K2 Integrity

Promoting Financial Inclusion with Federated Learning:
The **Consilient Solution**

Advancing Financial Inclusion with Consilient

GIANT OAK
We see the people behind the data.

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CONSILIENT

53 MILLION
NUMBER OF AMERICANS WHO LACK A CREDIT SCORE FROM A NATIONWIDE CONSUMER REPORTING AGENCY

56 MILLION
ADDITIONAL AMERICANS WHOSE CREDIT SCORES ARE RATED SUBPRIME

1 IN 5
AMERICANS WHO HAVE A "POTENTIALLY MATERIAL ERROR" IN THEIR CREDIT FILE

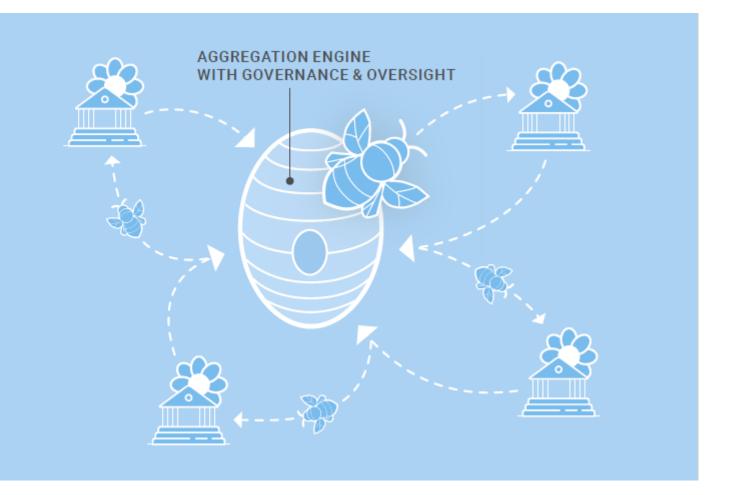# "Mission-Driven" Banks in the United States

- **Minority Depository Institutions (MDIs)** are banks where:
  - A majority of the voting stock is owned by minority individuals; **or**
  - A majority of the Board of Directors is minority **and** the community the institution serves is predominately minority.

- **Community Development Financial Institutions (CDFIs)** are community development banks, credit unions, loan funds, or venture capital funds that provide financial services to low- and moderate-income individuals or communities or other areas targeted by the government for redevelopment.

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How Consilient Works

A Traveling Algorithm

Consilient helps overcome barriers to information sharing by bringing the algorithm to the data, thus decoupling the ability to do machine learning from the need to store data in the cloud or in a single, centralized data center.

AGGREGATION ENGINE WITH GOVERNANCE & OVERSIGHT

Advantages for Mission-Driven Banks

- **The right partners:** Access to consortium of like-minded, mission-driven institutions that understand the financial services needs of low-income and minority communities and the barriers to access they have historically faced.

- **The right training data:** Use of "alternative data" and continuous updating to more accurately assess consumers' creditworthiness and track changes in behavior and financial circumstances over time.

- **A cost-sharing model:** Pooling of expertise and resources to reduce costs.

Human Oversight and Governance

- The Consilient approach to **governance and oversight** includes:
  - Reviewing and filtering data sets to prevent the consideration of prohibited attributes or known proxies for prohibited attributes;
  - Identifying and addressing clear indications that data sets are not representative of the relevant population;
  - Measuring the influence of previous credit decisions on particular data features to show that the model is actively reducing bias across those attributes; and
  - Regularly tuning the model to discourage the reproduction of bias.