



Interoperability: the Benefits and the Challenges.

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The image features a decorative background with a repeating pattern of white, interlocking leaf-like shapes on a teal background. A darker blue rectangular area is overlaid on the left side of the pattern. At the bottom, a bright lime green horizontal bar contains the word "INTRODUCTION" in bold, black, uppercase letters. A thin vertical blue line is positioned to the right of the green bar.

INTRODUCTION



Plan for this presentation....

- What interoperability is and why we should care.
- Some answers & ideas from other countries & other industries.
- For instance, because recent government mandates regarding health data are on the table and coming into force, I've been trying out ways to use "replacement vocabulary" from the electronic health data sector in order to craft persuasive calls-to-action for the digital media industry.

A visible junction of road, river, rail, and hydro lines, viewed from a GO Transit train in Toronto on January 30, 2025. At its best and most effective, digital interoperability is invisible.





DEFINITIONS, BENEFITS & REACTIONS

WHAT IS INTEROPERABILITY?

The Institute of Electrical and Electronic Engineers (IEEE) provides what [US] federal agencies have deemed the “accepted definition of interoperability, at least from a technical perspective”:

“the ability of two or more systems or components to exchange information and to use the information that has been exchanged.”

Source: **Atlantic Council**, "User in the middle: An interoperability and security guide for policymakers", 2024.

INTEROPERABILITY HELPS....

Digital media creators build assets and put them into different digital environments

Digital media companies do business throughout their supply chain using a range of platforms

Digital media audiences smoothly transition across platforms without prohibitive switching costs

Music & Metaverse

Water & Music, "The Emerging Tech Guide for Independent Artists", 2024, page 31.

Limitations & challenges

INTEROPERABILITY

Metaverse experiences are currently not interoperable with each other — meaning you can't move through or bring your data across platforms. For example, you can't take your Roblox avatar and all your in-game items to your interactions in Fortnite. This barrier often forces artists to lock their experience into a specific platform, along with that platform's specific audience and technical limitations.

- **Tip: Strategic platform focus.** Before artists put large scale resources into creating a metaverse experience, they should consider the tradeoffs of different platforms and build wherever makes the most artistic and career sense.

WORLD BANK IDENTIFIES A RANGE OF BENEFITS

Promoting technology and vendor neutrality

Improving the integrity of identity data

Creating administrative efficiencies

Reducing fraud and improving targeting

Improving end-user experience

Enabling innovation and new use cases

.... Despite these benefits, the data exchange and links between systems that interoperability facilitates can create risks to privacy and data security.

Source: World Bank
Practitioner's Guide,
"Interoperability", ca 2020

WIPO ON INTEROPERABILITY

Sources: full details are at the end of this slidedeck.

WIPO Conversation event, 2024, "**To protect or not to protect – Raising trust and interoperability**"

- the 8-slide deck includes examples of the goals of interoperability, has a good deal of technical vocabulary, and also some code.

WIPO Conversation event, 2023, about "**IP and Frontier Technologies**", "WIPO Factsheet: Metaverse", page 6:

Legal and ethical challenges include how to ensure inclusivity, security, privacy, safety, data protection, respect for intellectual property rights, and enforcement of IP rights, particularly for virtual goods, avatars, and digital items. Technical challenges include how to allow for interoperability and how to provide standards that are at the heart of the continuity of data and create an immersive, realistic, and fun virtual world. **WIPO Conversation** event about "**IP and Frontier Technologies**", "WIPO Factsheet: Metaverse", 2023

G7 ITALIA 2024: CULTURE MINISTERS' DECLARATION

page 6, in the section re “G7 and the global fight against illicit Trafficking of Cultural Property”

We intend to promote technological innovation, accessibility and interoperability among existing tools and national databases on stolen cultural property, including the INTERPOL database on stolen works of art and the UNESCO database on national cultural heritage laws to enable fast response and voluntary rapid data and information exchange, as well as expertise, to support the day-to-day fight against illicit trafficking of cultural property, speed up investigations and facilitate cooperation among law enforcement agencies

[...]

Source: **G7 Ministers' Meeting on Culture, G7 Napoli 2024**, "Ministerial Declaration: Culture, common good of humanity, common responsibility", 2024.

G7 ITALIA 2024: CULTURE MINISTERS' DECLARATION (CONT.)

page 6, in the section re “G7 and the global fight against illicit Trafficking of Cultural Property”

[...] We intend to promote provenance research, inventories, documentation, awareness raising, collaboration and international dialogue, including through interoperable digital tools and capacity building of specialised cultural professional, judiciary and law enforcement authorities and the national and global art market actors.

TIKTOK CREATOR ANXIETY

My own internet search (using Google in this case) on January 21, 2025 for "how to move TikTok assets to another platform" produced, on the first page of search results, various items with headings such as....

- how to transfer Instagram content to TikTok
- repurpose.io is made to help with this
- how to transfer TikTok coins to another account with a live treasury box
- how to move followers
- how to move collections
- how to move favourites

WHY THERE CAN BE COMPANY RESISTANCE TO REGULATION OF INTEROPERABILITY

Under the European Union's landmark Digital Markets Act that took effect last year, Apple must allow rivals and app developers to inter-operate with its own services or risk a fine of as much as 10% of its global annual turnover.

Meta has made 15 interoperability requests thus far, more than any other company, for potentially far-reaching access to Apple's technology stack, the latter said in a report.

"In many cases, Meta is seeking to alter functionality in a way that raises concerns about the privacy and security of users, and that appears to be completely unrelated to the actual use of Meta external devices, such as Meta smart glasses and Meta Quests," Apple said.

Source: Reuters, "Apple hits out at Meta's numerous interoperability requests", 2024.



REGULATORY EXAMPLES

EU/EUROPEAN UNION: DIGITAL MARKETS ACT

The EU's Digital Markets Act (DMA) endeavors to promote competition in the digital sector by establishing clear criteria to identify and regulate "gatekeeper" platforms. Per the DMA, gatekeepers "have a significant impact on the internal market, serve as an important gateway for business users to reach their end users, and ... enjoy, or will foreseeably enjoy, an entrenched and durable position."

In September 2023, the European Commission designated Amazon, Apple, Meta, Microsoft, Google's parent Alphabet, and TikTok-owner ByteDance as gatekeepers. Their obligations under the DMA include practices they must start ("dos," like enabling interoperability with third-party tech) and behaviors they must stop ("don'ts," like ranking their own services above those of their competitors). And some of these require significant adaptations.

Source: **emarketer**, "Antitrust Explainer -- Legal Fundamentals Marketers Need to Know as Regulators Wage War Against Big Tech", 2024.

CANADA: HEALTH INFORMATION TECH SECTOR

Under Bill C-72, health information technology vendors in Canada would be subject to the following obligations:

Interoperability Requirement: *Vendors must ensure that the health information technology they license, sell, or provide as a service is interoperable, meaning it must allow users to easily, completely, and securely access and use all electronic health information and exchange all electronic health information with other health information technologies. Additional standards for interoperability may also be included in the regulations.*

Source: **McCarthy Tétrault**, "Access, Interoperability, and Innovation: An Introduction to Canada's Bill C-72, the Connected Care For Canadian Act", 2024.



LEARNING FROM OTHER INDUSTRIES

LEARNING FROM OTHER INDUSTRIES MEANS

breaking out from our own pasture

exploring widely by free association

travelling in new directions

noting when something resonates

being inspired

finding a persuasive message that you can adapt



START

WHY HEALTHCARE?

Governments are moving forward with regulation in this sector, so there are models to adapt.

Benefit to patients is easy to understand and a goal that all parties in a sector can get behind.

It's up to us to decide what each of our digital media sector's equivalent is to "patient".

The creative and digital media industries contribute to physical and mental health.

HEALTHCARE SECTOR

G7 Open standards and Interoperability (pages 5-6, paragraph 1)

We recognise the importance of digital health solutions in transforming healthcare including but not limited to in response to pandemics. In order to derive maximum benefit from advances in digital health, we need to have data governance, system security, privacy, regulatory and data protection standards in place according to national and regional contexts. This includes ensuring that digital health solutions are inclusive, comprehensive and equitable.

Source: **UK Department of Health & Social Care**, "G7 Open standards and Interoperability", 2021.

HEALTHCARE SECTOR: INDUSTRY WORDS

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DIGITAL MEDIA SECTOR: PARALLEL VOCABULARY

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DIGITAL MEDIA SECTOR: CALL-TO-ACTION

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HEALTHCARE SECTOR

G7 Open standards and Interoperability (pages 5-6, paragraph 2)

The ability for digital healthcare systems to work together seamlessly using common and open standards is critical to the safe, effective and efficient use of technology in health and care. At present, there is significant variability within and across nations with respect to how computable health data is represented and used for healthcare and in the standards used for patients' health data.

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DIGITAL MEDIA SECTOR: PARALLEL VOCABULARY

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DIGITAL MEDIA SECTOR: CALL-TO-ACTION

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REPORT FROM ALBERTA VIRTUAL CARE: “INTEROPERABILITY SAVES LIVES”

Tim Murphy, chair of the Health Data Interoperability Working Group that authored this report, provides us with a fine example of call-to-action vocabulary, in his Foreword on page 4:

After reading *Interoperability Saves Lives*, the only conclusion one can come to is that maintaining the status quo is NOT an option. Our prior ineffectual approach to health digital media data interoperability is an obstacle to everything from individual patient care and inclusive access to the advancement in our understanding of the complex relationship between health the arts, wellbeing, and the social determinants of health. As this report highlights, digital technology, and content and exchange standards for linking data, exist and are ready to be adopted today. It is the way we relate with each other around data, what we have called in this report *human factor interoperability*, that presents the most significant barrier to meaningful health digital media data use in Alberta and Canada. Understanding this, we must recognize our collective accountability to health digital media data interoperability, and seize the opportunity to mandate it, lest healthcare digital media sectors continue to limp along and endure uncoordinated analytics services; elevated costs, stifled innovation, suboptimal quality of care audience experience, and patient harm to creators. Albertans and Canadians deserve better.

CANADA HEALTH INFOWAY: “DIGITAL HEALTH INTEROPERABILITY TASK FORCE REPORT”

Source: **Canada Health Infoway** "Digital Health Interoperability Task Force Report", November 2024

The goals of the Task Force included:

- *Improving the quality of patient care and enhancing patient safety through better use of interoperable digital health solutions.*
- *Advising and supporting efforts to effectively digitally connect physicians to health system resources to reduce administrative work, streamline care delivery and enable the sharing of health data.*
- *Stimulating innovations and approaches to overcome key barriers and develop practical implementation strategies to enable adoption and ongoing use of interoperable digital health solutions.*

While providing an overall analysis of the interoperability issue in the Canadian health care system, this report focuses on the physician perspective and their concerns.

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WHAT'S NEXT

ACTIONS: DECISION STARTING-POINTS

- Consider ways to apply health data interoperability advocacy methods to demonstrate value.
- For instance, identify technologies, seek out political champions, learn what words have meaning for them, and tell user stories.
- Communicating the value of a policy is a process, and continues to develop over time.
- We are all part of the work to advocate for the value of digital media.



As we set out to do the work

- pinpoint why interoperability matters to companies, creators, and audiences in your sector
- identify challenges in increasing interoperability in the arts sector
- determine which digital media industry sectors can join together in advocacy
- plan how digital media industry sectors can advocate

IN CONCLUSION: AN INVITATION

I invite you to break out from your pasture.

I'm eager to learn about more interoperability examples, and – especially – your re-interpretation of their parallel vocabulary.

Let's inform ourselves about the word "interoperability" and be ready to work to make it happen.

Vocabulary from the healthcare sector regarding interoperability can be a model for us & a source of inspiration. So let's take that inspiration, breathe it in, and make it work.

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THANK | YOU!