

DNA Data Storage Alliance

Dave Landsman – Co-chair
Stephane Lemaire – Co-chair

Storage and Computing with DNA 2025

Sorbonne University, Paris, France

June 19-21, 2025

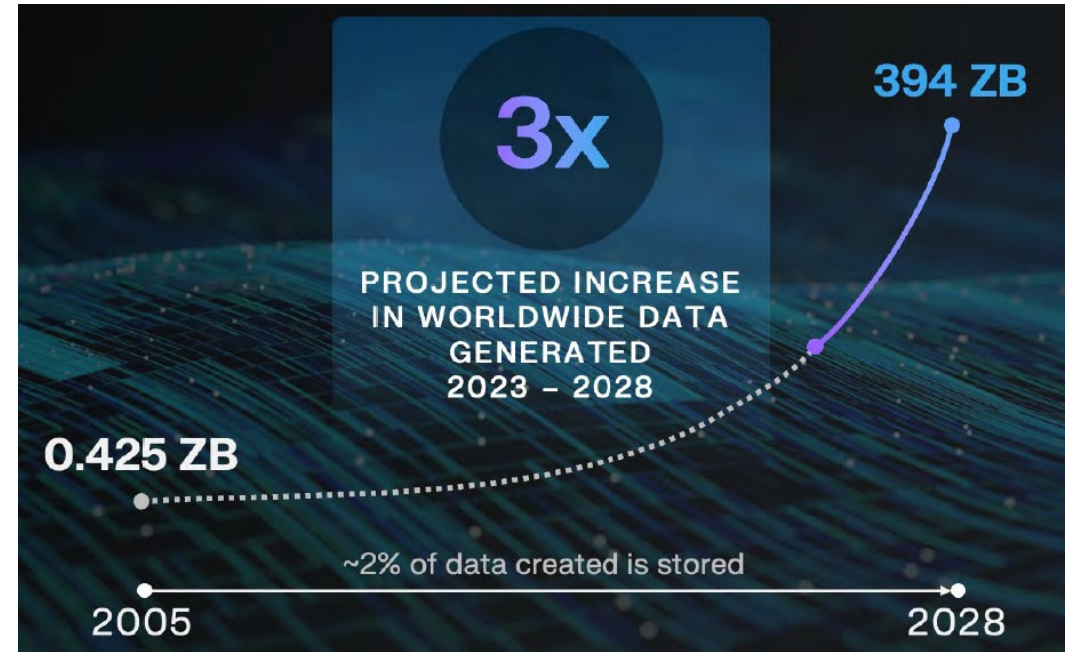
Why are we having this conference?

DNA data storage is amazing
and we all love the tech!



But why are we having this conference, really?

- ““Save/Discard Dilemma”
 - Increasingly expensive, impractical to save all we want with existing storage technology
- It's not purely about the zettabytes
 - Digital archivists want to save culture, history, law, etc. forever; longevity can be a value regardless of quantity
- AI/ML adding to quantity of data to be saved and creating higher opportunity cost of throwing it away
- We need archival storage media with lower TCO
 - Orders of magnitude more dense
 - Durable for decades at room temp
 - Zero power at rest
 - No technology migration required
- And we need to be able to compute on this data in situ

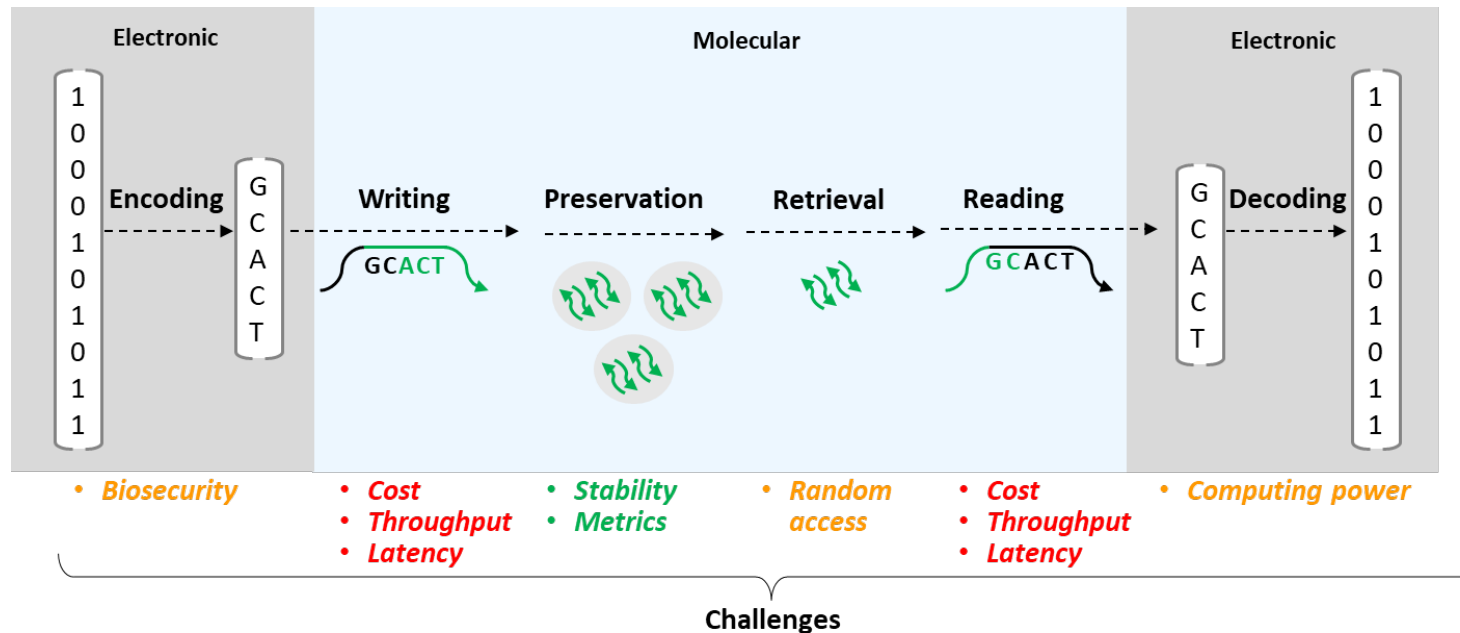


Source: Worldwide IDC Global DataSphere Forecast, 2024-2028, doc #US52076424, May 2024

DNA data storage and compute a compelling potential solution

DNA for data storage is an ecosystem, not just a media type

- Built on existing medical/scientific advances of past decades
- Hugely interdisciplinary
- Potential for being a multi-vendor storage ecosystem
- Cross pipeline research and cooperation needed to address challenges



This is why we created the DNA Data Storage Alliance

Mission: Create an interoperable storage ecosystem based on DNA as a data storage and compute medium

What we do to achieve our mission

- Educate the market to create awareness and adoption of DNA data storage and compute
- Influence and drive R&D and funding
- Develop standards and specifications to encourage ecosystem evolution

Specs and White Papers

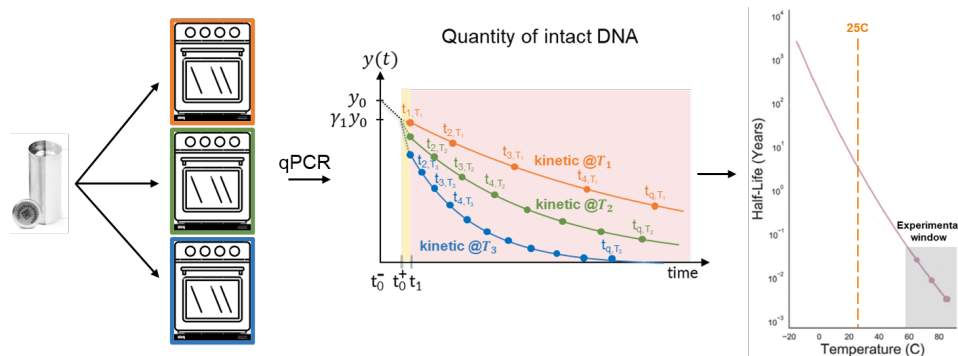
- [An Introduction to DNA Data Storage](#) (June-2021)
- DNA Rosetta Stone: [Sector 0](#) and [Sector 1](#) (Jun-2023)
- [DNA Stability Evaluation Method v1.0](#) (Sep-2024)
- [DNA Data Storage Codecs](#) (Jun-2025)
- [DNA Data Storage Technology Review](#) (Jun-2025)

Events



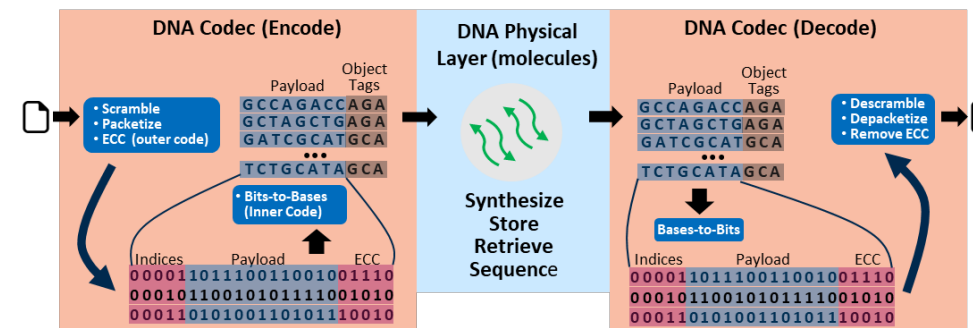
DNA Data Storage Alliance Workgroups

1) Data Retention Workgroup



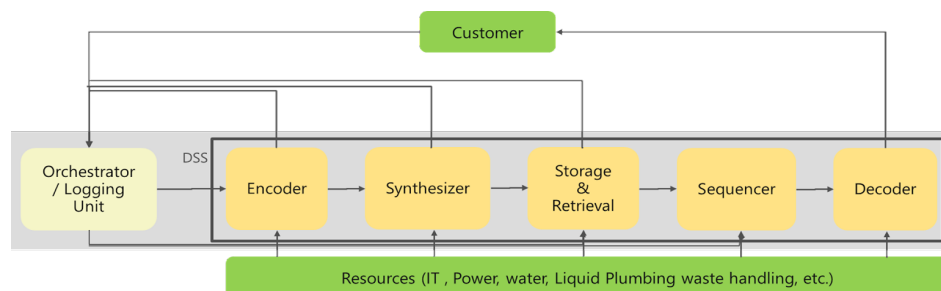
- [DNA Data Stability Evaluation Method v1.0](#) (Sep-2024)

2) Codecs Workgroup



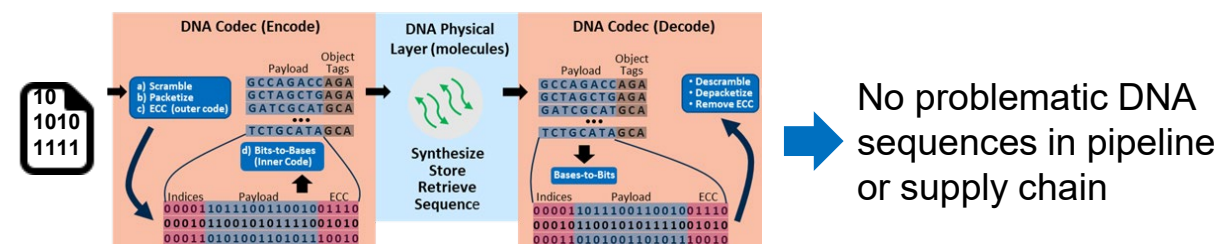
- White paper: [DNA Data Storage Codecs](#) (Jun-2025)

3) Interoperable Interfaces Workgroup



- Planning to relaunch WG in September
- Initial white paper likely based on previous presentations

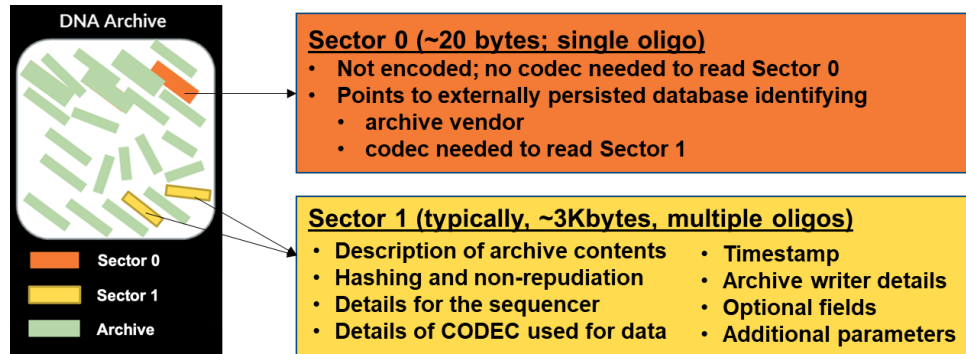
4) Biosecurity Workgroup



- Initial regulatory position drafted and being revised for publication
- Considering next steps: standards, best practices, etc.

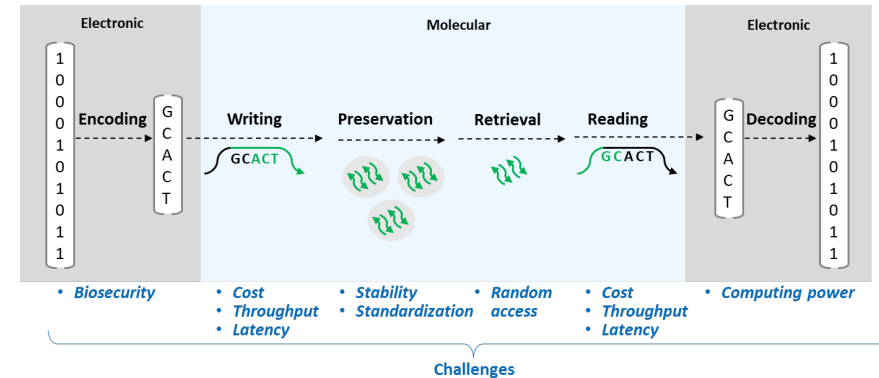
DNA Data Storage Alliance Workgroups

5) DNA Archive Rosetta Stone Workgroup



- [Sector 0](#) and [Sector 1](#) (2023)
- Future work will be done in Codec WG

6) Roadmap SIG



- White Paper: [An Introduction to DNA Data Storage](#) (2021)
- White paper: [DNA Data Storage Technology Review](#) (Jun-2025)

- Other workstreams being considered
 - Random access (launching Aug-20)
 - Write verification
 - ...



DNA DATA
STORAGE
ALLIANCE

A SNIA  Community

THANK YOU

Come join us:

LinkedIn: @dna-data-storage-alliance

URL: snia.org/groups

Email: Dave Landsman (dave.landsman@wdc.com)

Email: Stephane Lemaire (stephane@biomemory.com)