

Tape Media Update

Presented at Library of Congress DSA Conference,
Washington D.C.

March 27-28th, 2023

Chris Kehoe, Head of Infrastructure Engineering,
FUJIFILM Recording Media U.S.A., Inc.

Christopher.kehoe@fujifilm.com

www.fujifilm.com

FUJIFILM
Value from Innovation

FUJIFILM Corporate Overview



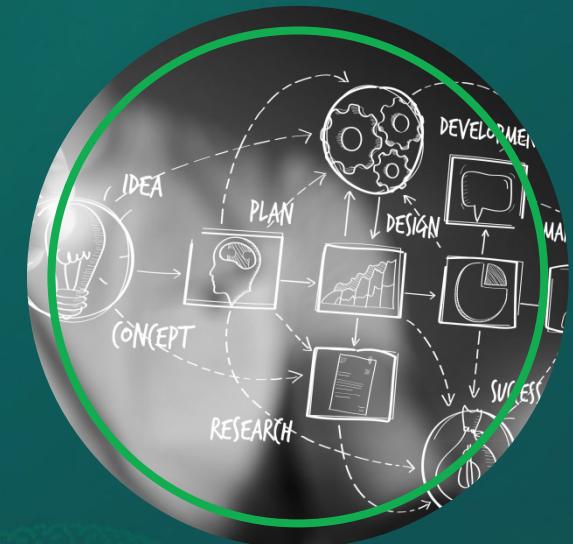
\$22.9B
REVENUE



280
SUBSIDIARY
COMPANIES



75,474
EMPLOYEES
WORLDWIDE



\$1.4B
R&D SPEND

2022 Patent Awards

TOP 50

FUJIFILM Ranked 48th out of 1,000
companies for the most patents
awarded in 2022



FUJIFILM Corporate Overview



HEALTHCARE
SOLUTIONS



MATERIAL
SOLUTIONS



IMAGING
SOLUTIONS



DOCUMENT
SOLUTIONS

70 years of Tape Technology!!!



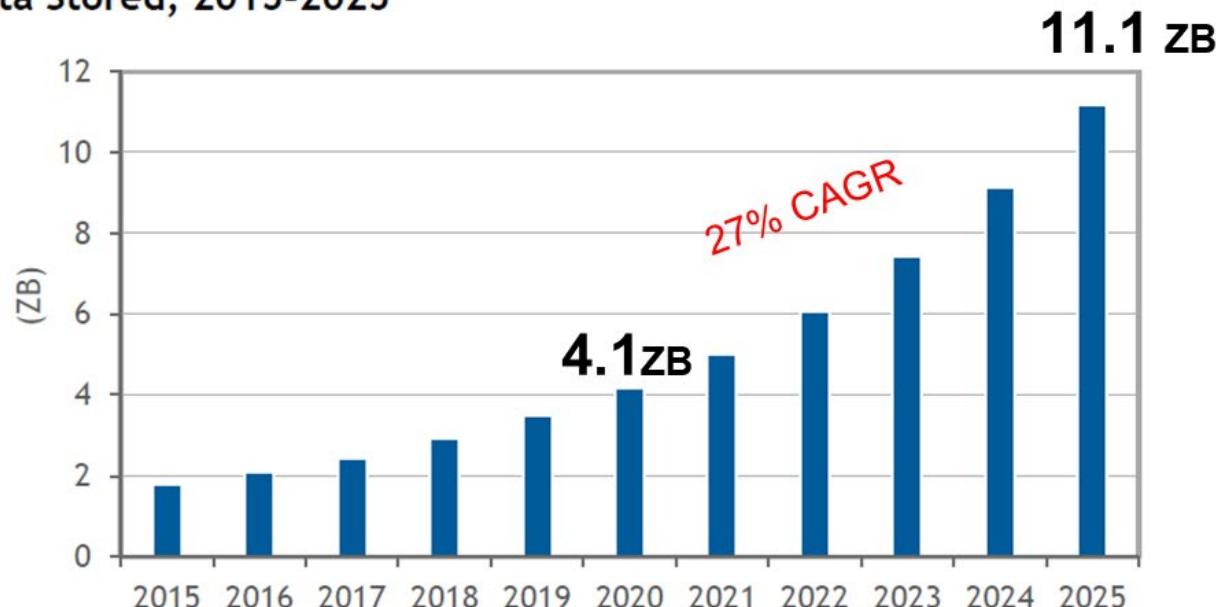
- Rapid growth and volume of data in ZB age
- Increasing value of data and cybersecurity risk
- Longer retention periods, need for long term, reliable storage
- Limited IT/storage budgets, energy/carbon concerns
- Better understanding of data profiles (Hot, Warm, Cold)
- Ability to automate data movement to the right tier of storage, at the right time and at the right cost!



Zettabyte Age Storage

FIGURE 1

Global Data Stored, 2015-2025

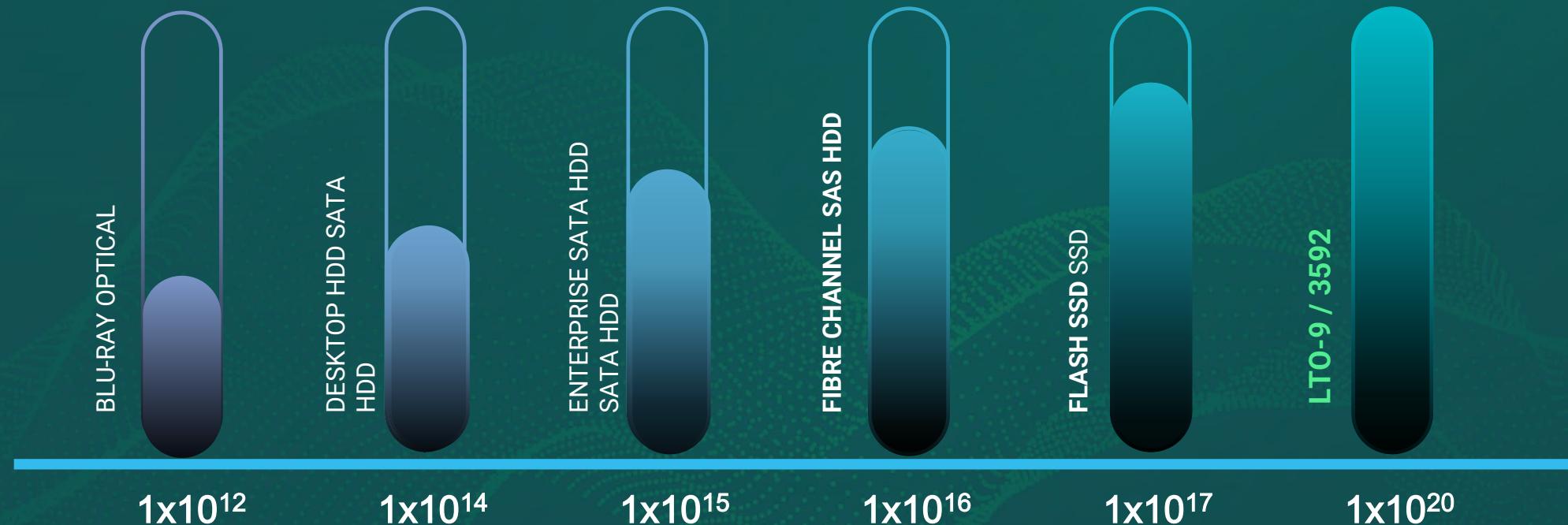


Source: IDC Global StorageSphere, 2021

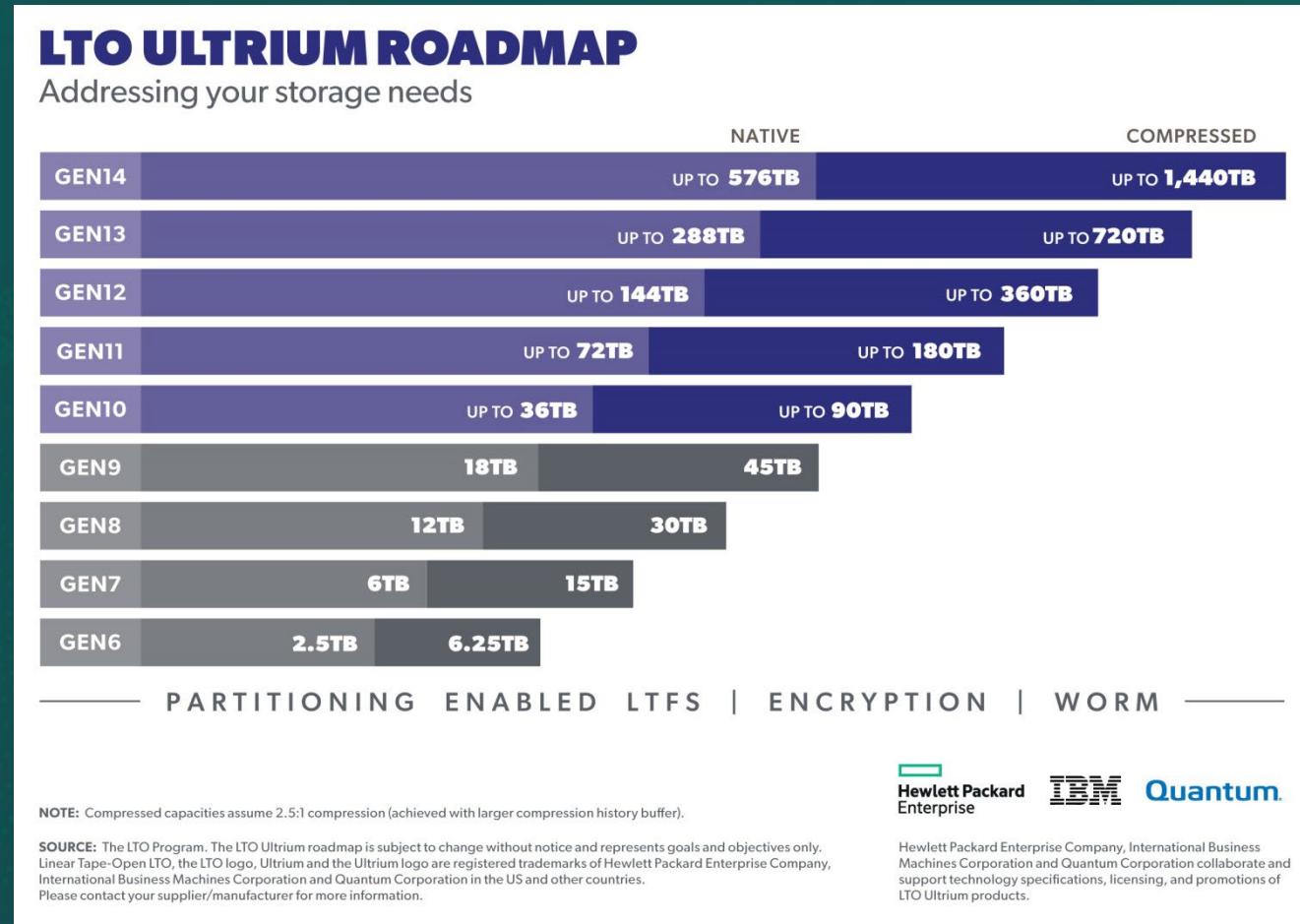
Note: 1 zettabyte = 55 million 18 TB HDDs or 55 million 18 TB LTO-9 tapes

Reliability Relationships : HDD, SSD, Tape

Tape's **bit error rate** is four orders of magnitude better than disk making it the most dependable storage available



New LTO Roadmap, Sept. 2022



IBM / Fujifilm Tech Demos

Ability to meet future capacity demands when the market is ready



Barium Ferrite

2006

6.6GBPSI / 8.0TB

2010

29.5GBPSI / 35TB

Strontium Ferrite

2014

85.9GBPSI / 154TB

2020

318GBPSI / 580TB

New Material

Future

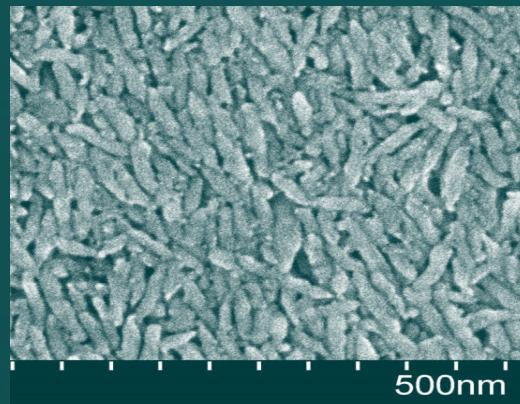
Higher Capacity



Strontium
Ferrite

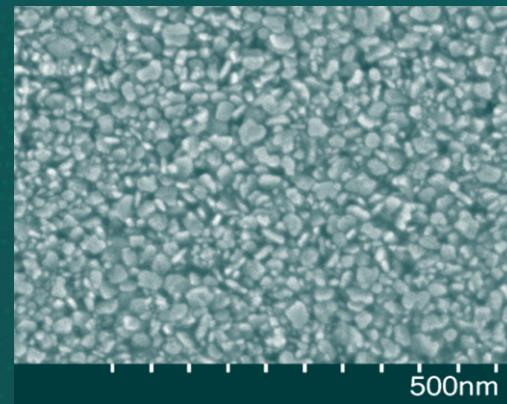
Metal Particle vs. Barium Ferrite vs. Strontium Ferrite

1994



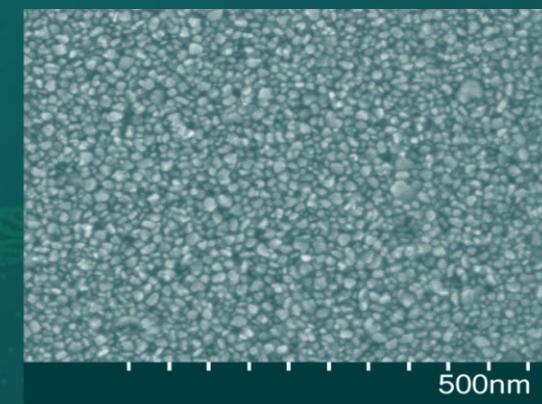
Legacy Metal
Particle

2001



BaFe
Particle

2022



SrFe
Particle

Final Thought:



The strategic move for
a transforming world.

45TB Capacity. Cost Savings.
Air Gap Security. Eco-Friendly.

FUJIFILM



FUJIFILM
LTO Ultrium 9
DATA CARTRIDGE
18 TB NATIVE
45 TB COMPRESSED
LTO ULTRIUM 9