



FreedomMall

# Whitepaper

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## Freedom Mall Strategic Roadmap

\*This Whitepaper has no relationship with Freedom Mall (Thailand)\*

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# Introduction

The year 2021 saw compelling evidence that cryptocurrency is on the cusp of establishing itself as part of mainstream consumerism and economics. A global survey of almost 30,000 adults across 20 countries found 41% of owners purchased crypto for the first time in 2021, underlining a recent uptick in demand due to greater awareness and/or acceptance<sup>1</sup>. Moreover, the same survey found that amongst respondents who did not already own cryptocurrency, those in countries plagued by home currency devaluation against the dollar of 50% or greater over the past 10 years were approximately 5.5 times as likely to plan to purchase cryptocurrency over 2022<sup>2</sup>. Such findings together paint a landscape where crypto adoption is both becoming more widespread and with its global purchasing power being an important motivator for ownership. It takes little leap of the imagination then, to envision the potential of a global crypto-centric online marketplace. Indeed, this is the vision Freedom Mall is built upon.

This Whitepaper first discusses the optimistic outlook for the e-commerce industry at large, then highlights ways in which a crypto-centric solution is superior to conventional fiat-powered ones. Following this, key issues with present crypto-enabled solutions are identified before Freedom Mall's unique proposition is presented. An in-depth examination of Freedom Mall's business model and its tokenomics follows, and finally, allocation and expansion plans are detailed.

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<sup>1</sup>: <https://www.reuters.com/technology/nearly-half-crypto-owners-first-bought-digital-assets-2021-survey-2022-04-04/>  
<https://www.gemini.com/state-of-crypto>

<sup>2</sup>: <https://www.gemini.com/state-of-crypto>

# The Growth of Online Retail and the Cryptocurrency Opportunity

E-commerce as a global industry has grown steadily due to increased digitalization – increased familiarity with online purchase channels on the demand side and improved retail experience (including with AR/VR) on the supply side – and this growth has been accelerated by the pandemic forcing changes in consumption behaviour. For example, prior to the pandemic market intelligence resource Insider Intelligence did not forecast US e-commerce sales to reach \$1 trillion until 2024, but it now expects the threshold to be reached in 2022<sup>3</sup>, while global e-commerce sales value is expected to reach \$5 trillion globally over 2022 and \$6 trillion by 2024, at a formidable compound annual growth rate (CAGR) of 9.5%. Moreover, e-commerce is set to play an increasingly important role in general retail, with UBS forecasting that it will account for 25% of overall global retail sales by 2025, up from just under 20% over 2021<sup>4</sup>.

As noted by the International Monetary Fund (IMF) in its empirical study, accounting for other factors and reverse causality, participation in e-commerce increases firms' productivity by 13.8%, with the effect even more pronounced for Asia, where an improvement of 29.8% could be expected<sup>5</sup>. Thus, through facilitating more efficient deployments of factors of production – arguably even more so when blockchain technology and the innovations it brings are added to the equation – Freedom Mall could conceivably have an outsized positive impact on the long-term economic growth of its target region of Southeast Asia.

Ecommerce also has the socio-economic impact of alleviating institutional roots of inequality. For example, by allowing women to sell goods online, e-commerce channels allow mothers who need to stay home with their children or women who are simply unable to travel to physical markets to generate income for themselves. Various studies corroborate this notion, such as McKinsey's 2018 study which found that for Indonesia, 35% of online revenue was generated by women, vs. 15% for offline channels<sup>6</sup>.

More generally, blockchain-enabled solutions have the potential to deliver even more efficient and inclusive solutions than fiat-only channels. For a start, blockchain-based transactions typically incur much lower costs than credit card purchases. As Table 1 illustrates, the processing fee for major credit card networks could be as high as 3.5% (for American Express)<sup>7</sup>, while for PayPal the figure is even higher, at 3.49% plus a fixed fee<sup>8</sup>, whereas for EVM-compatible blockchains, including the one Freedom Mall will utilize, each transaction typically incurs a fee of less than 1 cent.

<sup>3</sup>: <https://www.insiderintelligence.com/insights/ecommerce-industry-statistics/>

<sup>4</sup>: <https://www.ubs.com/global/en/wealth-management/our-approach/marketnews/article.1548128.html#:~:text=Globally%2C%20e%2Dcommerce%20revenues%20are,overall%20retail%20sales%2C%20by%202025>

<sup>5</sup>: Each of the two effects statistically significant at 1%. <https://www.imf.org/en/Publications/WP/Issues/2019/07/01/E-commerce-as-a-Potential-New-Engine-for-Growth-in-Asia-46950#:~:text=The%20use%20of%20e%2Dcommerce,from%20exports%20than%20other%20firms>

<sup>6</sup>: <https://www.mckinsey.com/featured-insights/asia-pacific/the-digital-archipelago-how-online-commerce-is-driving-indonesias-economic-development>

<sup>7</sup>: <https://www.bankrate.com/finance/credit-cards/merchants-guide-to-credit-card-processing-fees/>

<sup>8</sup>: <https://www.paypal.com/us/webapps/mpp/merchant-fees#fixed-fees-commercialtrans>

**Table 1: Credit Card Processing Fees vs. Blockchain Transaction Fees**

Credit Card Network	Processing Fee Range
American Express	2.5 to 3.5 percent
Discover	1.56 to 2.3 percent
Mastercard	1.55 percent to 2.6 percent
Visa	1.43 percent to 2.4 percent
Freedom Mall's blockchain solution	Freedom Mall's blockchain solution

Source: 'Average cost of credit card processing fees'  
<https://www.bankrate.com/finance/credit-cards/merchants-guide-to-credit-card-processing-fees/>  
 Accessed 10:00 GMT+7, 9th May 2022.

A crypto-enabled online retail experience would allow cryptocurrency owners to access some of their incomes/wealth, and recent evidence indicates there is indeed demand for such a portal, especially one that is easily navigated. Research conducted over 2020–21 by retail solutions and payment processing firm Cantaloupe of US adults on the Census database found that 67% of those who own cryptocurrency would use it for payment if it were linked to a mobile wallet, with an additional 19% specifying that they would 'maybe' use it if doing so were easy, or potentially 24% of the US adult population<sup>9</sup>.

To the extent demand for crypto-enabled retail platforms is driven by a desire to monetize one's income, this demand would likely increase over the short-medium term. In its October 2021 study, payments company Paysafe surveyed over 2,000 cryptocurrency owners across the UK and US and found that, of those who did not work primarily in cryptocurrency, 55% would like to be paid their main salary in cryptocurrency<sup>10</sup>, with the propensity to prefer this form of payment varying inversely with age (e.g., 60% for those 18–24 years of age, vs. 38% for those in the 55–64 bracket). Thus, as employers become increasingly adept at navigating the accounting and tax implications of crypto-denominated payrolls, and as today's youths enter the workforce, one could expect the average proportion of crypto-denominated income – and the corollary demand for crypto-enabled retail purchases – to increase.

Freedom Mall would also likely be catering to considerable interest on the retailers' side. A December 2021 Visa survey of 2,250 small businesses across nine markets found that 73% of them felt that accepting new forms of digital payments is fundamental to their growth over 2022<sup>11</sup> with 24% planning to start accepting cryptocurrencies<sup>12</sup>. Furthermore, there is evidence that accepting crypto payments allows to a retailer to broaden its appeal. For example, in its February 2022 survey of 3,000 online businesses global payments provider Checkout.com found that 82% of merchants whose customers paid with cryptocurrency stated that accepting the form of payment attracted customers from new segments<sup>13</sup>.

<sup>9</sup> : <https://mms.businesswire.com/media/20220104005011/en/935870/1/Cantaloupe-Unattended-Retail-Report-by-CITE-Research.pdf?download=1>

<sup>10</sup> : [https://www.paysafe.com/fileadmin/user\\_upload/Paysafe\\_White\\_Paper\\_-\\_Inside\\_the\\_crypto\\_community.pdf](https://www.paysafe.com/fileadmin/user_upload/Paysafe_White_Paper_-_Inside_the_crypto_community.pdf)

<sup>11</sup> : <https://usa.visa.com/dam/VCOM/blogs/visa-back-to-business-study-2022-outlook-jan22.pdf>

<sup>12</sup> : <https://usa.visa.com/about-visa/newsroom/press-releases.releaseId18711.html>





















<sup>13</sup> : <https://www.checkout.com/campaigns/demystifying-crypto>

# What are the Problems with the Current Blockchain-Enabled Solution?

## Limited Cryptocurrency Acceptance Amongst the Largest Online Retailers

As Table 2 illustrates, amongst the top 10 e-commerce companies, Japanese retailer Rakuten is the only one which accepts cryptocurrency payments, having done so since March 2015<sup>14</sup>. This in part reflects the Chinese makeup of the list – four of 10 largest e-commerce companies by revenue are based in the People's Republic of China where cryptocurrency is banned outright<sup>15</sup>. However, even those in more permissive jurisdictions such as Hamburg-based Otto Group have yet to allow crypto payments. Additionally, Rakuten presently only accepts Bitcoin (BTC), Ether (ETH) and Bitcoin Cash (BCH) for topping up its mobile wallet Rakuten Cash<sup>16</sup>, and for a maximum cumulative monthly total of 100,000 yen (\$766/month).

**Table 2: Largest E-commerce Operators Globally**

Rank	Name	2020 Revenue (\$bn)	Visits per Month (mn)	Accepts Crypto Payment	Metaverse/NFT Store
1	Amazon	386	5,200		
2	Jingdong (JD)	114	179		
3	Alibaba	71	534		
4	Suning	38	660		
5	Meituan	18	667		
6	Wayfair	14	179		
7	Otto Group	14	55		
8	Rakuten	13	544		
9	eBay	10	1,700		
10	Zalando	7	1,300		

Source : A Comprehensive Guide to the World's Top 50 Ecommerce Companies'

<https://influencemarketinghub.com/top-ecommerce-companies/>

Accessed 11:00 GMT+7, May 9th 2022. Company-specific annual reports for latest revenue figures and cross-checking.

<sup>14</sup> : [https://global.rakuten.com/corp/news/press/2015/0317\\_01.html](https://global.rakuten.com/corp/news/press/2015/0317_01.html)

<sup>15</sup> : <https://fortune.com/2022/01/04/crypto-banned-china-other-countries/>

<sup>16</sup> : [https://global.rakuten.com/corp/news/press/2021/0224\\_Q3.html#:~:text=and%20crypto%20asset%20\(virtual%20currency,and%20other%20crypto%20assets\\*2](https://global.rakuten.com/corp/news/press/2021/0224_Q3.html#:~:text=and%20crypto%20asset%20(virtual%20currency,and%20other%20crypto%20assets*2)

In addition to Rakuten, two prominent retailers noted for their crypto acceptance are American firms Newegg and Overstock, but neither of these are generalist stores, specialising in electronics and furniture, respectively. Moreover, Newegg and Overstock both require the users wishing to pay with cryptocurrencies to complete their transactions externally (via any wallet for Newegg and primarily through Coinbase for Overstock).

One could identify a myriad of factors, from the obvious balance sheet implications – both in terms of additional exchange rate risk to tax complications – to the less obvious but equally valid concern that such acceptance by a highly visible company would invariably be interpreted as a statement of support for cryptocurrencies at large, are at play. The consequence for the consumer is unambiguous however, in the form of less payment options for those on such platforms and limited accessibility to good and services for those who wish to pay with crypto.

## Lack of Streamlined Retail Experience on Major Cryptocurrency Platforms

On the other hand, some cryptocurrency platforms having started offering their customers retail portals through which said customers could pay for goods and services with crypto. Two prominent examples are Binance and Coinbase, with the former's offering being considerably more formidable. Presently, Binance Pay supports payment in over 40 cryptocurrencies via a mobile wallet app with Binance Visa Card integration<sup>21</sup>, while Coinbase Commerce supports only seven<sup>22</sup> – BTC, BCH and ETH, as well as DAI, Dogecoin, Litecoin and USD Coin – and requires non-Coinbase customers to transfer crypto payments through external channels<sup>23</sup>. Freedom Wallet, through its partnership with Bitazza Global, will be able to facilitate direct integration with various wallets across many exchanges.

Moreover, customers using Coinbase Commerce would have to contact the merchant directly for any refunds and/or in the case of missing items<sup>24</sup>. Such additional complications would likely dissuade a potential customer who would otherwise be open to crypto payments from using a platform. For example, in Deloitte's 2020 survey of 1,004 consumers in South Africa, 88% of respondents cited an effective checkout process as a factor in choosing an online store – the highest percentage amongst the factors listed. Almost as important was customer service, cited as an influencing factor for 86% of the respondents<sup>25</sup>.

<sup>18</sup> : <https://promotions.newegg.com/nepro/16-6277/index.html>

<sup>19</sup> : <https://help.overstock.com/help/s/article/Bitcoin>

<sup>20</sup> : This was the argument which drove Wikipedia's editors to vote against the website continuing to accept cryptocurrency donations: <https://www.wired.com/story/wikipedia-crypto-donations/>

<sup>21</sup> : <https://pay.binance.com/en>

<sup>22</sup> : <https://finance.yahoo.com/news/now-pay-dogecoin-coinbase-commerce-192800568.html>

<sup>23</sup> : Until the October 16th 2019 update, even those with Coinbase accounts had to manually transfer their cryptocurrencies to merchants. Presently, only those without Coinbase accounts need to do so. <https://help.coinbase.com/en/commerce/getting-started/for-customers>; <https://blog.coinbase.com/pay-coinbase-commerce-merchants-directly-with-your-coinbase-account-db9ed0772lea>

<sup>24</sup> : <https://help.coinbase.com/en/commerce/getting-started/for-customers>

<sup>25</sup> : <https://www2.deloitte.com/content/dam/Deloitte/za/Documents/strategy/za-Deloitte-Digital-Commerce-SA-Consumer-Key-Themes-Report.pdf>



There exists then, room for a crypto-enabled retail platform which provides the seamless convenience of mainstream online retailers while accommodating payments through a wide-ranging set of crypto assets.

## High Barrier to Entry for Small Operators

While large operators seem to lack the operational agility to quickly capitalize on the crypto retail opportunity, small operators who would otherwise seize said opportunity are faced with several formidable barriers to entry, not least the often prohibitively high costs of setting up the requisite infrastructure – be it for physical infrastructure, such as a logistics network, or a digital one, such as an online payment solution. Of course, incorporating blockchain technology would increase the latter expense yet further. Even once the platform is up and running, attracting and retaining customers for the platform during its initial phase presents a crucial challenge. As noted in studies of multi-sided platforms<sup>26</sup>, there exists the ‘chicken and egg’ problem whereby sellers are attracted to a market with lots of buyers, and vice versa for buyers, such that at its inception – without many buyers or sellers – a platform faces the difficulty of attracting users given the lack of historically demonstrable utility<sup>27</sup>.

<sup>26</sup> : Multisided platforms (MSPs) are platforms which enable direct interactions between two or more mutually dependent group of users (e.g., buyers and sellers). Airbnb (owners and renters), eBay and Rakuten (buyers and sellers) are prominent examples. <https://sloanreview.mit.edu/article/strategic-decisions-for-multisided-platforms/>

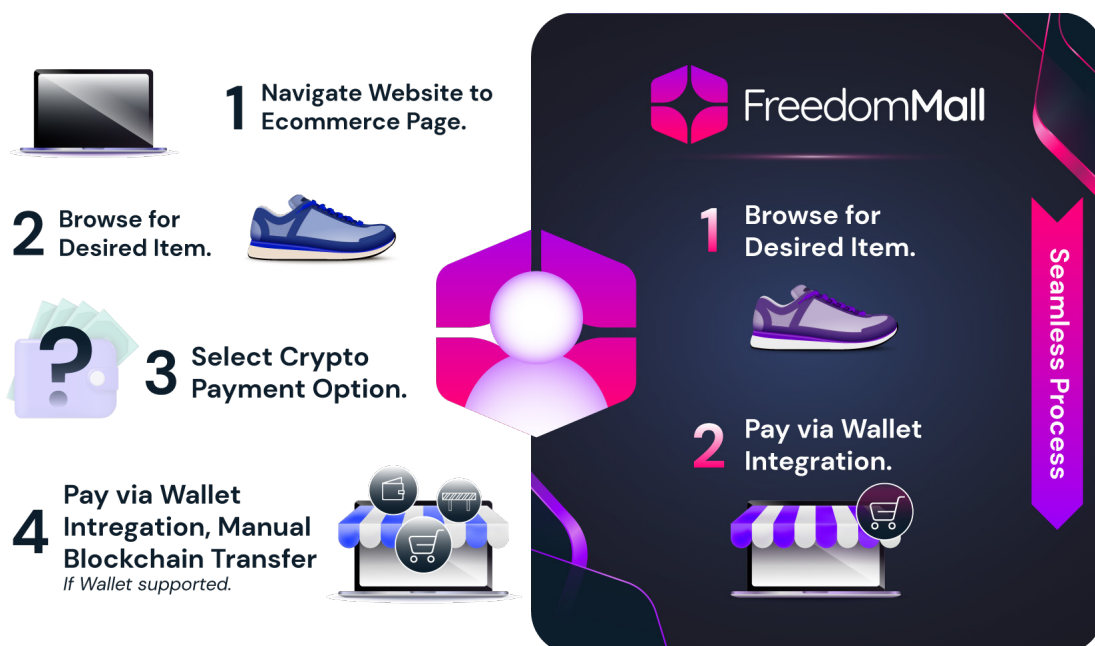
<sup>27</sup> : <https://link.springer.com/article/10.1007/s12525-020-00412-9>; <https://www.rchss.sinica.edu.tw/cibs/pdf/CaillaudJullien.pdf>

# What Unique Solutions does Freedom Mall Offer?

## A Streamlined Retail Experience

Freedom Mall has been built from the ground up to afford users a convenient and comprehensive retail experience unlike present crypto-enabled retail options available on the largest cryptocurrency platforms such as Binance and Coinbase. The UI and UX mirror those of the largest online retailers whereby (as Diagram 1 illustrates), the customer can browse and checkout in two steps vs. four or more buying goods/services on Binance/ Coinbase necessitates. Moreover, a dedicated crypto-literate customer service team to facilitate customer onboarding, transaction processing, as well as refunds/returns would distinguish our offering in the minds of customers who, as the aforementioned survey showed, care deeply about such issues.

**Diagram 1: A More Seamless Customer Journey with Freedom Mall**



Additionally, through our partnership with leading Southeast Asian logistics operator N-Squared, with over seven years of experience serving 521 clients across six countries in the region<sup>28</sup>, Freedom Mall can ensure that its goods delivery and return processes are both well- executed and cost-efficient relative to competitors in the e-commerce space. Global information technology (IT) consulting and service firm Atos estimates

<sup>28</sup> : <https://nsquared.asia/about-us/>

that last-mile delivery incurs 40– 55% of total supply chain cost, while also noting that two major pain points for customers (each issue cited by 34% of 2,500 respondents) are costly shipping and delayed deliveries<sup>29</sup>. As well as its experience, N-Squared's large customer base allows it to spread the cost of last-mile delivery across orders, in turn affording Freedom Mall lower average cost/delivery.

## Utility Token to Boost Early Adoption

As noted in a recent academic study<sup>30</sup>, platform-issued utility tokens could provide an incentive for early adoption of an MSP in its growth stage, through the prospect of financial reward as a token airdropped to early adopters appreciates in price. Indeed, the opportunity for Freedom Mall is amplified further by the absence of a well-designed token issued by the large incumbents currently operating in the crypto-enabled retail space.

Newegg's plan to launch its own token, the EggCoin<sup>31</sup>, was revealed to be an April Fools' joke<sup>32</sup>, while Rakuten's initiative to develop its own token appears to have been abandoned, with a little tangible update since February 2018, when Rakuten's founder Hiroshi Mikitani first discussed plans to develop the Rakuten Coin in his speech at Mobile World Congress.

As for Overstock, its airdrop of 4.37 million OSTKO security tokens on May 19th 2020 to all Overstock shareholders on a 1:10 basis<sup>34</sup> could not be likened to a comprehensive token launch, as the tokens afforded holders no utility beyond their value as digitally-issued dividends. Moreover, the fact they can only be traded on Overstock's tZERO exchange<sup>35</sup> considerably limits their liquidity. Through issuing a token with tangible, wide-ranging utility, coupled with a carefully considered long-term supply management strategy, Freedom Mall will be able to create a competitive advantage over the incumbent crypto-enabled retail platforms.

<sup>29</sup> : <https://atos.net/wp-content/uploads/2021/09/LMD-Here-Survey.pdf>

<sup>30</sup> : <https://link.springer.com/article/10.1007/s12525-020-00412-9>

<sup>31</sup> : <https://www.newegg.com/insider/introducing-eggcoin-the-worlds-first-egg-based-cryptocurrency/>; <https://www.ccn.com/newegg-makes-cryp-to-omelette-eggcoin/>

<sup>32</sup> : <https://www.ccn.com/newegg-makes-crypto-omelette-eggcoin/>

<sup>33</sup> : <https://techcrunch.com/2018/02/27/rakuten-will-roll-its-9b-loyalty-program-into-a-new-blockchain-based-cryptocurrency-rakuten-coin/>

<sup>34</sup> : <https://cointelegraph.com/news/overstock-airdrops-437m-security-tokens-to-shareholders>

<sup>35</sup> : <https://www.forbes.com/sites/robertanzalone/2020/05/20/overstock-pays-ostko-over-4-million-shares-now-trading/?sh=3ef6e1c2248b>

# How Freedom Mall would Function

Freedom Mall will launch as a business-to-consumer (B2C) online marketplace with a user-friendly UI, showcasing a wide array of durable consumer goods (clothing, electronics, etc.) through reputable third-party retailers and official distributors.

Payment settlement will occur via an on-site checkout page, where customers could link their crypto-enabled card and/or mobile wallet (e.g., Freedom Card and/or Freedom Wallet) for a convenient and seamless checkout experience. On the backend, Freedom Mall's partnership with Bitazza Global facilitates near-instantaneous conversion through the latter's platform and worldwide access to liquidity pools, mitigating balance sheet risk for Freedom Mall, all the whilst affording Freedom Mall customers the option to pay in any of the 60-plus cryptocurrencies supported by Bitazza Global<sup>36</sup>.

Retailers wishing to gain some exposure to cryptocurrency would have the option to keep their receipts in the form of cryptocurrencies through Bitazza Global's custodial service, though this service would initially only be available for BTC, ETH and select fiat-collateralized stablecoins such as USD Coin (USDC), Freedom Dollar (USDF). This is to limit the volatility experienced by our retail partners, especially those who are small and medium-size enterprises (SMEs), as they become more acquainted with and adept at managing exposure to cryptocurrencies. Additionally, this restriction would appear to accommodate the preferences of retailers anyhow. In the aforementioned February 2022 Checkout.com survey of 3,000 online businesses – mostly comprising of B2C marketplaces (50% of sample) and D2C e-commerce businesses (26% of sample) – 36% of CFOs and treasurers surveyed specified that they would like to settle payment in stablecoins, vs. only 5% for non-pegged cryptocurrencies<sup>37</sup>.

Allowing payments in many denominations rather than having FDM as the exclusive method of payment also circumvents the issue of offsetting incentives noted in a recent academic study, whereby expected long-term appreciation for a MSP's token could dissuade would-be buyers from spending it today, thus hurting the platform's growth<sup>38</sup>.

<sup>36</sup> : <https://trade.bitazza.com/gl/exchange>

<sup>37</sup> : <https://www.checkout.com/campaigns/demystifying-crypto>

<sup>38</sup> : <https://link.springer.com/article/10.1007/s12525-020-00412-9>

## About the FDM Token

The Freedom Mall (FDM) token will be an ERC-20 token offering utility for users of the Freedom Mall platform, issued by the Freedom Mall corporation. With the merge between Ethereum Mainnet and the Proof-of-Stake Beacon Chain slated to happen in the third quarter of 2022<sup>39</sup>, transactions conducted with FDM should soon benefit from a more energy-efficient validation system, but the management of Freedom Mall has also accounted for alternative contingencies and explored a partnership with an established provider of Delegated Proof-of-Stake (DPoS) blockchain solutions.

Regarding its utility, customers of the Freedom Mall who are holders of the FDM token will receive purchase discounts, privileged access to in-demand and limited-edition goods/services (e.g., concert tickets, PlayStation 5), as well as rebates, subject to the quantity of FDM staked. Customers who stake enough FDM to qualify for higher tiers of utility would be afforded further privileges to elevate their shopping experience yet further, such as limited free delivery service, and for the highest tier, access to an online personal shopper.

On the merchant side, staking a set minimum amount of FDM (currently 50,000 FDM) qualifies a vendor to fees discounts, and to have their banner displayed on the main page. Merchants who stake sufficiently large amounts of FDM to qualify for level 2 or 3 privileges would be afforded live shopping slots and allocated virtual retail spaces in the Freedom Mall metaverse.

Live shopping has been widely recognised as an increasingly important segment of retail. Retail TouchPoints, a publishing network for retail executives, noted recently that the livestreaming e-commerce sector in the US is expected to growth 1.9% from USD11bn to USD17bn over 2021-22, and accelerate thereafter, with annual growth rates for 2022 and 2023 expected to be 2.7% and 3.3%, respectively<sup>41</sup>. In China, the figure is even more formidable, with McKinsey noting that between 2017-2020 live commerce in the country grew at a CAGR of 280%, from USD3bn to USD171bn, with the figure expected to reach USD423bn by 2022<sup>41</sup>. Perhaps most relevantly for our partners, as McKinsey notes in its live commerce report, companies reported conversion rates of approximately 30% for live commerce – up to 10x higher than for conventional e-commerce<sup>42</sup>. Facilitating access to this lucrative sales channel is one of many ways Freedom Mall seeks to reward the most invested holders of FDM.

<sup>39</sup> : <https://time.com/nextadvisor/investing/cryptocurrency/ethereum-merge-what-to-know/>

<sup>40</sup> : For voting, staking is required to ensure votes are weighed proportionately to each voter's current holding.

<sup>41</sup> : <https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/its-showtime-how-live-commerce-is-transforming-the-shopping-experience>

<sup>42</sup> : <https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/its-showtime-how-live-commerce-is-transforming-the-shopping-experience>

Similarly, virtual shopping experiences have been demonstrated to markedly improve a brand's conversion rate, boosting it by 70% by some account<sup>43</sup>. More so than boosting conversion rates however, the metaverse represents an entirely new channel through which retailers could interact with and serve customers.

In its detailed June 2022 report on the metaverse, McKinsey notes that of all the potential drivers of economic value tied to metaverse, e-commerce is by far the most lucrative, with an estimated USD2-2.6 trillion impact by 2030<sup>44</sup>. Such commercial potential has in turn, resulted in virtual real estate being traded for considerable real world sums. For example, in November 2021, cryptocurrency investment company Tokens.com paid roughly USD2.4mn for a plot earmarked for fashion retail ventures within metaverse project Decentraland<sup>45</sup>. As well as the direct impact on a company's revenue, establishing a metaverse presence would enhance the brand image for a retailer, presenting them as being at the forefront of retail alongside blue chip names such as Adidas, Burberry, Gucci, etc<sup>46</sup>. There is however, an element of first-mover advantage. As noted by DappRadar in its valuation report on virtual plots (LANDs) within The Sandbox's metaverse project, a plot's location is a central driver of price, with plots next to Snoopverse, a large estate owned by celebrity entertainer Snoop Dogg commanding huge premiums. As such, the earliest supporters of Freedom Mall are rewarded with the opportunity to select premium plots before retailers who belatedly qualify for tier 3 benefits.

Lastly, all holders, irrespective of whether their holdings are staked, would each receive a share of the transaction fees revenue accrued to Freedom Mall's marketplace, as well as the ability to vote on significant issues such as product listings and partnership decisions<sup>48</sup>. Following the launch of our NFT store, holders would be able to secure whitelisting for highly coveted projects through staking set amounts of FDM tokens.

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<sup>43</sup> : <https://venturebeat.com/2022/06/05/metaverse-shopping-retailers-new-reality/>

<sup>44</sup> : <https://www.mckinsey.com/-/media/mckinsey/business%20functions/marketing%20and%20sales/our%20insights/value%20creation%20in%20the%20metaverse/Value-creation-in-the-metaverse.pdf>

<sup>45</sup> : <https://www.bbc.com/news/business-61979150> The 116 parcels in Decentraland's Fashion Street district were purchased for 618,000 MANA, see: <https://www.businesswire.com/news/home/20211123005825/en/Tokens.com%E2%80%99s-Subsidiary-Closes-the-Largest-Metaverse-Land-Acquisition-in-History>

<sup>46</sup> : <https://www.bbc.com/news/business-61979150>

<sup>47</sup> : <https://dappradar.com/blog/the-sandbox-land-valuation-report>

<sup>48</sup> : For voting, staking is required to ensure votes are weighed proportionately to each voter's current holding.



## Diagram 2: FDM Token Features



A key challenge in establishing and nurturing an online marketplace is ensuring adoption, and while Freedom Mall and its logistics partner N-Squared have long-standing relationships with numerous established retailers the former will be able to capitalise upon, on the demand-side, the FDM token is expected to play a crucial role in encouraging early-stage adoption, by rewarding those who support the platform during its growth stage. We ensure this by incorporating some well-considered tokenomics for FDM.

## Performance-Based Buyback-and-Burn

Once touted as a clever mechanism to bolster a token's price, the buyback-and-burn model has justifiably come under scrutiny of late, that while it improves participation ratios amongst current token holders, to the extent tokens burnt could have been deployed as productive capital (e.g., to encourage layer-2 development, boost adoption in new markets), token burns inhibit a platform's growth, and could ultimately hamper the long-term value of the platform and its utility token<sup>49</sup>.

Even in mainstream finance we see that the analogous mechanism of share buybacks sometimes has the opposite effect from intended, instead adversely affecting a security's price<sup>50</sup>, not least because this could signal that management sees limited good investment opportunities ahead<sup>51</sup>.

Nonetheless, there are circumstances in which share buybacks, and by extension, buyback-and-burn models, could be appropriate. One such circumstance is when the token is not needed to build out the ecosystem in the long-run and the issuer wishes to reward early adopters. This is indeed the case for Freedom Mall, as the online marketplace/MSP business model neither necessitates expensive research and development (R&D) nor continued adoption incentivization once the platform has attracted substantial numbers of buyers and sellers.

<sup>49</sup> : <https://www.placeholder.vc/blog/2020/9/17/stop-burning-tokens-buyback-and-make-instead>

<sup>50</sup> : <https://www.investopedia.com/tech/cryptocurrency-burning-can-it-manage-inflation/#:~:text=22Burning%22%20a%20cryptocurrency%20refers%20to,decreases%20the%20number%20in%20circulation>

<sup>51</sup> : <https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/the-value-of-share-buybacks>

In the context of general finance, buybacks are often considered acceptable when a stock is undervalued at current market prices, indeed, this is a strategy famed value investor Warren Buffet is known to operate under with regard to his publicly traded investment company Berkshire Hathaway<sup>52</sup>. Further corroborative evidence is found in a 2018 paper published in the Journal of Financial and Quantitative Analysis, which utilized a sample of over 9,000 buyback announcements across 31 countries to find statistically significant evidence that share repurchases are associated with positive short-term and long-term excess returns<sup>53</sup>. Furthermore, the study found that value stocks with smaller market capitalization and poorer performance leading up to the buyback announcements experienced higher long-run price appreciations, all else being equal<sup>54</sup>. All this suggests that in environments where a stock or token is likely undervalued by the market, a buyback strategy is a powerful tool to redistribute future value to those most deserving, i.e., the early adopters who stuck by the platform.

To the extent using buyback to distract from poor growth (or future growth outlook) is anathema for investors, and that stocks which are fundamentally undervalued would benefit most from management's signalling of confidence via buyback schemes, a token's buyback-and-burn mechanism would benefit from incorporating performance measures for the platform which issued it. This is the approach we adopt for the FDM token – specifically, token burns may only occur following at least two consecutive quarters of increased sales revenue on the Freedom Mall platform, using a fixed percentage of its net income to conduct the buyback. Additional criteria will be specified and published by Freedom Mall's management, but generally, buybacks would only be carried out following improvements in key quantitative metrics (e.g., merchant/retailer registrations), per Diagram 3 below.

Continued strong performance leading up to a buyback should provide some reassurance to holders and would-be buyers of the FDM token that said buyback amounts to more than smoke and mirrors, and constitutes both a signal of the management's confidence in the platform's future prospects as well as an earnest attempt to reward early adopters.

Our strategy is in line with what we observe with well-received buyback schemes, a prominent example being Berkshire Hathaway. Through the year 2021, the investment management behemoth saw its quarterly results grow YoY through every quarter<sup>55</sup> and steadily executed stock buybacks, repurchasing a record total \$27 billion of its own shares for the year<sup>56</sup>. Since the start of 2022, its shares have outperformed (5.25% YTD for its class A shares vs. -13.37% YTD for the S&P 500, as of 2nd May 2022). Moreover, its class A shares achieved an all-time high of \$504,400 – the first time it closed over half a million dollars – on March 16th 2022<sup>57</sup>.

<sup>52</sup> : <https://www.investopedia.com/articles/financial-advisors/121415/stock-buybacks-good-thing-or-not.asp>

<sup>53</sup> : [https://www.researchgate.net/publication/327654473\\_Are\\_Buybacks\\_Good\\_for\\_Long-Term\\_Shareholder\\_Value\\_Evidence\\_from\\_Buybacks\\_around\\_the\\_World](https://www.researchgate.net/publication/327654473_Are_Buybacks_Good_for_Long-Term_Shareholder_Value_Evidence_from_Buybacks_around_the_World)

<sup>54</sup> : [https://www.researchgate.net/publication/327654473\\_Are\\_Buybacks\\_Good\\_for\\_Long-Term\\_Shareholder\\_Value\\_Evidence\\_from\\_Buybacks\\_around\\_the\\_World](https://www.researchgate.net/publication/327654473_Are_Buybacks_Good_for_Long-Term_Shareholder_Value_Evidence_from_Buybacks_around_the_World)

<sup>55</sup> : <https://www.berkshirehathaway.com/2021ar/2021ar.pdf>

<sup>56</sup> : <https://www.reuters.com/business/buffetts-berkshire-posts-record-annual-profit-extends-slows-buybacks-2022-02-26/>

<sup>57</sup> : <https://www.cnbc.com/2022/03/16/berkshire-hathaway-closes-at-a-record-above-500000-a-share-as-buffetts-conglomerate-roads-back.html>



Utilizing a fixed percentage of platform revenue for conditional buybacks facilitates better cash flow management, and has the intuitively appealing benefit of ensuring more tokens are bought, all else being equal, when they are trading lower and are therefore likelier to be undervalued. Similar strategies have been adopted by some exchanges whose tokens have performed reasonably well. For example, WOO Network, where 50% of revenue generated across its services is used for monthly buyback-and-burn through the secondary market<sup>58</sup>, has seen its WOO token appreciate markedly from its October 2020 ICO price of \$0.03<sup>59</sup> to trade at \$0.3499 as of 3rd May 2022, representing an 1,066% increase.<sup>60</sup> A crucial difference in Freedom Mall's strategy however, is the added consideration of platform/network performance, such that following periods where growth stagnated, more revenue could be devoted to customer acquisition and incentivizing partnerships.

We also eschew auto-burn rules, lest they lead to unintended side-effects. A prominent example of this is Binance switching the quarterly burns of its BNB token to an automated process in December 2021<sup>61</sup>. As can be readily seen in the footnote below<sup>62</sup>, the formula utilized could very well exacerbate price swings. As Freedom Mall's buyback strategy aims to transcend beyond mere price manipulation and represents a continuous effort to direct the market attention to what we would believe the intrinsic value of the token to be, it must not focus exclusively on price, but also take performance measures under its consideration.

### Diagram 3: Performance-Based Buyback-and-Burn



<sup>58</sup> : <https://learn.woo.org/token/woo-token-utilities>

<sup>59</sup> : <https://icodrops.com/wootrade/>

<sup>60</sup> : <https://coinmarketcap.com/currencies/wootrade/>

<sup>61</sup> : <https://www.binance.com/en/blog/ecosystem/introducing-bnb-autoburn-a-new-protocol-for-the-quarterly-bnb-burn-421499824684903205>

<sup>62</sup> : The formula employed by Binance is  $B = (N * 1000) / (P + K)$  where B is the amount of BNB to burn, N the total number of blocks produced on BSC during the quarter, P a median price of BNB against the USD and K a constant set through community voting. Following a quarter where prices have generally been low but recently spiked, the median price would be much lower than the current price. A low P, given all else, means more BNB would be bought and burned, exacerbating the upswing.

# Roles in the FDM Token Economy

## FDM Stakers

To help ensure price stability over the short-medium term, Freedom Mall will introduce a staking programme by 2Q23, for holders to stake their FDM tokens for 30/60/90-day periods, in exchange for FDM-denominated interest payments. The scheme will last at least four years, with total interest payments constituting no more than 30% of the overall Ecosystem & Community Growth allocation. Moreover, under conservative assumptions (e.g., 50% staking rate, all at the highest yielding 90-day period) the scheme is expected to provide market-competitive yields<sup>63</sup> through its duration and only conclude after the Freedom Mall platform has sufficiently grown to the point where other benefits such as marketplace revenue participation are independently sufficient to strongly incentivize holding FDM.

It is important to note that beyond its initial phase, the continuation of the staking model does not necessitate the continued depletion of FDM supply. We could eventually switch to paying out exogenous rewards, e.g., in BTC/ETH, subject to the platform generating sufficient revenue. Indeed, such schemes have the benefit of affording stakers better risk-diversification (as holders are paid in a different asset) and allowing the FDM utility token better prospect for price appreciation (with less sell pressure from rewards payouts)<sup>64</sup>.

## Freedom Mall Governance Participants

The management and expansion of Freedom Mall would be at the direction of the company's executives and relevant management, but specific decisions regarding listings of new products, partnerships/sponsorships would be open to community-led proposals and votes through a DAO-like structure, with voting rights verified and voting power allocated through temporarily staking one's FDM token holdings on the voting portal.

<sup>63</sup> : <https://www.stakingrewards.com/cryptoassets/>

<sup>64</sup> : <https://medium.com/fitzner-blockchain-consulting/staking-models-for-productive-assets-20f9051d286b>


# Allocation of FDM

The planned allocation for FDM is as shown in Diagram 4 below, with 50% being allocated for global expansion, which include community building and ecosystem incentives across all the Southeast Asian markets being targeted, as well as a reserve amount (25% of suballocation) for additional potential markets. That this latter amount is relatively small accounts for the fact that additional expansion would only occur after Freedom Mall has successfully established a credible presence across Southeast Asia, and thus both the credibility of the Freedom Mall brand and higher FDM price established should allow us to utilize smaller amounts of FDM tokens to incentivize participants in those new markets.

**Diagram 4: FDM Token Allocation**

FDM Allocation (5 billion FDM)		
	Category Allocation (%)	FDM Token Allocated
Angel investors	25%	1,250,000,000
Global Expansion	50%	2,500,000,000
Management, employees, contributors, advisors.	20%	1,000,000,000
Metaverse & white label merchandising	5%	250,000,000
<b>Total</b>	<b>100%</b>	<b>5,000,000,000</b>

Global expansion committee (FDM CEO, CSO, etc.) finalizes list of countries and country-specific FDM allocations.



FDM Global Expansion Allocation		
	Global Expansion Allocation (%)	FDM Token Allocated
Indonesia	15%	375,000,000
Malaysia	15%	375,000,000
Philippines	15%	375,000,000
Thailand	15%	375,000,000
Vietnam	15%	375,000,000
Remaining	25%	625,000,000
<b>Total</b>	<b>100%</b>	<b>2,500,000,000</b>

FDM Global Expansion Allocation		
Ecosystem & CG	70%	262,500,000
Partners & BD	30%	112,500,000
<b>Total</b>	<b>100%</b>	<b>375,000,000</b>

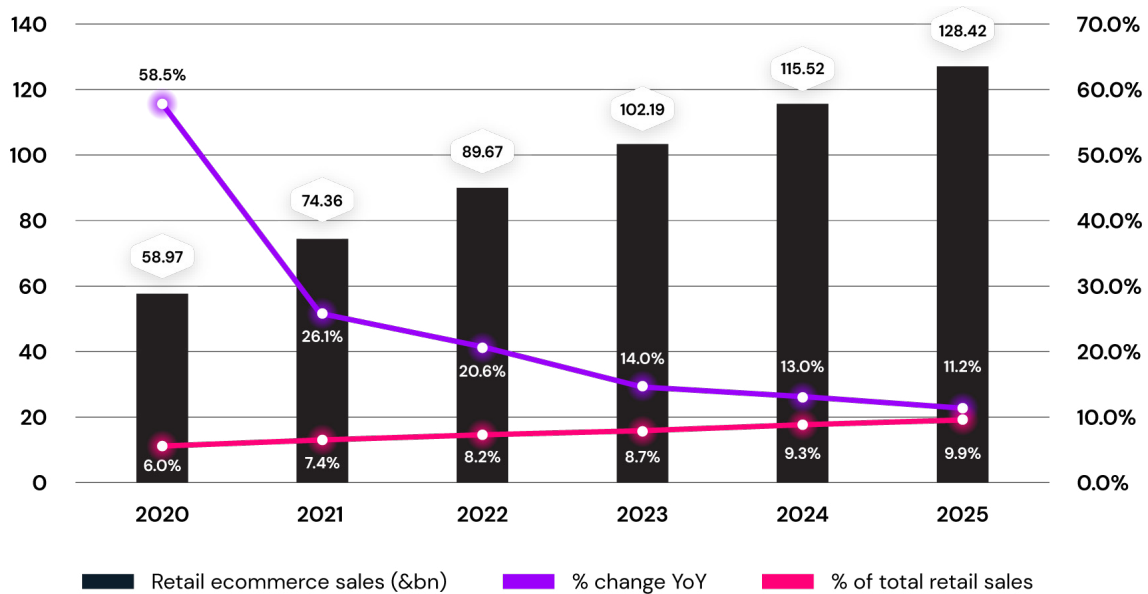
\*Tentative allocation, subject to change.

# Expansion Plan

## Southeast Asian Focus

From the initial launch in Thailand, Freedom Mall plans to expand across Southeast Asia. This would allow the platform to capitalize on both N-Squared's distribution network and on the rapid growth in e-commerce forecasted for the region. According to market intelligence firm eMarketer, Southeast Asia is expected to see its retail e-commerce sales increase 20.6% YoY over 2022 (Chart 1), the highest rate of growth amongst all regions in the world<sup>65</sup>. Additionally, in eMarketer's January 2022 forecast for countries' retail e-commerce sales growths, five of the top 10 countries identified were in Southeast Asia (Chart 2).

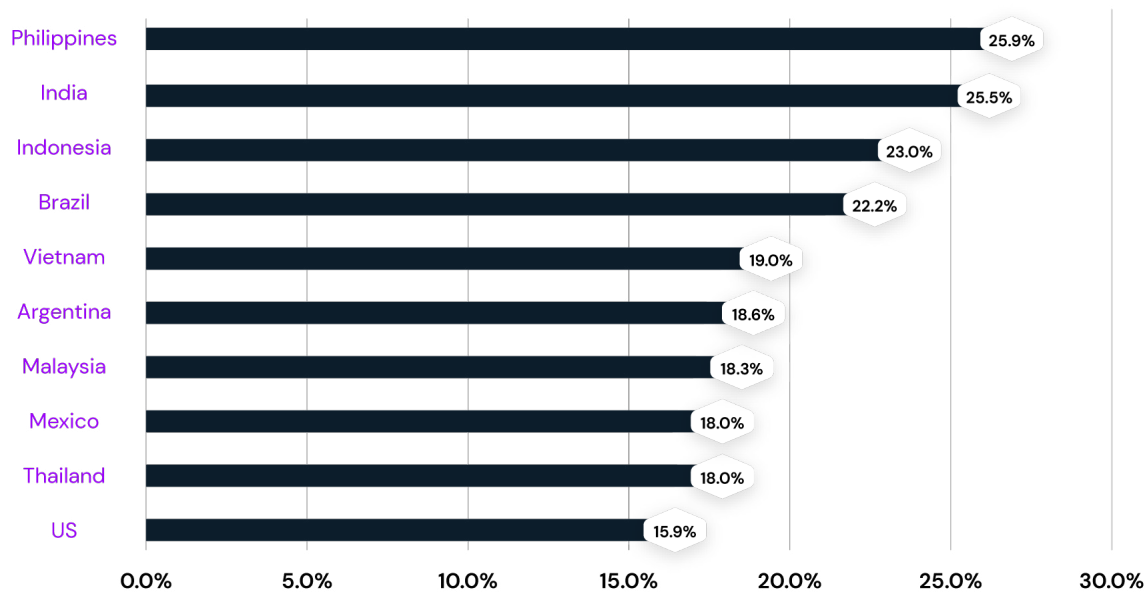
**Chart 1: Growth of E-commerce Across SEA**



Source: Southeast Asia sees the fastest digital sales growth in the world  
<http://www.emarketer.com/content/southeast-asia-sees-fastest-digital-sales-growth-world>

<sup>65</sup> : <https://www.emarketer.com/content/southeast-asia-sees-fastest-digital-sales-growth-world>

**Chart 2: Top 10 Countries by Projected 2022 Retail Ecommerce Sales Growth**



Source: "Southeast Asia sees the fastest digital sales growth in the world". <https://www.emarketer.com/content/southeast-asia-sees-fastest-digital-sales-growth-world>

Southeast Asia also exhibits greater readiness to embrace cryptocurrencies relative to the rest of the world. As Table 3 illustrates, all five Southeast Asian economies highlighted place relatively highly on the Crypto Adoption Index (CAI) ranking of 154 countries. Furthermore, Vietnam, Philippines and Thailand place particularly highly on the subcategory of on-chain retail value received. This metric weights the value of transactions conducted by non-professional, individual cryptocurrency users by the purchasing power parity (PPP) per capita, of the country, and provides some indication of the propensity of each country's population to conduct transactions in cryptocurrency in a personal capacity<sup>66</sup>. Thus, high rankings for the region suggest that, all else being equal, it would be easier to entice consumers in the region to engage in crypto-enabled ecommerce. Similarly, the percentage of internet users aged 16–64 that owns cryptocurrency is higher for each of the countries than the global average (10.2%).

**Table 3: Southeast Asian Countries and the Crypto Adoption Index (CAI)**

Country	CAI Score	CAI Rank	Retail Value Rank*	P2P Rank**	Owns Crypto***
Indonesia	0.10	25	14	111	16.4%
Malaysia	0.10	23	33	28	13.2%
Philippines	0.16	15	9	80	19.4%
Thailand	0.17	12	11	76	20.1%
Vietnam	1.00	1	2	3	11.2%
Worldwide	NA	NA	NA	NA	10.2%

\*For on-chain retail value received

\*\* For P2P exchange trade volume

\*\*\* As % of internet users aged 16–64

Source: The 2021 Geography of Cryptocurrency Report'  
<https://go.chainalysis.com/rs/503-FAP-074/images/Geography-of-Cryptocurrency-2021.pdf>  
 Digital 2022: Big Rise in Cryptocurrency Ownership  
<https://datareportal.com/reports/digital-2022-big-rise-in-cryptocurrency-ownership>

<sup>66</sup> : <https://go.chainalysis.com/rs/503-FAP-074/images/Geography-of-Cryptocurrency-2021.pdf>

While there certainly looks to be strong demand going forward across Southeast Asia for crypto-enabled ecommerce, supply-side obstacles remain. According to the World Bank's 2018 global Logistics Performance Index (LPI) compilation – its most recent such study – all the Southeast Asia nations placed poorly, the highest being Thailand at number 32, followed by Vietnam at 39. The Philippines, a lucrative ecommerce market set to experience the highest growth over 2022 (25.9%)<sup>67</sup> ranks 60th on the list<sup>68</sup>. Poor transport infrastructure is a big debilitating factor – the highest infrastructure score for the five Southeast Asian nations highlighted is 3.15 for Malaysia, 26% lower than the lowest such score amongst countries with high logistics capabilities (Table 4). With regard to this issue, Freedom Mall's partnership with N-Squared will ensure it competently navigates the challenging logistics landscape of Southeast Asia.

Operational efficiency is imperative not only to foster customer loyalty, but to ensure profitability for the company as well. As recently noted by McKinsey, while e-commerce represents a significant avenue for growth for most retailers, growth alone does not ensure profitability. Indeed, McKinsey analysed the total shareholder returns (TSR) for 100 large retailers and found that those in the bottom two quartiles in terms of TSR performance over 2015–20 (total revenue CAGR of 2% and –1%, respectively) also registered the highest growth in e-commerce share of revenue (18% and 16%, respectively, vs. 8% for the best performing quartile which registered a CAGR of 6%)<sup>69</sup>. The study highlights high fulfilment costs as a factor contributing to this empirical juxtaposition, which McKinsey estimates could account for up to 20% of e-commerce revenues<sup>70</sup>. Freedom Mall's expansion strategy targets not merely growth, but growth that is profitable and therefore sustainable.

**Table 4: Southeast Asian Countries  
and their Poor Logistics Infrastructures**

Country	LPI Rank	LPI Score	Infrastructure score
Indonesia	46	3.15	2.89
Malaysia	41	3.22	3.15
Philippines	60	2.90	2.73
Thailand	32	3.41	3.14
Vietnam	39	3.27	3.01
Germany	1	4.20	4.37
Sweden	2	4.05	4.24
Belgium	3	4.04	3.98
Austria	4	4.03	4.18
Japan	5	4.03	4.25
Netherlands	6	4.02	4.21
Singapore	7	4.00	4.06

Source: International LPI – Global Rankings 2018'  
<https://lpi.worldbank.org/international/global?sort=asc&order=Infrastructure#datatable>

<sup>67</sup> : <https://www.emarketer.com/content/southeast-asia-sees-fastest-digital-sales-growth-world>

<sup>68</sup> : <https://lpi.worldbank.org/international/global?sort=asc&order=LPI%20Rank#datatable>

<sup>69</sup> : <https://www.mckinsey.com/industries/retail/our-insights/solving-the-paradox-of-growth-and-profitability-in-e-commerce>

<sup>70</sup> : <https://www.mckinsey.com/industries/retail/our-insights/solving-the-paradox-of-growth-and-profitability-in-e-commerce>

In light of this, Freedom Mall's NFT marketplace should seek to distinguish itself in a number of ways, one of which would be through offering a custodial service. Through our partnership with Bitazza Global and its custodial firm subsidiary, Freedom Mall will be able to offer convenient and gas-free storage solutions for NFTs. Specifically, customers could choose to store their NFTs with our NFT marketplace's holding account via the custodial company's offline storage solution, and subsequent transactions between users of our platform would be registered on our off-chain system, circumventing the need for blockchain verification and the associated gas fees<sup>71</sup>. Reducing the cost and hassle of ownership should encourage both pre-existing and first-time buyers alike to utilize our platform.

Secondly, Freedom Mall will seek to acquire proprietary intellectual property (IP), be it through developing our own brands or more likely, incubating NFT/metaverse related projects, for which 5% of the FDM allocation has been set aside. From the above example of Rakuten launching its store in February 2022, to LINE launching LINE NFT in April of the same year<sup>72</sup>, we see a recent trend of NFT marketplaces which can offer exclusive access to popular, established brands entering the space, and as such, Freedom Mall's long-term competitiveness as an NFT/metaverse store likely necessitates developing its own content/brands.

Freedom Mall would also seek to incorporate charitable giving. By way of example, a company looking to fulfil its corporate social responsibility (CSR) obligations could list products/services slated for giveaways on our platform at considerable discounts from their retail prices. Customers could then pay for said offers with cryptocurrencies, with Freedom Mall's partner Bitazza Global enabling near-instantaneous conversion into fiat for the designated charities. Special considerations ranging from discounted trading commissions to NFT badges awarded to the donating customers and blockchain-verification for charitable transactions for the companies (drawing upon academic research that recognition motivates charitable giving more than monetary incentives<sup>73</sup>) would be applied as appropriate.

## FOR MORE INFORMATION



Freedom Mall: <https://freedommall.com/>

<sup>71</sup> : <https://help.niftygateway.com/hc/en-us/articles/4409003713299-An-Explanation-of-Nifty-Gateway-s-Custody-Option>

<sup>72</sup> : <https://linecorp.com/en/pr/news/en/2022/4200>

<sup>73</sup> : <https://dash.harvard.edu/handle/1/41127156>

## Conclusion

Through offering its customers an intuitive and seamless online shopping experience compatible with a wide-ranging set of cryptocurrencies and supported by a proven logistics network, Freedom Mall will appeal to crypto veterans looking to monetize their incomes and curious first-time users alike. The FDM utility token, with its carefully considered token supply management scheme to reward early adopters, should help accelerate the growth of the Freedom Mall platform and in turn, encourage the proliferation of crypto-enabled payment channels and their many socio-economic benefits.



## REFERENCES

- Anzalone, R. (2020). Overstock Pays Blockchain-Powered Dividend, 4 Million Shares Now Trading. Available at: <https://www.forbes.com/sites/robertanzalone/2020/05/20/overstock-pays-ostko-over-4-million-shares-now-trading/?sh=74a4044d248b> [Accessed 10 May 2022].
- Atos (2021). The pressure is on: the true costs of last-mile delivery. Available at: <https://atos.net/wp-content/uploads/2021/09/LMD-Here-Survey.pdf> [Accessed 10 May 2022].
- Bai, J., Fu, F., Guan, R., Hoffman, S., Karnani, P., Mysore, M. and S. Touse. (2021). Solving the paradox of growth and profitability in e-commerce. Available at: <https://www.mckinsey.com/industries/retail/our-insights/solving-the-paradox-of-growth-and-profitability-in-e-commerce> [Accessed 10 May 2022].
- Berkshire Hathaway Inc. (2022). 2021 Annual Report. Available at: <https://www.berkshirehathaway.com/2021ar/2021ar.pdf> [Accessed 10 May 2022].
- Binance (2022). Binance Pay. Available at: <https://pay.binance.com/en> [Accessed 10 May 2022].
- Binance (2022). Introducing BNB Auto-Burn: a new Protocol for the Quarterly BNB Burn. Available at: <https://www.binance.com/en/blog/ecosystem/introducing-bnb-autoburn-a-new-protocol-for-the-quarterly-bnb-burn-421499824684903205> [Accessed 10 May 2022].
- Bitazza (2022). Exchange. Available at: <https://trade.bitazza.com/gl/exchange> [Accessed 10 May 2022].
- Business Wire (2021). Tokens.com's Subsidiary Closes the Largest Metaverse Land Acquisition in History. Available at: <https://www.businesswire.com/news/home/20211123005825/en/Tokens.com%E2%80%99s-Subsidiary-Closes-the-Largest-Metaverse-Land-Acquisition-in-History> [Accessed 4 July 2022].
- Caillaud, B. and B. Jullien (2003). Chicken & egg: competition among intermediation service providers. RAND Journal of Economics. Available at: <https://www.rchss.sinica.edu.tw/cibs/pdf/CaillaudJullien.pdf> [Accessed 10 May 2022].
- Cantaloupe & CITE Research (2021). Unattended Retail Research. Available at: <https://mms.businesswire.com/media/20220104005011/en/935870/1/Cantaloupe-Unattended-Retail-Report-by-CITE-Research.pdf?download=1> [Accessed 10 May 2022].
- Chainalysis (2021). The 2021 Geography of Cryptocurrency Report. Available at: <https://go.chainalysis.com/rs/503-FAP-074/images/Geography-of-Cryptocurrency-2021.pdf> [Accessed 10 May 2022].
- Checkout.com (2022). Demystifying Crypto. Available at: <https://www.checkout.com/campaigns/demystifying-crypto> [Accessed 10 May 2022].
- Coinbase (2019). Pay Coinbase Commerce merchants directly with your Coinbase account. The Coinbase Blog/Weblog. Available at: <https://blog.coinbase.com/pay-coinbase-commerce-merchants-directly-with-your-coinbase-account-db9ed07721ea> [Accessed 10 May 2022].
- Coinbase (2022). For customers. Coinbase Commerce. Available at: <https://help.coinbase.com/en/commerce/getting-started/for-customers> [Accessed 10 May 2022].
- CoinMarketCap (2022). WOO Network. Available at: <https://coinmarketcap.com/currencies/wootrade/> [Accessed 10 May 2022].
- Cramer-Flood, E. (2022). Southeast Asia sees the fastest digital sales growth in the world. Available at: <https://www.emarketer.com/content/southeast-asia-sees-fastest-digital-sales-growth-world> [Accessed 10 May 2022].
- Das, K., Tamhane, T., Vatterott, B., Wibowo, P. and S. Wintels (2018). The digital archipelago: How online commerce is driving Indonesia's economic development. Available at: <https://www.mckinsey.com/featured-insights/asia-pacific/the-digital-archipelago-how-online-commerce-is-driving-indonesias-economic-development> [Accessed 10 May 2022].
- Deloitte (2020). SA Digital Commerce Consumer Report. Deloitte Digital. Available at: <https://www2.deloitte.com/content/dam/Deloitte/za/Documents/strategy/za-Deloitte-Digital-Commerce-SA-Consumer-Key-Themes-Report.pdf> [Accessed 10 May 2022].
- DeMatteo, M. (2022). Ethereum is Planning a Major Software Update. Here's What Investors Should Know. Available at: <https://time.com/nextadvisor/investing/cryptocurrency/ethereum-merge-what-to-know/> [Accessed 10 May 2022].
- Dobbs, R. and W. Rehm (2005). The value of share buybacks. McKinsey Quarterly. Available at: <https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/the-value-of-share-buybacks> [Accessed 10 May 2022].
- Dogadkina, O. and Emperia (2022). Metaverse shopping: Retailers' new reality. Available at: <https://venturebeat.com/2022/06/05/metaverse-shopping-retailers-new-reality/> [Accessed 4 July 2022].

## REFERENCES

- Drasch, B. J., Fridgen, G., Manner-Romberg, T., Nolting F.M. and S. Radszuwill (2020). The token's secret: the two-faced financial incentive of the token economy. *Electronic Markets*.  
Available at: <https://link.springer.com/article/10.1007/s12525-020-00412-9> [Accessed 10 May 2022].
- Entrepreneur en Español (2021). You can now pay with Dogecoin in Coinbase Commerce, we tell you how it works.  
Available at: <https://finance.yahoo.com/news/now-pay-dogecoin-coinbase-commerce-192800568.html>  
[Accessed 10 May 2022].
- Fitzner, Z. (2020). Staking Models for Productive Assets. *Fitzner Blockchain Consulting. Weblog*.  
Available at: <https://medium.com/fitzner-blockchain-consulting/staking-models-for-productive-assets-20f9051d286b>  
[Accessed 10 May 2022].
- Gemini (2022). 2022 Global state of crypto report.  
Available at: <https://www.gemini.com/state-of-crypto> [Accessed 10 May 2022].
- Hagiu A. (2013). Strategic Decisions for Multisided Platforms. *MIT Sloan Management Review*.  
Available at: <https://sloanreview.mit.edu/article/strategic-decisions-for-multisided-platforms/> [Accessed 10 May 2022].
- Haig, S. (2020). Overstock Airdrops 4.37m Security Tokens to Shareholders.  
Available at: <https://cointelegraph.com/news/overstock-airdrops-437m-security-tokens-to-shareholders>  
[Accessed 10 May 2022].
- Herrera, P. (2022). The Sandbox LAND – Valuation Report.  
Available at: <https://dappradar.com/blog/the-sandbox-land-valuation-report> [Accessed 4 July 2022].
- ICO Drops (2022). Wootrade.  
Available at: <https://icodrops.com/wootrade/> [Accessed 10 May 2022].
- Johnson, H.D. (2022). Average cost of credit card processing fees.  
Available at: <https://www.bankrate.com/finance/credit-cards/merchants-guide-to-credit-card-processing-fees/>  
[Accessed 10 May 2022].
- Kinda, T. (2019). E-commerce as a Potential New Engine for Growth for Asia. *IMF Working Papers*.  
Available at: <https://www.imf.org/en/Publications/WP/Issues/2019/07/01/E-commerce-as-a-Potential-New-Engine-for-Growth-in-Asia-46950#:~:text=The%20use%20of%20e%2Dcommerce,from%20exports%20than%20other%20firms>  
[Accessed May 10 2022].
- Lang, H. (2022). Nearly half of crypto owners first bought digital assets in 2021, survey shows. *Future of Money*  
Available at: <https://www.citethisforme.com/citation-generator/harvard> [Accessed 10 May 2022].
- Lee, T. B. (2022). Wikipedia Editors Are Ready to Stop Accepting Crypto Donations. *Business*.  
Available at: <https://www.wired.com/story/wikipedia-crypto-donations/> [Accessed 10 May 2022].
- Li, Y. (2022). Berkshire Hathaway closes at a record above \$500,000 a share as Buffett's conglomerate roars back.  
Available at: <https://www.cnbc.com/2022/03/16/berkshire-hathaway-closes-at-a-record-above-500000-a-share-as-buffetts-conglomerate-roars-back.html> [Accessed 10 May 2022].
- LINE (2022). LINE Launches LINE NFT, an NFT Marketplace in Japan.  
Available at: <https://linecorp.com/en/pr/news/en/2022/4200> [Accessed 10 May 2022].
- Lisa, A. (2021). 10 Major Companies That Accept Bitcoin.  
Available at: <https://finance.yahoo.com/news/10-major-companies-accept-bitcoin-190340692.html> [Accessed 10 May 2022].
- Lunden I. (2018). Rakuten will roll its \$9B loyalty program into a new blockchain-based cryptocurrency, Rakuten Coin.  
Available at: <https://techcrunch.com/2018/02/27/rakuten-will-roll-its-9b-loyalty-program-into-a-new-blockchain-based-cryptocurrency-rakuten-coin/> [Accessed 10 May 2022].
- Madore P.H. (2015). Newegg Makes a Crypto Omelette with Eggcoin.  
Available at: <https://www.ccn.com/newegg-makes-crypto-omelette-eggcoin/> [Accessed 10 May 2022].
- Manconi, A., Peyer, U. T. Vermaelen (2018). Are Buybacks Good for Long-Term Shareholder Value? Evidence from Buybacks around the World.  
Available at: [https://www.researchgate.net/publication/327654473\\_Are\\_Buybacks\\_Good\\_for\\_Long-Term\\_Shareholder\\_Value\\_Evidence\\_from\\_Buybacks\\_around\\_the\\_World](https://www.researchgate.net/publication/327654473_Are_Buybacks_Good_for_Long-Term_Shareholder_Value_Evidence_from_Buybacks_around_the_World) [Accessed 10 May 2022].
- McKinsey & Company (2022). Value creation in the metaverse.  
Available at: <https://www.mckinsey.com/~media/mckinsey/business%20functions/marketing%20and%20sales/our%20insights/value%20creation%20in%20the%20metaverse/Value-creation-in-the-metaverse.pdf> [Accessed 4 July 2022].
- McKinsey Digital (2021). It's showtime! How live commerce is transforming the shopping experience.  
Available at: <https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/its-showtime-how-live-commerce-is-transforming-the-shopping-experience> [Accessed 4 July 2022].
- Monegro, J. (2020). Stop Burning Tokens – Buyback and Make Instead.  
Available at: <https://www.placeholder.vc/blog/2020/9/17/stop-burning-tokens-buyback-and-make-instead>  
[Accessed 10 May 2022].
- Murad, A. and W. Smale (2022). The retailers setting up shop in the metaverse.  
Available at: <https://www.bbc.com/news/business-61979150> [Accessed 4 July 2022].

## REFERENCES

- N-Squared (2022). About us.  
Available at: <https://nsquared.asia/about-us/> [Accessed 10 May 2022].
- Nifty Gateway (2022). An Explanation of Nifty Gateway's Custody Option.  
Available at: <https://help.niftygateway.com/hc/en-us/articles/4409003713299-An-Explanation-of-Nifty-Gateway-s-Custody-Option> [Accessed 10 May 2022].
- Overstock.com (2022). Bitcoin.  
Available at: <https://help.overstock.com/help/s/article/Bitcoin> [Accessed 10 May 2022].
- PayPal (2022). PayPal Merchant Fees.  
Available at: <https://www.paypal.com/us/webapps/mpp/merchant-fees#fixed-fees-commercialtrans> [Accessed 10 May 2022].
- Paysafe (2021). Inside the crypto community; Plotting the journey to mass adoption.  
Available at: [https://www.paysafe.com/fileadmin/user\\_upload/Paysafe\\_White\\_Paper\\_-\\_Inside\\_the\\_crypto\\_community.pdf](https://www.paysafe.com/fileadmin/user_upload/Paysafe_White_Paper_-_Inside_the_crypto_community.pdf) [Accessed 10 May 2022].
- Phaneuf, A. (2022). Ecommerce Statistics: Industry benchmarks & growth.  
Available at: <https://www.insiderintelligence.com/insights/ecommerce-industry-statistics/> [Accessed 10 May 2022].
- Quiroz-Gutierrez, M. (2022). Crypto is fully banned in China and 8 other countries. Tech – Cryptocurrency.  
Available at: <https://fortune.com/2022/01/04/crypto-banned-china-other-countries/> [Accessed 10 May 2022].
- Rakuten (2021). Bitcoin and Other Crypto Currencies Can Now Be Used to Charge E-Money.  
Available at: [https://global.rakuten.com/corp/news/press/2021/0224\\_03.html#:~:text=and%20crypto%20asset%20\(virtual%20currency,and%20other%20crypto%20assets\\*2](https://global.rakuten.com/corp/news/press/2021/0224_03.html#:~:text=and%20crypto%20asset%20(virtual%20currency,and%20other%20crypto%20assets*2) [Accessed 10 May 2022].
- Rakuten (2022). Rakuten Launches Rakuten NFT, a New Marketplace and Sales Platform for NFTs.  
Available at: [https://global.rakuten.com/corp/news/press/2022/0225\\_01.html](https://global.rakuten.com/corp/news/press/2022/0225_01.html) [Accessed 10 May 2022].
- Rakuten (2015). Rakuten to Accept Bitcoin on Global Marketplaces.  
Available at: [https://global.rakuten.com/corp/news/press/2015/0317\\_01.html](https://global.rakuten.com/corp/news/press/2015/0317_01.html) [Accessed 10 May 2022].
- Reiff, N. (2022). Cryptocurrency Burning.  
Available at: <https://www.investopedia.com/tech/cryptocurrency-burning-can-it-manage-inflation/#:~:text=%22Burning%22%20a%20cryptocurrency%20refers%20to,decreases%20the%20number%20in%20circulation> [Accessed 10 May 2022].
- Silberstein, N. (2021). Livestreaming Update: Coresight Debunks 5 Common Myths.  
Available at: <https://www.retailtouchpoints.com/topics/digital-commerce/livestreaming-update-coresight-debunks-5-common-myths> [Accessed 4 July 2022].
- Staking Rewards (2022). Total Assets. Real-time staking rewards database.  
Available at: <https://www.stakingrewards.com/cryptoassets/> [Accessed 10 May 2022].
- Stempel, J. Buffett's Berkshire posts record annual profit, extends but slows buybacks.  
Available at: <https://www.reuters.com/business/buffetts-berkshire-posts-record-annual-profit-extends-slows-buybacks-2022-02-26/> [Accessed 10 May 2022].
- The World Bank (2022). Global Rankings 2018. International LPI.  
Available at: <https://lpi.worldbank.org/international/global?sort=asc&order=LPI%20Rank#datatable> [Accessed 10 May 2022].
- UBS Editorial Team (2021). E-commerce growth is here to stay. Longer term investments.  
Available at: <https://www.ubs.com/global/en/wealth-management/our-approach/marketnews/article.1548128.html#:~:text=Globally%2C%20e%2Dcommerce%20revenues%20are,overall%20retail%20sales%2C%20by%202025> [Accessed 10 May 2022].
- Visa (2022). 2022 Small Business Outlook. Visa Back to Business Global Study.  
Available at: <https://usa.visa.com/dam/VCOM/blogs/visa-back-to-business-study-2022-outlook-jan22.pdf> [Accessed 10 May 2022].
- Visa (2022) Visa Study: Small Businesses Optimistic, Looking to Digital Payments for Growth in New Year.  
Available at: <https://usa.visa.com/about-visa/newsroom/press-releases/releaseld.18711.html> [Accessed 10 May 2022].
- Wang, C. Y. (2018). Essays in Market Design and Behavioral Economics. Digital Access to Scholarship at Harvard. Doctoral dissertation, Harvard University, Graduate School of Arts & Sciences.  
Available at: <https://dash.harvard.edu/handle/1/41127156> [Accessed 10 May 2022].
- Wohlner, R. (2021). Are Stock Buybacks a Good Thing, or Not?  
Available at: <https://www.investopedia.com/articles/financial-advisors/121415/stock-buybacks-good-thing-or-not.asp> [Accessed 10 May 2022].
- Woo Network (2022). WOO Token Utility.  
Available at: <https://learn.woo.org/token/woo-token-utilities> [Accessed 10 May 2022].
- Newegg (2022). Bitcoin Accepted.  
Available at: <https://promotions.newegg.com/nepro/16-6277/index.html> [Accessed 10 May 2022].
- Newegg Staff (2015). Introducing EggCoin: The World's First Egg-based Cryptocurrency. Newegg Insider.  
Available at: <https://www.newegg.com/insider/introducing-eggcoin-the-worlds-first-egg-based-cryptocurrency/> [Accessed 10 May 2022].