

From Digitisation Frenzy to Datafication Frenzy: Are Data Spaces the Silver Bullet for "Real" Digital Transformation?

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Outline

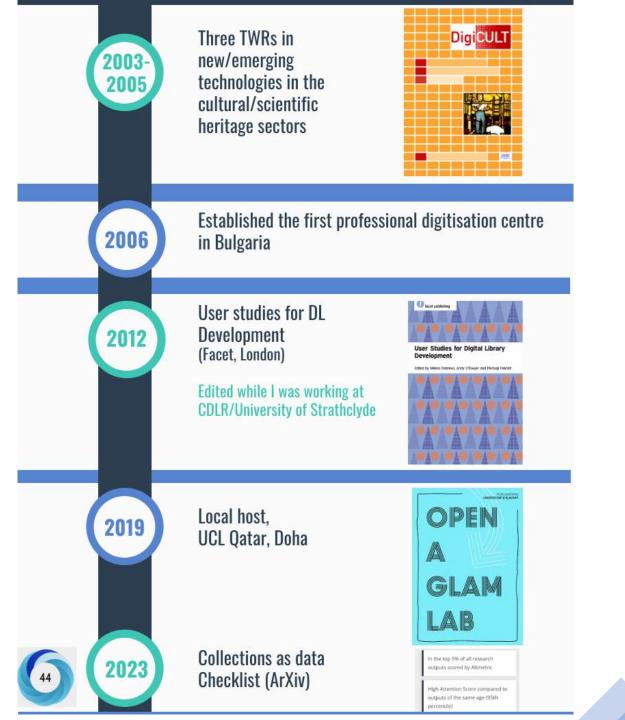
Introduction

Data spaces

Digital transformation

Some historical observations

Conclusions







Why this topic?

- There is a new major ecosystem under development: data spaces
 - According to IDSA (International Data Spaces Association): "a
 domain-specific or cross-domain ecosystem of trusted partners
 that share data" in a sovereign way "to benefit from the added value potential in many different use cases."
 - Four maturity categories: lead-in, committed case, pilot and live
- The EC invests some 2 billion EUR in data spaces; CH is considered mature due to the large-scale infrastructures in the domain.
- Key features: departure from aggregation to federation empowered by intelligent tools.

How does this talk fit current policy making – one EC call and one Bulgarian tender

HORIZON-CL2-2023-HERITAGE-01-03

Re-visiting the digitisation of cultural heritage: What, how and why?

The cultural heritage sector, as the rest of society, finds itself in the midst of a **dramatic digital transition**. This transition deeply affects its activities, its organisation, and at times the purpose or existence of its institutions and subsectors.

A key component of European and national cultural heritage policy has been, and is, the digitisation and subsequent broad access to cultural heritage. Large sums have been invested by the European Union and Member States to digitise collections, monuments and buildings, and more are likely to follow.

Digitisation of cultural heritage can bring many benefits. In terms of research, preservation, accessibility and of supporting cultural and creative innovation, digitised cultural heritage can be an enormous asset. One of the reasons why these large investments are made is that such digitised objects facilitate a wider, more creative use of Europe's world-renowned cultural heritage, and the creation of more societal value in Europe and beyond.

However, along with the benefits of digitising cultural heritage come pitfalls. One risk may be that digitised cultural heritage is used, or misused, out of its context.

Libraries, museums and archives, as well as other collections, often have long histories. Both the collections they house and the language they use(d) to describe these collections are products of that historical legacy. Taken out of its context, such items may be used to convey messages contrary to the intended, possibly in conflict with European values or the policy of the institutions housing the collections.

Other risks may emerge from the (perceived) loss of control over the uses of the digital objects, possibly prompting cultural heritage institutions to limit the access to and the use of their digital assets, thus hampering the realisation of the wider societal value digitisation is expected to bring.

The uses of digitised cultural heritage, and the strategies that might be pursued in order to reap the full benefits while avoiding the pitfalls, have not been thoroughly researched.

Proposals should address these gaps in knowledge and elaborate evidence-based recommendations on how digitisation of cultural heritage can best be managed, as well as on how digitised cultural heritage can best be used.

The European cultural heritage sector is wide and diverse, comprised of many different actors, from large public institutions to independent artists and artisans. Moreover, the context, the cultural heritage itself and the policy landscape often vary strongly between different countries and regions. This diversity should be taken into account when elaborating recommendations, so that these can realistically be applied across Europe. To the extent possible, proposals should build on existing knowledge, activities and networks, notably the ones funded by the European Union. Furthermore, where appropriate links should be established and synergies sought with related actions, such as relevant R&I actions funded by Horizon Europe or Horizon 2020. In particular, funded proposals should liaise with the projects funded under the "European Collaborative Cloud for Cultural Heritage" calls in the frame of Horizon Europe Cluster 2 (€110 million until 2025 from Horizon Europe), as well as, to the extent appropriate, with projects funded under the Digital Europe programme to establish a European data space for cultural heritage.

THE STATE OF BULGARIAN DECISION MAKING ON NATIONAL LEVEL https://app.eop.bg/today/273749

"Изготвяне на единни стандарти и методология за дигитализиране на музейно, библиотечно и аудиовизуално съдържание"

To be done in two months for some 66 000 leva – awarded for 48.590 BGN – due on 4 June

Предметът на обществената поръчка включва изпълнение на следните основни дейности:

1. ДЕЙНОСТ 1 - Извършване на проучване за текущото състояние, което включва:

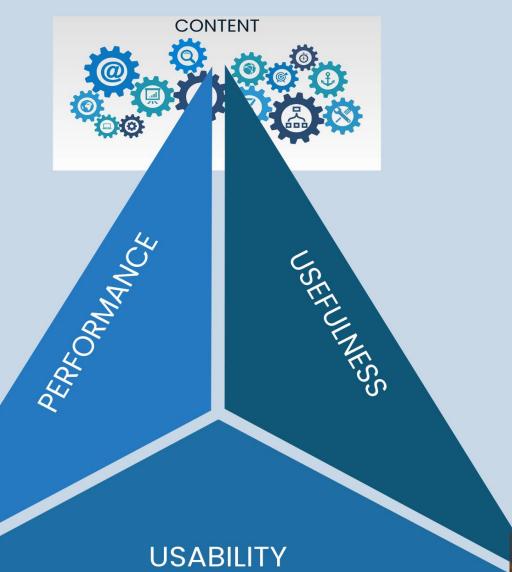
- извършване на проучване на състоянието и структурата на субектите на дигитализация;
- извършване на проучване за наличието на човешки ресурс и ниво на експертиза в обектите, в които следва да бъдат извършени дейностите по дигитализация;
- оценка на текущата готовност и необходимостта от допълнително обучение и квалификация на персонала на обектите, в които следва да бъде извършвана дигитализацията;
- извършване на оценка и систематизиране на обектите за съответствие с възможността им да бъдат дигитални хъбове;
- оценка на текущото състояние на вече дигитализираните материали, получени следствие на извършени до момента дейности и реализирани проекти, както и възможността за прилагане на стратегия за извършване на процеса по дигитализация;
- оценка на съответствието на текущо дигитализираните материали с Методическия кодекс на Държавна агенция "Архиви";
- дефиниране и структуриране на целевите групи, които ще са естествени потребители на различен тип дигитално съдържание;
- изготвяне на стратегия и подходи за дефиниране на сбирки, които подлежат на доразвиване.

2. ДЕЙНОСТ 2 - Изготвяне на единни стандарти за дигитализиране на музейно, библиотечно и аудиовизуално съдържание, което включва подбор и създаване на приложими към структурата на обектите, в които ще бъде извършвана дигитализацията, единни стандарти.

Следва да бъде извършено ясно и систематизирано дефиниране на обща рамка от стандарти, отразяващи спецификите на съдържанието за дигитализация и съответните дейности и оборудване за: музеи, галерии, библиотеки, Българска национална филмотека, Българско национално радио, Българска национална телевизия и Българска телеграфна агенция.

- **3. ДЕЙНОСТ 3 Изготвяне на единна методология за провеждане на координирана дигитализация**, която следва да дефинира, в съответствие с резултатите от Дейност 1 и Дейност 2, следните елементи:
- дефиниране на критерии и подход за определяне на това кои институции ще бъдат координатори на дигитализационния процес на национално ниво;
- дефиниране на критерии и подход за определяне на това кои съществуващи центрове за дигитализация в музейната и библиотечната мрежа ще бъдат доразвити по проекта, както и какъв район ще обслужват в ролята на координатори на дигитализационния процес на регионално ниво;
- дефиниране на подход за прилагане на принципите за <mark>недублиране на усилия и инвестиране в апаратура, като се направи анализ на съществуващите центрове за дигитализация, създавани в рамките на усилията на центрове за върхови постижения като Наследство.БГ, UNITE и е-инфраструктурата CLADA.bg;</mark>
- дефиниране на критерии и подход за приоритизиране на съдържанието, което да бъде дигитализирано в музеите, библиотеките, БНФ, БНР, БНТ, БТА и ДАА;
- дефиниране на критерии за извършване на вътрешен одит на наличното дигитално съдържание (на ниво дигитални сбирки), както и на наличната дигитализационна техника в музеи, библиотеки, БНФ, БНР, БНТ и БТА на ниво сбирки;
- дефиниране на критерии за извършване на вътрешен одит на наличното дигитално съдържание към еинфраструктурите като CLADA-bg и центровете за върхови постижения Наследство.БГ и UNITE;
- изготвяне на подход за прилагане на утвърдената от председателя на Държавна агенция "Архиви" методика за дигитализация на Националния архивен фонд, във връзка с наличните на хартиен носител материали. Методологията и стандартите трябва да дадат отговор на това как ефективно да бъде извършено дигитализирането, така че да може да се осъществи успешна интеграция с необходимите за целите на ползване на трансформираните архивни, музейни и библиотечни материали, в съответствие с необходимите технологични решения.





TECHNOLOGY



PEOPLE



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Digital transformation

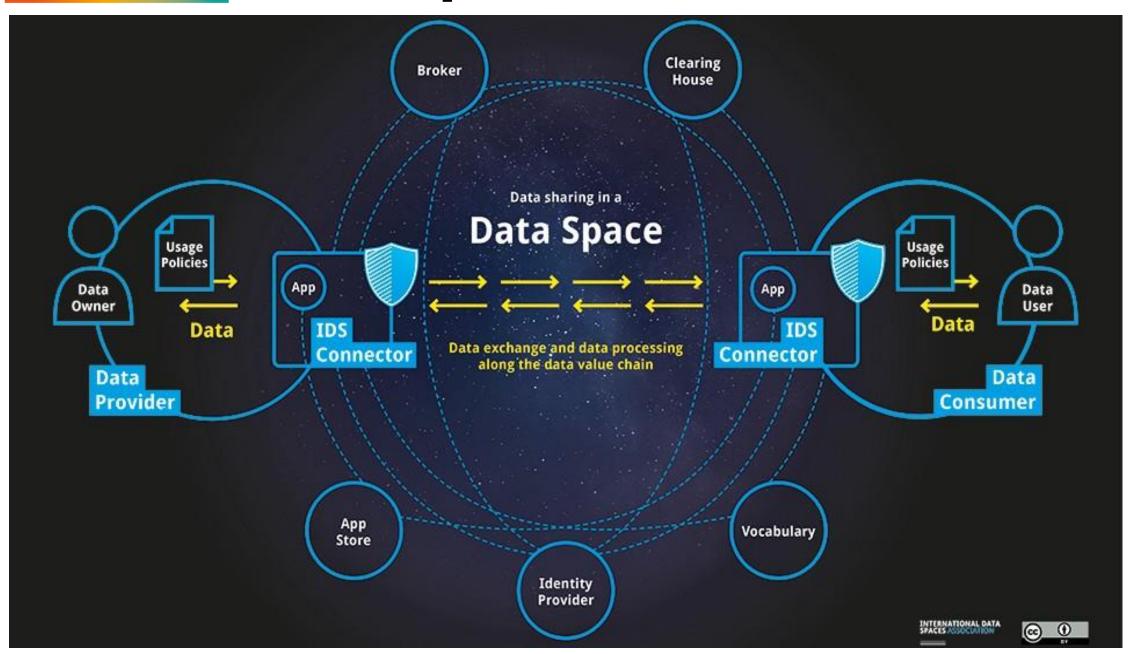
Some historical observations

Conclusions

Data spaces (repeated)

- There is a new major ecosystem under development: data spaces
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 - Four maturity categories: lead-in, committed case, pilot and live
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Data spaces



The Common European Data Space for CH

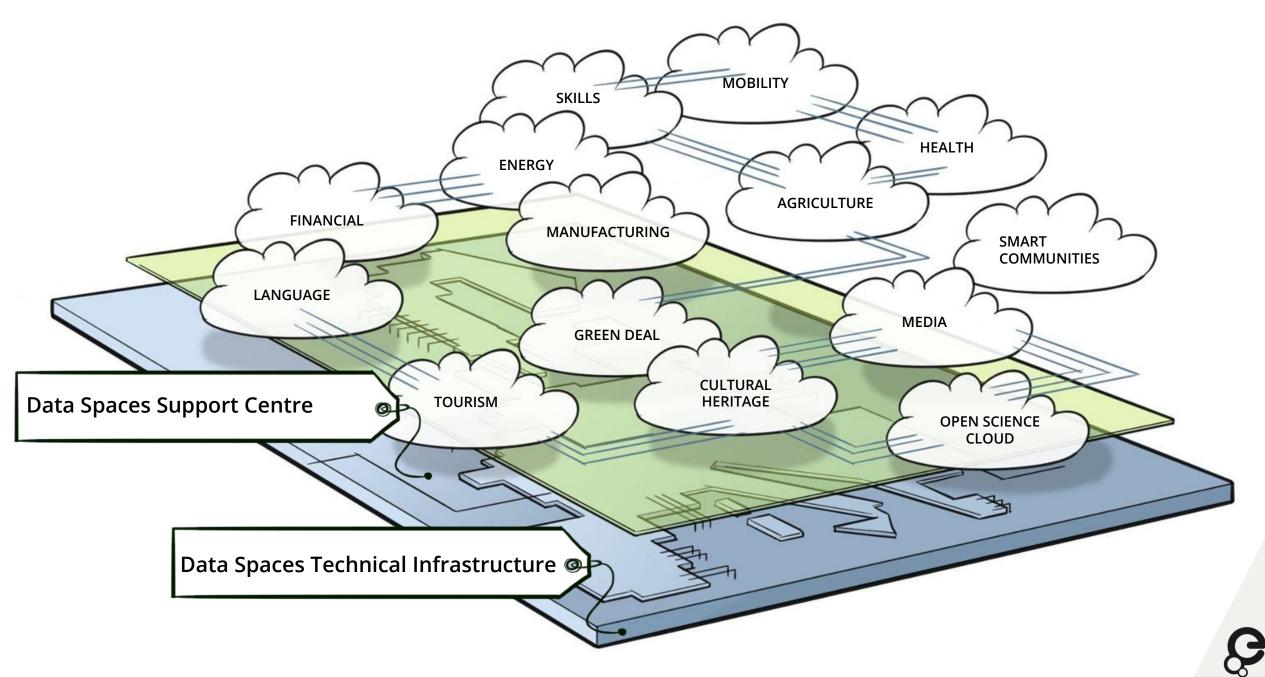
• **DS4CH** – consortium led by Europeana: kick off on 24.11.2022

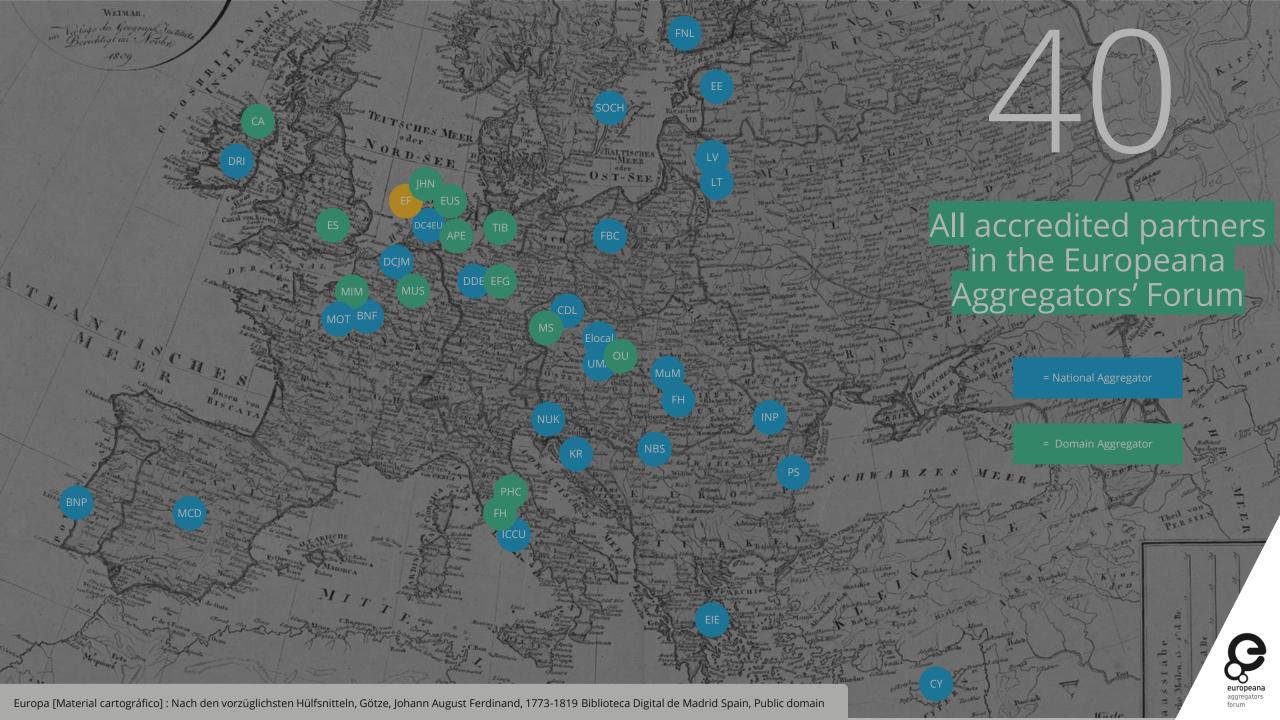
- Focus on
 - attracting more3D content;
 - capacity building;
 - encouraging reuse.



The Common European Data Space for CH

- Its implementation had been launched in September 2022
- Tender consortium led by Europeana
 - 58 mln objects
 - Considerable aggregation experience
 - Huge professional network Europeana Network Association seven communities



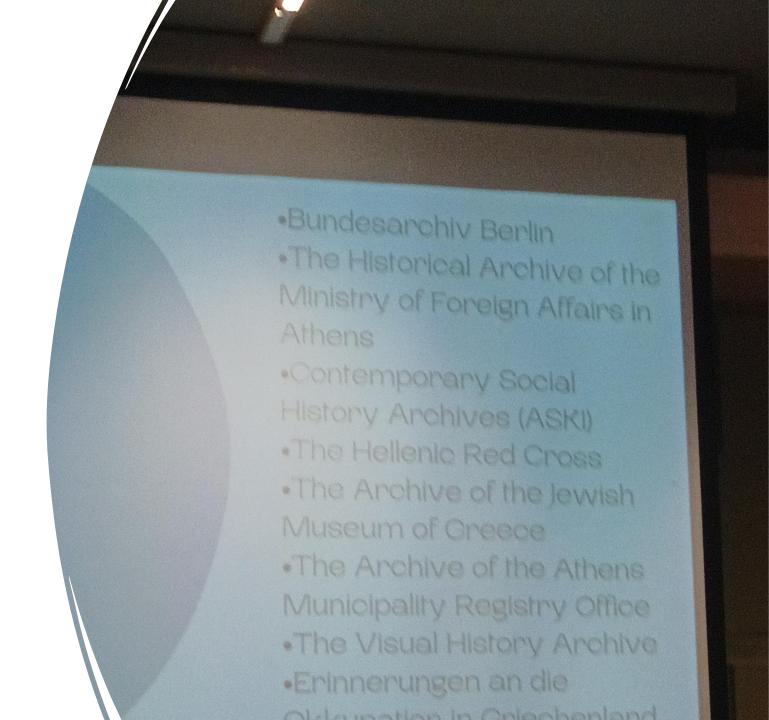


Use case 1: the simplest one

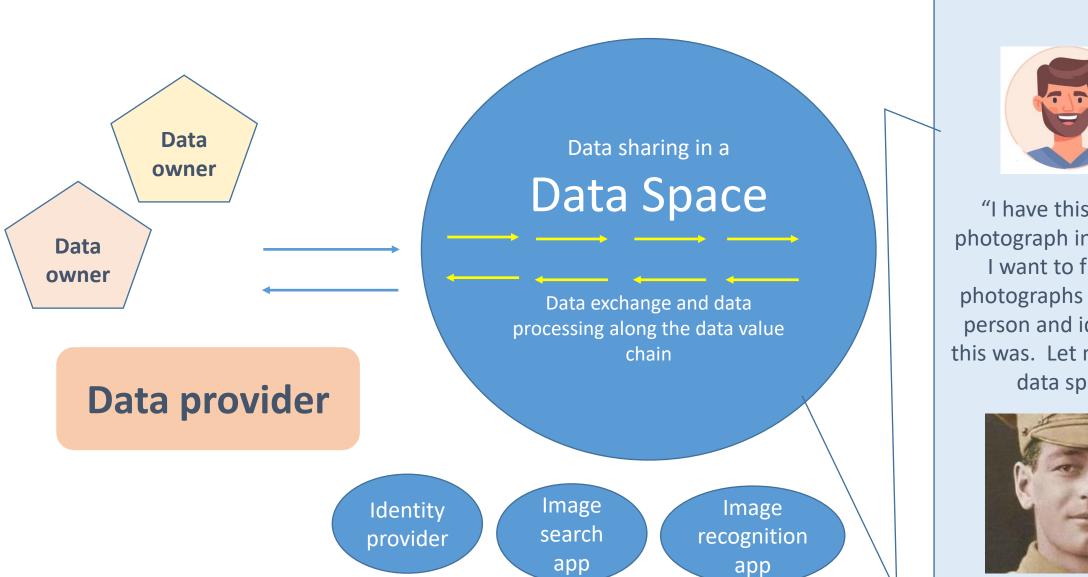


Do you think that would be easy if the archives have the collections and rights are ok? Think again!

During the Europeana Conference on Data Spaces for Cultural Heritage on 1 March 2022, Gaël Chenard (Director of the Archive départementales de la Vienne) argued that some 200 digital archive collections in France do not have a federated search facility (or guaranteed interoperability).



A more complicated use case





"I have this historical photograph in my archive. I want to find other photographs of the same person and identify who this was. Let me check the data space..."



And even more complicated one!

- Example: urban data space can use data from the data space for cultural heritage to create a rich layer of additional details on historical buildings.
- This can be used by a tourism data space for providing users with personalised cultural routes.
 - use cases can be purely within the data space for CH ...
 - ... or "mixing" data from several data spaces

What are the CH use cases?

- Understanding users of digital heritage collections are notoriously difficult!
- A source of inspiration is the work of GLAM labs (innovation/data labs in galleries, libraries, archives, museums)
 - Collections as data
 - Open innovation
 - Use cases
 - Closing the skills gap



Some key data space questions

- Technology
- Legal aspects
- Use cases clear in some domains but not in CH
- Capacity building
- Convergence with other data spaces
- Connection to other infrastructures and networks

Challenges

- Lack of consensus
- Lack of use cases
- Driven by the holder of an 'older' vision
- Context of objects, loss of control?
- •Smaller institutions?

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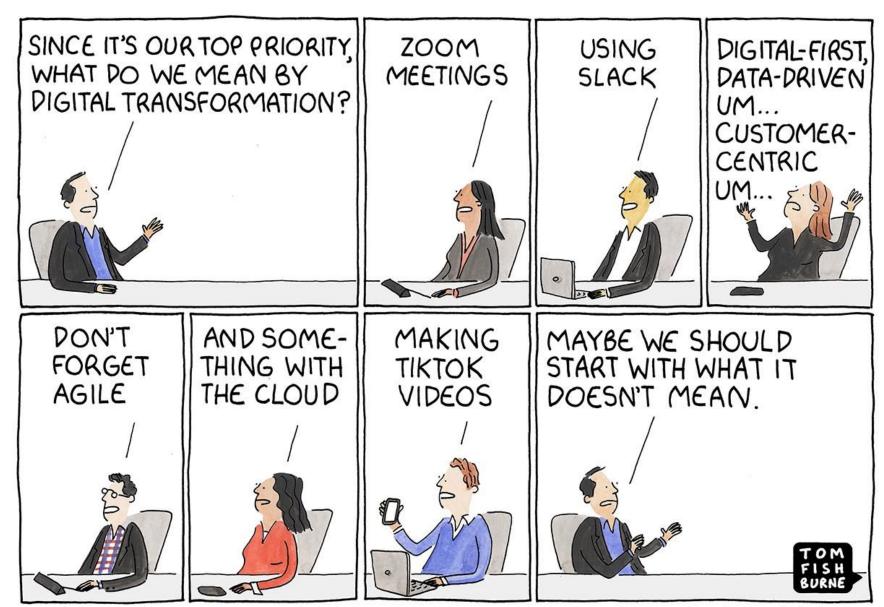
Digital transformation

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And what about digital transformation?



@marketoonist.com

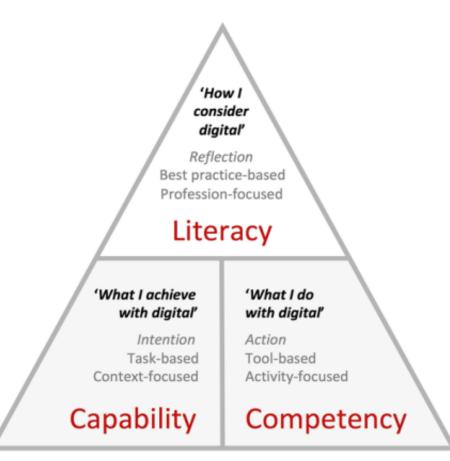
> From <u>Europeana</u>

Digital transformation is both the process and the result of using digital technology to transform how an organisation operates and delivers value. It helps an organisation to thrive, fulfil its mission and meet the needs of its stakeholders. It enables cultural heritage institutions to contribute to the transformation of a sector powered by digital and a Europe powered by culture.

Digital skills and literacies

Digital skills break down into two types - a competency is action-oriented, the ability to use a tool or system. A capability is more contextual and achievement-oriented, knowing how to successfully apply that ability to a certain task.

Digital *literacy* is more reflective, being able to evaluate the appropriateness of those competencies and capabilities in a specific context and taking a holistic, strategic approach to all aspects of digital.



Digital activity

All digital activities (online publishing, content management, video production etc) and all activities supported by digital (finance, recruitment, fundraising) within a cultural heritage organisation, can be usefully broken down into these four elements -

- What will we need to use?
- What will we need to manage?
- What will we need to create?
- What will we need to understand?



Digital maturity

An individual's or an organisation's ability to use, manage, create and understand digital, in a way that is contextual (fit for their unique setting and needs), holistic (involving vision, leadership, process, culture and people) and purposeful (always aligned to the institution's social mission). Source: One by One project

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The digital heritage resources

- The vision of the past
 - Access
 - Preservation
- And now
 - Analysis
 - Visualisation
 - New objects

Some examples

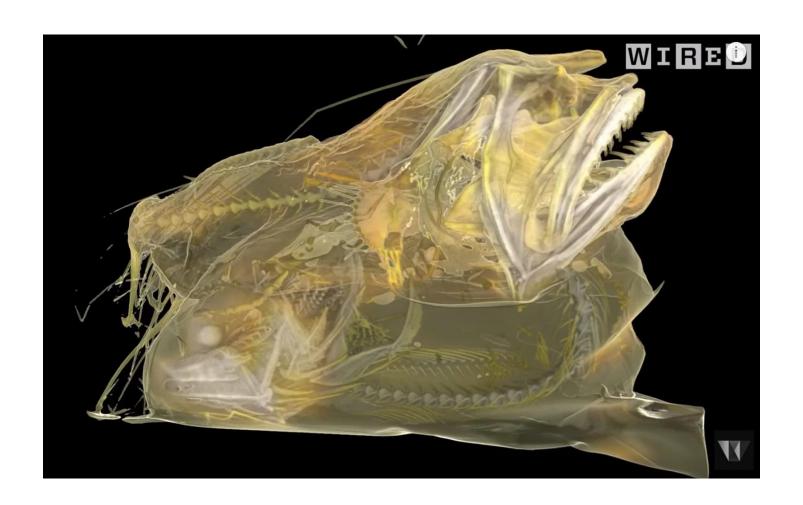
Digital as a microscope

Text analysis and discovery tools



4mm Miniature Book, University of Iowa Special Collections and University Archives https://blog.lib. uiowa.edu/spe ccoll/2013/08/0 6/identifyingour-4mmminiaturebook/

3D digitisation

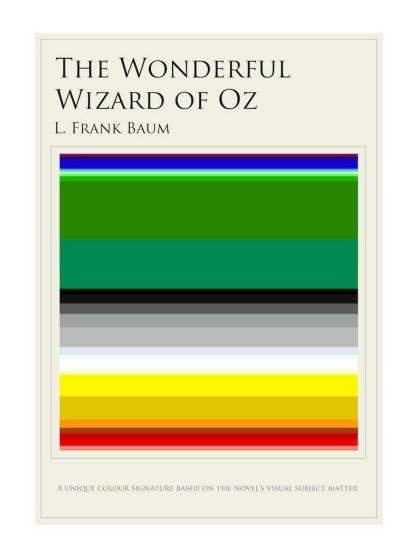


This 3D scan of a fish from the Natural History Museum collection in London allows to explore a fish within a fish – the last meal of the predator scanned.

CH and digital (as a microscope)

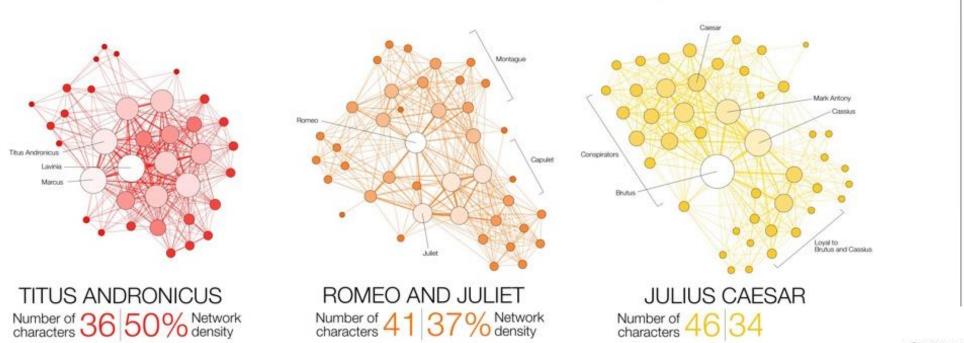
Colour signatures of books (Jaz Parkinson)

Source: https://www.wired.com/2013/09/data-visualization-the-color-signatures-of-famous-books/



CH and digital (as a microscope)

SHAKESPEAREAN TRAGEDY



ABOUT

Shakespeare's plays listed chronologically.
Two characters are connected if they appear in the same scene.
Their size and color intensity are proportional to their (weighted)
degree of centrality.

The 'network density' measures how close the graph is to complete. A complete graph (100%) has all possible edges between its nodes.

CC-BY-SA Martin Grandjean 2015 www.martingrandjean.ch

Digital as a telescope

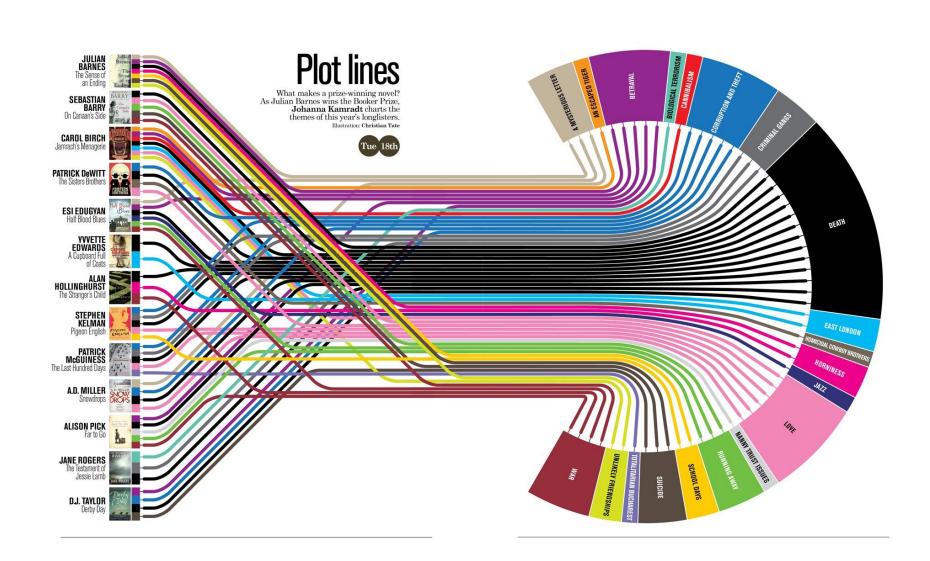
- big data
- collections as data

Aggregators!



Girl Looking through a Telescope by Pietro Antonio Rotari -Nationalmuseum, Sweden, Sweden - Public Domain. http://www.europeana.eu/en/it em/2064116/Museu_ProvidedC HO_Nationalmuseum__Sweden _17114

CH and digital (as a telescope)



CH and digital (as a telescope)



Library of Congress



Explore Library of Congress collections through color with this application External by Laura Wrubel! Published January 2018 https://labs.loc.gov/work/experiments/library-of-congress-colors/

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Key achievements in the digitisation of CH over the last decade

- Digitisation for access, preservation
- Models of digital libraries DELOS DLRM, 5S
- Big data aggregation

Issues

- Domination of the 'library' metaphor
- Hybrid collections

Remaining challenges

- Understanding the contexts of use of digital material
- Digitisation for analysis
 - Inspiration in the Collections as Data/ GLAM Labs
 - Content-based information retrieval, multi-modal models for retrieval
- Ease of use (from 'compromised needs' to human communication)
- Tackling multiple perspectives on shared heritage

Priority actions to ensure that digitisation knowledge is shared/sustained in the next decade

- Going with the flow data spaces cloud for cultural heritage
 - data owners/providers and data users/consumers
- Understanding the users vs flexibility and personalisation
- Working with smaller institutions open innovation

Future plans: DISPATCHES – ERA Chair in Data Spaces for CH

DISPATCHES

- Started in March 2023 at GATE Institute
- DISPATCHES will offer positions for researchers and PhD students
- Research agenda

Twitter:

@euDISPATCHES

User enablers

Personalisation

User Journeys

Alternative ways of knowing and documenting

Data enablers

Paradata standards in CH

Interoperability

Understanding and Documenting Ownership/Rights Standards Are data spaces going to be the silver bullet for digital transformation?

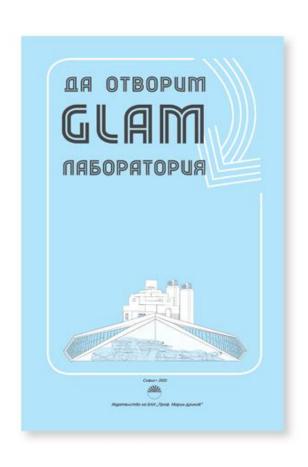


Your village has been overrun by savage werewolves, which are represented by the number on each of the cards that make up your village. To get rid of these fanged fiends faster than the neighboring villages, use your residents' special abilities and your powerful secret weapon: a silver bullet.

Call for a vote when you think you have the fewest werewolves, but be careful; everyone else gets one more turn to save their own village first...

Some useful resources





Open a GLAM Lab

https://cladabg.eu/images/PDFs/web_ISBN_9786192450939.p df



Data Spaces

https://gate-ai.eu/bg/business/idsa-хъб

DISPAtCHes – ERA Chair in Digital

Spaces for Cultural Heritage

MOOCs - inDICEs

- Developing Digital Transition Strategies for Cultural Heritage Institutions
- KU Leuven, inDICEs
- https://www.edx.org/course/developing-digital-transition-strategies-for-cultural-heritage-institutions

eCHOIng

 Recovery of cultural heritage through higher education-driven open innovation - https://echoing.eu/

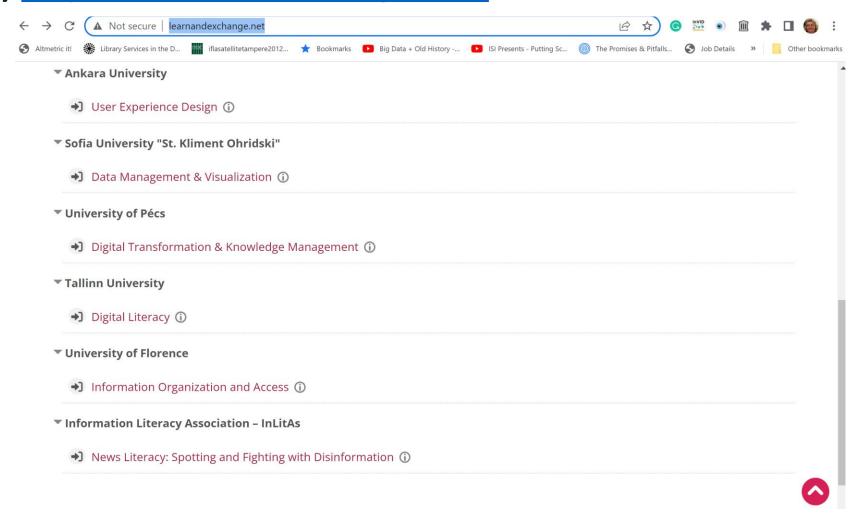
MOOCs: Pact4Skills

- Tackling the challenges of the European Education Area by building resilient, inclusive and forward-looking training to upskill HED students face the transformations in digital culture with new e-skills, intercultural and entrepreneurial competences
- https://ivetagr.org/pact4skills/

Museum assets, Experience design

MOOCs

 Learn and Exchange (Upskilling the Information Professionals of the Future) http://learnandexchange.net/



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Thank you!

Get in touch!

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