



Arctic World Archive

Protecting World Memory



The Archive

A safe zero-emission repository for protecting world memory located deep inside an arctic mountain.

A growing portion of mankind's heritage is being stored digitally. As the global production of information and data is soaring exponentially, current storage technology is being stretched to its limits, shortening the life expectancy of some of our civilisation's most precious treasures.

Despite efforts to safeguard precious information for the near future, it is fragile, subject to fast acting changes to the environment. Also, most data storage requires an enormous amount of energy, much of it damaging our environment.

The combination of resilient longer-term technology in the remote, protected and cold conditions found on an arctic archipelago enables even fragile, irreplaceable data to survive a thousand years from now.

“The meaning with our deposit of digital Svalbard money in AWA, is that they shall be stored “as safe as the Bank of England” for at least 1000 years into the future. This deposit is a part of “hedging our bets” towards the risk of loss of these data in the digital domain.

Morten Søberg, Government Relations Director, Sparebank1

AWA is a secure mountain vault in the depth of the permafrost in a decommissioned mine.

AWA is located in a well kept and safe decommissioned coal mine (Mine no. 3) that is owned by Store Norske Spitsbergen Kulkompani (SNSK). SNSK has more than 100 years' experience developing and operating mines and infrastructure on Svalbard and is owned by the Norwegian Ministry of Trade, Industry and Fisheries.

AWA is in its own vault at the centre of the permafrost, 300 metres inside the mine and 300 metres below the top of the mountain. SNSK is responsible for the operation and maintenance of the vault and mine, including security and access control for AWA.

Data stored in AWA are offline, secure, resilient and is expected to last more than 1 000 years, without the need for electricity or artificial climate control. This makes storage incredibly sustainable, with minimal environmental impact while helping to build peaceful, educated societies.

The safety, security and remoteness constitute the perfect choice for an archive of such valuable information. The cool, dry conditions significantly extend the longevity of the stored data.

Guardian of irreplaceable information

Established in 2017, the Arctic World Archive hosts a unique growing collection of invaluable digital artifacts and irreplaceable information from around the world.

AWA is home to manuscripts from the Vatican Library, official documents, museum masterpieces, scientific breakthroughs, priceless, irreplaceable data and the writings of Nobel laureates. Surrounded by majestic mountains and gigantic glaciers, the archive contains and can maintain man's history and accomplishments on earth for over 1000 years with guaranteed future accessibility.

AWA now protects treasures from 24 nations. Recent additions are outstanding works of art from the National Museum of Norway and the Modern Museum in Stockholm. This unique initiative has gained significant media attention and support from the global community.

“ It is an amazing feeling to know that my own nation's memory will be kept safe for future generations to see on this arctic island.

Erick Cardoso, National Archive of Mexico

On a fragile planet rapidly changing, memories stored here will survive into the distant future, providing a safe copy for countless generations to come.

Early deposits were made from the National Archives of Mexico and Brazil, including their constitutions, along with other images and documents of high importance. Government representatives and dignitaries from both nations travelled to Spitsbergen to personally store digital copies of their national treasures into the arctic vault.

“ We are proud to create history for Brazil by being part of this important moment; to deposit in the Arctic World Archive the most important documents from the 16th century until the 20th century. By doing this, we ensure that future generations will have access to this information.

José Ricardo Marques, National Archives of Brazil

An excerpt from our client list

Arctic World Archive holds an impressive collection of valuable digital artifacts and irreplaceable information from around the world.



Satellite images for eternity

The European Space Agency (ESA) deposited sample data acquired by its first Earth Remote Sensing (ERS) satellite launched in 1991, and a thorough description of the mission objectives and achievements. This history captures the moment that saw a whole new chapter opened for the world in continuously monitoring the health of our planet from space - and should never be lost.



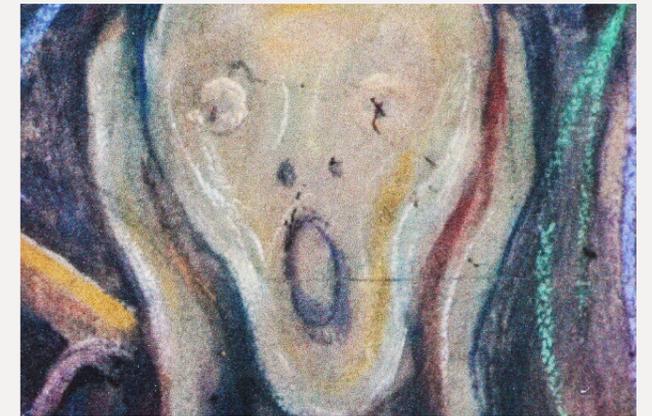
The child convention stored in a safe place

On the 30-year anniversary of the adoption of the United Nations (UN) Convention on the Rights of the Child, UNICEF Norway has deposited document in AWA both as a DNA file, which is an emerging data storage technology, and on piqlFilm to ensure future accessibility. A further deposit was made featuring a petition of thousands of signatures in support of the child convention.



Open source software from GitHub

GitHub deposited 6,000 of its most significant repositories in AWA for perpetuity, capturing the evolution of technology and software. This collection includes the source code for the Linux and Android operating systems; the programming languages Python, Ruby, and Rust; web platforms Node, V8; cryptocurrencies Bitcoin and Ethereum; AI tools TensorFlow, FastAI; and many more.



Norwegian Masterpieces

The National Museum in Norway has made three deposits of digitised artworks including "The Scream" by Edvard Munch and Vinternatt i Rodane (Winter's night in Rodane) (1914) by Harald Sohlberg. Further they have deposited important photographic collections from three female photographers, Backer, Marakatt-Labba and Mugaas.

*“We are the inheritors of gifts from the past.
We seldom stop to think about how they
have transformed our lives.”*

Roman Krznaric, author of the bestselling book
The Good Ancestor: How to think long term in a short-term world



Manuscripts from the Vatican Library

The manuscript of the “Divine Comedy” (La Divina Commedia) by Dante Alighieri, masterpiece of the 14th century Italian literature as well as one of the most important manuscripts of the Gospels, Hanna Papyrus 1 (Mater Verbi), one of the oldest surviving witnesses of the text of the New Testament, are examples of the deposits by the Vatican Library.



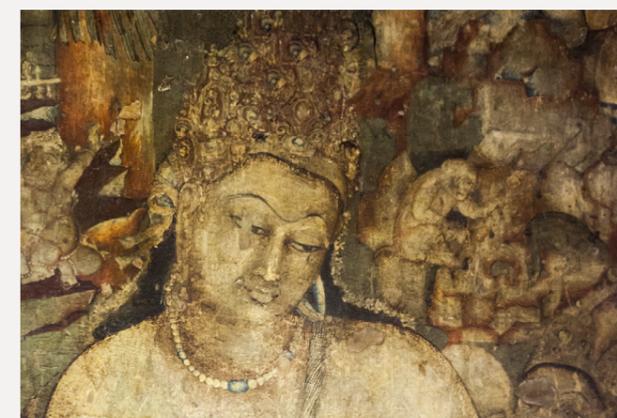
National Library of Hungary

Representing the first Hungarian deposit, The National Library of Hungary deposited a selection of manuscripts representing different eras, along with coronas of King Matthias, a collection of historic maps, and graphic posters from 1800s and 1900s.



Nobel Prize Laureates

Olga Tokarczuk Foundation and Literary Publishing deposited the complete literary works of Olga Tokarczuk, a Nobel Prize Laureate. Olga Tokarczuk is considered one of the most critically acclaimed and successful authors of her generation in Poland.



Ajanta caves in India

Sapio Analytics deposited high resolution images of the Ajanta Caves in India, the first AWA deposit of a UNESCO world heritage site. Considered some of the most significant ancient art in the world, these paintings and carvings hold immense importance for people in many nations.

A remote and secure location

Svalbard is a Norwegian archipelago in the Arctic Ocean halfway between Norway and the North Pole. Spitsbergen is the largest island on the archipelago and AWA is located close to Longyearbyen, the worlds northernmost settlement.

Svalbard is a declared demilitarised zone by 46 nations. The safety, security and remoteness made it a perfect choice for an archive of such valuable information.



In summer, the majestic landscape is illuminated by the presence of the midnight sun. In winter, it is battered by ferocious winds, and pitched into the freezing darkness of the polar night, at times decorated by the breath-taking sight of Aurora Borealis lighting up the sky.



Key Benefits

Designed to withstand natural and man-made disasters, data stored here will last for centuries.

Sustainable

The Arctic World Archive requires no electricity, no servers, no migration to store the data, - making it the most sustainable data centre in the world.

Permanent

Photosensitive film is known to be robust with proven long-term qualities, and piqlFilm is tested together with its packaging, the piqlBox, for an expected lifetime of 1000 years.

Flexible

Depending on your needs you can store your data in computer readable digital formats or as human readable texts or images. You can also combine the two for additional benefit.

Searchable

Operated within a standard IT environment, your index/metadata is fully searchable. You'll find what you need, whenever you need it.

Secure

The combination of the offline technology and the remote and secure location of the archive ensures your data remains protected from risk.

Future-proof

Data retrieval is independent of access to specific technologies or vendors. For disaster recovery, all you need is a light source, a magnifying glass, a digital camera and a computer. Human readable text explains how to reproduce your files.

Migration-free

By storing digital data in preservation file formats on piqlFilm, repetitive migrations are no longer needed. You avoid the risk of migration-related corruption and data loss, you'll save time and work, and get a more predictable long-term cost.

Unalterable

Your data is preserved securely on a true WORM (Write Once Read Many) medium, making it impossible to manipulate or delete your valuable data.

Sustainable, safe and secure storage



“Nothing is as magnificent as a glacier. Nothing we have done will be considered remarkable if achieving it has meant closing our eyes to science and throwing away the life and happiness of future generations.”

Andri Snær Magnason, author
On Time and Water

Arctic World Archive is a digital archive, and we can store any kind of digital file or object whether it's a music file, a database, a 3D virtualization or a document.

The technology

The technology used to store the data is as important as the archive itself. Most digital storage mediums have a limited lifetime, and hardware, software and file formats become obsolete as technology evolves.

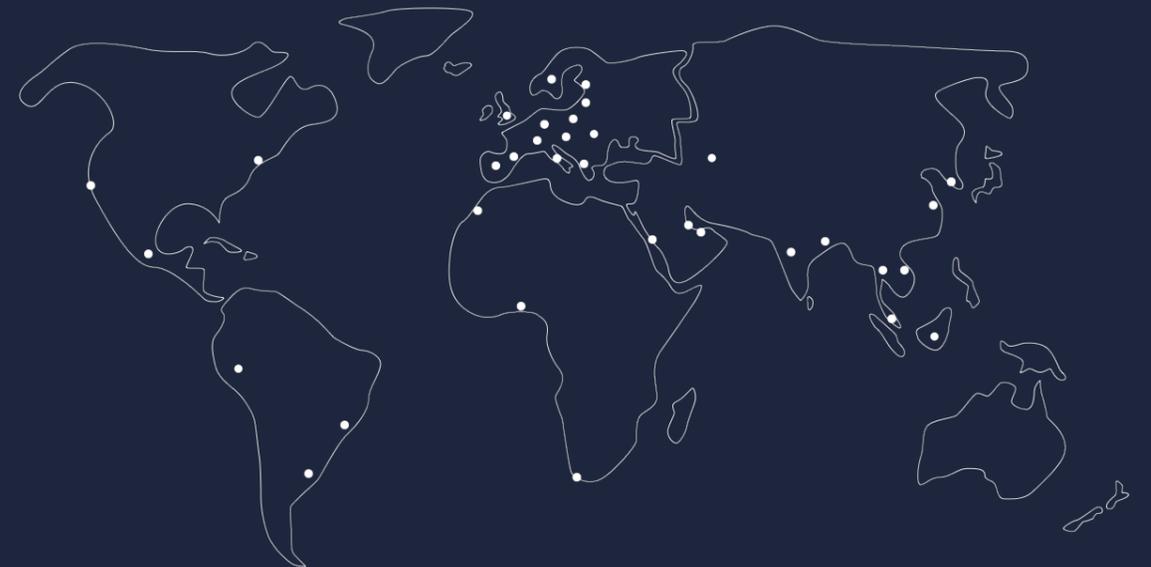
We use a purpose-built digital storage medium, piqlFilm, that can keep data alive for over 1000 years with guaranteed future accessibility. The piqlFilm is futureproof and technology independent, so regardless of how much time has passed and how technology has evolved, the data will still be accessible.

The technology can withstand extreme electromagnetic exposure and has undergone extensive longevity and accessibility testing.

Contributing to the archive

AWA is for the preservation of world memory, i.e. data that holds significant cultural and historical value, but also for clients who wish to store other irreplaceable or valuable information. If you have valuable data that you want to ensure lives on for the future, AWA is the right place.

Piql is a specialist provider of digital preservation and long term data storage solutions. Backed by the EU, it is well recognized for its innovative approach to keeping data well preserved with guaranteed future access, maintaining data integrity and authenticity.



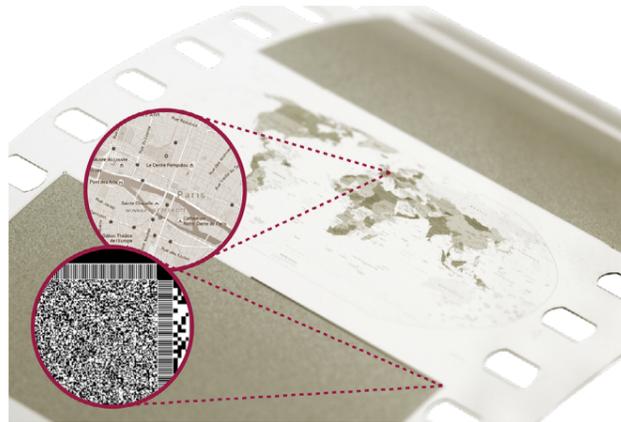
Piql are present all over the world

For more information, contact your local Piql representative, see piql.com/contact for details.

More information is also available at:

www.arcticworldarchive.org

How it works



Eternal information carrier

Digital information is transferred to piqlFilm as super-high resolution QR-codes that can-not be deleted or manipulated. This service is provided through a Piql Partner, which is present in 25 countries globally.



100% quality control

All data is read back from the piqlFilm and data integrity and authenticity is verified 100% before it is packed and ready to ship.



Secure storage in AWA

The piqlFilm in its protective piqlBox is securely shipped to Svalbard by our logistic partner, Pole Position Logistics, and stored in AWA with state-of-the-art security measures in place.



Data retrieval on request

The information can be searchable online, retrieved upon certified request and will be made available to its owner online or shipped on an agreed physical medium.

Contact us

If you would like more information about Arctic World Archive, please get in touch with us.

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