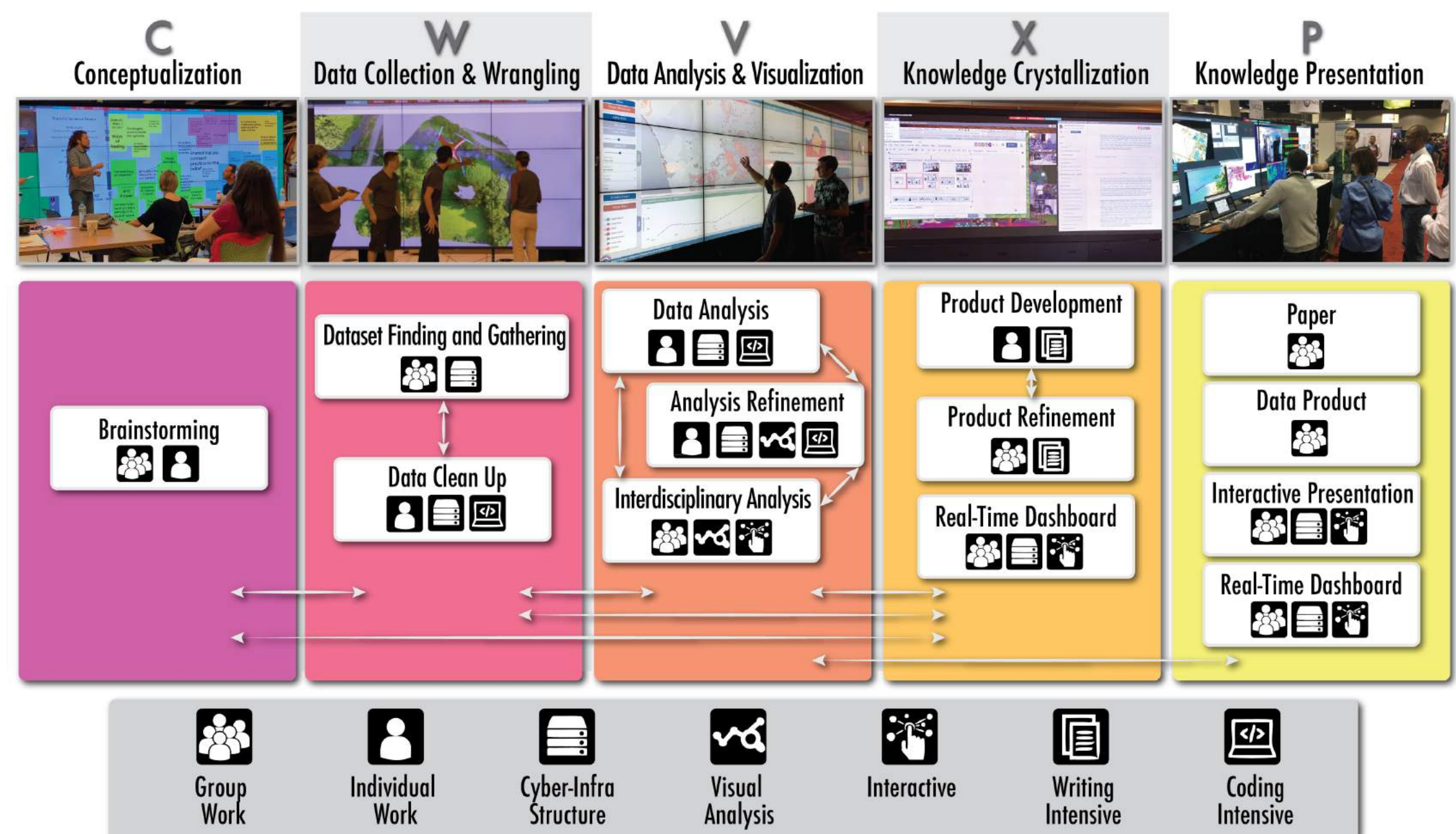
## What is SAGE2?

SAGE2 is a user-centered platform enabling small groups or large distributed teams to access digital media datasets from various sources and display, juxtapose, share and investigate a variety of related, high-resolution information on tiled display walls. SAGE2 builds on SAGE (Scalable Adaptive Graphics Environment), developed with prior NSF funding. With ~4,000 users at ~800 SAGE2 sites in over 17 countries worldwide, SAGE2 is having a transformative effect on data exploration, visualization and collaboration, making cyberinfrastructure more accessible to end users, both in the laboratory and in the classroom. SAGE2 has a many features; recent ones are listed here:

- SAGE2 accessible via web browsers on laptops, tablets and smartphones
- Share screens – e.g., push laptop displays or individual windows
- Share digital media (PDF, JPG, MP4, etc.)
- Supports multi-user interaction and control, locally and remotely
- Integrated with Jupyter Notebooks
- Links applications; i.e., applications can pass data among one another
- Application menus have intuitive user interaction widgets
- Integrated with science and Cloud applications (ongoing) – e.g., Google Docs and Hangout, ParaViewWeb, ARCGIS, PubMed, VTK.js, etc.
- Quick Notes let users post messages and/or annotate digital media documents
- Multi-resolution viewer makes it easy to zoom and pan through high-resolution imagery
- Ensures a secure SAGE2 web server environment
- Extended launcher supports initial setup and editing of configurations
- Supports walls driven by a single PC or computer cluster
- Distributed as open source; commercial license available

## SAGE2 Supports the Human-Centered Scientific Enterprise

SAGE2 expands beyond gateways and workflows to support the human-centered scientific research and education enterprise from end-to-end, which NSF calls the cyberinfrastructure ecosystem's Missing Middle – i.e., the link between data sources and repositories and end-users' abilities to discover, publish, share, integrate, collaborate and reuse.



Usage Patterns of Wideband Display Environments In e-Science Research, Development and Training, eScience 2019, <https://tinyurl.com/rkxoyj>

## High-Impact Science Communities Worldwide Use SAGE2

High-impact domain science communities worldwide use SAGE2 to share information, reach conclusions and make decisions with greater speed, accuracy, comprehensiveness, and confidence. New and upcoming global user communities include: EBP (Earth BioGenome Project), C-MĀIKI (Center for Microbiome Analysis through Island Knowledge and Investigation), LandSAGE (Landslide Management), EarthDEM (Earth Digital Elevation Models), LifeMapper and Distance Education for Clinical Informatics.

Disciplines that currently use SAGE2 include: Archaeology, Architecture, Art, Atmospheric Science, Biology, Chemistry, Civil Engineering, Communications, Computer Science, Education (preschool to grad school), Geoscience, Health, Library Science, Medical, Meteorology, Network Engineering, Neuroscience, Physics, Psychology, and Statistics.



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