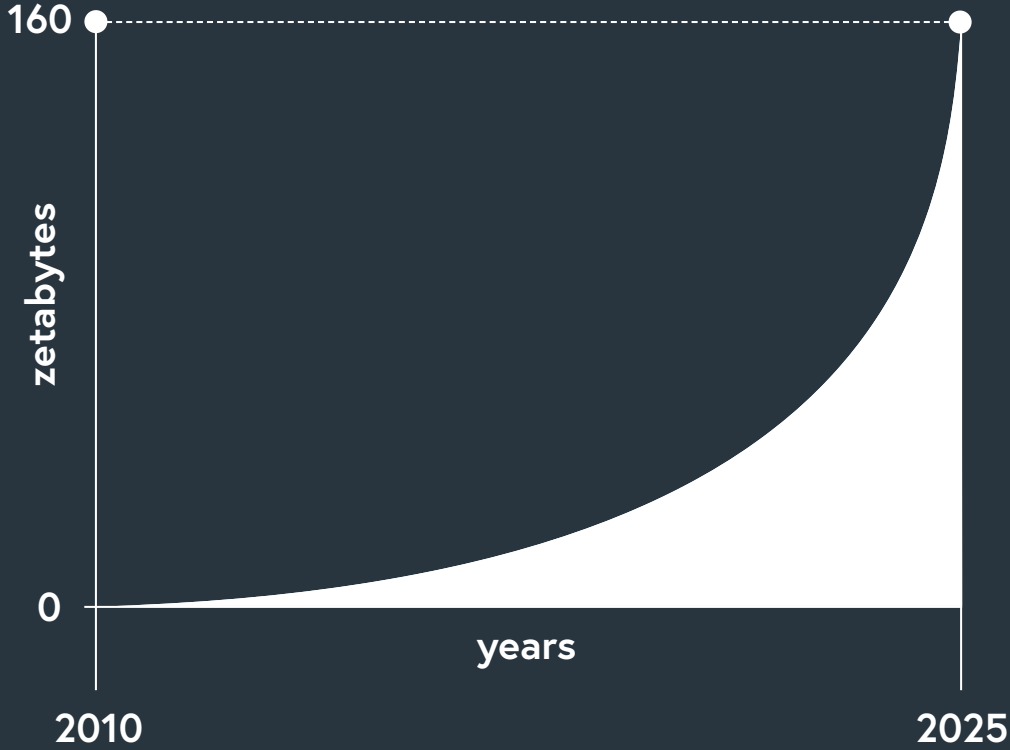# CATALOG

Library of Congress 20190910
Devin Leake CSO

The world produces more data than it can store or compute

160

zetabytes

0

years

2010   2025

Of the 160 million zetabytes to be generated in 2025, only 12.5% can be stored.

Most of that data will be pushed down to "cold tiers" that cannot be computed on.

DNA makes all data computationally relevant

infinite storage

Hyper Dense: 1,000,000x more dense than SSD (solid state drive)

Massively Parallel: DNA is easily replicable into multitudes of copies for simultaneous computing/query

Eternal: Stable for 1000s of years – once archived will last forever

infinite compute

In-Memory: Perform all computing tasks directly on stored data – no costly movement between tiers
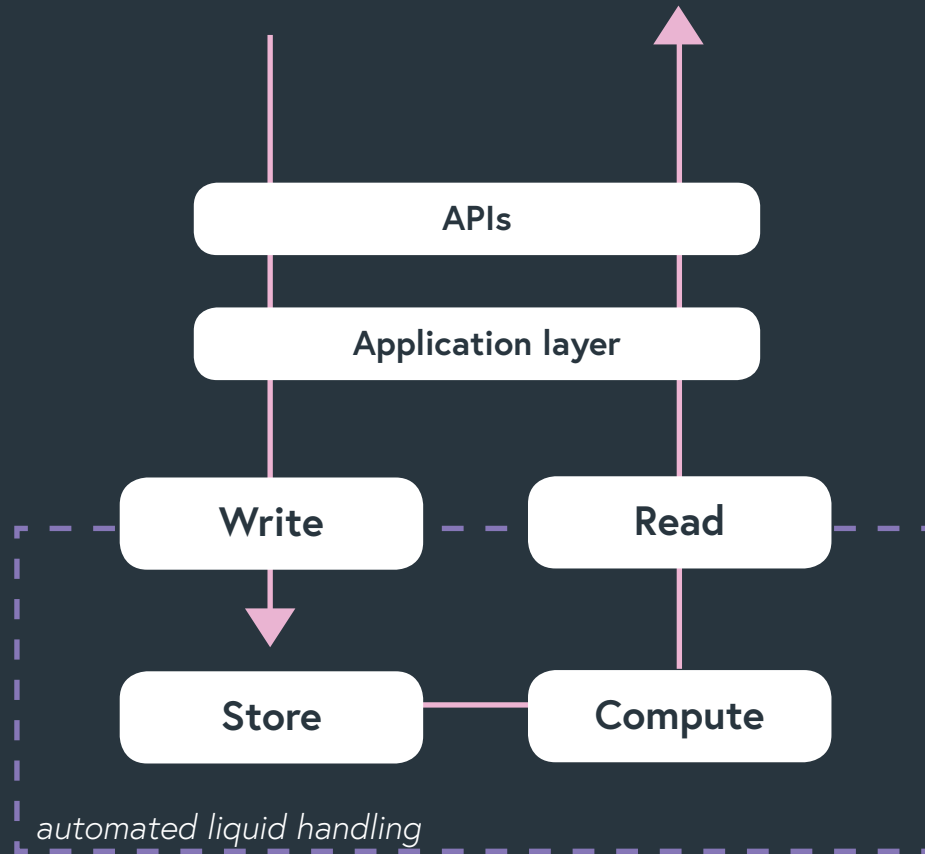
Scale-Free: DNA computing is a chemical process – which means it never loses efficiency regardless of the dataset size

DNA-Native: Rely on structure & physical properties inherent in DNA to perform unique computing operations

Vision: High performance storage with innate compute

CATALOG broke barriers by inventing the printing press of DNA - the only platform that will reach the speed of traditional storage

CATALOG owns the Intel Microcode of DNA - building an IP portfolio of all fundamental chemical operations needed to compute in DNA

CATALOG will be the first company to market with enterprise-level DNA-based solutions

Moveable type encoding unlocks write speed and compute

Components are
pre-synthesized in bulk

The position of each bit is encoded
in an identifier, and the presence or
absence of the identifier represents
the value of that bit

Identifiers are pooled to
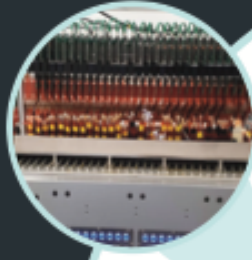represent a data set

Component
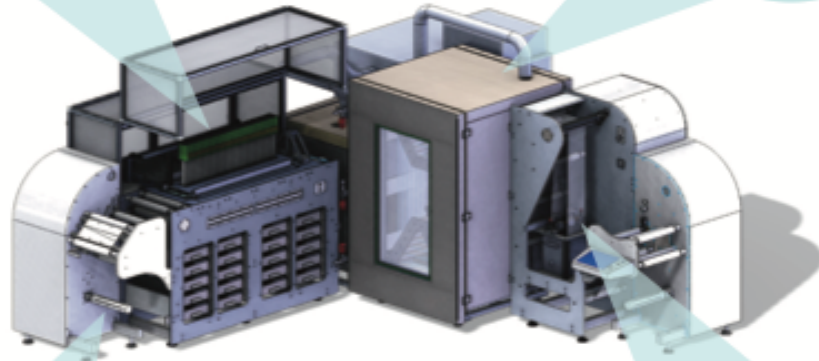
Identifier

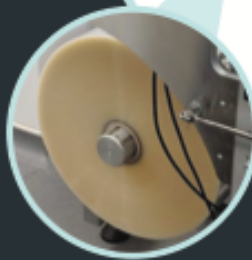**Identifier Library**

Mobius (Mb/s write speed achieved)

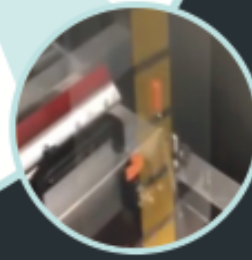Print engine dispense 114 unique DNA Components to create ~500,000 reactions per second

Incubator maintains critical environment for Identifier assembly

Webbing provides surface for reactions and traverses instrument at 16 meters per minute

Pooler removes and combines assembled DNA Identifiers from the web

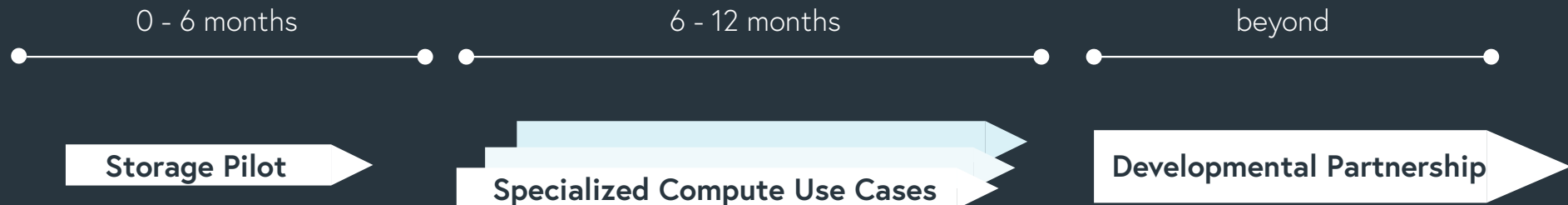# Commercial Strategy: Select pilot customers to co-develop industry solutions

Target Clients

- Heavy consumers of specialty storage
- Computing needs beyond current compute paradigm
- Intractably large datasets
- Underserved by public cloud providers

Media and Entertainment
Oil and Gas
Life Sciences
Government

Engagement Model:

0 - 6 months	6 - 12 months	beyond

Storage Pilot

Specialized Compute Use Cases

Developmental Partnership

Thank you

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