

Litepaper: Arrland Ecosystem – An Overview of Resource Gathering, On-Chain Economy, and Gaming Layers

Introduction

Arrland bridges the worlds of blockchain technology and immersive gaming through its unique pirate-themed universe. By uniting economic simulation, NFT-driven resource mechanics, and tactical gameplay, the Arrland ecosystem allows players to gather resources, craft items, manage islands, and engage in fierce PVP battles. This litepaper details how on-chain resource management, competitive arenas, and casual Telegram-based gameplay interconnect—supported by the dual-token economy of \$RUM (deflationary) and \$ARRC (in-game currency).

Players can choose and switch between three distinct gaming layers:

- ***Strategic On-Chain Gameplay:*** Resource management, crafting, and economic simulation.
- ***PVP Arena and MOBA Battles:*** Skill-based multiplayer combat modes.
- ***Telegram Mini-App:*** A casual, tactical arcade layer accessible on mobile and desktop devices.

Whether you're steering fleets across the high seas, crafting items to power your battles, or exploring the archipelago via Telegram, Arrland's comprehensive ecosystem offers rich gameplay experiences for every pirate at heart.

Demo video <https://www.youtube.com/watch?v=XfEaLH6lIEU>

1. On-Chain Strategic Resource Management

Core Gameplay

In Arrland's on-chain economy, resources are gathered, processed, and traded using Pirate NFTs, ships, and island infrastructure. Each action—be it farming, crafting, or building—contributes to a dynamic marketplace governed by player-driven supply and demand. This strategic layer is accessible via any modern web browser, and soon it will also be available through the Telegram Mini-App for ultimate flexibility.

On-chain farming <https://www.youtube.com/watch?v=IS7appkuGKQ>

1.1 Resource Gathering

1.1.1 Mechanics

- Assign Genesis Pirate NFTs, Inhabitants (ordinary pirates and citizens) NFTs, or non-NFT crewmen to specific tasks like farming, fishing, mining, or crafting.
- Each Pirate NFT consumes 1 \$RUM token per day to gather resources, contributing to the token's deflationary model.

1.1.2 Resource Types

- **Basic Resources:** Wood, Fish, Coconuts, Citrus, Sugarcane, Cotton, Tobacco, Grain, Pigs, etc.
- **Advanced Resources:** Planks, Barrels, Fabric, Coconut Liquor, and more, which require specific buildings and tools to produce.

1.1.3 Formulas

Below are examples of how resource outputs are calculated. Pirate skills, luck, and duration of work all factor into production:

- **Fish Output**
(Swimming + Luck) / 2 × Days Worked (Requires tools for higher efficiency).
- **Wood Output**
(Strength + Luck) / 30 (without tools) or
(Melee + Woodcutting) / 10 (using Woodcutting-type tool, e.g., Axe with Woodcutting 8 for higher efficiency).

1.1.4 Tool Requirements

- Certain processes (e.g., turning wood into planks) require tools.
- Proper tools increase efficiency and unlock advanced resources (e.g., crates, meat processing).

1.1.5 Staking and Burn Mechanism

- Resources gathered are staked on-chain.
- Farming incurs a daily \$RUM fee (1 \$RUM/day per Pirate NFT), contributing to the overall deflationary token economy.

2. Resource Utilization

2.1 Building and Island Development

Resources can be used to construct and upgrade buildings on player-owned islands. From residential zones to specialized workshops, each structure enhances resource production, crafting capabilities, or defensive strength.

2.2 Voyage Supplies

Food, ammo, and repair materials are critical to sustaining ships on missions. Properly stocking your vessel ensures higher success rates on voyages, whether for trade or battle.

2.3 Crafting

Arrland's crafting system allows you to convert basic resources into advanced goods, such as barrels, crates, coconut liquor, or weapons. Crafting efficiency is influenced by:

- *Building Levels* (e.g., Blacksmiths, Cooper's Workshops, Food Processing Plants).
 - *Crew Specialization* (Pirate skills or dedicated workers).
 - *Tools and NFTs* that expedite or enhance production.
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3. Crafting: Transforming Resources into Value

3.1 Core Crafting Mechanics

3.1.1 Crafting Workshops

Specialized buildings (e.g., Blacksmiths, Cooper's Workshops) require specific resources and tools to produce items.

3.1.2 Items You Can Craft

- **Combat Items:** Weapons, ammo, and consumables for PVP Arena and MOBA battles.
- **Ship Parts:** Upgrades and repairs for ships.
- **Trade Goods:** High-value items like barrels, crates, or liquor for economic trade.

3.1.3 Crafting Economy

- Crafted items can be sold on in-game marketplaces or external NFT platforms.
 - Some items (e.g., weapons, tools) exist as NFTs stored on the blockchain.
 - This player-powered economy encourages specialization and trade collaboration.
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4. Integration with the Arrland Ecosystem

4.1 PVP Arena and MOBA Battles

4.1.1 Battle Mechanics

- **Kills and Assists:** *Players score points by defeating opponents.*
- **Interactive Environment:** *Different elements can be used to tip the balance of power in his team's favour.*
- **Team Play:** *Capture the Flag, Conquest, and other modes that test coordination.*

4.1.2 Integration with Other Layers

- *Items crafted in the on-chain economy (e.g., ammo, consumables) give a tactical edge in battles.*
- *Victories reward players with \$ARRC tokens, which can be reinvested into island development or traded on DEX.*

4.2 Platform Requirements for 3D PVP and Future Open World

- **High-End PC Only (for now)**
The 3D PVP Arena and the upcoming open-world modes feature high-quality graphics and advanced physics, requiring a powerful PC (with a strong GPU) for optimal performance.

4.3 Telegram Mini-App: Tactical Arcade Gameplay

4.3.1 Core Features

- **Exploration:** *Navigate your ship across the Arrland Archipelago, discovering islands owned by players or NPC fortresses.*
- **Battles and Challenges:** *Fight NPCs for loot, engage in fortress sieges for rare items.*
- **Ship Customization:** *Upgrade your ship with parts earned from battles and exploration.*
- **Adventurous Game Modes:** *Text-based adventures, mini-games focusing on reflexes and tactics.*

4.3.2 Economy

- *The Telegram Mini-App's resources are non-correlated with on-chain resources, maintaining balance in the main economy.*
- *Rewards from this app increase player engagement and progression, offering prestigious digital assets that enhance reputation.*

4.3.3 Platform Availability

- *Built primarily for mobile devices, but also usable on PC and MAC via the Telegram desktop client, ensuring a broad user base can participate without specialized hardware.*

4.4 Island Management

- *Residential Zones house non-NFT crewmen or specialized workers.*

- Collected resources fuel building upgrades, expand islands, and enhance overall productivity.
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5. Economic Model

5.1 \$RUM Token Burn Mechanism

- 1 \$RUM/day is burned per Pirate NFT during resource gathering, steadily reducing token supply and increasing scarcity.
- All burn transactions are verifiable on-chain, ensuring transparency.

5.2 \$ARRC Token Utility

- **Used for:**
 - Shipboarding fees, trading, crafting, and paying for certain transactions.
 - Rewards for victories in the PVP Arena.
- **Burning Mechanisms:**
 - Some \$ARRC is burned during voyages and specific marketplace transactions to stabilize token value.
- **Value and Liquidity:**
 - \$ARRC tokens are tradable on decentralized exchanges (DEX) and hold value in stablecoins like USDT, facilitating a robust in-game economy.

5.3 Marketplace Dynamics

Players can buy and sell resources, crafting materials, and finished products in the in-game marketplace or on external platforms. Player-driven supply and demand create an evolving economic landscape where strategic resource management, production efficiency, and combat success converge.

6. Strategic Depth

6.1 Ship Classes and Missions

- Ships vary by size, cargo capacity, and durability, offering different strategic options.
- **Missions include:**
 - Resource Transfers: Transport goods across islands.
 - Trading: Fulfill buy/sell orders with other players.
 - Attack Missions: Raid enemy ships for resources.

6.2 Building and Development

- *Island Buildings: Residential Zones, Specialist Workshops, Shipyards, Defensive Towers, etc.*
- *Upgrades: Improve production slots, increase crafting capacity, and unlock advanced resource processing.*

6.3 Pirate Reputation and Crew Management

- *Reputation influences gameplay. High-reputation players attract more skilled crewmen and gain trading advantages.*
 - *Crew Management: Assigning the right pirates to tasks optimizes resource output and combat efficiency.*
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7. Ecosystem Integration Beyond Gameplay

7.1 Digital Assets

- *Interoperable NFTs: Pirate NFTs, ships, and crafted items are recognized across gameplay layers (on-chain, PVP, Telegram).*
- *Prestige: Represents a player's standing in the ecosystem, potentially unlocking future rewards like Interactive DAO tokens or real-world asset shares.*

7.2 Interactive DAO

- *Active Players earn governance tokens by participating in the ecosystem.*
 - *This future decentralized entity will oversee Arrland's project decisions and IP, aligning with the community's interests.*
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8. Platform Accessibility

- **High-End PC**
Required for 3D PVP and the future open-world experience due to advanced graphics and physics.

Metaverse trailer: <https://www.youtube.com/watch?v=vNohkKGQsc8>

Alpha teaser: <https://www.youtube.com/watch?v=R6TaKfQ-GPc>

- **Web Browser (PC/Mac/Mobile)**
*On-chain strategy accessible via any modern browser.
Simplifies resource gathering, island management, and crafting.*
- **Telegram Mini-App (Mobile, PC, Mac)**
A casual yet rewarding layer, featuring tactical arcade experiences.

Designed to be mobile-friendly but also works seamlessly on desktop Telegram clients, ensuring broad accessibility.

Mobile Ship Sailing: <https://x.com/ArrlandGame/status/1862056590360166455>

This multi-platform approach allows all types of players—from casual mobile gamers to hardcore PC users—to actively participate in the Arrland ecosystem, regardless of their preferred devices or hardware capabilities.

9. Battle Arena – Gameplay Overview

In the Arrland Battle Arena, you're in for an exhilarating PVP experience with dynamic arenas, interactive traps, and a wide array of equipment. Prepare for epic skirmishes featuring firearms, melee weapons, and explosive items that can turn the tide of any encounter.

Alpha footage <https://www.youtube.com/watch?v=h2fF8RPK8rI>

9.1 Interactive Environmental Elements

- **Cannons** – Positioned strategically around the map, these inflict heavy damage on both enemies and allies (beware of friendly fire!).
- **Equipment Crates** – Scattered throughout the arena, containing weapons and items (e.g., swords, pistols, bombs, potions).
- **Lockable Gates** – Control entrances and exits to fortresses and passageways, tactically cutting off enemy approaches.
- **Floor Spikes** – Lethal traps activated by a switch, dealing significant damage to unsuspecting players.
- **Fiery Arrows from Walls** – Hidden mechanisms that, when triggered, fire volleys of flaming bolts into designated areas.
- **Falling Bridges** – Bridges that can be dropped via a switch, sending unwary foes into pits or lava flows.
- **Control Points** – Occupying these specific areas lets you raise your team's flag and earn points for controlling the zone.

9.2 Equipment

- **Bare Fists** – Your last resort when ammo runs dry or if a weapon gets destroyed.
- **Sword** – A reliable melee weapon offering quick attacks and the ability to parry incoming strikes.
- **Pistol** – Ideal for mid-range combat; ammo management is crucial.
- **Blunderbuss** – A powerful pirate shotgun effective at close range, capable of hitting multiple targets simultaneously.
- **Bomb with Fuse** – Explosive charges that can be used for ambushes or clearing clustered enemies.

- **Healing Potion** – Instantly restores health.
- **Shield Potion** – Grants temporary damage protection, providing a brief survivability boost.

9.3 Objectives

- **Capture the Flag** – Seize the enemy flag and deliver it to your own base.
- **Point of Control** – Secure strategic points on the map, hoist your team's flag, and score control points.
- **Kills & Assists** – Eliminate opponents and support allies to earn extra points for kills and assists.
- **Team Cooperation** – The key to success on any arena; coordinated squads capture objectives more easily.
- **Friendly Fire** – Be mindful of allies! Killing a teammate yields negative points and may decide the outcome of a match.

9.4 How to Begin

1. Log in to the game and select your character. If you own multiple Pirate NFTs, choose among them; otherwise, you have access to the Basic Pirate character.
2. Approach the Portal – Create a new room or join an existing session.
3. Mark “ready/start” – Once everyone in the room is set, the match begins.

9.5 Rewards

9.5.1 Achievements & Reputation

- Playing with various classes or types of weapons builds your achievements and increases your reputation.
- Participating in matches with at least 2v2 or larger teams also boosts reputation, which affects future airdrops and bonuses.

9.5.2 \$RUM Payouts

- If your team wins, each member of the victorious side receives \$RUM based on their score (points from kills, assists, capturing objectives):
 - Score / 10 in \$RUM if the player owns an Arrland NFT.
 - Score / 100 in \$RUM if the player does not own an Arrland NFT.

9.6 Battlegrounds

9.6.1 Two Fortress

Location Description

- Two fortresses on a volcanic island separated by a lava river spewing from an active volcano.

- Each fortress has two gates operating in an alternating pattern (one closes as the other opens), plus a rear entrance from the beach.

Interactive Elements

- **Cannon:** Usable by the fortress defenders.
- **Flag Point:** Inside or near each fortress, critical for Capture the Flag modes.
- **Floor Spikes:** Activated via a switch in the fortress, perfect for defending gates or the flag.
- **Falling Bridges** over the lava river – a switch can send foes tumbling into the flow below.

Map Resources

- **Beach:** Chests containing swords, fuse bombs, healing potions, shield potions, and pistol ammo.
- **Island in the Lava River:** Blunderbuss ammo; crossing requires navigating the falling bridges.
- **Volcanic Mountain & Tunnel:** Leads to a terrace where you can trigger fiery arrows aimed at the central battlefield.

9.6.2 Mount Emerald

Core Objective

- Capture the flag at the island's summit and deliver it to the extraction point.

Map Layout

- Fort defending the path to the peak – has 2 gates lockable from the inside, plus a cliff path with falling bridges.
- Fort Switches – Activate or collapse these bridges, sending chasing enemies over the edge.

Mountain Peak

- Platform containing the critical flag location.
- **Red Button** – Launches waves of fiery arrows to repel advancing opponents.

9.6.3 Fierry Peak Fortress

Control Point Mode

- A flag mast stands in the center of the fortress.
- Staying within the control circle lowers the enemy flag and raises your own, earning continuous points while your team's flag is at the mast's top.

Strategy

- *Effective defense of this key point and proficient use of bombs, traps (spikes, cannons), and teamwork can guarantee victory.*

Enter the portal, set up your team or join an existing match, and fight for glory and loot in the Arrland Battle Arena! Remember, tactical coordination and skillful use of the arena's interactive elements can tip the scales of victory. See you on the battlefield, pirate!

10. Conclusion

Arrland's resource farming and crafting system stands at the heart of its on-chain ecosystem, uniting PVP battles, island management, and a player-driven economy. By leveraging Pirate NFTs, \$RUM and \$ARRC tokens, and advanced crafting mechanics, players can build, trade, and dominate a dynamic blockchain-powered strategy game.

Simultaneously, the PVP Arena and MOBA battles offer skill-based competition, while the Telegram Mini-App provides a casual yet immersive arcade layer—all integrated into a cohesive world. This broad approach ensures that both seasoned blockchain enthusiasts and casual gamers can find their niche, collectively fueling Arrland's deflationary tokenomics and vibrant marketplace.

Set sail, gather resources, craft your way to victory, and claim your legacy in Arrland today!
Arrland – Where blockchain-powered strategy meets high-seas adventure.