Commercialization Working Group

The document is intended as a community asset to leverage in the marketing efforts of Cardano.

SWOT Analysis summary to date (Sep 20, 2024)

This document contains a work-in-progress Strengths-Weaknesses-Opportunities-Threats (SWOT) analysis of Cardano, conducted primarily through the lens of commercial opportunities and relevance. It is intended to be a "live" document, continuously edited and enhanced. It was motivated by the desire to answer the seemingly simple question of "why Cardano" when talking to customers.

The emerging picture in discussions at the SWOT Analysis working group has two facets. On the one hand, the Cardano blockchain and associated ecosystem have some weaknesses that could be significant in a highly competitive market. On the other hand, the world has not yet found compelling use cases for blockchain other than crypto. This lack of compelling use cases has led to a situation where blockchain companies are speculatively building infrastructure and features in anticipation of being the platform of choice once non-crypto compelling use cases gain popularity. This situation means that we have time to address our weaknesses and exploit opportunities. Further, we are not under the revenue explosion expectations that venture capital backed blockchain companies find themselves under, which inherently limits their runways.

Possibly the greatest threat to Cardano stems from uncertainty for the blockchain segment as a whole. The lack of compelling blockchain use cases outside of cryptocurrencies runs the risk that interest in blockchains could wane and threaten the existence of blockchain companies before they have the chance to gain self-sustaining commercial traction. Meanwhile, regulatory uncertainty in the United States and some other developed countries threatens mainstream adoption of crypto in the financial infrastructure.

Strengths	**Opportunities**
1. Immutability 2. Self Sustaining Treasury 3. On-chain voting on roadmap And Decentralized Governance (Voltaire era) 4. Innovation funds 5. Tokenomics for Long-Term Stability 6. Research in advance of roadmap 7. Mature participant culture 8. Peer Review Research 9. Decentralized Block Production 10. Reliability makes Cardano suitable for mission critical apps 11. Tokens represented as native assets 12. Collaboration Culture 13. Openness	1. Develop a coordinated approach 2. Establish framework for Cardano oriented integrators and development houses 3. Decentralized Sales Channel incentivized by commissions on revenue created from tx-volume generated 4. YouTube Affiliates 5. Onboarding and Developer Education models 6. Using regulation to elevate Cardano

Mild Strengths 1. Sustainability	
Weaknesses 1. One primary public facing Cardano evangelist (Charles Hoskinson) 2. Image of oversold features and missed deliveries 3. High learning curve and friction developer experience 4. Lack of diverse economic power 5. Cardano projects are not economically viable 6. Low voter participation and untested Ada holder sentiments 7. Unexercised decentralized Cardano decision making mechanisms:	**Threats** 1. Improper treasury management 2. Ecosystem talent retention 3. Wealthy/large custodial bad actors who leverage massive voting or stake power. 4. Activist agendas

Strengths

1. **Immutability**: Cardano has a strong advantage over other blockchains, being based on the UTXO model, and guaranteeing that there is no double spend and ensuring strong immutability.
2. **Self-Sustaining Treasury System:** A portion of every transaction fee (currently 20%) is automatically directed to the Cardano treasury. This creates a perpetual funding source for ecosystem development, ensuring long-term sustainability without reliance on external funding or inflation.
3. **On-chain voting on road-map:** Unlike other blockchains, the roadmap is determined entirely by the community through on-chain voting, ensuring alignment with community interests. This gives visibility into future improvements such as, if prioritized correctly, speed and scale, lower fees, interoperability with partner chains
   The decentralized governance offered by Voltaire enables ADA holders to participate in decision-making, ensuring the network evolves according to community needs. This democratic approach prevents centralized control and promotes long-term alignment with user interests.
4. **Innovation funds:** A mature innovation fund that engages the community acts as an innovation engine, allowing the community to propose and fund projects. The community has a strong voice and vote ensuring that development is driven by actual ecosystem needs and fosters continuous innovation.
5. **Tokenomics for Long-Term Stability:** Capped supply of 45 billion ADA prevents inflationary pressures. Non-custodial liquid staking model encourages participation in network security without locking up funds, promoting a healthy, active ecosystem.
6. **Research in advance of the roadmap:** Very strong and future looking reserve of prep and research, allowing well thought out features to be released in the future. Cardano is not in a position of having to be reactive to unanticipated demands but rather has anticipated various aspects of future demand and designed ahead of this demand.

   An example of a realized advantage of Cardano's research rootedness is the layered

architecture with a separate computational and settlement layer, allowing for greater scalability and flexibility of protocol updates without downtime, increased security, and the hard fork combinator for seamless transition from one protocol version to another.

7. **Mature participant culture**: A culture of participants with mature business and technology experience and perspective. Contrasted with “Lambo Bro” crypto culture, for example, we have the people to think about and develop sustainable utility oriented use cases.
8. **Peer Review Research:** Cardano is built on a foundation of peer-reviewed research. The project’s developers, Input Output Global, collaborate with external academics and university partners to ensure all code and improvements to the protocol undergo rigorous peer review before deployment. The peer review research process combines insights from computer science, cryptography, economics, and mathematics to develop a secure, decentralized, and scalable ledger, while also providing accountability and error-checking mechanisms to ensure Cardano’s code and updates meet the highest standards of quality and security. As of June 2022, IOHK’s research library comprises over 200 peer-reviewed papers, many of which have been accepted at conferences such as Crypto, POPL, and EuroCrypt (need updated date/numbers).
9. **Decentralized Block Production**: Cardano stake pool operators (SPOs) are a group of ecosystem participants responsible for processing transactions and producing new blocks for Cardano’s proof-of-stake protocol. Cardano SPOs operate independently from each other within a permissionless environment, meaning anyone can participate as an SPO. The Cardano SPO network currently consists of over 3,000 stake pools actively minting blocks for Cardano across the globe, effectively contributing to the decentralized transaction processing and consensus necessary to achieve a completely censorship-resistant ledger.
10. **Reliability makes Cardano suitable for mission critical apps:** Cardano’s zero downtime over the seven years since its founding, resilience to hacking and low transaction failure rates make Cardano suitable for decentralized mission critical applications with high reliability and availability requirements.
11. **Tokens are represented as native assets**: Cardano represents tokens as native assets rather than requiring smart contracts to issue tokens, giving Cardano the advantage of 1/lower transaction costs, 2/ increased security from use of native token processing infrastructure which avoids reliance on smart contract code to interact with token information and 3/potentially regulatory advantages as smart contracts may be classified as securities.
12. **Collaboration culture:** An ecosystem with a strong sense of collaboration, where multiple entities and community members are working together to support corporate needs and find the best solutions for them within the ecosystem.
13. **Openness**: The Cardano protocol openness enables low costs for stakepool operators compared to other blockchains. With only a 500 ADA refundable deposit, it’s another strength, the costs of running a stake pool is low compared to other blockchains for registration of a stake pool and no high hardware requirements (disk space, CPU and memory). This is accompanied by a Cardano community that is welcoming in helping newcomers.

Mild Strengths

1. **Sustainability**: Being based on proof-of-stake, Cardano has better sustainability than proof-of-work blockchains. However, most blockchains, other than Bitcoin, have now switched to proof-of-stake, diminishing the relative advantage of Cardano in this area.

Weaknesses

1. **One primary public-facing Cardano evangelist:** The lack of a broad base of evangelists for Cardano results in much of the responsibility for being the public face of Cardano falling to Charles. This single point brings a) an over focus on personality and style of Charles from the insider blockchain community and b) does not create public champions in various areas, such as vertical industries, to propagate Cardano.
2. **Image of oversold features and missed deliveries:** Articulate explanations and presentations of planned Cardano features have whet blockchain communities appetite for these capabilities, but have resulted in disappointment as these features often have taken longer than expected to deliver. Examples include the ERC20 converter and Marlowe. (example or two?) This weakness is primarily restricted to the blockchain community and not more widespread. (is this correct?)
3. **High learning curve and friction developer experience:** The need to learn Haskell and Plutus poses a steep learning curve for script oriented developers used to imperative languages and unfamiliar with functional programming. Issues with DBSync stability have led to an erosion of trust by developers (overstated?). The lack of abstracted tooling for the DevOps and operational requirements require sophisticated developers in DevOps that are also skilled in Haskell, resulting in a very small and expensive labor pool to draw on.
4. **Lack of diverse economic power:** The economic engine of Cardano has traditionally revolved around the founder, IOG, and more recently Intersect, while having a comparatively low participation of institutional investors. Alignment amongst the traditional players in Cardano (IOG, Cardano Foundation, Emurgo) has also been inconsistent at times. The result has been a lack of non-Cardano funded economic forces pushing for Cardano's success.
5. **Cardano projects are not economically viable:** Cardano community contributors are not receiving economic remuneration for their efforts, leading to a flight risk away from Cardano. A possible solution is for interim mechanisms to fund via Intersect and Cardano Foundation, to bridge the gap to sustained project revenue. An effective approach in this area needs to address the lack of business experience in projects, ensuring they have a path to independent revenue.
6. **Low voter participation and untested Ada holder sentiments :** To date there has been relatively low on-chain voter participation in governance topics (e.g. 1947 of approximately 3.5 million ADA holders voted in the Interim Constitutional Committee Election). The voting sentiments of large Ada has not yet been tested and presents uncertainty.
7. **Unexercised decentralized Cardano decision making mechanisms:** As Cardano transitions to a decentralized decision making and planning model, the governance and execution mechanisms to operate in this environment will be exercised for the first time and could result in unexpected consequences.

Opportunities

1. **Develop a coordinated approach:** There is an opportunity to better coordinate the Cardano Foundation, Emurgo, and IOG to drive innovation/development of core infrastructure and activate the ecosystem to develop dapps for addressing business use cases.
2. **Establish framework for Cardano oriented integrators and development houses:** Creating a business alliance group with membership of various Cardano system integrators can create a diverse group of public Cardano champions that have the advantages of a) having expertise and deep relationship in their respective areas and vertical markets, b) being economically diverse and not being viewed as paid (and biased) mouthpieces for Cardano, c) Further developing Cardano's brand as a platform

for business solution development.
Intersect is focused on advancing its open source initiatives, which depend on collaboration, innovation, and community support. The main challenges include fostering continuous innovation, maintaining an active community, and ensuring sustainability for open source projects. To address these, Intersect has the opportunity to form strategic partnerships that can provide shared resources, expertise, and networks. Currently, there is growing interest in open source projects, with a need for sustainable development and community engagement to support long-term success.

3. **Decentralized Sales Channel:** Utilize the broad Cardano community and marketing experts by developing an incentive program for decentralized sales activity. Utilize the broad Cardano community and marketing experts by establishing a decentralized sales channel. The channel would consist of direct sales representatives responsible for driving opportunities across a decentralized sales channel. Sales channel participants would be compensated directly from the treasury revenue created from transaction volume directly generated by production activity associated with registered sales opportunities. For example, we would pay commissions on a monthly basis (net 90 terms) based on tying pre-registered sales opportunities with the actual on-chain volume created by those opportunities.
4. **YouTube Affiliates**: Bring together Cardano experts on YouTube for a coordinated effort to promote Cardano. Develop a YouTube affiliate program?
5. **Onboarding and Developer Education models:** Cardano has a significant opportunity to enhance its developer onboarding and education by creating structured, comprehensive training programs that accelerate skill development. By collaborating with industry leaders and educational institutions, Cardano can provide specialized resources, certifications, and mentorship to attract and retain top talent. Leveraging innovative technologies and platforms will further improve the onboarding experience, making it easier for developers to engage with the ecosystem. Expanding outreach efforts and forming strategic partnerships will be key to building a vibrant and long-lasting developer community, essential for Cardano's growth and success.
6. **Using regulation to elevate Cardano:** Cardano has an opportunity to create a perception as being the blockchain suitable for regulated use cases, by taking the lead in mapping out jurisdictions and regulatory restrictions in them, and create a framework for developing applications, establishing entities in favorable regions, and navigating regulatory regimes.

Threats

1. **Improper Treasury Management:**The Cardano treasury is replenished by taxing the epoch rewards regularly distributed to Ada holders and stake pool operators. An epoch's rewards are a sum of an exponentially decaying release of Ada reserves plus the transaction fees harvested as a result of network activity occurring that epoch. Sustaining epoch rewards is necessary to ensure proper incentivization of Cardano stake pool operators, and arguably necessary for, or at least contributory to, attracting stakeholders to hold Ada. Proper management of the treasury, including taking calculated risks, must be realized in order to effectively sustain the rewards revenue currently sustaining Cardano network operators. Increasing revenue from transaction fees, generated by growing transaction volumes, will be required in order to effectively subsidize diminishing rewards being distributed from the continuously depleting Ada reward reserves pool.
2. **Ecosystem talent retention:** The decrease in crypto and blockchain related revenue opportunities make blockchain oriented development less economically viable for developers, resulting in the exit rate of developers from Cardano exceeding the

replenishment rate.

3. **Wealthy/large custodial bad actors who leverage massive voting or stake power:** Mass adoption triggered by an application achieving product-market-fit will likely come in the form of a custodial solution that mitigates the technical intimidation which traditionally accompanies the crypto onboarding process. A malicious or bad acting entity that accumulates a massive amount of user-owned Ada will be able to leverage the staking power and voting power of that Ada, potentially without their users' permission. Such success in volume could lead to massive centralizations of both stake and voting power.
4. **Activist agendas:** Activist agendas with private or negative interests could derail Cardano's initiatives by promoting divisive narratives or pushing for changes that prioritize personal or ideological goals over the broader community's needs. This could lead to internal conflict, loss of community trust, and misallocation of resources. Such agendas might also interfere with strategic partnerships, slow down project development, and undermine the alignment between Cardano's mission and its open-source values, jeopardizing long-term sustainability and growth.