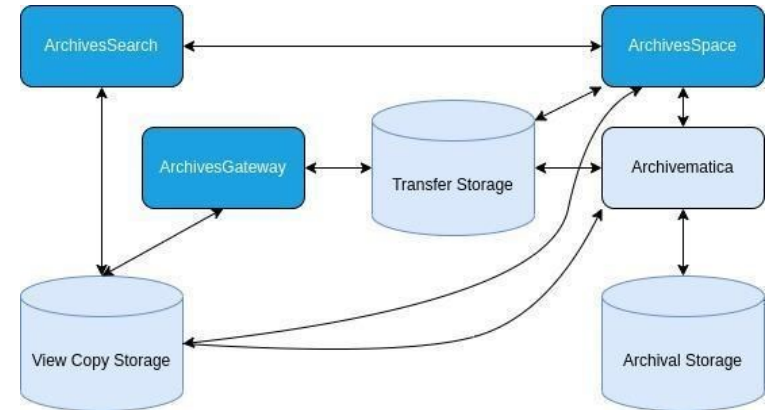


Introducing

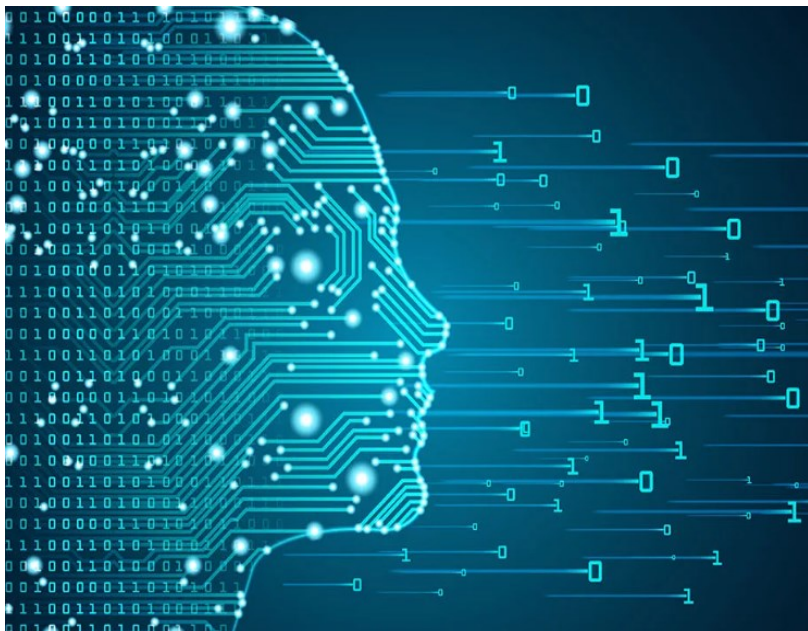
- **Digital Archive Program at the Queensland State Archives** will deliver Digital Preservation and Storage (DPS) capability for permanent value records of the Queensland Government.
- **Digital Archiving As a Service**
- Phase 1 focuses on digital material already held at Queensland State Archives
- Next phase will focus on building a fully functional Digital Archive to enable government agencies to transfer their digital records



DPS Systems Architecture (Source: Gaia Pty Ltd - DAaaS Supplier)

Before we start...

How we would like reality to be

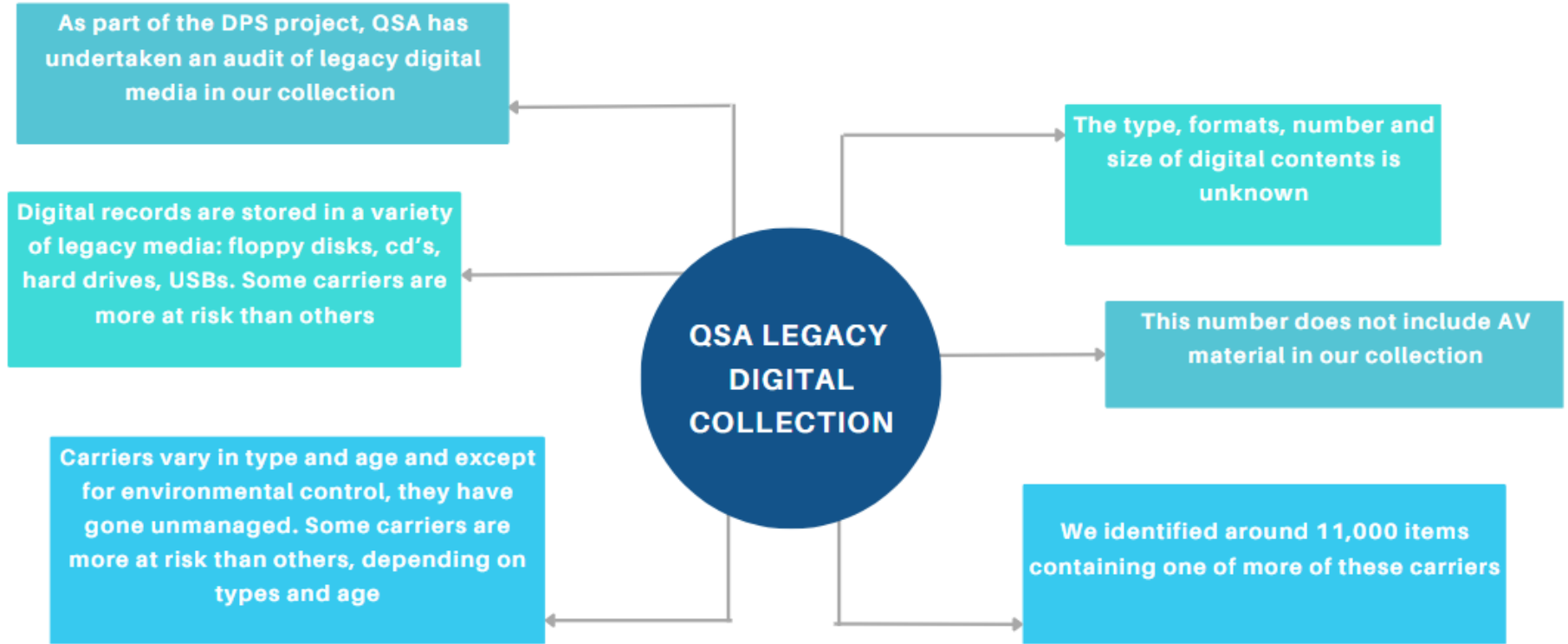


VS

The actual reality



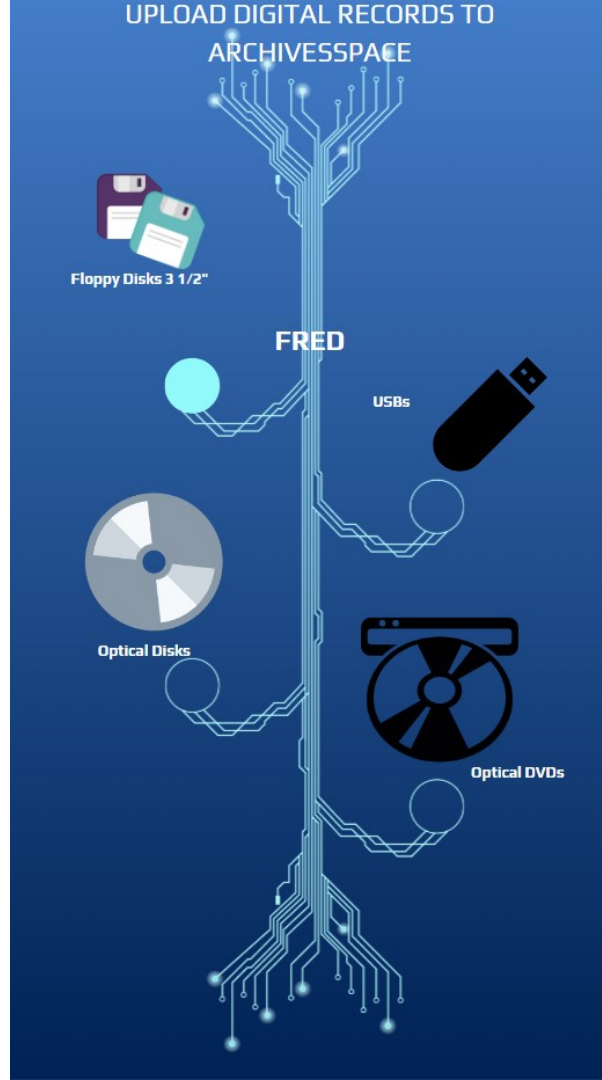
Background



Legacy media, Risk and Technical Difficulty ratings

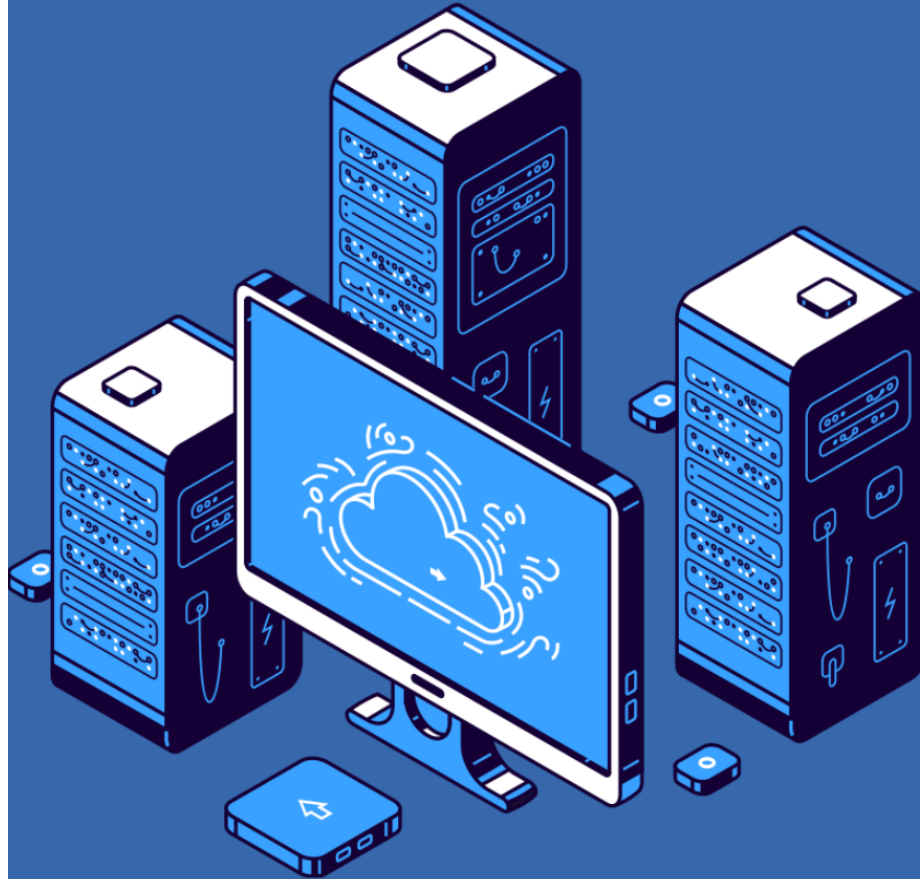
Prioritisation Categories and Ratings					
Media Type	Risk	Software/Hardware Availability	Technical Diffic	Staff Capability (in	Comments
Disk (type unknown)	Unknown	Unknown	Unknown	Unknown	Risk dependent on type and age
External hard drive	Unknown	Hardware and software available	Low	High	Risk dependent on type and age
Flashdrive/USB/Thumbdrive	Endangered	Hardware and software available	Low	High	Not Critically Endangered because we have readers
Floppy disk - 3 1/2"	Endangered	Hardware and software available	Medium	High	Not Critically Endangered because we have readers
Floppy disk - 5 1/4"	Endangered	Hardware and software available	High	Medium	Not Critically Endangered because we have readers
Floppy disk - diskette?	Critically Endangered	Unknown	Unknown	Unknown	
Floppy disk - Zip drive?	Critically Endangered	Not available at QSA	Medium	Medium	FRED might have an adapter for this but you need the right h/w and s/w
Floppy disk (size unknown)	Unknown	Not available at QSA	High	Unknown	May include 8 inch floppy disks. Risk dependent on type and age.
LTO computer tape (generation unknown)	Unknown	Not available at QSA	High	Low	Hard to read without knowing the software that was used to create it. Might be able to copy the content
LTO-5 computer tape	Endangered	Hardware and software available	Low	High	Not Critically Endangered because we have readers
LTO-6 computer tape	Endangered	Hardware and software available	Low	High	Not Critically Endangered because we have readers
Magenetic tape?	Unknown	Not available at QSA	High	Unknown	Reel tape storage. Not possible to read at QSA. Risk dependent on type and age.
Magnetic?	Unknown	Not available at QSA	High	Unknown	Reel tape storage. Not possible to read at QSA. Risk dependent on type and age.
Network Attached Storage (NAS) - Camel	Critically Endangered	Hardware and software available	Low	High	Change Risk to Endangered if less than 5 years old + maintenance schedule; renewable extendable warr
Optical - CD	Endangered	Hardware and software available	Low	High	Not Critically Endangered because we have readers
Optical - CD (data?)	Endangered	Hardware and software available	Low	High	This would be the same as above I think. Not Critically Endangered because we have readers.
Optical - DVD	Endangered	Hardware and software available	Low	High	Not Critically Endangered because we have readers
Optical - MiniDisc?	Endangered	Hardware and software available	Low	High	Not Critically Endangered because we have readers
Optical - Professional Disc?	Critically Endangered	Not available at QSA	Unknown	Unknown	Unknown if optical reader in FRED can read this disc type. Sony proprietry format for use in video camer
Optical - Universal Media Disc?	Critically Endangered	Not available at QSA	Unknown	Unknown	Mainly used on playstation portable, unlikely FRED will be able to read.
Unknown	Unknown	Unknown	Unknown	Unknown	
Optical - CD-R	Endangered	Hardware and software available	Low	High	Not Critically Endangered because we have readers
Bernoulli disk	Critically Endangered	Not available at QSA	Unknown	Unknown	Specific drive required to read

Extraction done in a way that guarantees records' authenticity and trustworthiness



Forensic Recovery of Evidence Device

FRED is a very powerful workstation that serves to **secure, save and analyse data** from hard drives and other media carriers



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Utilises write blockers (software or hardware) to prevent actions on the workstation from altering the files on your source media.



Forensic Recovery of Evidence Device

FRED is a very powerful workstation that serves to **secure, save and analyse data** from hard drives and other media carriers

Utilises write blockers (software or hardware) to prevent actions on the workstation from altering the files on your source media.



FRED is not non-networked to reduce the risk of vulnerability.

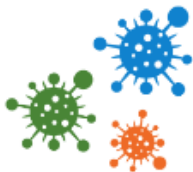
Keeping the workstation non-networked is a way of mitigating common internet risks, such as viruses introduced through email.



Create Disk Images
FTK Imager



Checksums
Exact File



Virus Checks
Microsoft Defender

Suite of Tools used in FRED



File format
identification
DROID or WinDirStat



QSA's approach to transferring the data from the original media to FRED is to create disk images

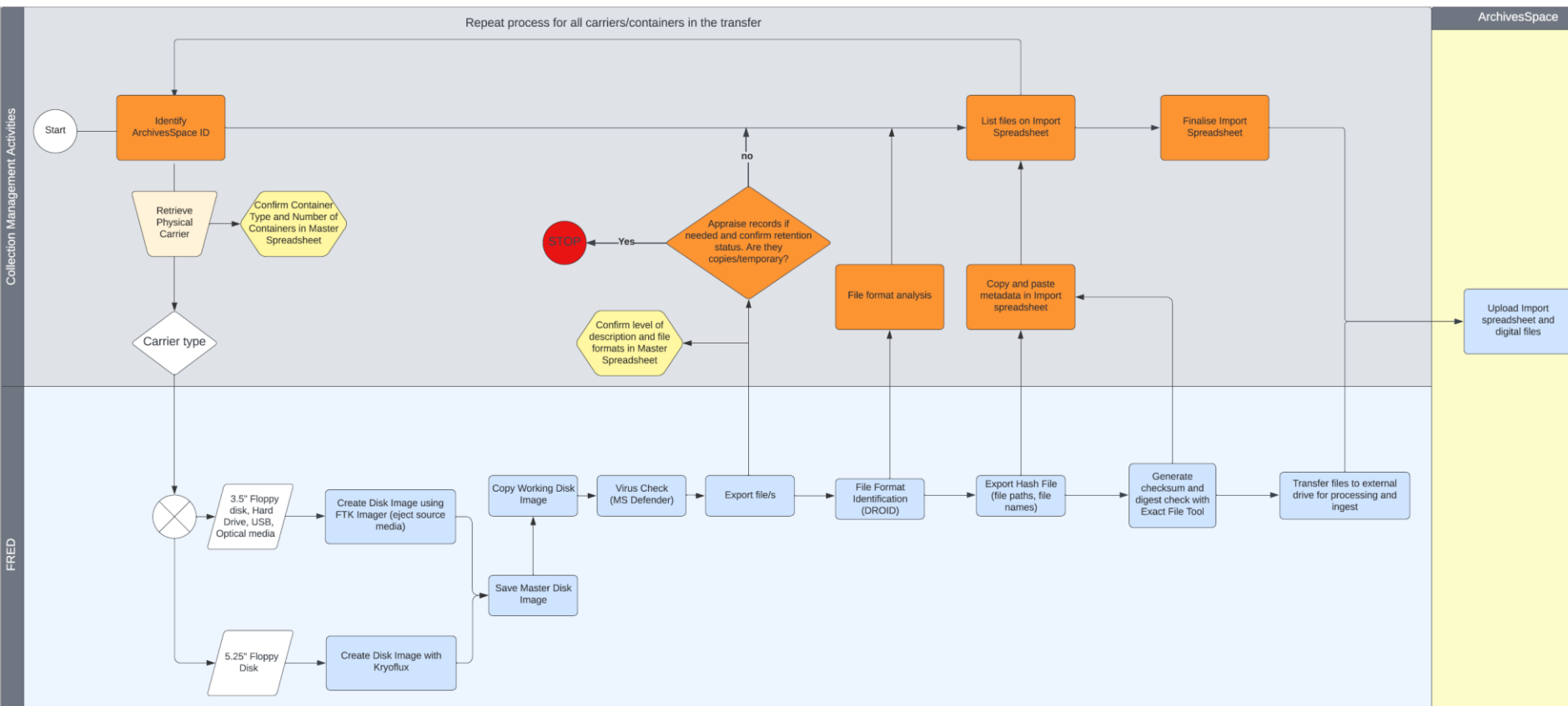


Why do we create Disk Images?

- ✓ The intent of the disk imaging process is to make a single file containing an authentic copy of the files and the file system structure on a disk, allowing you to store that file somewhere less vulnerable than the source media.
- ✓ Disk images that image everything (including deleted files and unallocated space) are called “forensic images”



QSA Digital end-to-end Forensic Workflow



Contact

Please contact the Digital Archive Team at Queensland State Archives with any questions or comments.

We'd love to hear from you!

digitalarchive@archives.qld.gov.au

**QUEENSLAND
STATE ARCHIVES**