

Title: Key blockchain projects to improve performance at the British Museum

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Blockchain and the British Museum

The digital revolution, led by technologies such as Blockchain, Artificial Intelligence and Machine Learning, may create a better world for our society. This short article explores how the blockchain may bring benefits to an existing historic organisation in the United Kingdom: The British Museum. We have identified four key potential projects, using blockchain technology, that can bring benefits to the Museum, its visitors, and the art collection industry.

Blockchain is a digital ledger that is shared with the public, immutable, consensus-based, and direct. Each block (which aggregates into a chain) represents a single transaction and contains information related to sharing/ownership properties, payment, and contractual obligations. In the art industry, blockchain technology can revolutionise how art is distributed, paid for, collected, and even viewed. The British Museum, a 267-year old institution, is the UK's most popular tourist attraction and showcases ancient and modern artefacts from all around the world (**Association of Leading Visitor Attractions 2020**). The British Museum may achieve a strategic advantage by harnessing the blockchain technology. The adoption of blockchain at the British Museum may provide benefits to all its stakeholders, including the visitors and the host organisation. This article examines the current strengths and weaknesses of the British Museum and presents four potential blockchain-based projects that, if implemented, would each address an area of weakness for the British Museum.

Potential Projects Using Blockchain Technology at the British Museum

Project 1: Industry-Wide Loan and Provenance Tracking

The first problem, we identified was that the British Museum inefficiently collaborates with industry partners including other museums, families, universities, individual collectors,

community associations, and governments. There is no industry-wide marketplace for tracking a piece's transactional history. To overcome this problem, the blockchain can aid the British Museum in its art exchanges process with a single, public, real-time database shared across museums and other collecting institutions to track the locations of valuable art. For example, Vastari (an art exchange facilitator based in London) has begun this project, boasting a database on its website (2020) for museum professionals and producers to share and browse more than 700,000 objects amongst 33,000 contacts. In a similar vein, the British Museum may enhance its industry collection database using the blockchain technology. Key aspects of this weakness and the solution are described in the following table.

<i>Weakness 1: Lack of industry-wide loan and provenance tracking</i>	<i>Blockchain Solution 1: Launch an industry collection database using the blockchain</i>
<ul style="list-style-type: none"> • Loans of 2,800 items to 105 locations worldwide (The British Museum 2019) • Contestation of displayed items from Greece, Easter Island, Nigeria, Benin, and more (Alberge 2019) • Retaliation of colonization legacy via resignations, activist criticism, and public calls for restitution (Dawson 2019) • Lack of industry information collection standards resulting in redundancy and increased transaction costs 	<ul style="list-style-type: none"> • Public database of artefacts' history, past sale results, and specifications • Multiple uses including to collaborate, reduce redundancies, repatriate works, compare prices, and consolidate tools to manage collections • Increased trust and transparency with the public and industry partners

Project 2: Digital Art Footprint

A second key weakness, we found was that while the British Museum allows online patrons to view some of its collection online, it has not embraced digital art. There is a difference; viewing art online displays a JPEG image of a piece meant to be viewed in person. Digital art, however, is presented exclusively through a screen; it cannot be touched like a statue or painting in a physical setting. In trading digital art through the blockchain, an owner gets access to a digital file and its unique code that cannot be replicated. This creates scarcity, as it would be impossible to create a duplicate and increases the value of a work. Some may be skeptical about the value of digital art, until they read the New York Times' article (2018) about CryptoKitty which sold for \$140,000. Ikohaus is a black-owned digital art gallery on the blockchain that has organised itself to sell digital art securely and accept crypto payments (Ikohaus 2020). The WUNDER Museum, the ZKM Center for Art and Media, and the Schinkel Pavilion have also launched exhibitions dedicated to crypto-art with reported success (Styx 2020). Thus, the British Museum may develop similar projects to enhance their value proposition. Key aspects of this weakness and the potential solution is described in the following table.

<i>Weakness 2: Lack of a digital art footprint</i>	<i>Blockchain Solution 2: Open a digital art exhibition</i>
<ul style="list-style-type: none"> • Nearly 8 million objects in its collection (The British Museum 2020) • Online collection (different to digital art) contains half of collection • No past digital art exhibitions • No digital art exhibitions planned in 2019/20 	<ul style="list-style-type: none"> • Exhibition featuring artwork made and exchanged on the blockchain to capitalise on a growing movement around digital art • Multiple mediums of display including in museum, online, or by partners with access • Emergence of new consumer market of visitors and industry partners

Project 3: Expanded Payment Methods

A third key weakness, we found was that in neither of its exchanges with industry partners nor its admissions for visitors does the British Museum use cryptocurrencies. For artists, cryptocurrencies could result in royalty payments any time a work trades hands. For institutions, acquisitions or loans could be paid for with cryptocurrencies, especially for digital art. For visitors, blockchain can increase the security of a digital ticket, decrease costs, and enhance the museum experience with additional features powered by data analytics. Cultural Places, an art and tourism app developed by Oroundo, wants to let users purchase tickets to museums, theatres, galleries, and exhibitions using a cryptocurrency called the Cultural Coin (Keane 2018). While Cultural Places will take a cut of ticket sales, its service is meant to reduce ticketing fees and fraudulent ticket resales. Thus, there are clear benefits for the British Museum to use and accept cryptocurrencies for transactions. Key aspects of this weakness and the solution is described in the following table.

<i>Weakness: Limited payment methods</i>	<i>Blockchain Solution: Accept cryptocurrencies for transactions</i>
<ul style="list-style-type: none"> • 6.2 million visitors (Association of Leading Visitor Attractions 2020) • Free museum entrance • Cash/credit accepted for paid exhibitions and donations by visitors • No cryptocurrencies used in exchanges with industry partners to date 	<ul style="list-style-type: none"> • Acceptance of one or more cryptocurrencies to enable and secure the exchange of digital art • Encouraging an industry-wide cryptocurrency to standardise payments • Increased accessibility for visitors contributing admission fees and donations • Attraction for consumers who are interested in cryptocurrency but have no experience in art collection

Project 4: Accessible Market for Ownership

The final key weakness of the current the British Museum’s service, we found was that despite making art viewership accessible for millions, the Museum can expand art ownership and contribute to the shared economy via the blockchain. The blockchain enables fractionalization, the divided the ownership of a work apportioned by fractional tokens. Fractionalization via the blockchain will make art more scalable, democratic, affordable, and inclusive. For example, in 2018, art collector Eleesa Dadiani auctioned 49% ownership of Andy Warhol’s 14 Small Electric Chairs on the blockchain platform Maecenas (Livni 2018). Rather than being sold for a lump sum of \$5.6 million (or 850 Bitcoin at the time), Warhol’s work is now co-owned and accessible by 100 buyers. This shows that by enabling fractional ownership of works, the Museum may get a strategic advantage in the market by expanding its customer and partner base. Key aspects of this weakness and the solution is described in the following table.

<i>Weakness: Exclusive Market for Ownership</i>	<i>Blockchain Solution: Enable fractional ownership of works</i>
<ul style="list-style-type: none"> • High-brow stigma of art collection and appreciation • Current collection fully owned by museum (via purchase or donation) or on temporary loan from another individual or institution • Museum’s combined income and endowment nearly £80 million (The British Museum 2019) 	<ul style="list-style-type: none"> • Shared ownership of works with industry partners and individuals • Increased global interest in art as ownership becomes more affordable and accessible for working class • Encouragement for part-owners to establish deeper ties with the British Museum • Promotion of in-house, partnered, or independent online marketplace

Final Reflection

The digital revolution is transforming many organisations, and it is imperative that the organisations adopt new practices to secure both a strategic advantage and survival in the long-term. In this article, we have explored how the British Museum may implement a blockchain program to enhance its value proposition and mitigate current weaknesses. This may bring benefits to the Museum by being an early adopter of blockchain technology in the art industry.

Based on our analysis, the following key recommendations are made to the British Museum (fair to note that some of these weaknesses, found for the British Museum, are applicable to the broader art industry):

- Launch an industry collection database to compensate for a lack of synchronisation in information collecting with industry partners which creates redundancies and inhibits collaboration for loans, provenance tracking, and restitution projects;
- Open its first digital art exhibition to enter an emerging market;

- Use cryptocurrencies for acquisition, selling, and loans to broaden the accepted methods of payment for both visitors and industry partners; and
- Enable fractional ownership or works to make art ownership more inclusive.

Some solutions proposed will require increased in-house efforts as well as collaboration. The risks may include the lack of consensus to create industry standards for a volatile technology, overestimated interest in digital art exhibitions creating investment losses, reluctant adaptation of blockchain technology by industry partners and visitors, and weakened control and status due to fractionalization of artefacts. Despite these risks, the British Museum and other renowned art institutions may take advantage of this nascent technology and become early beneficiaries. We acknowledge that implementing these changes are by no means easy, yet here lies the challenge to the British Museum to adopt new technologies. If adopted, blockchain might revolutionise the way we view, buy, and sell art at the British Museum!

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