UX

Mapping the User Journey

Building a User Persona and Story Repository to Improve NASA EOSDIS
Application Development

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WHY CREATE PERSONAS?

Personas are research-based user archtypes that help designers and developers think about external user needs rather than their own. They also give stakeholders, user experience professionals, and managers and opportunity define and refine who the users are for a given application or website. The process of developing the personas forces the team to consider who their users are and informs decisions based on the needs and potential actions of the core user base. In context of NASA EOSDIS (Earth Observation System Data and Information System) application development, personas help us stay focused on a collection of core users as we develop applicatoins and processes across multiple platforms and teams. It helps to ensure that the services we create are consistent and meet user needs.

HOW WE USE PERSONAS

Personas play an important role in our pre-production process and are generally used to inform new software and feature development as well as make sure our organization understands who their building software for. The persona and journey map library are living documents--accessible via a shared wiki for everyone in the organization to view and revise. Each persona in the library includes the following:

- Brief overview and description of the user
- An associated data user profile from the Earthdata website
- An IRL (in real life) section that gives real-world examples of this particular user
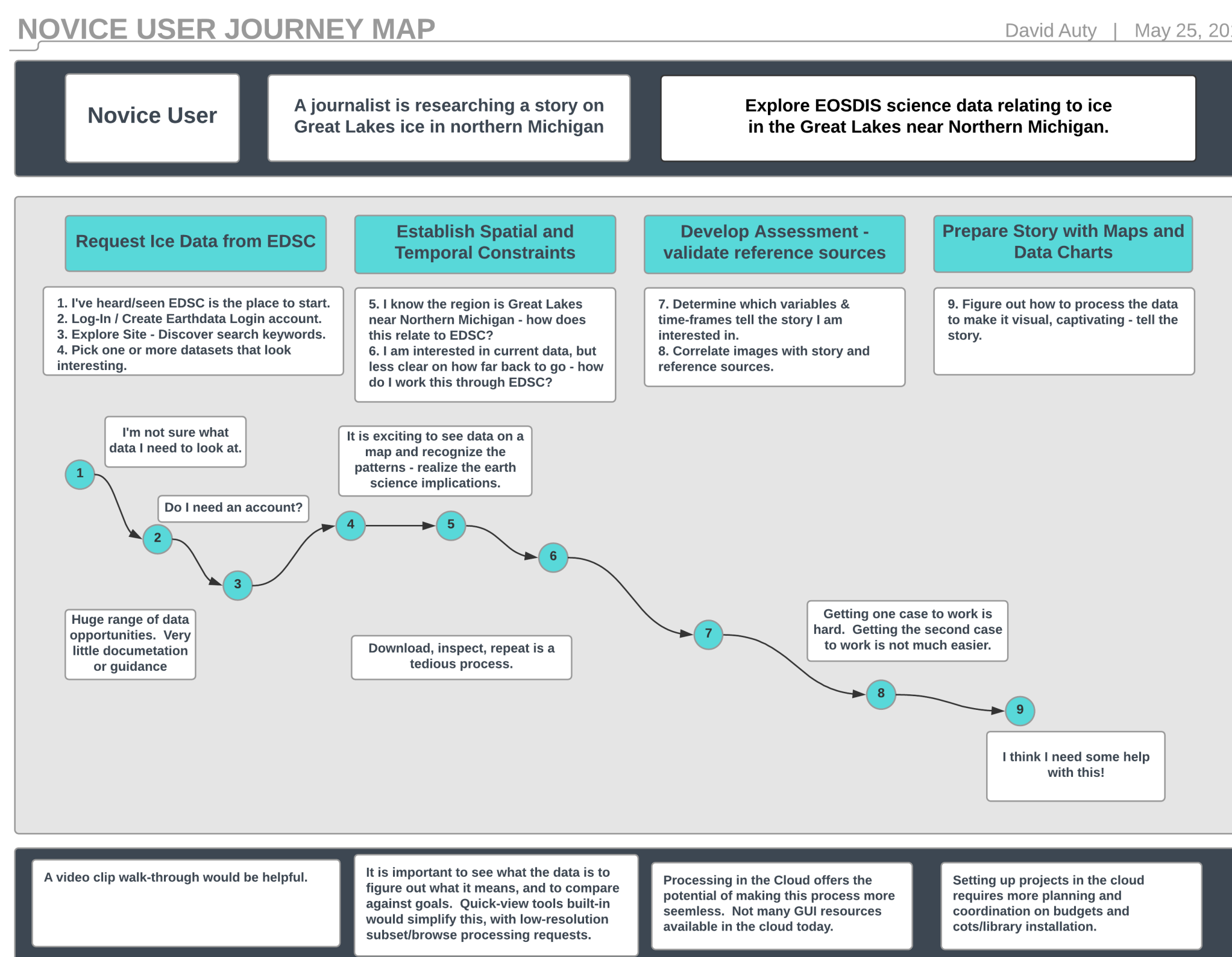- Goals, pain points, and a journey map

WHAT'S A JOURNEY MAP?

A journey map is a visual representation of the path and process a user goes through to complete an action on the site or accomplish a goal. Journey maps give us a way to walk a persona thorugh a scenario and highlight the actions, thoughts, and emotions that may be present while completing the task. They give designers and developers a clear picture of how a user may behave while using the website or application and offer an opportunity to refine and improve the user path before any code is written.
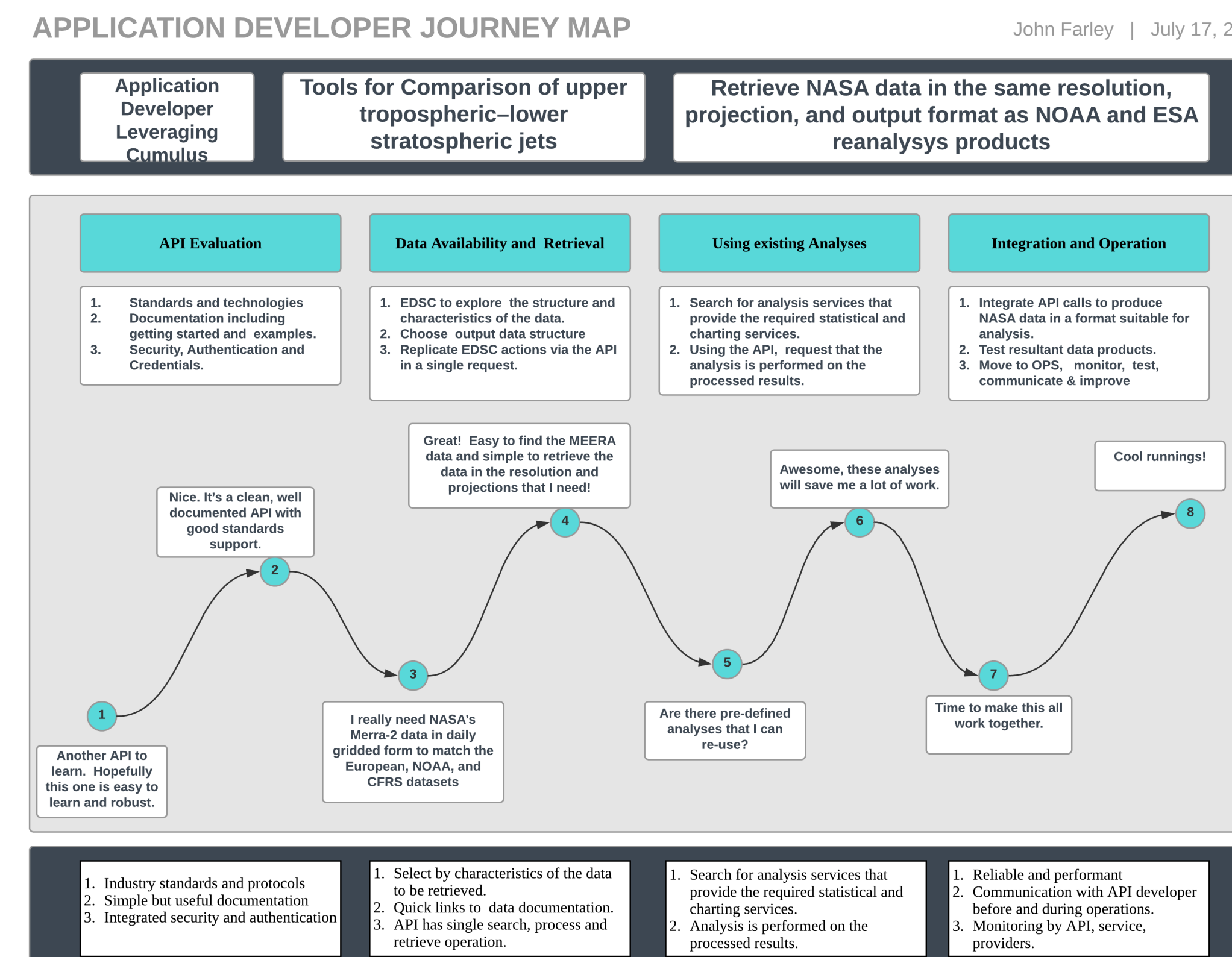
DATA USE JOURNEY MAPS

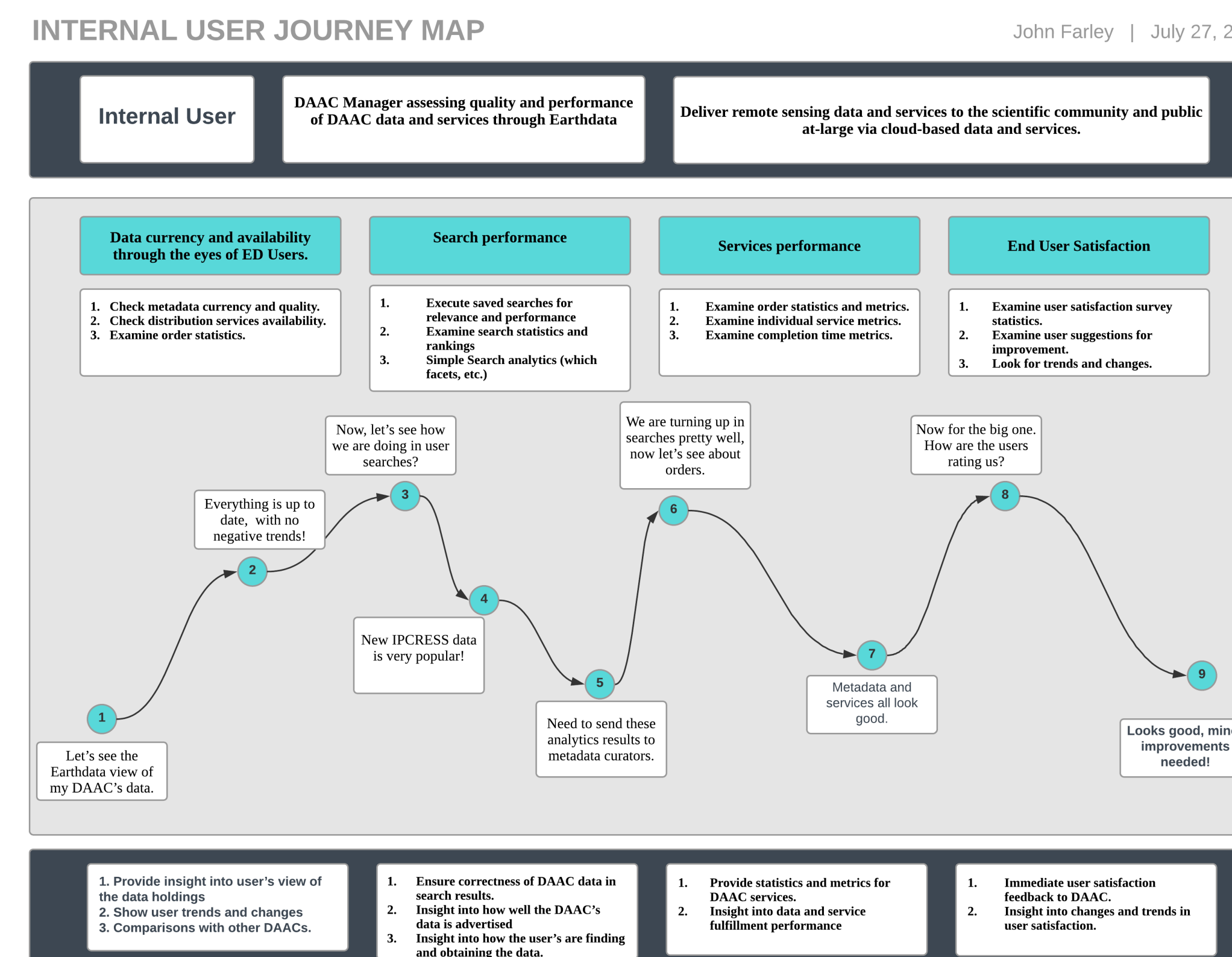### EARTH SCIENCE RESEARCHER JOURNEY MAP
David Auty | May 5, 2018
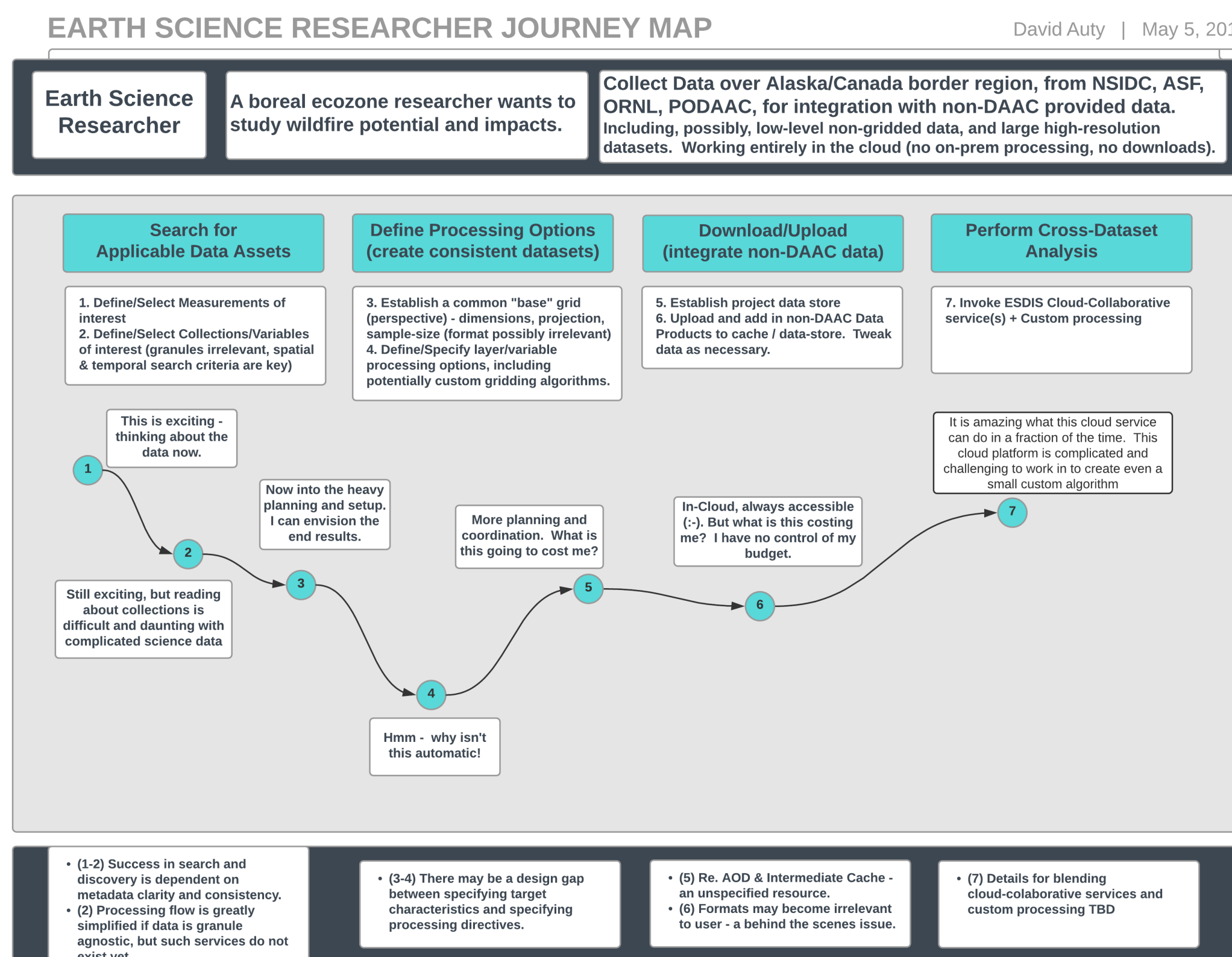
A scientist whose goal is to use remote sensing data to answer research questions. This research could include measuring sea ice elevation over the arctic, exploring wildfire frequency in western North America, or assessing the movement of glaciers in Canada. The Earth Science Researcher often has to do processing and analysis outside of the EOSDIS system to create datasets better suited for their research. They're often concerned with different collections and different measurements over the same geographic area and they expect the data they download to be accurate and consistent.

APPLICATION DEVELOPER JOURNEY MAP
John Farley | July 17, 2018

A software developer or programmatically-minded scientist with a private/commercial company or governmental organization whose goal is to use cloud-based remote sensing data in their application. Scenarios could include integrating sea surface temperature data, AIS and GPS location information with other oceanographic sensors to build better marine management systems, integrating with commercial tools like MapBox and ArcGIS, and creating search and analysis tools built on the EOSDIS system. Application developers need stable, well-designed, and well-documented APIs.

APPLIED SCIENCE PROFESSIONAL JOURNEY MAP
David Auty | May 5, 2018

A professional whose main job is not remote sensing research but who uses remote sensing to complete a related job. For example, a geographer measuring crop production in their communities like corn and soybeans to help policy makers plan for land use and other regulations.

NOVICE USER JOURNEY MAP
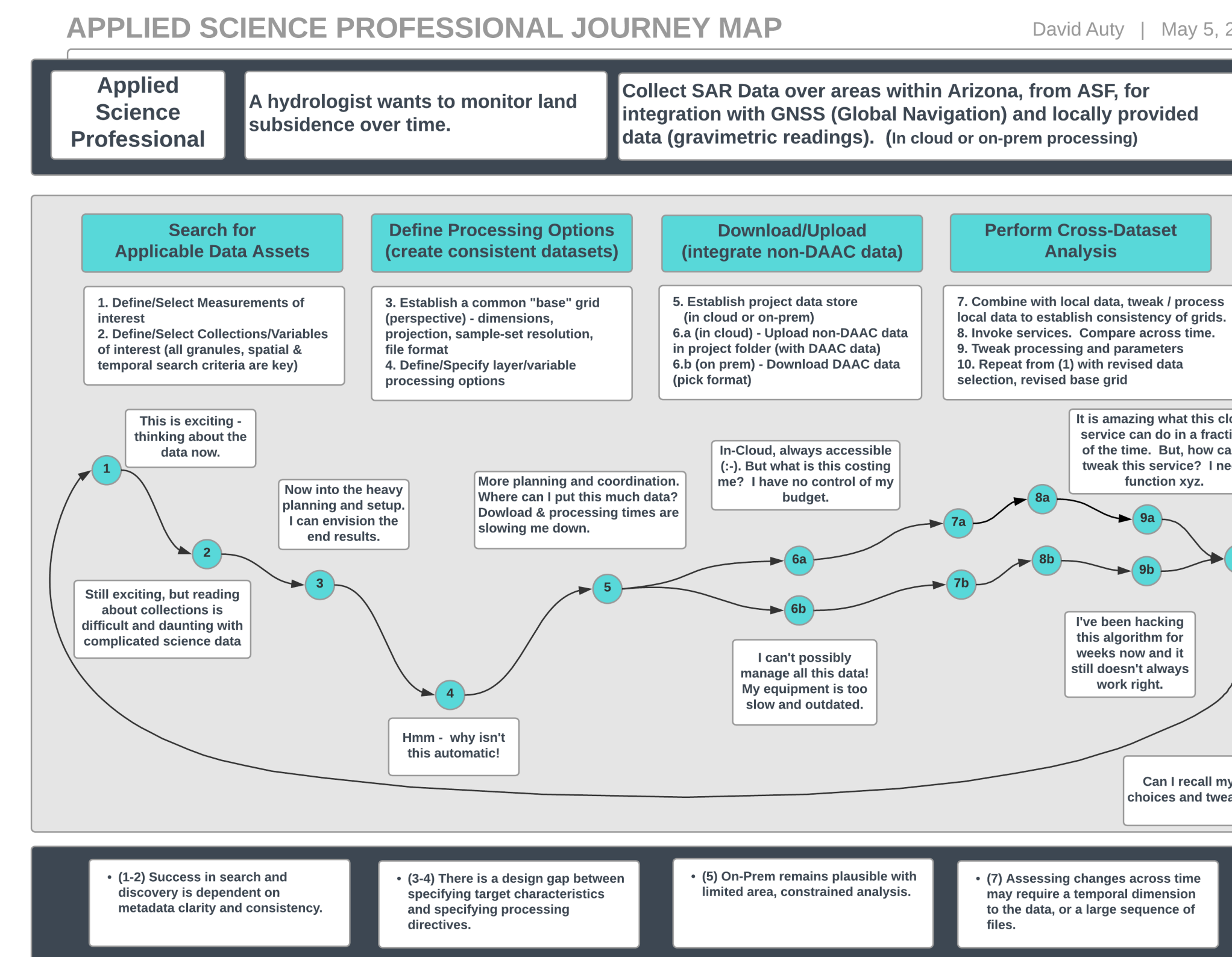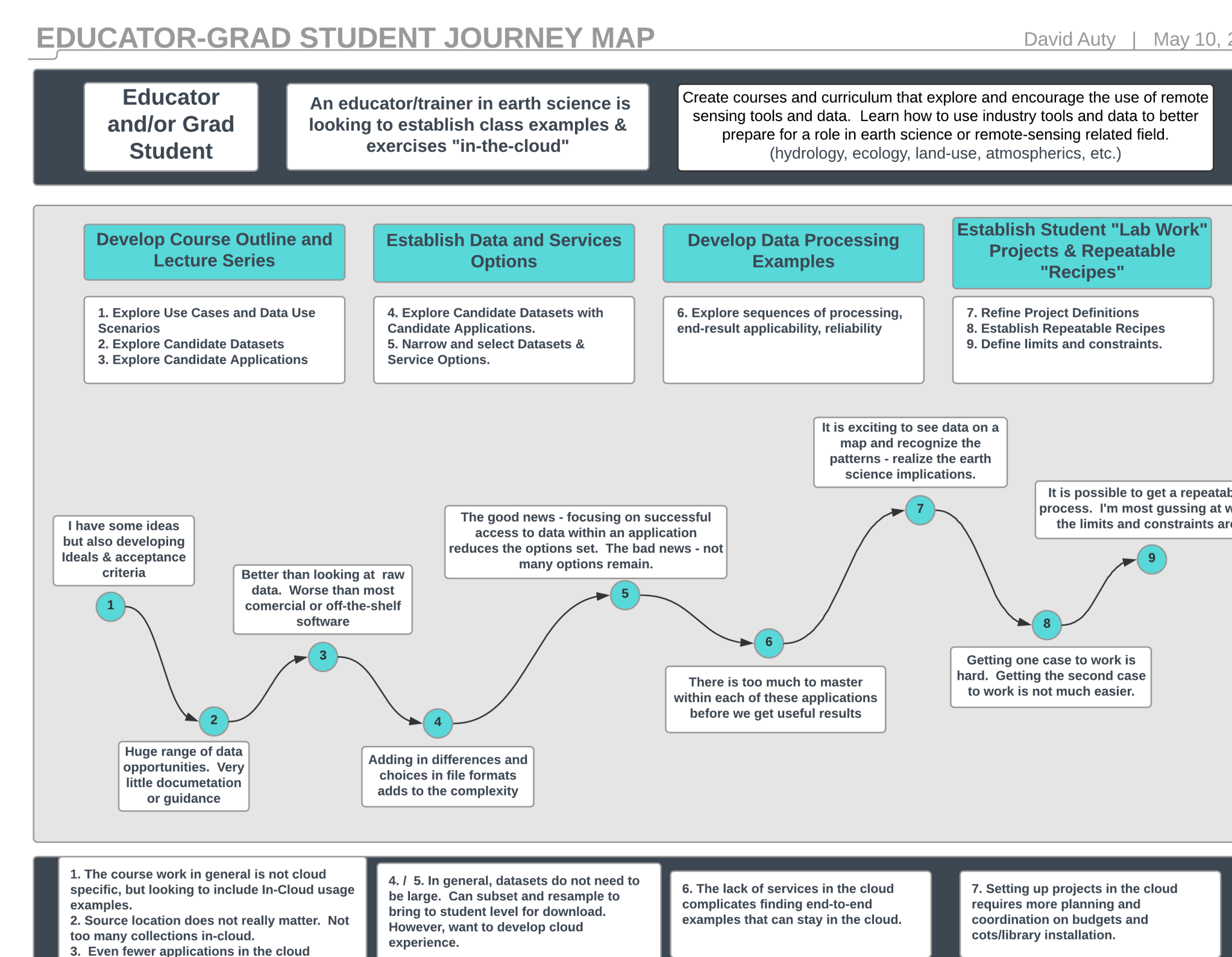David Auty | May 25, 2018

Individuals with little to no experience in remote sensing, EOSDIS systems, or cloud-based applications, in general. These could be people just starting a career, a citizen scientist looking to explore or research a local issue involving land use or snow cover, or a journalist researching a story. Novice Users are looking for clear guidance and steps on how to get started and an easy way to explore data in a way that helps them answer their questions.

INTERNAL USER JOURNEY MAP
John Farley | July 27, 2018

ESDIS management and DAAC administrators that work directly with EOSDIS systems and processes. This group represents a mix of scientists, software developers, designers, managers, and administrators that work to maintain and improve the EOSDIS system as a whole. Some of these users may also live comfortably in other persona categories but as a general rule, they all primarily work on the system--they don't use the system for outside work or research.

EDUCATOR-GRAD STUDENT JOURNEY MAP
David Auty | May 10, 2018

University grad students and educators studying remote sensing or using remote sensing data in their curriculum, such as an Ecology department using EOSDIS data and tools to teach lessons in land use and climate regions. Learning and facilitating that learning are the primary motivations of this user group (although some edutactors and grad students may use remote sensing tools in their research outside of the classroom) and it's important for them to know how and why EOSDIS tools can help them in their classes.

Secret Decoder Ring
AIS – Automatic Identification System
DAAC – Distributed Active Archive Center
ED – Earthdata
EDSC – Earthdata Search
ESDIS – Earth Science Data and Information System
EOSDIS – Earth Observing System Data and Information System
GPS – Global Positioning System
NASA – National Aeronautic and Space Administration