



The path to a DNA data storage product

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Silicon-based DNA synthesis



Founded in 2013 to make synthetic DNA to improve health & sustainability

NASDAQ: TWST

FY23 Revenue \$245M



Advanced DNA synthesis platform

Inkjet-based DNA synthesis

Products for Synthetic Biology, NGS, & Biopharma



Pioneers in DNA Data Storage

CMOS-based DNA synthesis

Developing Data Storage solutions



Value proposition for DNA data storage

- Data resilience
- Data sovereignty
- Data redundancy
- Sustainability

Challenges to rolling out a new data storage product

- Develop product specification
- Iterate with early adopter
- Achieve pilot production



Workflow update

00 → A
01 → G
10 → C
11 → T

Code

Codec delivers bit error rate comparable to HDD



Synthesis

Chips deliver TB-scale DNA – optimizing for throughput and cost



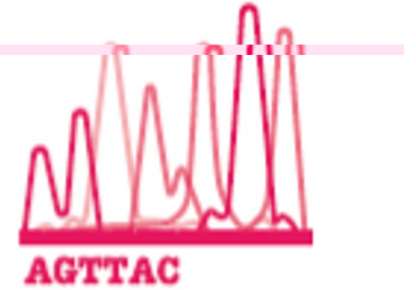
Storage

Installing Imagene large-capacity packaging system - working on fixity check



Sequencing

Electronic sequencing error rates are good enough to scale to required capacity



Decode

Codec delivers bit error rate comparable to HDD



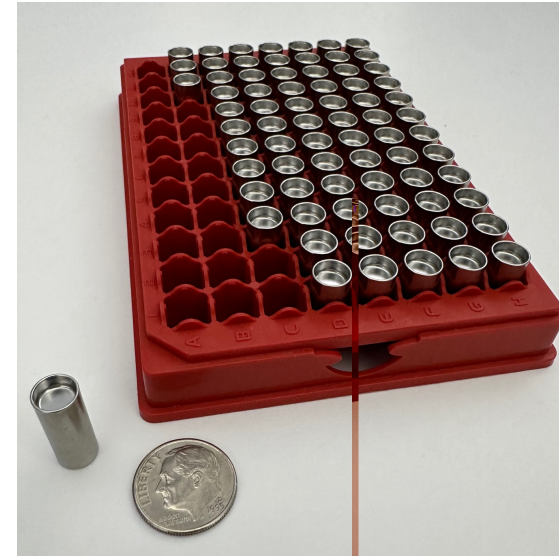
Product evolution

Near Term: Service (Data in, DNA out)

- Hermetically packaged DNA
- Script for decoding sequencing data

Long Term: On-premise system

- Modular components
- SW stack





Conclusions

- Committed to delivering a TB-scale DNA data storage solution
- Ongoing product development, developing customer acceptance plan



CAAGCAAGGATACGATATACGAGGATGGCATGGACTACAGGATC
CTACAGCTACGACTAGATATATCTACACGAGCATAATCATAGATC
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