

# Descartes Labs Government (DLG) Capabilities Overview

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## DLG's Core Covenants

- 1) Encourage open architecture and 3<sup>rd</sup> party integration, by avoiding vendor lock on data types/sources, output analytic and viz tools, and algorithms/analytics – allows for flexible mission execution
- 2) Continue to be cloud first. A cloud native infrastructure designed to handle petabytes of data using parallel processing – allows for mission scaling
- 3) Evolve our core dual-use technology stack (Galileo) such that DLG continues enabling rapid solution prototyping – allows for rapid mission response



# DLG is the government arm of Descartes Labs



## Parent Company: Descartes Labs (DL)

2014 technology transfer spun out of **Los Alamos National Laboratories** specializing in:

- Remote Sensing
- Artificial Intelligence & Machine Learning
- High performance computing



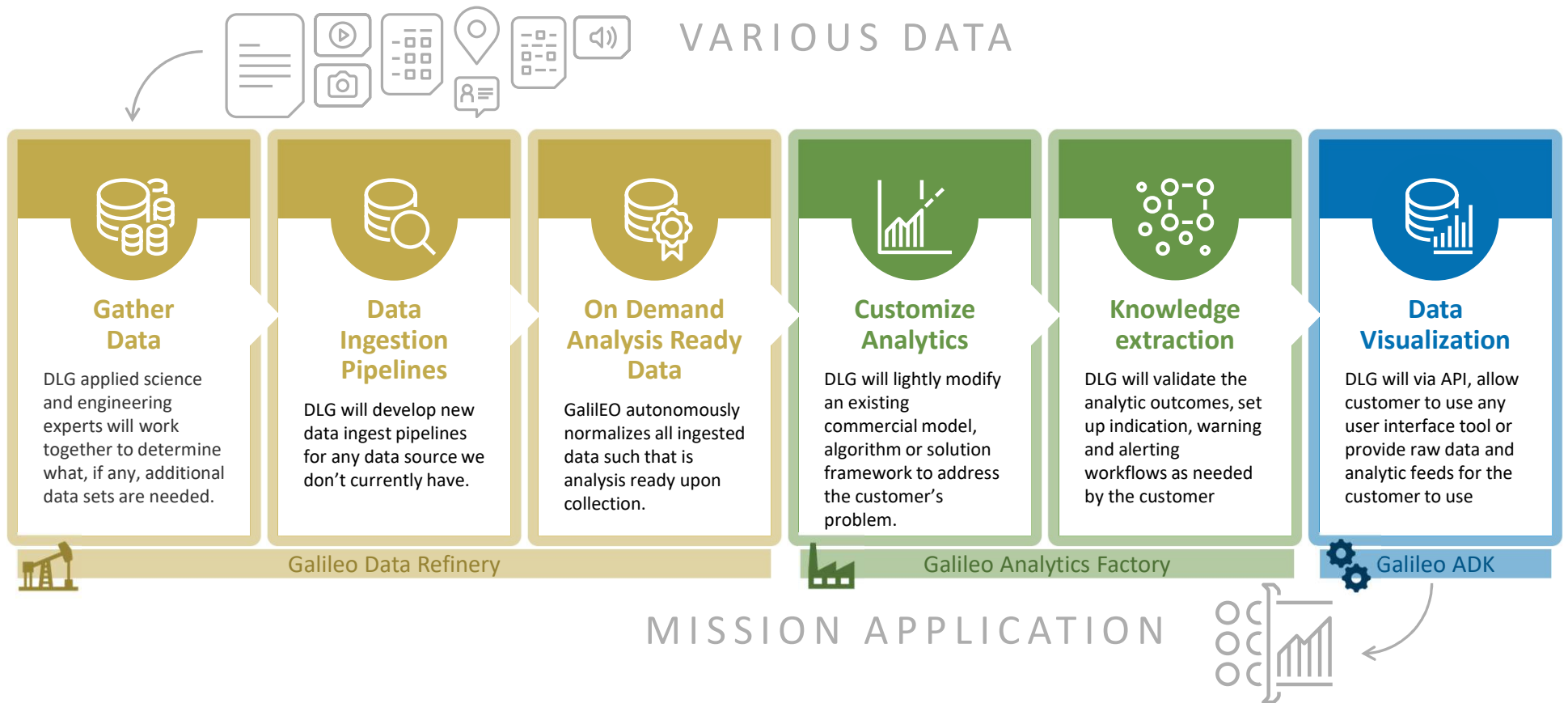
## Descartes Labs Government (DLG)

**DLG is a wholly owned subsidiary** of Descartes Labs, formed in November 2022, to advance dual-use capabilities for government specific missions:

- Classified engagements
- Customization of dual-use technology in government cloud environments
- Data-as-a-Service, Software-as-a-Service, Insights-as-a-Service, Professional Services

# Galileo - Data Flow Overview

DLG's Rapid Prototyping SaaS Technology Stack



# Core Components of Galileo

We abstract the complexity of data engineering, cloud, and automation so users can focus on their mission

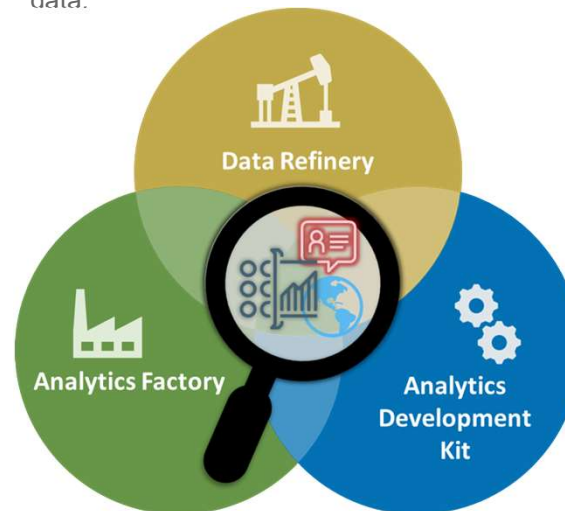
## Analytics Factory

- Analytics developed and deployed within the analytics factory have access to the Data Refinery's catalog of ARD.
- Through our commercial and government projects, DLG has amassed a large portfolio of commercial analytics and algorithms that are baselined and easily customizable to quickly develop custom outcomes.



## Data Refinery

- The Data Refinery automates one of the most manual, tedious processes associated with any data project – prepping data for analytics.
- DLG holds over 10 patents associated with how we've designed our cloud-native architecture, which allows us to handle any type or source of data.



## Analytics Development Kit

- DLG intentionally created Galileo with an open API solution suite. This allows users to consume our analytics and data services in tools they are already comfortable with, lowering operational disruption.
- Via API, organizations have access to Galileo to access analysis ready data, data and insight services in existing tool (e.g. ArcGIS, Google Earth, GOTS tools, etc) or custom developed tools.
- Further, DLG can provide the raw or processed data in common formats (e.g. CSV, KML/Z, Shape, JSON, etc), generate custom reports, and provide alert notifications.

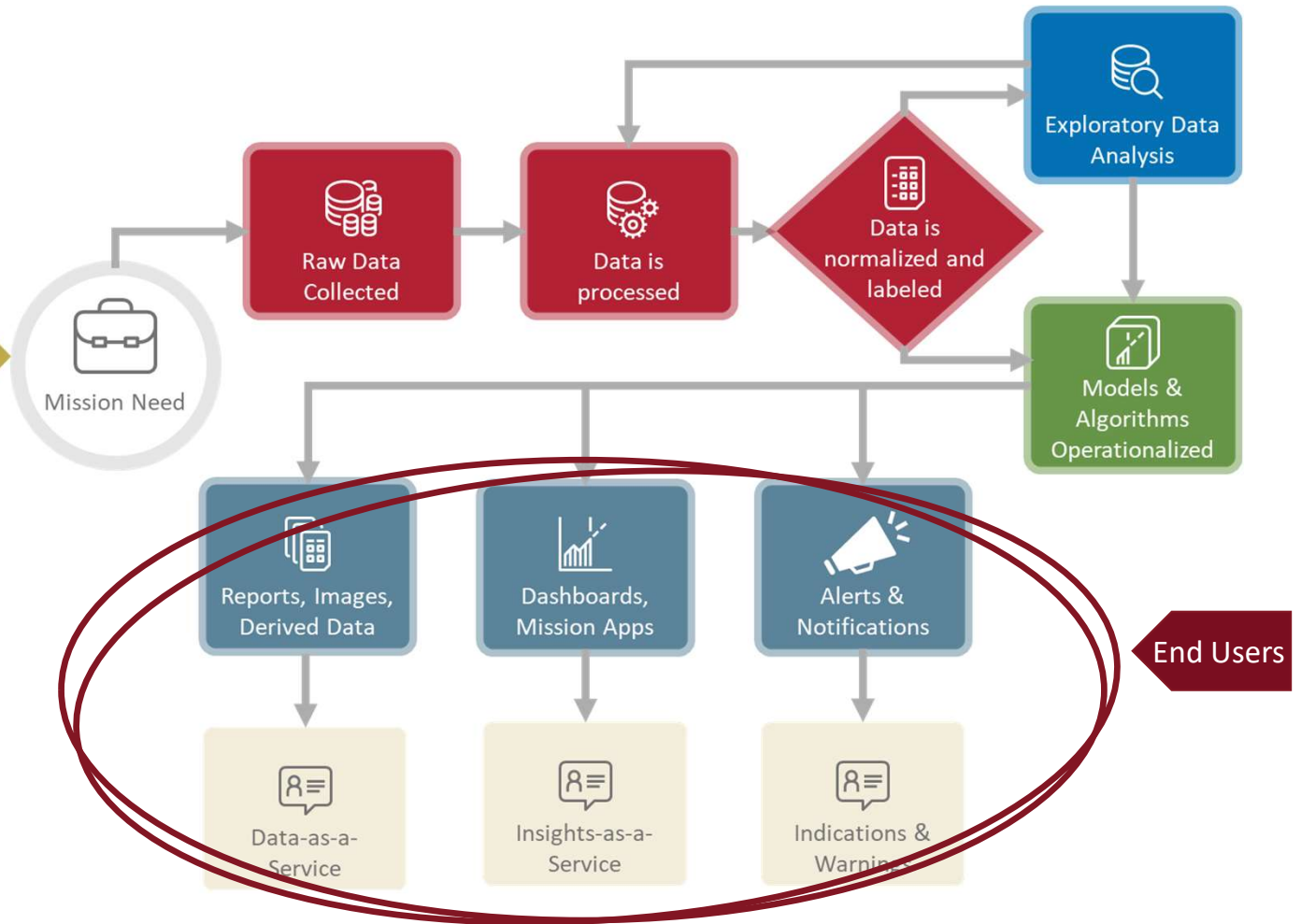
# High Level Block Diagram Workflow

## Focus on the mission.

Galileo automates one of the most manual, tedious processes associated with any data project – prepping data for analytics. DLG holds 10 patents associated with how we’ve designed our cloud-native architecture, which allows us to handle any type or source of data at petabyte scale.

## Digital Twin Foundation.

Every day, DLG is re-mapping the world and continuously curating a foundational geospatial data from over 100 open and public data sources, petabytes of data, and derived data sets that are unique to DLG based on commercial analytics (i.e., global water, land and cloud masks, building and vegetation layers, etc).



# Our Key Technology Differentiators

With our technology and expertise, DLG can address a variety of Military and IC mission use cases.

1

## Dual-Use & Rapid Prototyping

Our SaaS dual-use commercial technology stack, Galileo, is cloud native. For unique government missions, we rapidly prototype data and computationally intense solutions by customizing or lightly modifying our existing commercial analytics and models, rather than developing the foundational technology from scratch.

2

## Scalable & Agile

Our technology can ingest, normalize, fuse multiple data sources, analyze data of all types, and run complex AI/ML analytics, on demand, and in near real time. Further, our technology includes a “digital earth twin” of consistently refreshed foundational GEOINT as well as libraries of dual-use algorithms and analytic models (developed and used on past government and commercial projects).

3

## Open & Interoperable

To address the government’s need to avoid “vendor lock,” DLG intentionally designed our technology stack using open-source software frameworks, such as Kubernetes and other Python libraries. This allows a DLG solution to integrate into most cloud environments (e.g., AWS) and decreases the government’s out year operations and maintenance costs.