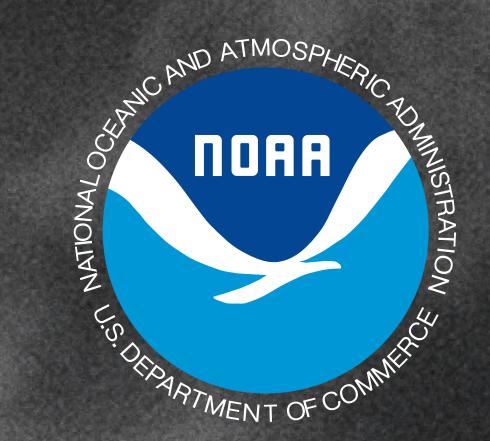
EXPANDING THE USE OF SCIENTIFIC DATA THROUGH MAPS & APPS





Sudhir R Shrestha NOAA, Cyberdata Technology

Mike Halpert

David Herring NOAA

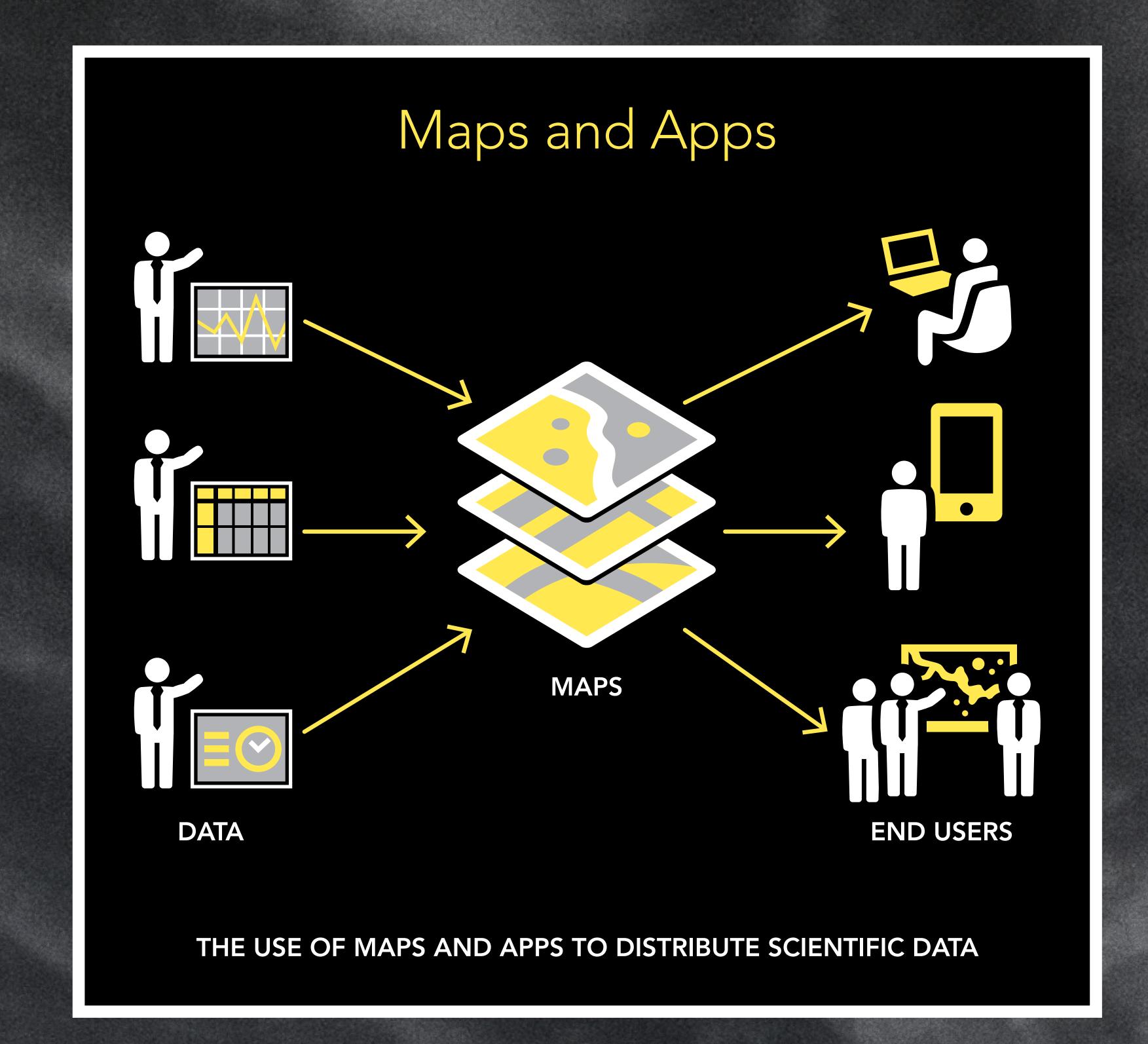
Dan Zimble Esri

aps are intuitive. Pull one up on your phone (or atlas), and you know what to do with it. People glean valuable insights from data-rich maps, thanks to their intuitive nature. As the world produces and collects more information than at any other time in history, people need a helpful way to incorporate that information. Consider the vast amount of multidimensional science data coming out of all today's research. Easily portraying this scientific data as intuitive maps and apps yields more effective use of the information.

Data – and demand for data – is increasing and will only continue to. But applying science data is an art. There are challenges. Scientific data is often inherently complex, for instance. Data type varies hugely, moreover, and data volume itself is huge. Many users struggle to find data in the first place. Once they have it, what can they do with it? Those who manage science data must do whatever it takes to reformat the data into variety of more common formats in order to meet the increasing demand for these scientific products. Oftentimes the handling and reformatting of scientific data requires the development/modification of custom tools. Due to cost and limited resources, such custom tools are often created on a case-by-case basis. That means there's no single common software platform for interacting and manipulating scientific data that is presentation ready for novice users including policy makers.

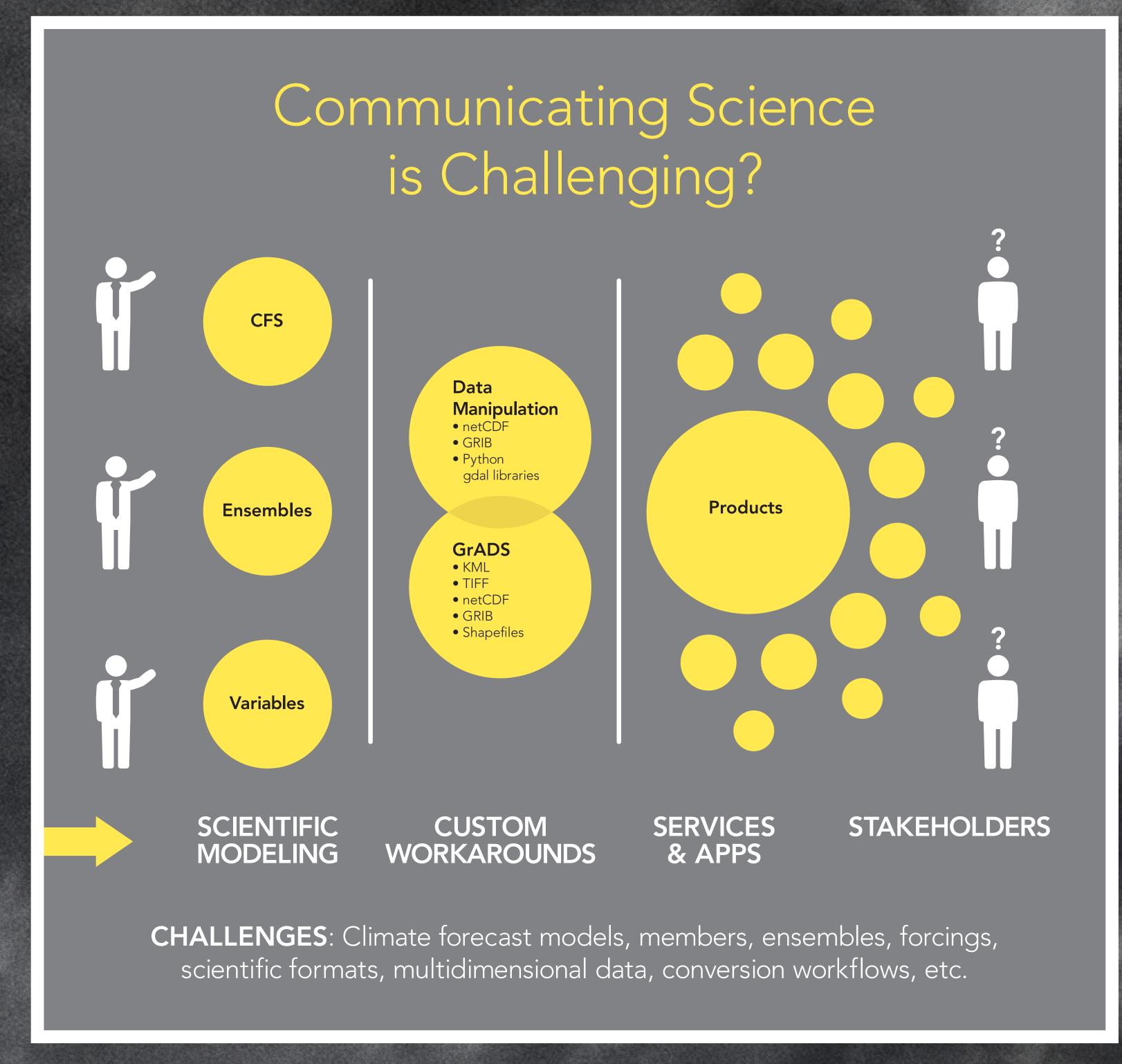
But there's an easier way.

Information technologies exist to mitigate the daunting nature of these challenges. Implementing an enterprise architecture that includes a geospatial platform is one such solution. A geospatial platform is a location-smart, platform technology that helps you share data using standard web services. These services employ the logic needed to handle, describe, and portray scientific information accurately – whether on images and maps or through features and geoprocessing. Furthermore, web APIs, which are part the platform, help experts in the science community focus less on data translation and more on the design of user-friendly maps and apps that help users of all types, including scientists, policy-makers, or general users. So those using your data know what to expect. They can get straight to the decision-making.



GOAL:

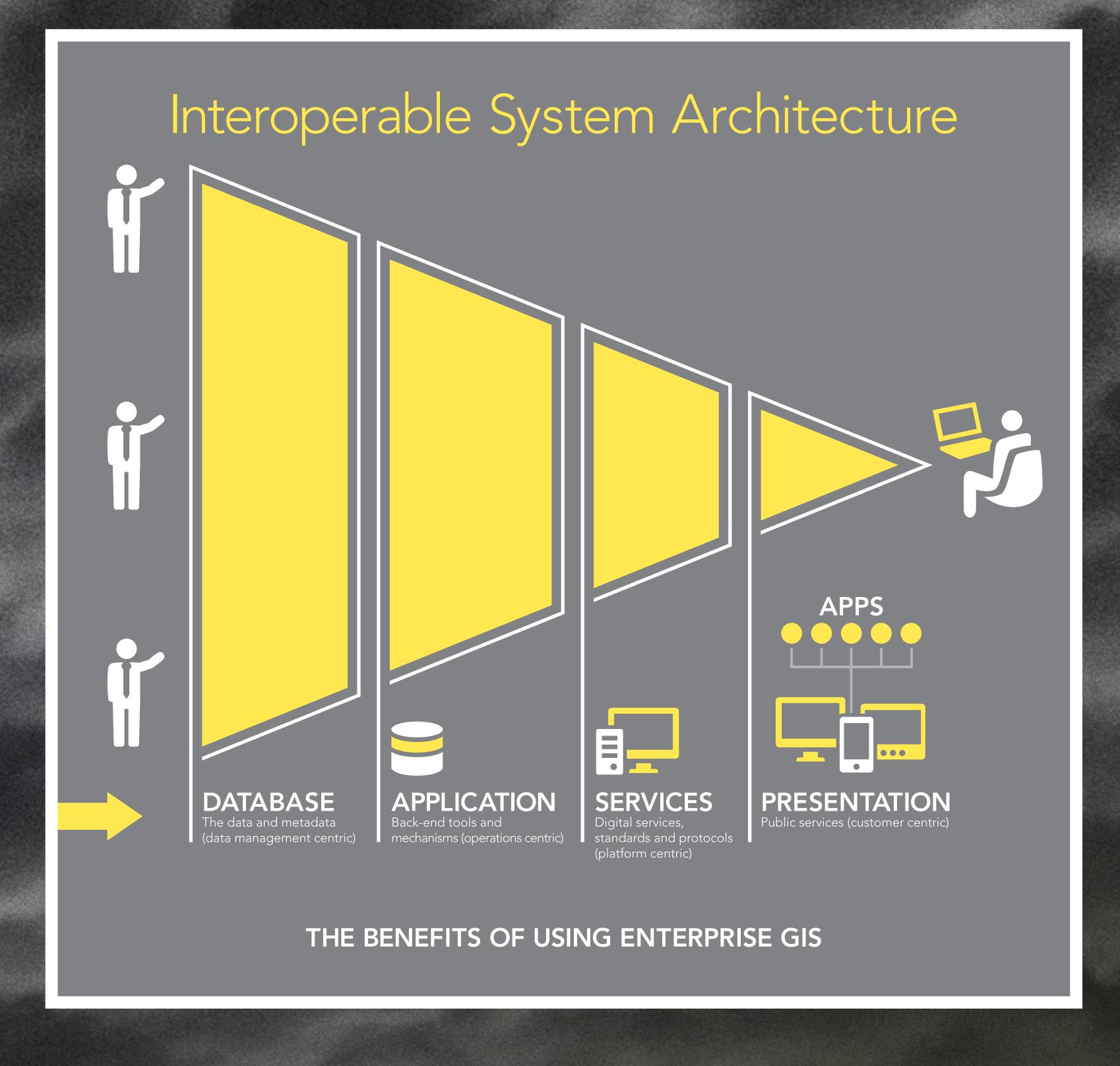
Empower science community members to provide instant access to science data as consumable maps and apps. Users of all kinds gain actionable intelligence through intuitive, scientifically based maps and apps.



CHALLENGE:

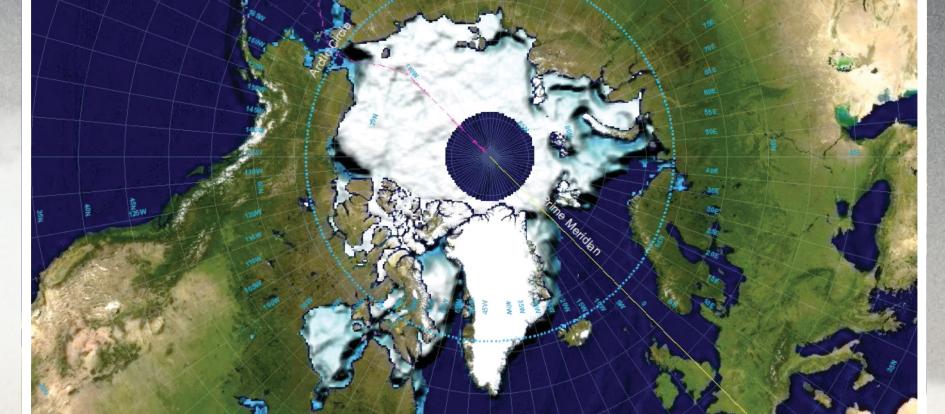
Those who use science information struggle to tap the world's growing variety and volume of scientific data. Never mind the problem of finding a way to put that data to use. With more types and sources of data – and more ways to access and apply it – than ever, regardless of whether they are scientists or policy-makers, everyone is challenged with making effective use of the information.

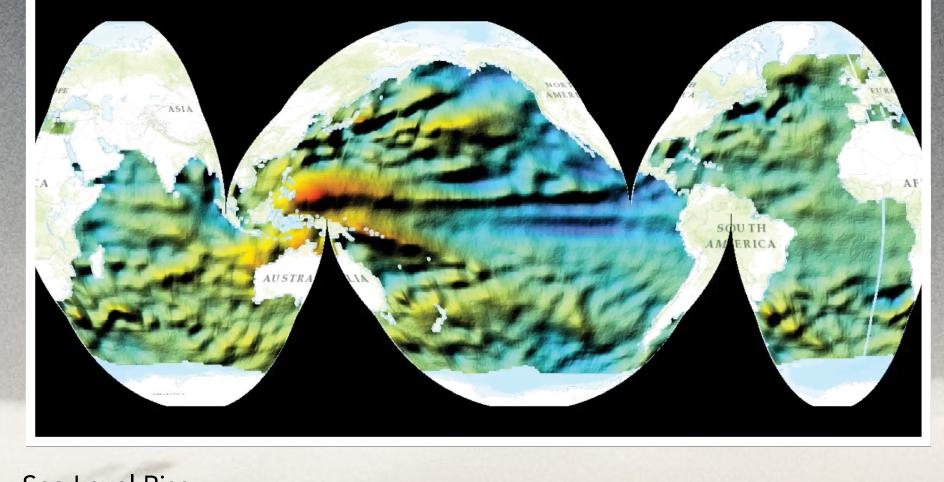
Vorticity Map

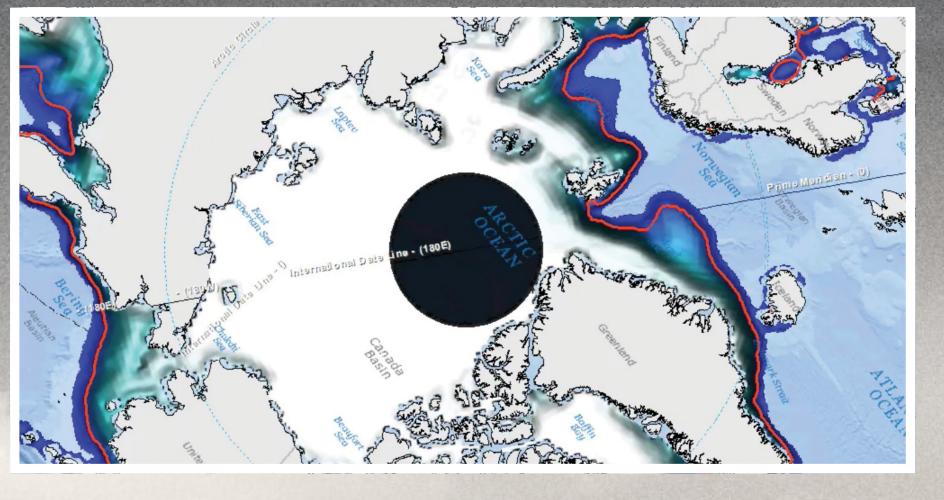


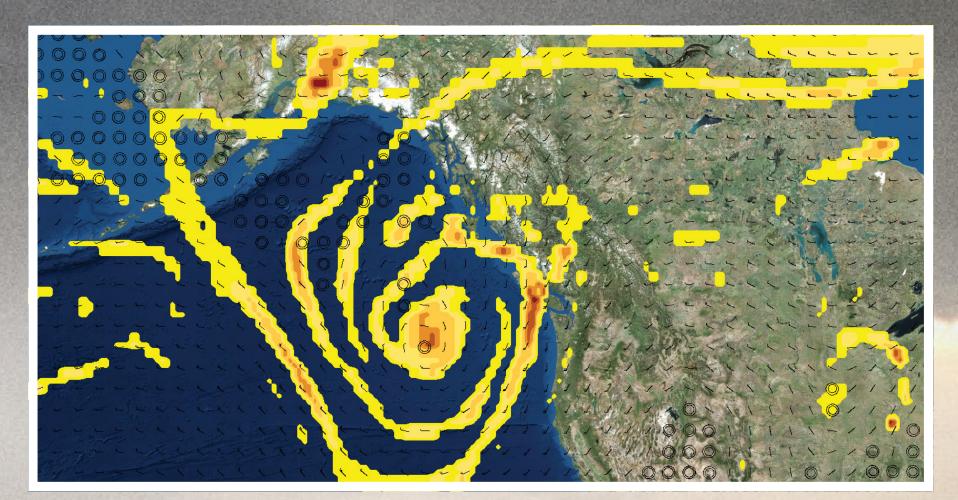
SOLUTION:

A geospatial platform solution offers many benefits. It provides a standardized set of protocols, so end users can interact with scientific data while providing scientists with a common platform to share their data products. The NOAA Integrated Dissemination Program (IDP) GIS project, for example, is in the process of starting up a geospatial platform that is part of the NOAA enterprise architecture. This project will leverage existing geospatial standards and allow for consistent dissemination of data formats and protocols across all NOAA geospatial data and products.









For further information, please contact:

Sudhir R Shrestha – sudhir.shrestha@noaa.gov Dan Zimble – dzimble@esri.com

NCOM Ocean Temperature

Arctic Sea Ice

Sea Level Rise

NCEP CPC TM SIC