Elacity: Access Economy - Business Models for Web3. Contact: sash@ela.city

1 Why We Exist

Digital transformation is projected to grow from $1.69 trillion in 2023 to $4.46 trillion by 2030 [1]. The internet makes duplication almost costless. Therefore, the challenge is how to create scarcity. This is crucial for establishing value, which in turn enables monetisation and new digital asset markets online. We exist to extend blockchain's proven scarcity and security features from financial assets like Bitcoin to non-financial digital assets like media and software. By merging blockchain with a decentralised digital rights management system, we're opening up a global exchange for trading all types of digital assets, delivering new business models and instant payments. Elacity redefines digital monetisation, scarcity and the way we transact online. Encrypt data, trade access, get paid.

What is a Digital Asset? A digital asset is any content or data in digital form that can be owned and holds value. This includes but is not limited to, cryptocurrencies, documents, digital art, to audio (music, podcasts, audiobooks), and video (films, documentaries, educational) content. They include games, in-game items, digital avatars, metaverse assets, 3D printing designs, machine learning models, automated workflows, and software. Digital assets additionally become digital twins to replicate and control physical objects like IoT smart locks and robotics.

Problem with Digital Assets. At its core, the problem is that digital assets are easy to duplicate, which undermines their value and drains the global economy. Existing Digital Rights Management (DRM) systems, designed to control access and monetisation, are centralised and financially inefficient for owners of Intellectual Property (IP). Middlemen increase costs by taking a cut. The emerging Web3 ecosystem, with its decentralised nature via DeFi and NFTs, offers a new paradigm but lacks a robust, decentralised DRM system to fully secure and monetise digital assets. We exist to provide this inclusive technology and enable a more efficient and equitable marketplace.

📊 Piracy costs the global economy $1.13T yearly, with U.S. video piracy losses up to $71B annually and job losses up to 560,000 [2, 3]. Most online music is downloaded illegally (95%) [4], and unlicensed software usage exceeds 50% in many countries [5]. Ebooks account for $300M in losses due to piracy [6]. The DRM market is valued at $3.6B, expected to reach $24.63B by 2030 [7]. Revenue splits favor platforms: YouTube keeps 45% and Google AdSense 50% [9, 10]; software app and music stores take 30% cuts [12, 13, 14]; OnlyFans takes 20% [16]. Blockchain technology is projected to reach $1.43T by 2030 [17], and the NFT market $231B [18, 19].

2 Our Approach

The digital challenge isn't just encryption but managing value and access to assets in a globally decentralised setting. The focus shifts to secure encapsulation and transparent, flexible rights management, catering to diverse stakeholders.

- **Digital Assets Reimagined as Digital Capsules:** Go beyond traditional files to encapsulate digital assets as encrypted "Digital Capsules," which can be hosted universally. Unlocking these capsules requires the purchase of specific rights from the owner's decentralised wallet by using their smart contracts on a blockchain.

- **Transparent & Flexible Asset Management via AEP:** Introduce the "Access Economy Protocol (AEP)" for managing and trading access, ownership and distribution rights in a way that is both immutable and transparent, directly working with the encrypted capsule in question for secure playback.

- **Versatile Web3 Business Models:** Offer an array of monetisation strategies for individual creators to large entities, covering diverse digital capsules from documents, imagery, audio, video, software, gaming, 3D assets alongside decentralised business models like buy now, rental, pay-per-view, subscription, adverts, and more.

- **Market-Driven Minimum Viable Product:** Video is now the most popular form of content on the internet. The global video streaming market size was valued at USD 455.45 billion in 2022 and is projected to grow to USD 1,902.68 billion by 2030[20]. We have built a "Video Capsule" MVP with packaging, distribution, trading, and playback to showcase our technology. This by default also supports "Audio Capsules" like music or audio books.

3 Our System

Managing and monetising digital assets in a secure, transparent, and decentralised manner is the central challenge. Our system uses encryption and decentralised storage, as well as features for decryption and playback. It employs blockchain for ownership and smart contracts for trading rights, with added compliance for legality and trust.

- **Asset Creation and Encryption:** Encryption serves the function of turning accessible data into a set of unreadable data that can only be accessed using the right key. Utilising the 128-bit Advanced Encryption Standard in Counter Mode, we adhere to the Common Encryption (CENC) standard to ensure a secure and interoperable environment.

- **Storage and Retrieval:** Digital Capsules are stored in decentralised networks like the InterPlanetary File System (IPFS) with unique identifiers or fingerprints which are saved on the blockchain registry and used to retrieve data.

- **Blockchain Registry (ERC721):** A registry is crucial to record and verify ownership. Our blockchain registry allows users to log their intellectual property as unique tokens on a blockchain.

- **Access, Royalty and Distribution Tokens (ERC1155):** Owners issue smart contracts with "Access Tokens", scarcely defined, tradable NFTs which contain specific rights to decrypt capsules. These contracts also contain "Distribution Rights Tokens" for terms for sales, and tradable "Royalty Tokens" for instant profit-sharing.

- **Marketplace:** All transactions are verifiable and immutable, thanks to blockchain technology. Elacity's Authority Gateway smart contract regulates content access, enforce payment processes, and supervise token trades and transfers, ensuring immediate and accurate fund distribution. Encrypted licences are issued to Access Token holders as per their rights for Digital Capsule playback.

- **Playback:** Capsules are decrypted via 'Runtime', a decentralised player which lets Access Token holders communicate with decentralised storage locations and run the content. Runtime is built using WebAssembly (WASM) and runs locally on the users device via browser or an application, enabling decentralised playback solutions.

- **Compliance:** We use credentials and zero-knowledge proofs to ensure compliance and protection. KYC partners issue credentials to decentralised IDs for verification, which can be used on Elacity without directly disclosing personal data to meet various regulations, parental controls and accountability challenges.

- **Revenue Stream:** Elacity has a 5% publishing fee for creators in the form of "Royalty Tokens", which fuels further technological innovation, growth and optimisation of the Access Economy Protocol (AEP). 3% is claimable for affiliate link asset onboarding. As a result, Elacity offers a 0% trading fee for buyers on the marketplace.

3.1 Our Advantage

Democratising control over digital assets for various economic opportunities with inclusive economics.

- **Empowerment Through Decentralisation:** Leverage blockchain technology and decentralised networking to democratise control over scarcely defined digital assets. This gives everyone, from individual creators to large organisations, the power to control, monetise, and trade rights to encrypted IP in a global and inclusive marketplace.

- **Automated & Efficient Monetisation:** Replace outdated, centralised systems with automated, real-time solutions for licensing and royalty payments. This enhances cash flow and reduces inefficiencies and fees in transactions.

- **Freedom & Flexibility:** Enable creators to choose their business models and directly connect with their audience. Remove the need for third-party intermediaries, thereby maximizing profits and reducing dependencies.

3.2 Bigger Vision

Elacity aims to revolutionize the way digital assets are accessed and traded by offering a blockchain-powered platform with on-demand, secure virtual computing for Digital Capsules. The platform will support diverse digital asset packaging and digital rights trading—including secondary, derivative, and royalty markets—while enabling secure playback, direct communication, and real-world interactions through smart devices. The vision is to lead in a market expected to reach $4.46 trillion by 2030.

3.3 Senior Team

Sash Mitchell: Elacity Founder/CEO, ex- Warner Bros., Universal Pictures, Disney, Netflix and MGM. Blockchain Strategy Oxford Said Business School. **Anders Alm:** Elacity CTO, WAU.io Founder, ex- Norsk Hydro, McAfee, Dell, and Norwegian Government. **Jon Hargreaves:** Elacity Growth Lead, Global Vice Chair Edelman, successfully launched MySpace, LinkedIn, Airbnb and Cardano to global audiences. **Dr. Xin Wang:** Elacity Senior Advisor, Adjunct Computer Science Faculty Member at University of Southern California. Key architect of MPEG-21 REL (rights) and CEL (Contract) DRM standards. PhDs in Computer Science and Mathematics from UCLA and USC. Executive roles at Huawei and Xerox. **Rong Chen:** Elacity Senior Advisor, Elastos Founder, Operating System expert and 10th employee of Microsoft Internet Explorer team, contributed to the first web browser, Mosaic, at the National Center for Supercomputing Applications (NCSA) at University of Illinois Urbana-Champaign. Computer Science at Tsinghua University.

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