STAR ATLAS

State of the Economy

ATMTA, Inc.
Department of Economics

Q2 2026

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A Note From the Team

As noted in the last report, our data streams were shut off on March 5th, 2026. We responded by quickly building a cheaper, scrappier pipeline, which powers the data here. Many charts will look familiar, but one notable topic is absent: SAGE (Starbased). We made the deliberate decision not to rebuild its pipeline given the cost and our limited resources. We are better served restoring our legacy data and focusing our energy on C4 (SAGE's replacement) data ingestion. The token flow and token ownership datasets also remain unrebuilt, though both are a top priority. As a result, this report contains fewer figures than regular readers are used to. But each has been crafted by hand and with care. We expect the next report to be more data and figure-rich.

1. Executive Summary

This quarter's report is built on a new, leaner data pipeline, stood up after our prior data streams were shut off on March 5th, 2026. As a result the report carries fewer figures than usual, and SAGE: Starbased metrics have been intentionally set aside — we have chosen not to rebuild that pipeline and are instead concentrating our resources on bringing legacy data back online and ingesting data for C4, Starbased's successor. Asset trade and ownership datasets likewise remain unrebuilt, though both are a priority for upcoming reports.

The macroeconomic backdrop remains challenging. ATLAS continued its decline against the US Dollar this quarter, a trend that tracks the broader crypto market and that we have historically linked to player participation (roughly a one-percent loss in players for every one-percent decline in ATLAS/USD). Whether ATLAS's ~5% annual inflation contributes to the price decline remains an open question we cannot cleanly isolate without a natural experiment. On the emissions side, combined daily ATLAS emissions ran around 11.8 million — above our long-standing 8.5 million target — with FICs contributing ~4.3 million daily, an estimated ~7.5 million from Loyalty Points (not directly measured this quarter), and a negligible ~33,000 from SCORE. Per-capita emissions ticked up slightly, likely a survivorship effect as higher-earning whales prove stickier than smaller players.

Market dynamics tell a familiar story: the Star Atlas economy in itself remains stable while it fluctuates wildly from an outside view. Measured in ATLAS, in-game prices have held relatively steady — especially for functional assets — but in USDC terms prices are down sharply (often more than 50%), driven almost entirely by ATLAS's devaluation rather than any internal price instability. Weekly volume has run around 20,000 USDC since April, concentrated in ships and structures; resource trade is shrinking, a concerning sign of growing player self-sufficiency (autarky) in what should be a trade-driven economy. Trade remains overwhelmingly secondary and USDC denominated, while OTC activity has fallen to roughly 5% of volume from a historic peak near 36%.

The lockers remain a substantial and lucrative pillar of the ecosystem: a large share of both POLIS and ATLAS supply sits staked, with the wide gap between median and mean stakes underscoring the outsized role of whales. Looking ahead, the report's center of gravity is C4 — the newly released public test realm for the fully financialized next iteration of SAGE, introducing Combat, Council Rank, Crafting Habs, and Claim Stakes. C4 brings real-money sinks (notably ship destruction in combat), a recycled-versus-curve ATLAS sourcing model governed by a tunable parameter we aim to drive toward zero over time, and a faction-based Loyalty Points reward system whose pool design deliberately creates competitive friction between dominant and trailing factions. We expect C4 to inject significant trade into the economy and anticipate a richer, more data-complete report next quarter.

2. Program Participation

As mentioned in the note, we will not be displaying *SAGE: Starbased* user numbers due to not having the data pipeline anymore. However, latest projections by third-party data runners like Aephia suggest *Starbased* has around 750 Daily Active Users.[1] As of our latest data on SAGE (3 months ago)

[1] For more information about Aephia, visit: https://aephia.com/ .

monthly active users floated around 2,000. For the programs that we are tracking in our new data pipeline, we present Table 1 which shows the number of users active so far this year. Table 2 shows the overlap between these.

Table 1: Program Participation - Excluding SAGE (9,904 total players)

Track	Players
Marketplace	2,636
SCORE	1,430
Claims	1,566
ATLAS locker	6,169
POLIS locker	7,693

Note the small number of users who participate in all lockers, marketplace, and SCORE/Claim Stakes. There are several reasons for this, some behavioral, and some mechanical. First, players tend to prefer one form of gameplay over another. For example, some users with both a claim stake and ships in score (admittedly a small group) may have no reason to participate in the marketplace because they don't participate in SAGE (a much more demanding game with hundreds of mechanisms). Second, it is difficult with this nascent data to trace accounts to one another, something we will hopefully be able to do by the time the next report is released. This means that if a user has multiple Solana wallets that they use for each program, this person will show up as multiple users. Thus, Table 2 is informative but the values are under-estimating the true overlap between programs.

Table 2: Program Participation - Overlap

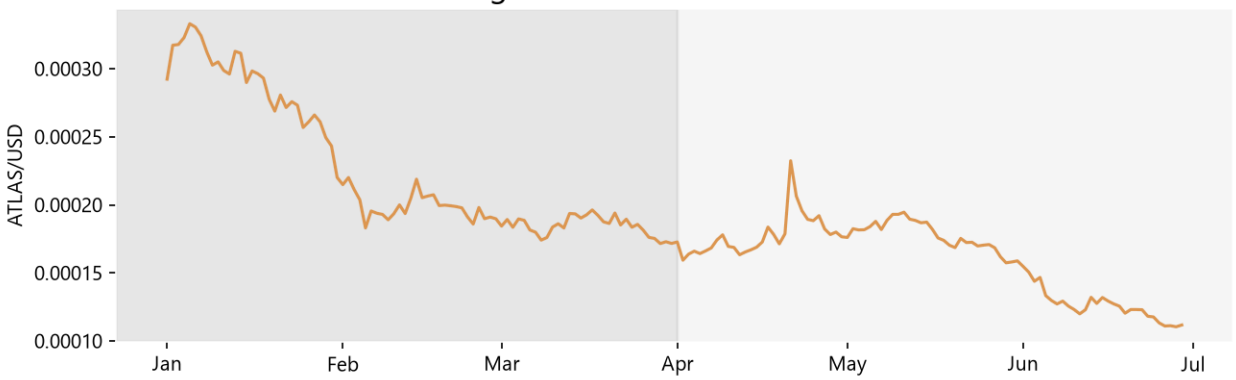
Groups	Shared players	% of players
Marketplace + SCORE	783	7.9%
Marketplace + Claims	943	9.5%
Marketplace + ATLAS locker	1,070	10.8%
SCORE + Claims	528	5.3%
SCORE + ATLAS locker	461	4.7%
Claims + ATLAS locker	932	9.4%
All four tracks	154	1.6%

3. ATLAS Dynamics & Emissions

Exchange Rates

The past quarter has seen continued decline in the price of ATLAS on the macroeconomic market, shown in Figure 1. That is, the value of ATLAS continues to decline relative to our reference currency, the US Dollar. While this decline hasn't impacted the Star Atlas economy in isolation, it does have negative consequences for player growth and retention. We have noted in the past the strong relationship between the ATLAS price and player participation. For every percent loss in the value of ATLAS compared to USD, we lose about one percent of our playerbase in SAGE. In a previous report, we compared this decline to the rest of the gaming market and, with the exception of a few comparable games, ATLAS faces a similar fate as the rest of the crypto market.

Figure 1: ATLAS Price 2026 H1



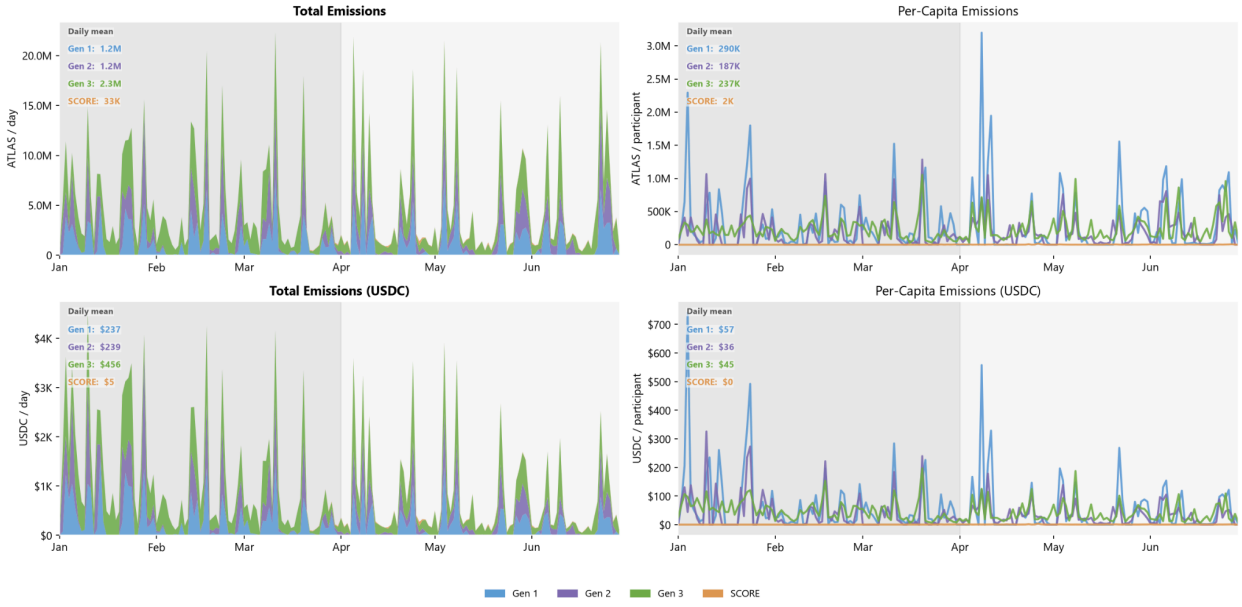
There remains debate, however, on whether the emissions rate of ATLAS plays a role in its price. While there are many mechanisms at play, it is difficult to say how much of the fall in ATLAS/USD is due to the currency's inflation rate (roughly 5% annually). The reason such isolation of effect is difficult is due to our lack of a natural experiment. To properly measure the impact of ATLAS inflation on ATLAS price we would need a very similar project with a difference in inflation of its currency due to some exogenous shock (i.e., random). Such a scenario has never occurred that we are aware of. Thus, only descriptive and/or predictive models can be built.

ATLAS Emissions

Figure 2 shows ATLAS emission from various sources throughout the quarter. Notably, we do not have data on Loyalty Points (LP) emissions this quarter. However, we know from previous reports that ATLAS emissions due to LP are often exceptionally stable and have historically floated around 7.5 million ATLAS daily with little to no trend. Due to removing the most stable form of ATLAS emissions the charts display a characteristic *spikiness* which we note is due to player whales extracting large sums of ATLAS in a single moment. One also notes the remarkably tiny amount of ATLAS emissions that come from SCORE. In terms of totals, SCORE accounts for a minuscule 33,000 daily atlas emissions compared to FICs' combined 4.3 million average. Add on to this

approximate 7.5 million from LP and we get a combined daily ATLAS emissions of around 11.8 million, above our target of 8.5 million.[2]

Figure 2: ATLAS Emissions from SCORE + FICs



Notes: Daily ATLAS emissions by source. Totals are stacked (sum = ecosystem total); per-capita = mean per participating player, shown unstacked. Grey shading = pre-Q2 (before Apr 1). In-panel 'Daily mean' = each source's mean over all days in range (no-activity days count as 0). Gen 1 = MUD / ONI / Ustur Infrastructure Contracts | Gen 2 = Gotti's Favor (MUD), Vaor's Order (ONI), Opos' Request (Ustur) | Gen 3 = Starpath Cells, Quantum Nodes | SCORE = ship harvest (processHarvest) rewards.

We note finally that per capita emissions have been on a slight incline of the past quarter, likely due to selection of whales, who statistically earn more, being more sticky than non-whales, who statistically earn less.[3]

4. Market Dynamics – Prices and Volume

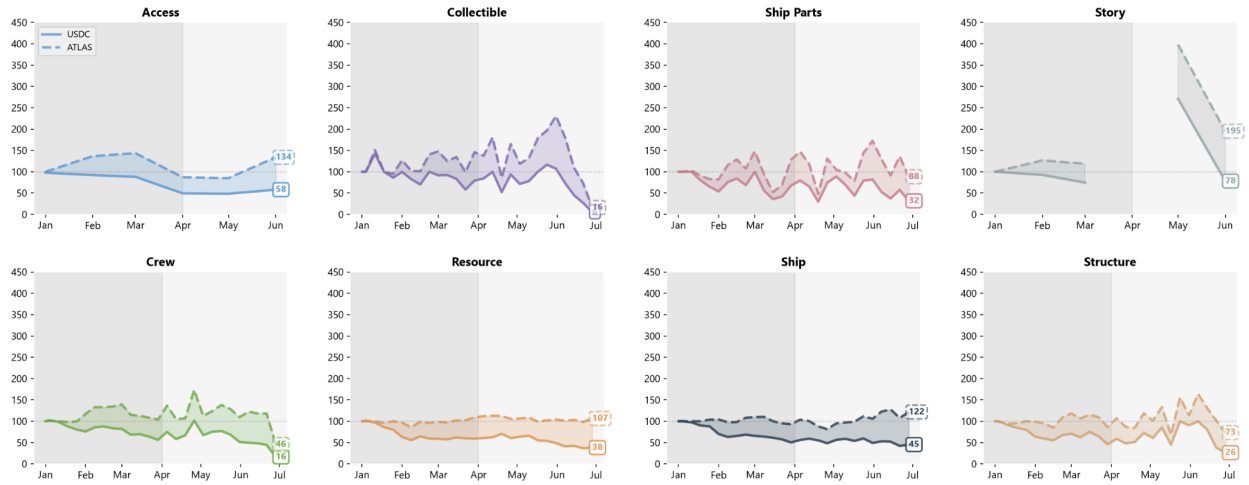
Prices

One may wonder how the price of ATLAS influences the price of in-game resources in the Star Atlas universe. Figure 3 presents 8 separate price indices for the 8 core-item types in the Star Atlas universe. Each sub figure has two lines. The solid line shows the price in USDC and the dotted line shows the price in ATLAS denominated terms. One notes that prices in ATLAS denominated terms have been relatively stable, especially for the bottom row assets (what we call "Functional Assets").[4] However, in USDC denominated terms, prices are down severely (in most cases over 50%). This

[2] The Star Atlas economy team set a target daily ATLAS emissions rate of 8.5 million back in 2023 with the launch of SAGE. It should be noted that Star Atlas leadership has taken the stance that higher emissions are acceptable in light of the current macro crypto decline. This report does not qualify these statements.
[3] We call this survivorship bias in statistics and it tends to over-state metrics over time.
[4] The drops in some of the indices near the end of the period (crew, for example) are due to lack of data more so than actual price declines. The same can be seen for the Story items which see effectively no trade during the month of April.

decline is due almost entirely to the devaluation of ATLAS (Figure 1). We explain the juxtaposition of USDC and ATLAS prices next.

Figure 3: Asset Price Indices (USDC vs ATLAS)



Notes: Price index = current weekly VWAP / first observed VWAP; median per asset type. ATLAS price from ATLAS/USDC rate on CoinGecko daily. Access and Story aggregated to monthly. Grey shading = pre-Q2 (before Apr 1). Solid = USDC-denominated; dashed = ATLAS-denominated. Shaded area = difference.

Suppose you were living in a small, developing country with its own currency. Within this economy, the price of a bundle of apples costs 1 currency today. Twelve months from now that same bundle costs 1 currency. In this way, within your little country, prices are stable, you do not experience inflation or deflation. However, at the same time, your country's currency has collapsed relative to the US Dollar. And that same bundle of apples which cost $1 today and $0.20 twelve months from now has apparently decreased in value. As someone living inside the country, you don't notice this change but as an outsider, say a banker, investor, or international journalist, you do notice it.

In our example, Star Atlas is the small developing country. Things are well balanced within the country, but pain can be felt outside of it. Many MMOs would dream of stable prices internally. They do not have to worry about the market dynamics outside of their world. For better or for worse, Star Atlas does have to worry about this dynamic. As such, while the game economy is stable, macro economic conditions are far from satisfactory.[5] In the next section we show volume denominated in USDC terms precisely for the reasons discussed in this section. Namely because the USDC denomination provides far more detail into the Star Atlas economy.

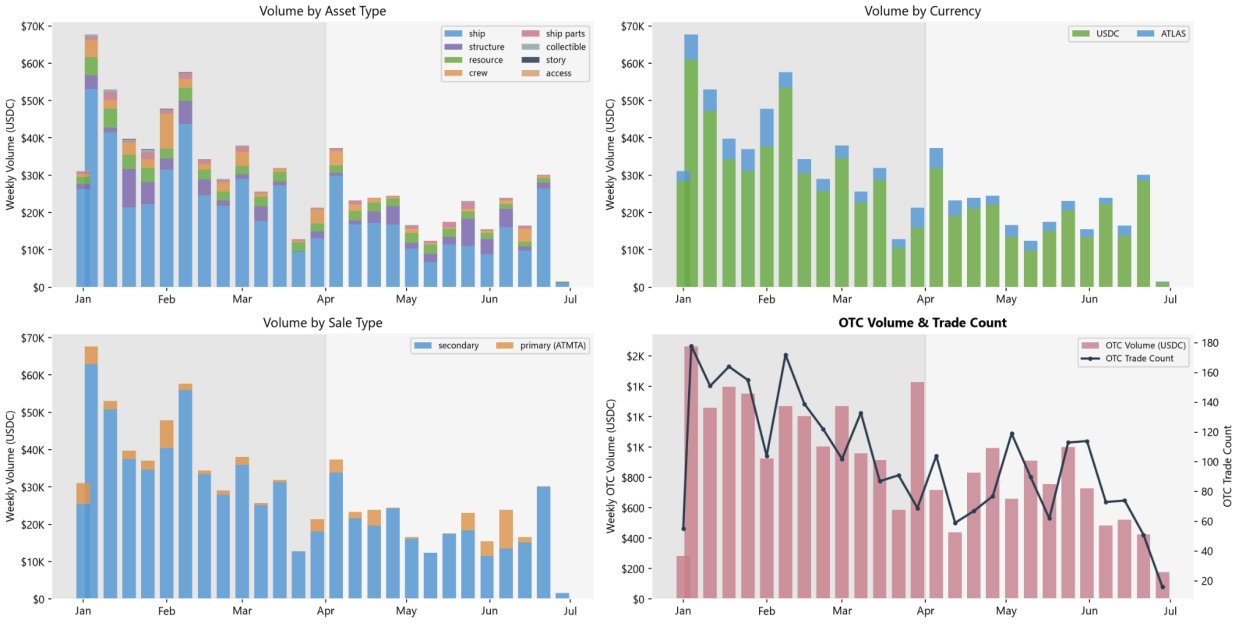
Volume

Figure 4 below shows all Star Atlas volume in USDC denominated terms broken out by several features.[6] Volume indicates price times quantity traded from player to player in Star Atlas. Volume is perhaps one of the most important metrics we care about both internally and as a community. One of ATMTA's primary revenue streams comes from a 6% fee extracted on every trade in the market. If more players are playing and trading, volume increases which increases ATMTA revenue.

[5] For the purposes of this report, macro economy refers to "external to Star Atlas" rather than the traditional economic definition (a field of economics dealing with growth, policy, and trade).
[6] We exclude Faction Infrastructure Contracts from these calculations because they would artificially inflate volume.

The upper-left figure shows that we have seen roughly 20,000 USDC in weekly sales since April and that most of this trade has come from ships and structures (claim stakes and hab facilities). Note that resources make up a smaller and smaller portion of trade. This is a concerning trend as resources are the lifeblood of an economy. Stagnant trade of basic resources indicates that players have no need to trade resources which could further show that players are self-sufficient. In economics, we call this autarky. This is not an ideal set up for an MMO. We want players engaging with one another. Fortunately, we anticipate that C4 will inject an enormous amount of trade into the game economy (C4 is discussed in more detail later).

Figure 4: Star Atlas Marketplace - Volume Breakdown (H1 2026)



Notes: Weekly USDC volume = price x conversionRate x quantity, Sunday-week buckets. Grey shading = pre-Q2 (before Apr 1). Panels 1-3 reconcile to the same total; primary (DAO) excluded; 'Unknown' = unmapped assetType. OTC = ATLAS trades at price <= 1e-8; OTC volume reconstructed as (per-week per-item non-OTC VWAP, whole-period fallback) x quantity. The count line includes all OTC trades; ~15% trade only OTC (no reference price) so they are counted but not valued.

The upper right hand figure shows that the vast majority of trade is done in USDC (resources are likely the source of the ATLAS trade volume because they *must* be traded in ATLAS). This is a concerning trend as it shows under-utilization of the game currency. This behavior is due to several reasons but one of the main ones is the fact that players price items in USDC when doing their mental calculations for the value of an item and, as a result, tend to trade in USDC. The lower left figure also shows that the vast majority of trade is secondary and not primary (purchased directly from ATMTA). This is a typical trend we have seen over the past several years. One sees a jump in ATMTA volume around June of this year which was due to a new ship promotion. The lower right hand figure shows the continued decline of so-called OTC trades, representing roughly 5% of all trade volume (down from a historic peak of around 36%).

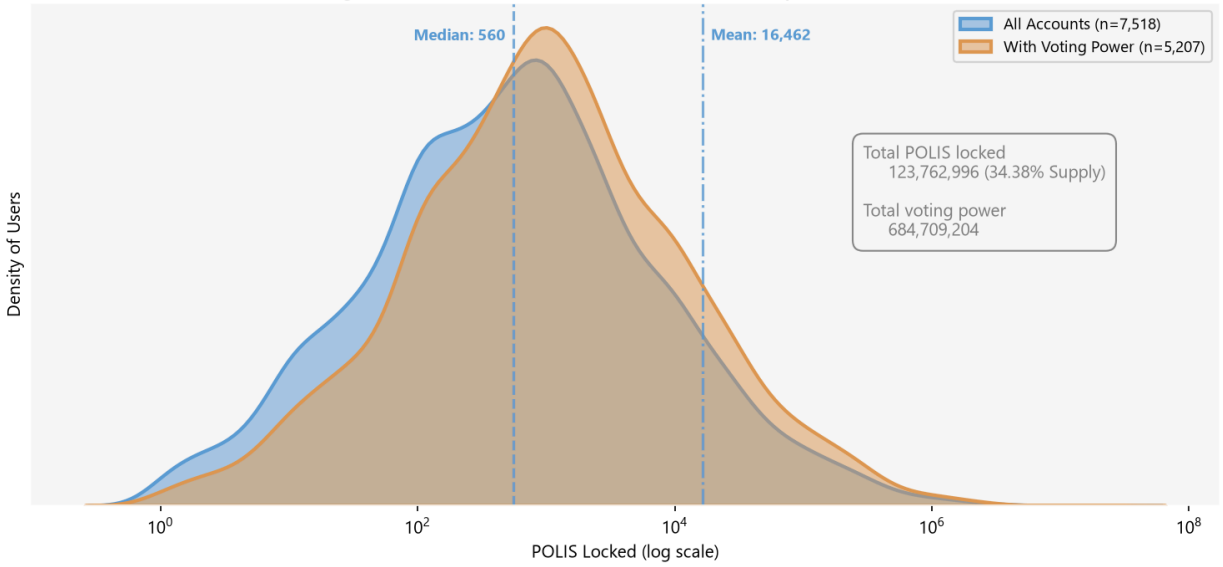
5. Locker Status

The Star Atlas lockers are one of the earliest "play to earn" mechanisms implemented. These allow players to "stake" their ATLAS and POLIS for a specified amount of time. The amount of time and stake provides players with various rewards. For the ATLAS locker, the reward is a small amount of POLIS as well as a discount in the galactic marketplace (players can get up to 5.1 percentage points off of the 6 percent fee). The POLIS locker provides players with residual POLIS emissions as well as

voting Power (VP) which allows them to cast votes on various PIPs (POLIS Improvement Proposals) submitted by the community.[7] Given the importance of ATLAS and POLIS in the value of the Star Atlas economy, it is important to track the activity level in these lockers.

Figure 5 shows the density of players based on POLIS locker account value.[8] The blue density shows all accounts while orange shows only accounts that have an active stake (i.e., VP greater than 0). We note that 123 Million (~34%) of the total supply of POLIS is currently staked in the locker.[9] Finally, we note the large gap between the median stake amount and the average stake amount (560 to 16,462) which is not atypical of this type of data but emphasizes the role that whales play in the Star Atlas ecosystem. In other words, most players (the median) have staked about 560 POLIS while a very small percentage of large players have staked huge sums which brings the average to a much higher amount: 16,462.

Figure 5: Distribution of POLIS Locked per Account

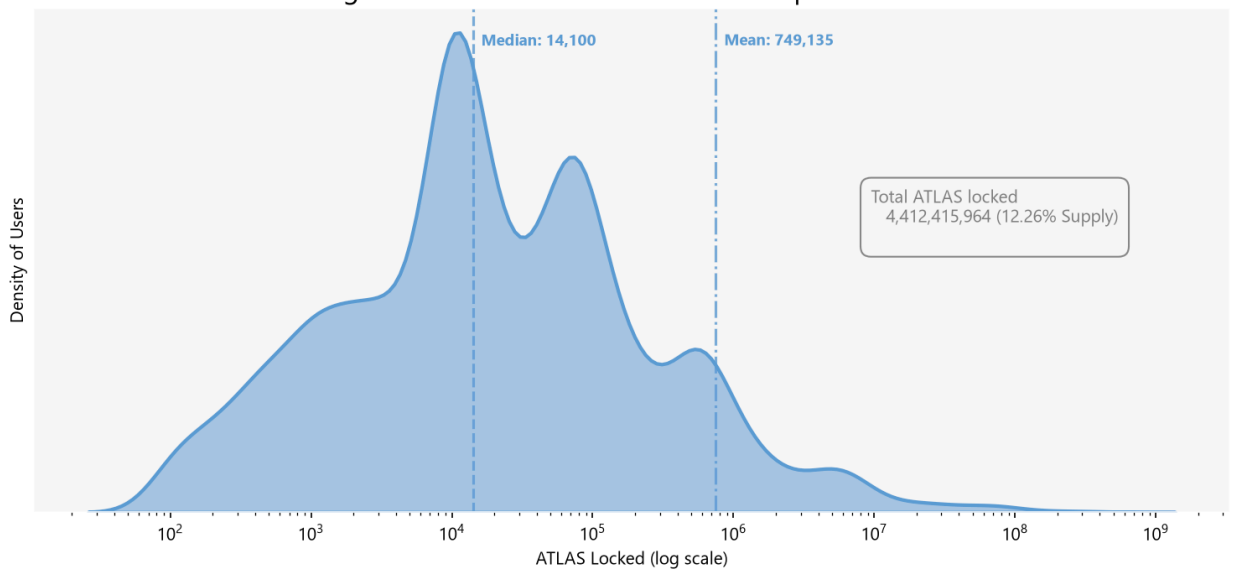


Notes: Kernel density of POLIS locked per escrow account, latest snapshot. Mean and Median calculated using All Accounts (n=7,518)Accounts with < 1 POLIS excluded completely; x-axis log-scaled.

Figure 6 displays an identical figure except for the ATLAS locker. There is no VP equivalent for ATLAS and so we only plot one density in Figure 6. We note that there is a total of ~4.4 billion ATLAS locked, 12.3% of total supply. We also note the same dramatic difference between the median ATLAS stake and the mean: 14,100 to 749,135. However, the mean/median ratio is much larger for the ATLAS locker than it is for the POLIS locker. One possible explanation, though the mechanics are not straightforward, could be the utility richness of ATLAS compared to POLIS. The only use case for additional POLIS earned is to stake it whereas ATLAS has a multitude of use-cases.

[7] For more information on the Star Atlas DAO visit: https://govern.staratlas.com/ .
[8] Figures 5 and 6 are effectively histograms. They show the quantity of people that have an account with the amount of currency displayed on the X-axis. Thus, the peak of the figure is the point on the x-axis which has the highest density of users with that amount.
[9] 34% refers to the amount of POLIS locked divided by the total supply of POLIS (not outstanding supply)

Figure 6: Distribution of ATLAS Locked per Account



Notes: Kernel density of ATLAS locked per escrow account, latest snapshot. Mean and Median calculated using All Accounts (n=5,890). Accounts with < 100 ATLAS excluded; x-axis log-scaled.

The lockers remain an essential and lucrative part of the Star Atlas ecosystem with an enormous amount of each currency staked.

6. C4 Economy Discussion

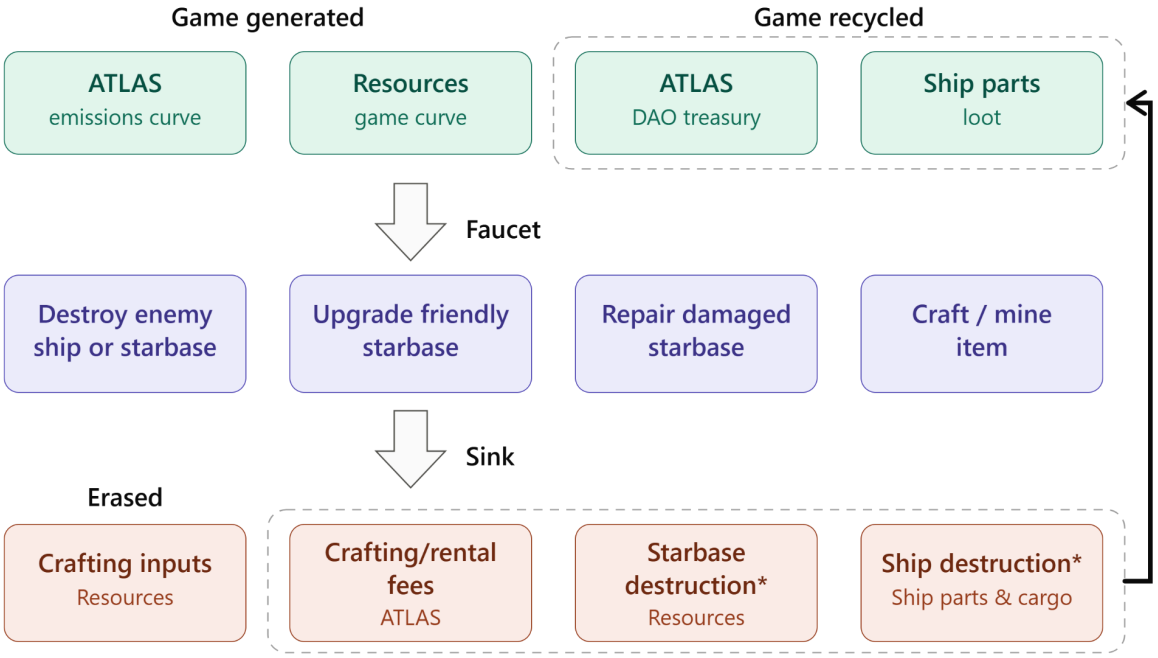
Overview

The PTR (public test realm) of SAGE: C4 released this quarter. This test releases in full-scope the long-awaited update to SAGE, a grand strategy space-themed browser MMO. This update introduces Combat, Council Rank, Crafting Habs, and Claim Stakes into the game. While each of these has been present in previous iterations of SAGE (*Starbased, V1, and Holosim*), this is the first time the 4 Cs will be brought into a fully "financialized" version of the game.[10] While Claim Stakes and Crafting Habs have introduced new ways to create items, Combat and Council Rank create obstacles for realizing one's potential. Combat in particular introduces a new type of sink to our real-money economy that hasn't been seen before. For example, in Holosim, where there were over 4.5 million combat events last season, there is no financial consequence to having one's ship destroyed due to the F2P nature of the game. In SAGE: C4, however, this is not the case.

C4 Economic Flows

In one sentence, C4 is a large-scale sandbox economy game. Players can buy ships and claim stakes, move them around, produce goods, battle other players, and sell their items on the Galactic Marketplace. To that end, there are some major updates to the C4 economy design that differ from its predecessor. The core economy loop in C4 is shown below in a simplified graphic:

[10] Financialized refers to the real-money nature of SAGE. Players purchase ships & claim stakes with real money. These are then used to produce items in the economy which can be sold for real money on the Galactic Marketplace.



* Some portion of loot from starbase destruction and ship destruction will be recycled into the game as loot; all else is burned.

There are three layers to the C4 economy, the faucet layer, the action layer, and the sinks layer. This is functionally the same as in previous versions of SAGE except there are more variables than before. The game generates resources and currency to give to players from two main sources. One we call the "curve" which is essentially produced out of thin air and the other which is the "recycled" pool which uses items already in the economy. Resources have unlimited supply and so their curve is bottomless. ATLAS, however, has a fixed supply at 36 billion which means that eventually, we will need to decrease the amount of ATLAS coming from the curve and increase the amount recycled. Players perform actions in order to receive items: destroying enemy ships and starbases, repairing or upgrading starbases, and crafting or mining items. The final layer contains all the costs in the economy. There are effectively no free actions in the C4 economy and as such, doing just about anything costs resources, ATLAS, and at the very least, player time.

One source to note is that of ATLAS. It is never permanently burned which means that any ATLAS that is used as a sink is simply recycled into the game economy. Eventually, the amount of ATLAS outstanding will be sufficient to replace the amount currently sourced from the emissions curve. A powerful lever which we have built into the C4 economy sets exactly this proportion. That is, we can call the percent of ATLAS sourced from the emissions curve as δ and the amount sourced from the game cycle as 1-δ. Eventually, the goal is to decrease δ to 0. The latest iteration of SAGE, Starbased, had a δ value of 1. We are currently calibrating this value in C4 but we anticipate reaching somewhere in the neighborhood of δ=0.9 when C4 releases on the z.ink network.

C4 ATLAS Emissions

Paramount to the discussion at hand is that of how ATLAS is actually distributed as a reward for in-game actions. With the help of the Star Atlas Economic Vantarah Group[11], we have devised the following system to distribute ATLAS sustainably and fairly in C4. Players of SAGE: Starbased will be familiar with the LP (Loyalty Points) system. This system rewards players with LP, rather than ATLAS, for in-game actions. At the end of the day (called an *epoch*), players then earn ATLAS proportional to the LP they earned on that day. The LP system will operate very similarly in C4 as it did in Starbased but with a few changes. Below, I outline the LP system in C4.

A player earns some amount of LP for each LP-generating action in the game. The amount of LP earned and the types of actions that earn LP change but for now, combat and starbase upgrading/healing generate LP. The LP generated for each action differs but in general: PVP combat > Starbase Combat > Starbase Upgrading > Starbase Healing > PVE Combat. A player earns ATLAS each day based on all their LP compared to the rest of their faction's LP earned. Thus, a player earns:

$$ATLAS = \frac{LP_i}{\Sigma LP_{Faction}} ATLAS_{Faction}$$

Where LP_i refers to the player's LP earned that day and LP_faction refers to all the LP earned by that player's faction that day. ATLAS_Faction is:

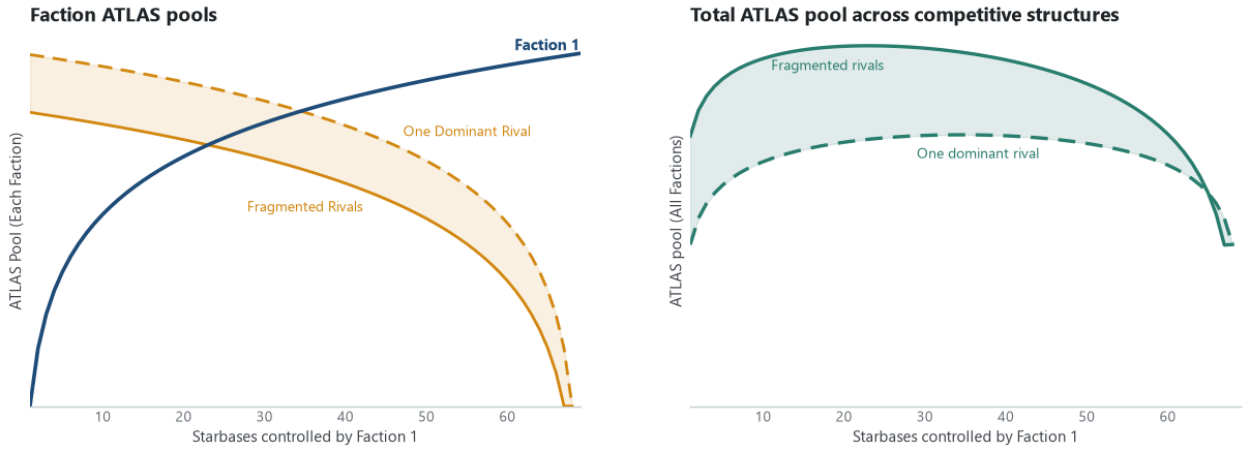
$$ATLAS_{Faction} = A * ln(Starbase\ Count)$$

Where A is a scaling value determined by the Star Atlas economy team and *ln* is the natural log. In other words, each marginal starbase a faction controls is worth less than the last. We plot ATLAS pool sizes in Figure 7 as a visual reference. The left-hand side shows the amount of ATLAS some reference faction, called Faction 1, would receive in their daily pool as a function of their controlled starbases. This figure also plots the ATLAS pool for each other faction under two regimes: one in which another faction controls all other starbases (dotted line - dominant rival) and one in which the two other factions split the starbases equally (solid line). Note that the yellow lines show only a single faction's ATLAS pool (we omit the third faction for saliency).[12]

[11] The Vantarah group is a player-led committee of 6 community leaders with a special knack for economics, data, and human behavior. The group meets on a regular basis to discuss crucial game economy facts, statistics, and mechanics.

[12] We note that the LP model is the current working model for SAGE: C4 but, given that C4 is in testing, could be subject to change.

Figure 7: ATLAS Pool Dynamics



Solid = rivals split the remainder evenly -- results in higher overall ATLAS emissions. Dashed = a single rival dominates remainder of pool -- results in lower overall ATLAS emissions. Left figure shows each faction's pool based on how many starbases Faction 1 controls. In the case of one dominant rival faction, the third faction's pool is size zero, not plotted.

The right hand side of Figure 7 shows the total ATLAS pool size for all factions under both the dominant rival regime (dotted) and equal rivals regime (solid). One notes that the total ATLAS pool is largest when each faction controls about 23 starbases yet an individual faction's ATLAS pool is maximized when it controls all of the starbases. This creates a desirable friction within the SAGE: C4 macro economy. On the one hand, individual players are interested in maximizing their faction's pool. On the other hand, opposing factions that fall behind have a larger incentive to push for more starbases. Furthermore, factions that are falling behind, perhaps due to population size, may want to invest resources into acquiring more players in their faction. These new players will be more likely to join the smaller faction if the per user payoff is higher in that faction than the other factions.

One final note before moving to the conclusion is that of alternative ATLAS earnings mechanisms. It has always been the case that only a minority of the player base actually earns ATLAS through the LP system (or FIC system for that matter). Most players earn ATLAS by selling goods on the galactic marketplace. In this way, the primary way most players earn ATLAS will likely remain in these alternative channels. Our assumption is that about 50% of players will earn ATLAS through the LP system and the other 50% will earn by selling to combat-heavy players who don't craft.

7. Conclusion

This quarter the Star Atlas economy faced many of the same difficulties it has in the past several quarters. Worsening external conditions yet remarkable stability in its own borders. The advent of C4 and the current playtest will surely see strength in the near future. We are all eagerly awaiting the vibrant new economy that will come with the full release of C4. Some of the new features of C4 that will surely launch us forward into a golden age follow. Negligible transaction fees from the Zink network will make the game accessible to players of all kinds. Real-money ship combat will inject fun and pain into the economy like we have not seen before, bringing with it a new age of digital industry. Finally, the advent of Council Rank and the Claim Stake system will introduce entirely new gameplay mechanisms into an already robust game economy. The future is bright for the Star Atlas economy.