National Geothermal Data System: Open Access to Geoscience Data, Maps, and Documents
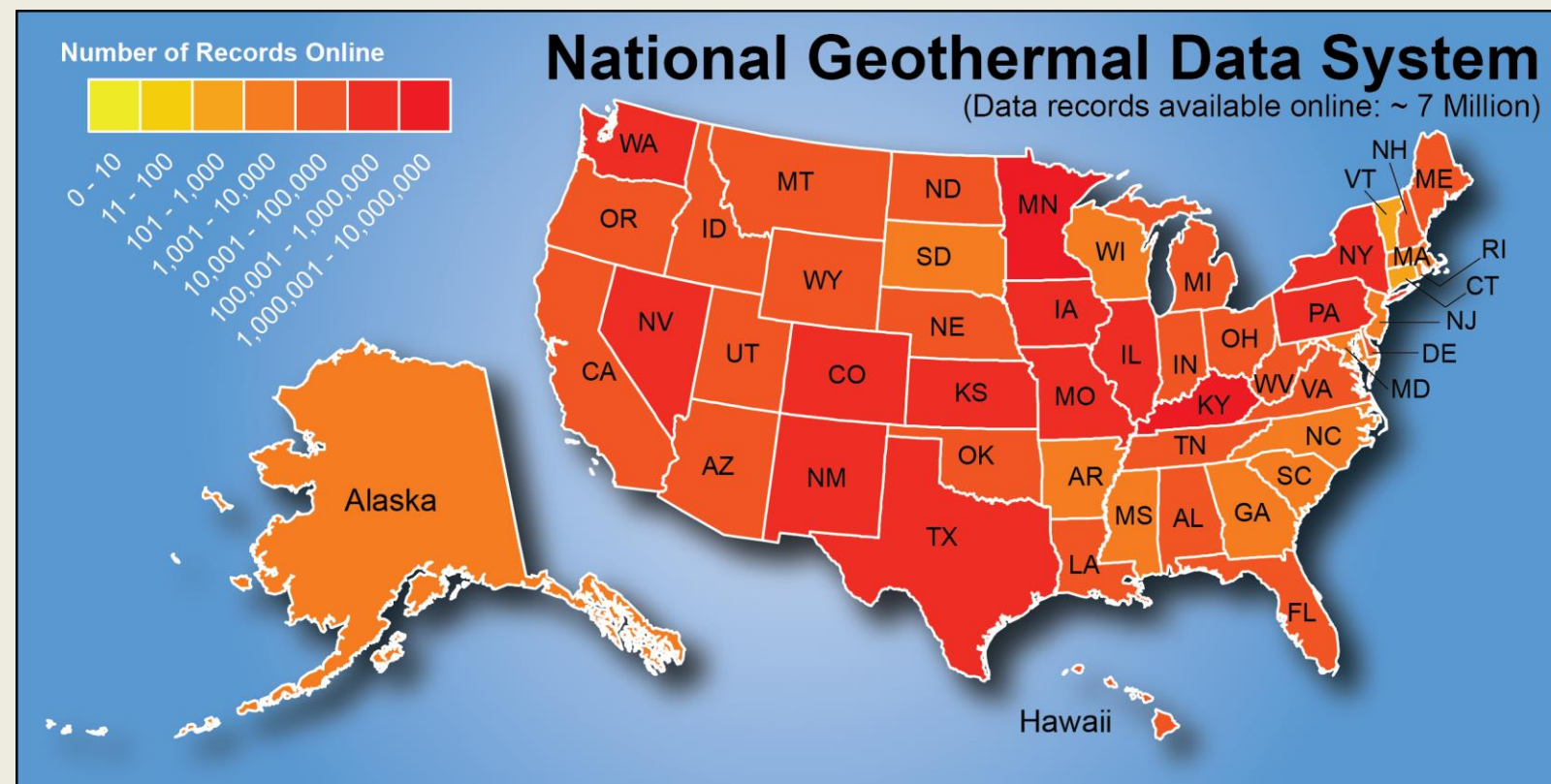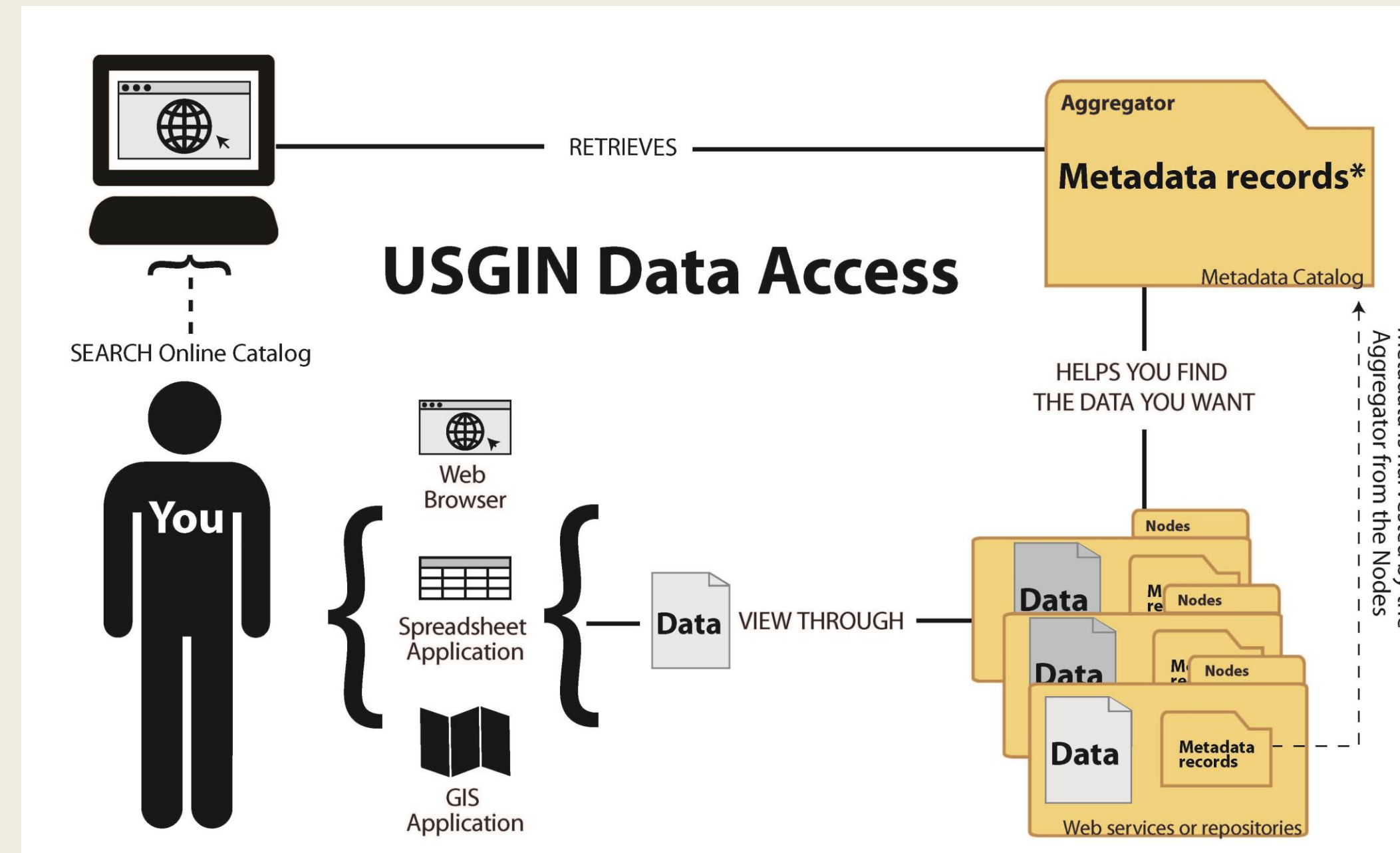
NGDS

The dynamic project site http://geothermaldata.org serves as the information source and gateway to the system, allowing data and applications discovery and availability of the system's data feed. Map-centric web-based applications have been created to support finding, visualizing, mapping, and acquisition of data based on topic, location, provider, or key words.

GIS data available online through NGDS; figure originally produced for and published in Scientific American (2013).
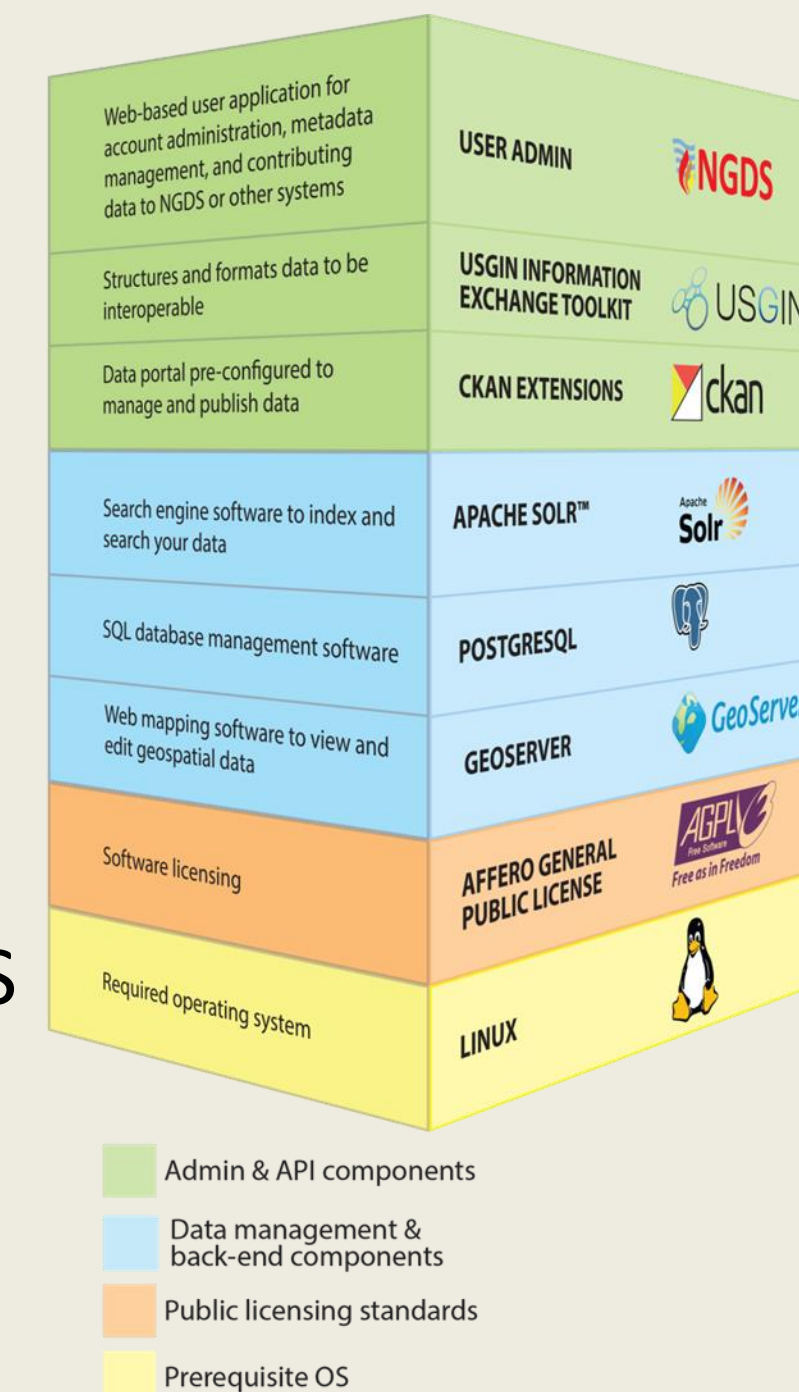
USGIN

The U.S. Geoscience Information Network (USGIN) exposes, connects, and opens earth science data. USGIN is a federated information-sharing framework that uses free and open-source technology, capable of interacting with similarly configured data-sharing networks. This approach offers a long-term solution to data storage and sharing without any proprietary software.

USGIN framework

Free and Open-Source Codebase and Software

A redistributable, free and open-source software package called GIN-stack (USGIN software stack) was created to give data providers a simple way to release data using interoperable and shareable standards, upload data and documents, and expose those data as a node in the NGDS or any larger data system through a CSW endpoint. The easy-to-use interface is supported by OSS including Postgres, GeoServer, and custom CKAN extensions among others.

Use for third-party GIS applications

OGC-compliant map image and data web services allow users to access information with a variety of applications.

Community Experience: User-created models, tools, and scripts

Community-driven systems are innovative, agile, and more likely to be useful and sustainable. USGIN accomplishes this through use of GitHub, developer blogs, a user-created tools site, and invitations to edit and create USGIN data models.

NRRC DSS: Another USGIN System Implementation

The Arizona Natural Resources Council Decision Support System is another USGIN-styled system in development – see our digital presentation for more!

AZGS Geoinformatics Section