

# STEAM INVENTORY SERVICE

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# Agenda

- Benefits of economic systems
- Risks and costs associated
- Using the Steam Inventory Service
- Approaches suggested by partners

# In-game Economies

Economic systems and microtransaction systems are tools that you can use to improve the product you offer to your customers.



# In-Game Economies

Focus on persistent customer value

Create positive externalities

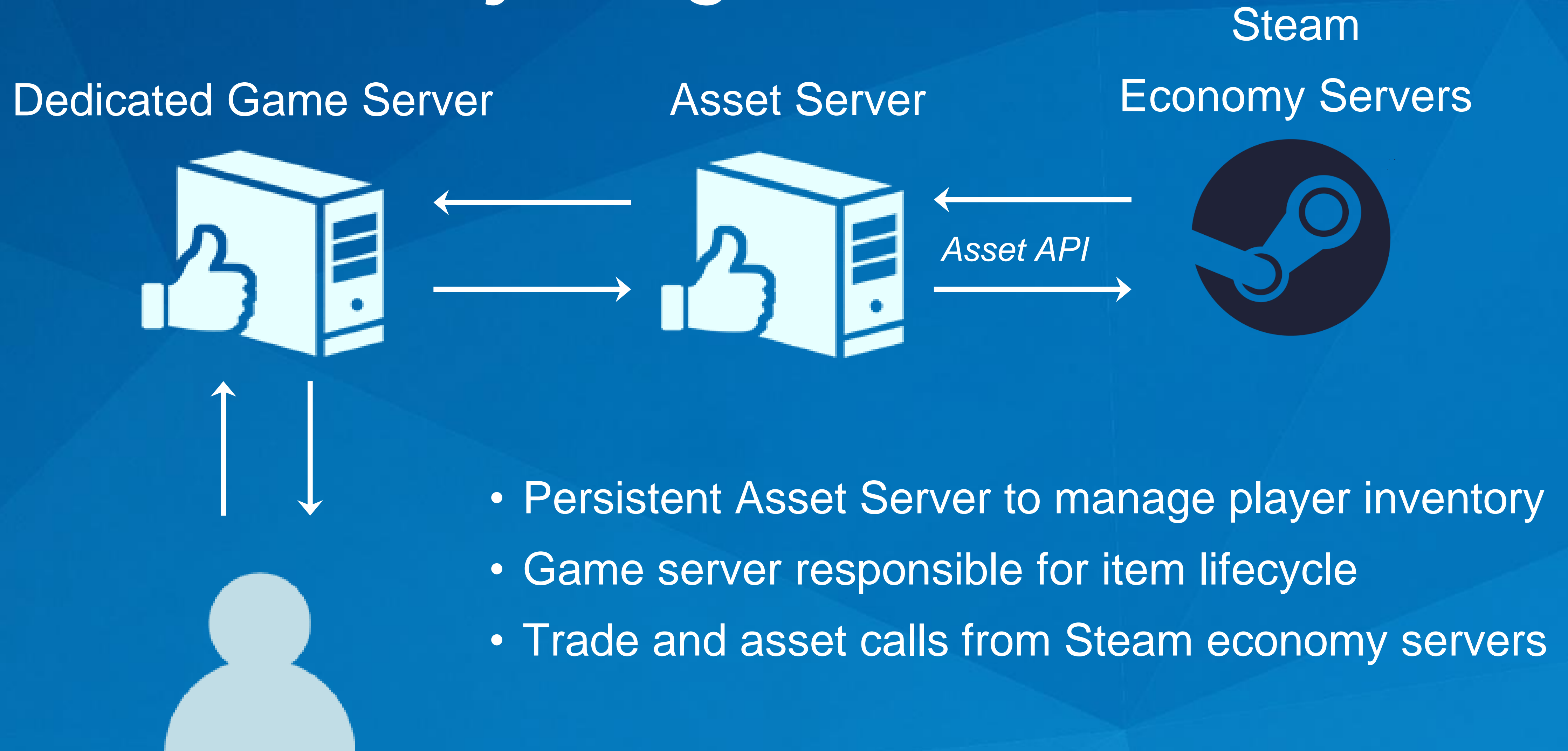
Distribute value randomly

Let users make value for each other

Make everything tradable



# Steam Economy Integration



# Steam Global Economy





**FEEDBACK**

# Feedback

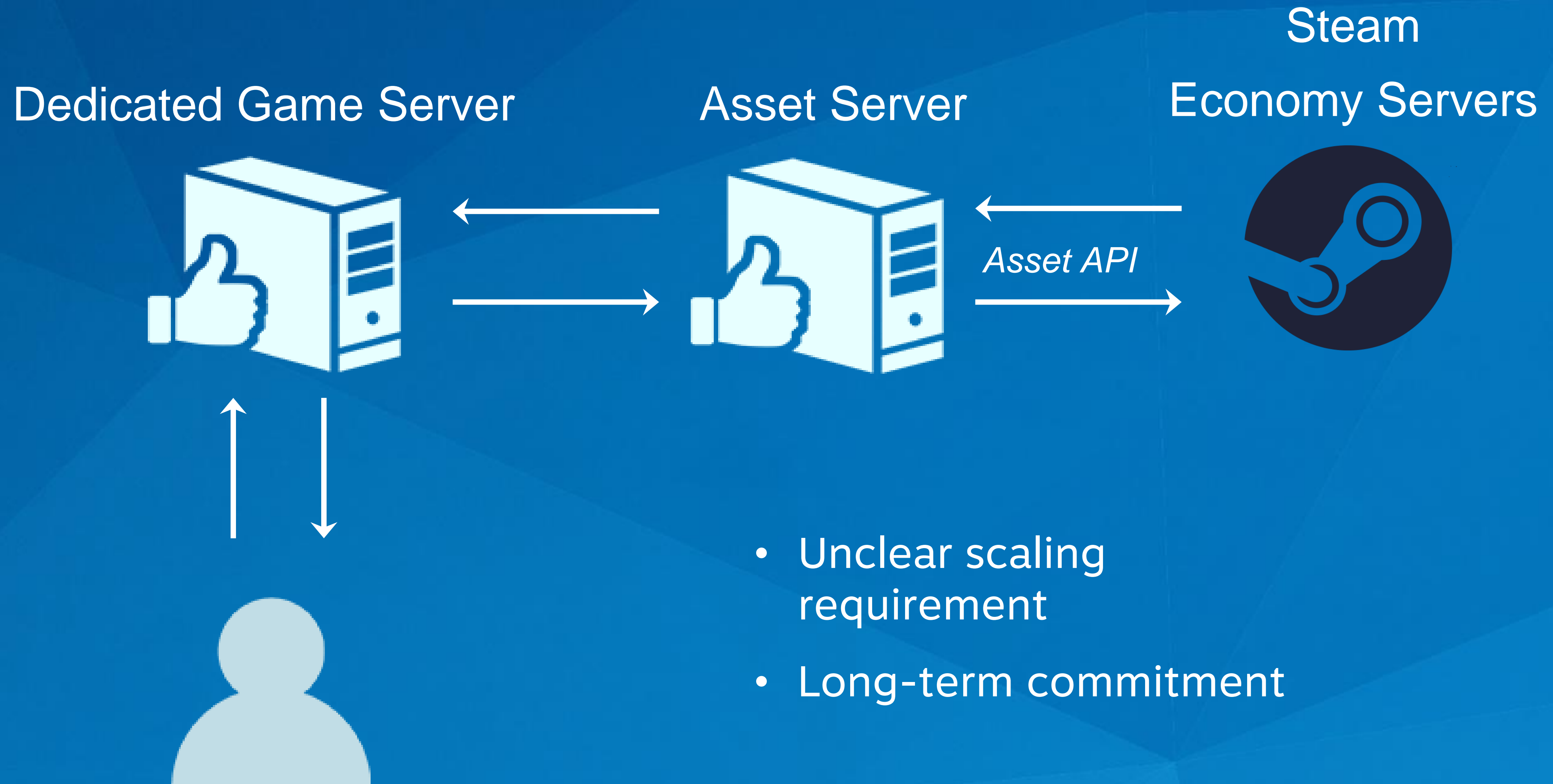
Unclear how to start

Out of reach to some teams





# Feedback: Risks





# Feedback: Costs

## Development cost:

- Comes before any player feedback
- Takes away from time on game
- Biggest impact on smaller dev teams





# Improvements

## Goals - can we:

- Lower the barriers enough to increase participation?
- Enable *really* small development teams?
- Scale to huge player economies?

## Solution characteristics:

- Hosted
- Low up-front work
- Support small experiments and iteration

# Steam Inventory Service

- Provide all backend implementation for player inventories
- Integrates with Steam features:  
Community Market, Trading, Storefront, and Workshop.
- Refined based on feedback from partners

# Steam Inventory Service - Suggestions

## Get Started

Reward Positive Behavior

Sell Items Directly

Use the Curated Workshop

Provide Long-term Value





# Getting Started





INSPECT

WHITENS 



## PRIDE'S DESTINY

Dice

Dice fit for a king. To wield them is to lay bare the true nature of one's heart.

Dropped during Armello's anniversary.

## Pride's Destiny



EQUIPPED

EQUIP  
OPEN MARKETPLACE

Tags:  
Not Transmogrifiable  
Tradeable  
Marketable

BACK





**Crimson Bleed Dice**  
 Spoils of War Collection, Uncommon  
 Tradeable  
 Dark grey colored dice with a crimson bleed effect.  
*"Dice you may see the nobility of Armello"*



**Trusty Dice**  
 Spoils of War Collection, Rare  
 Tradeable  
 Wooden dice that have rounded metal edges.  
*"I'd sooner trust these hardy dice than any other in Armello"*



**Boulder's Might Dice**  
 Spoils of War Collection, Rare  
 Tradeable  
 Cracked stone dice with rounded edges.  
*"Have you not might like the boulder?"*



**Morning Star Dice**  
 Spoils of War Collection, Epic  
 Tradeable  
 Dark metal dice with spiked edges and a bright orange aura.  
*"It is not often the kinder of paws that are the tool of the kind."*



**Heart's Fire Dice**  
 Spoils of War Collection, Legendary  
 Tradeable  
 Bright orange dice with charred red symbols. The base color of the dice look almost molten, and when rolled it has a bright flare effect.  
*"Within us all burns the eternal fire, flows the molten river, cries out our soul. War, our vice, as fuel to flame."*

Armello

☐ Include descriptions in search

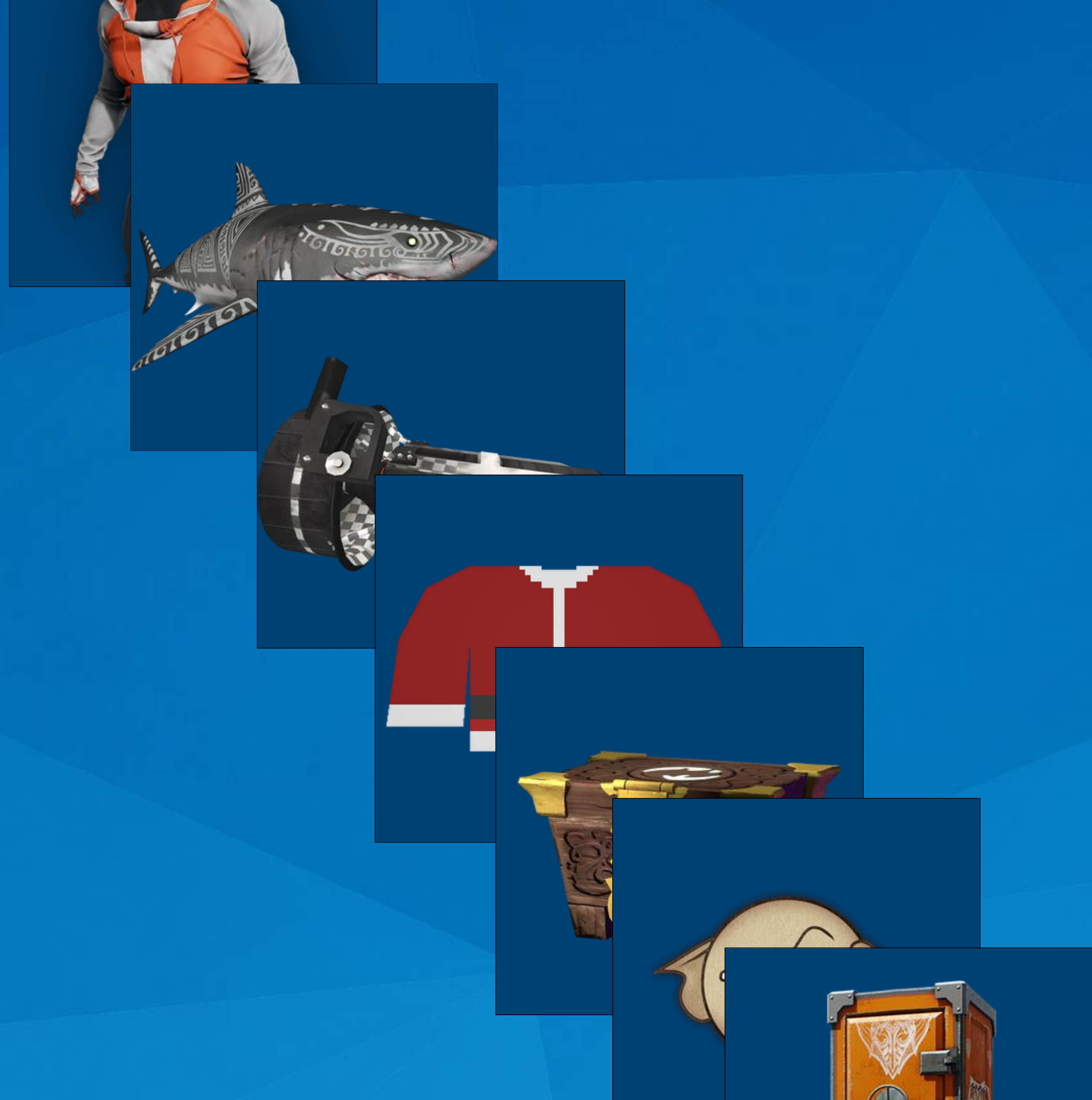
Collection	Rarity	Item Type
<input type="checkbox"/> Spoils of War	<input type="checkbox"/> Common	<input type="checkbox"/> Dice
<input type="checkbox"/> Wyld's Bounty	<input type="checkbox"/> Uncommon	<input type="checkbox"/> Chest
	<input type="checkbox"/> Celebratory	<input type="checkbox"/> Key
	<input type="checkbox"/> Rare	
	<input type="checkbox"/> Epic	
	<input type="checkbox"/> Legendary	

Reset to default
 Search



# Get Started

- Setup Inventory Service
- Define items
- Poll for items in game client



# Get Started: Setup

All setup is on the partner site:

<https://partner.steamgames.com>

- Generate a secure API key
- Enable Inventory Service

Steamworks > App Admin > Spacewar

## App Data Admin: Spacewar (480

Application ▾

SteamPipe ▾

Installation ▾

Security ▾

## Steam Inventory Service Settings [View Inventory](#)

☒ Enable Inventory Service

To enable economy integration make sure to also set the Asset

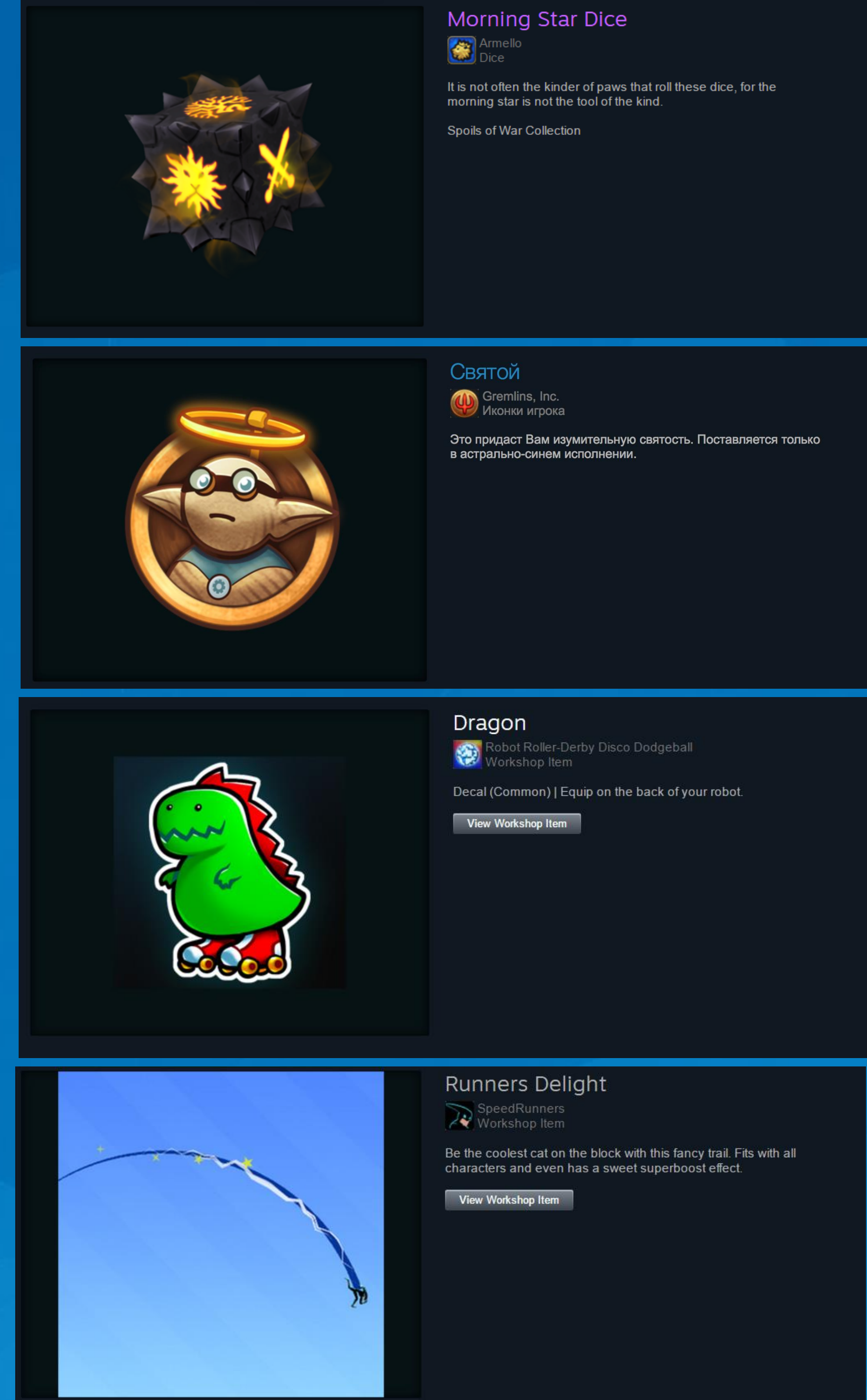
## Playtime Item Grants [View Inventory Documentation](#)

You can grant items automatically based on playtime in your g

You can grant items automatically based on playtime in your game  
Format: Minutes of gametime required to grant an item (60 is c

# Get Started: Items

```
{
  "appid": "480",
  "itemdefid": "404",
  "type": "item",
  "name": "Key 404 – Key Not Found",
  "description": "This key is somehow never where you left it. How does that happen?",
  "tradable": true,
  "marketable": true,
  "tags": "rarity:epic;pocket:left",
  "name_color": "FFFF00",
  "background_color": "993300",
  . . .
```





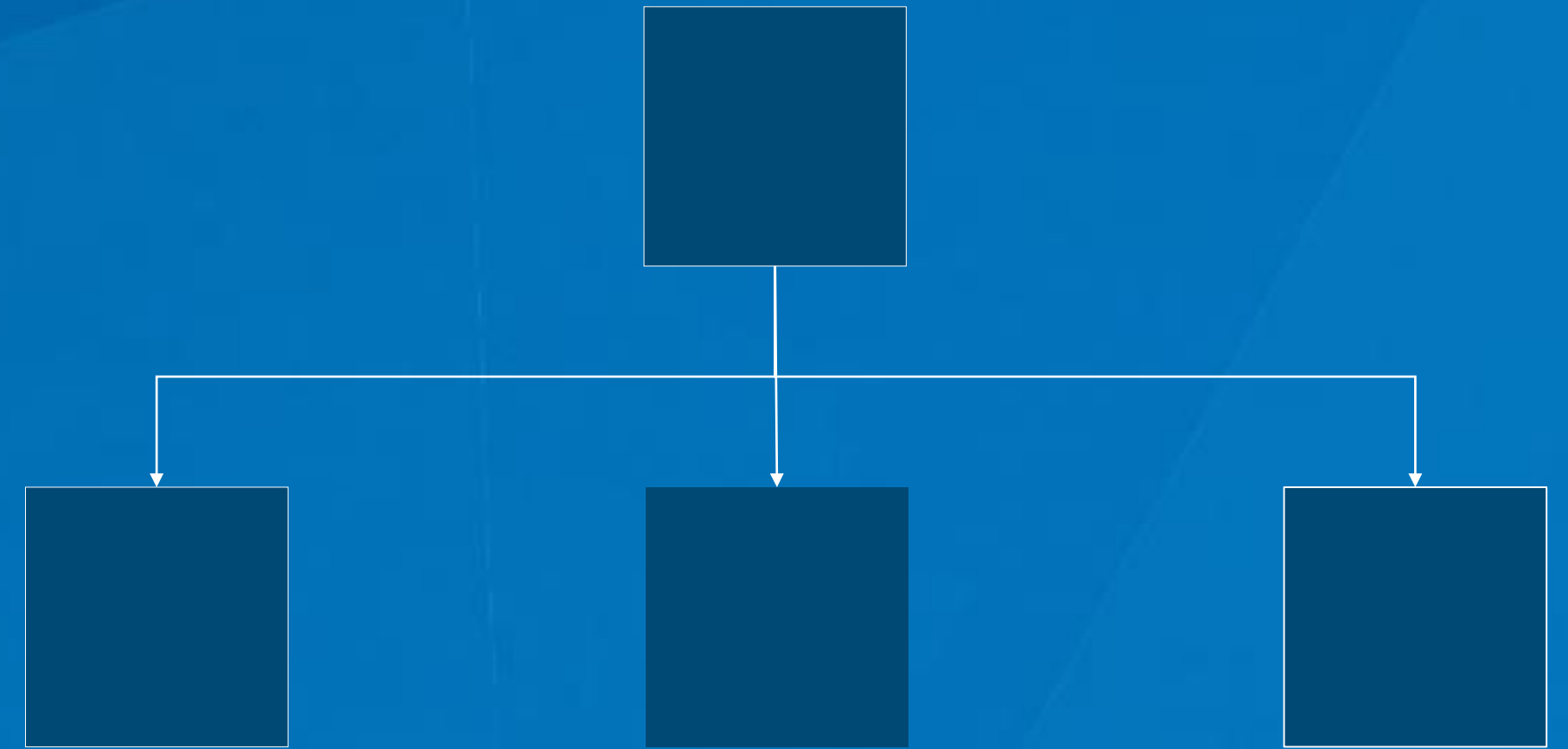
# Get Started: Special Items



- Playtime-based drops
- Generators
- Item bundles
- Crafting

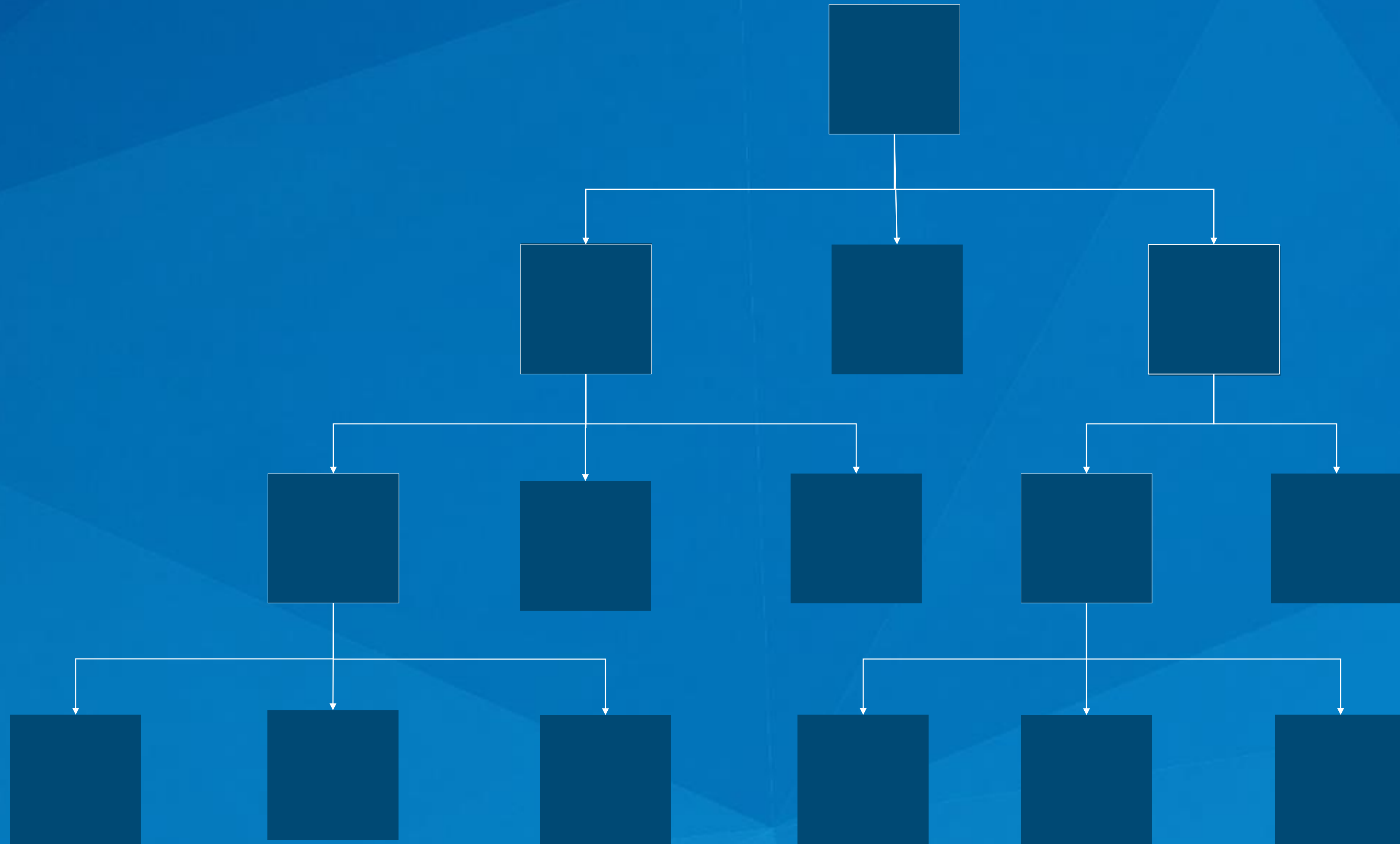
# Get Started: Special Items

- Playtime-based drops
- **Generators**
- Item bundles
- Crafting



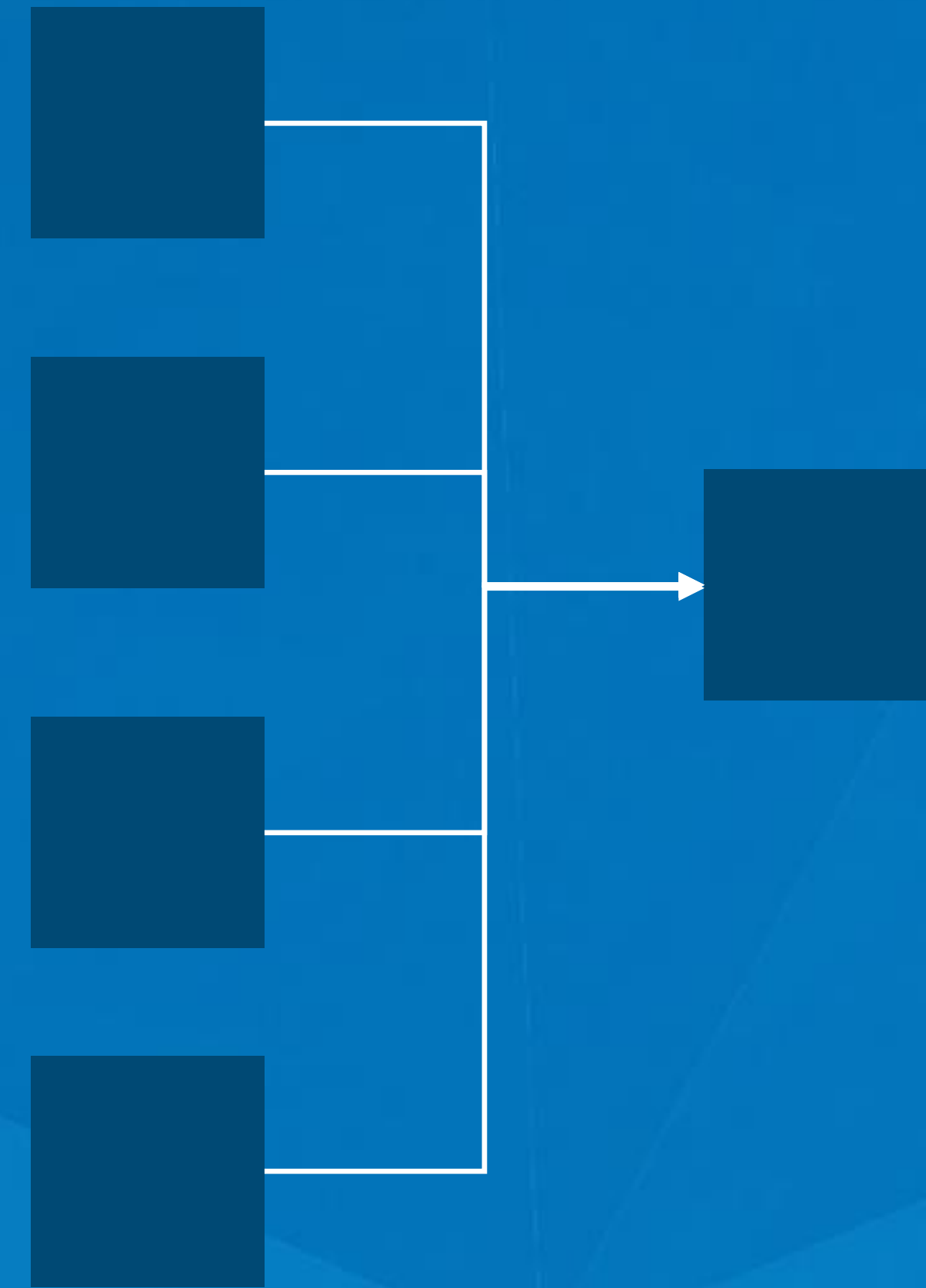
# Get Started: Special Items

- Playtime-based drops
- Generators
- Item bundles
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# Get Started: Special Items

- Playtime-based drops
- Generators
- Item bundles
- Crafting



# Get Started: Example





# Get Started: Client

## ISteamInventory:

- Get inventory: **GetAllItems()**
- Check for playtime drop: **TriggerItemDrop()**
- Opening chest: **ExchangeItems()**

## WebAPIs

- AddItem - Give a specific item to a specific user. C
- ConsumeItem - Consume some or all of a given ite
- ExchangeItems - Convert items using predefined c
- GetInventory - Retrieve the inventory for a given us
- GetItemDefs - Retrieve itemdefs for a given app. C

## Client APIs

- ISteamInventory::GetAllItems() - Start retrieving th
- ISteamInventory::GenerateItems() - Used for insec
- ISteamInventory::ConsumeItem() - Consume or rer
- ISteamInventory::ExchangeItems - Convert items (
- ISteamInventory::SendItemDropHeartbeat() - Used
- ISteamInventory::TriggerItemDrop() - Used for play
- OnSteamInventoryUpdate event - Used to be notifi
- ISteamInventory::AddPromoItem() - Grant a single
- ISteamInventory::AddPromoItems() - Grant specific
- ISteamInventory::GrantPromoItems() - Grant all ap
- ISteamInventory::TransferItemQuantity() - Split and



# Steam Inventory Service - Suggestions

Get Started

Reward Positive Behavior

Sell Items Directly

Use the Curated Workshop

Provide Long-term Value





# Reinforce positive behavior

Track in-game actions

Random drops

Analytics

Consumable items





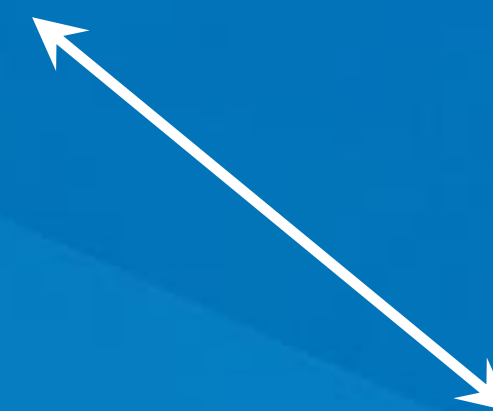
# Reinforce positive behavior

Web API for direct control  
Secure game server  
Context-specific drops



Inventory Service

Dedicated Game Server



# Steam Inventory Service - Suggestions

Get Started

Reward Positive Behavior

**Sell Items Directly**

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# Item sales - risks

## Risks:

Customer reception

Pricing

## Techniques:

act based on data

enable low cost experimentation

learn from other partners

## Technical issues:

DLC: heavyweight

Microtransactions: visibility, complexity



All Games > Free to Play Games > Unturned



# Unturned

You become a member of society, and live among the living.

User reviews:  
RECENT: Very Positive  
OVERALL: Very Positive

Release Date: Jan 12, 2017

Popular user-defined tags:

Early Access

Sign in to add this item to your wishlist, follow it, or mark it as not interested

## Play Unturned



Free to Play

Play Game

## Downloadable Content For This Game

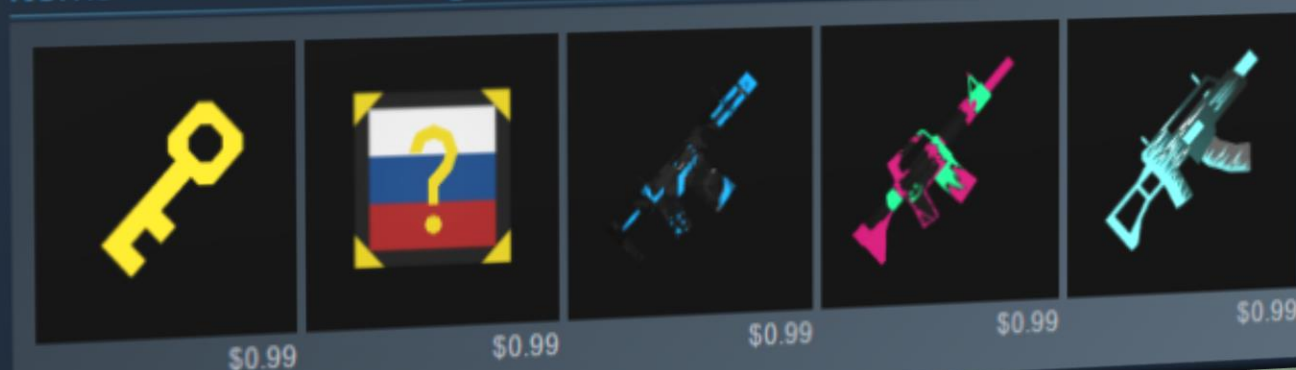
Unturned - Permanent Gold Upgrade

\$4.99

\$4.99

Add all DLC to Cart

## Items available for this game



## Play Unturned



Free to Play

Play Game

## Downloadable Content For This Game

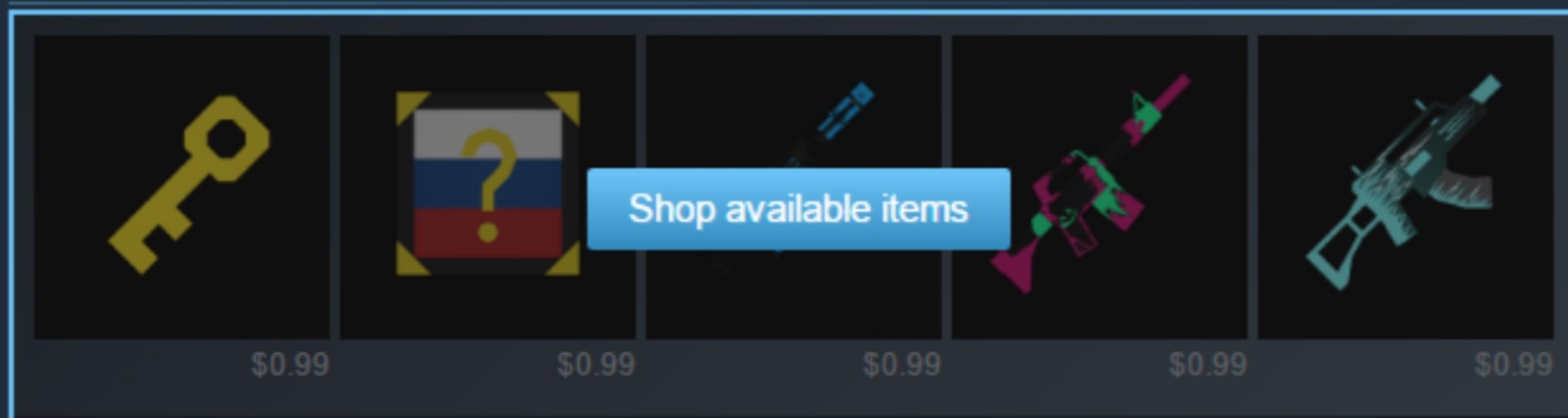
Unturned - Permanent Gold Upgrade

\$4.99

\$4.99

Add all DLC to Cart

## Items available for this game







Top Sellers

New Releases



Mystery Box Key

\$0.99



Russia Map Mystery Box

\$0.99



Permafrost Nightraider

\$0.99



Insane Maplestrike

\$0.99



Insane Augewehr

\$0.99

## Robo Invader Outfit



Beep boop... All your base are belong to us! We come in cheese!

Mythical Effects:  
Luminescent

Workshop Contributors:  
Fatsheep

When used this expands into several items.

\$1.99

Add to Cart

After purchase, this item:

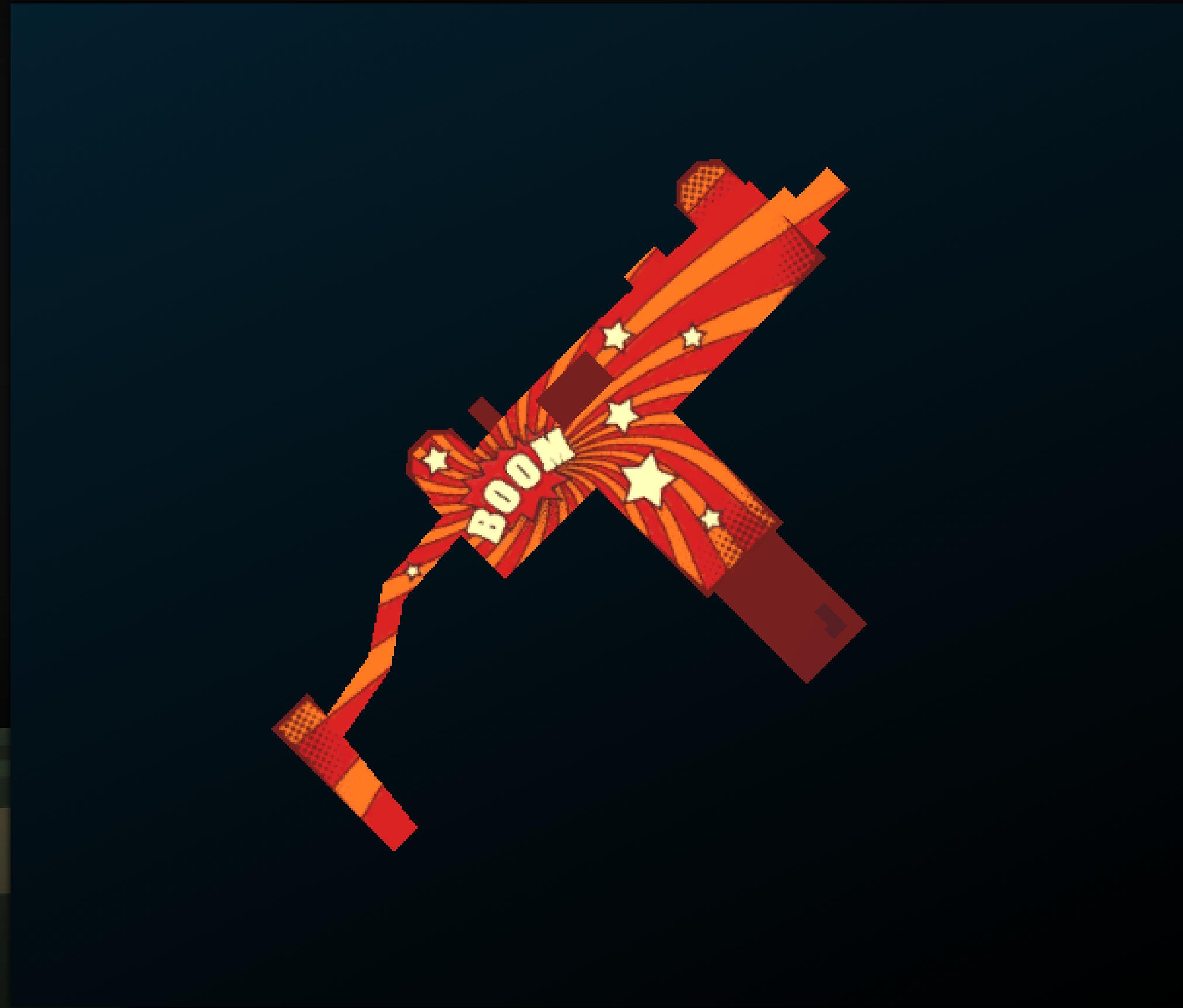
- this item is considered an "in-game item" for the purposes of the **Steam Refund** offer

# Item Store

- Choose items
- Configure store

```
... "itemdefid": "404",  
    "type": "item",  
    "price_category": "1;VLV100",
```

## Comic Boom Bulldog



Pow! Bang! Kablooey!

Workshop Contributors:  
aleksvaleraWork

When equipped this applies the **Comic Boom** appearance to the Bulldog in-game.

\$0.99

Add to Cart

Tags: Tradable

After purchase, this item:

- will not be tradable for one week
- this item is considered an "in-game item" for the purposes of the **Steam Refund** offer



# Item Store

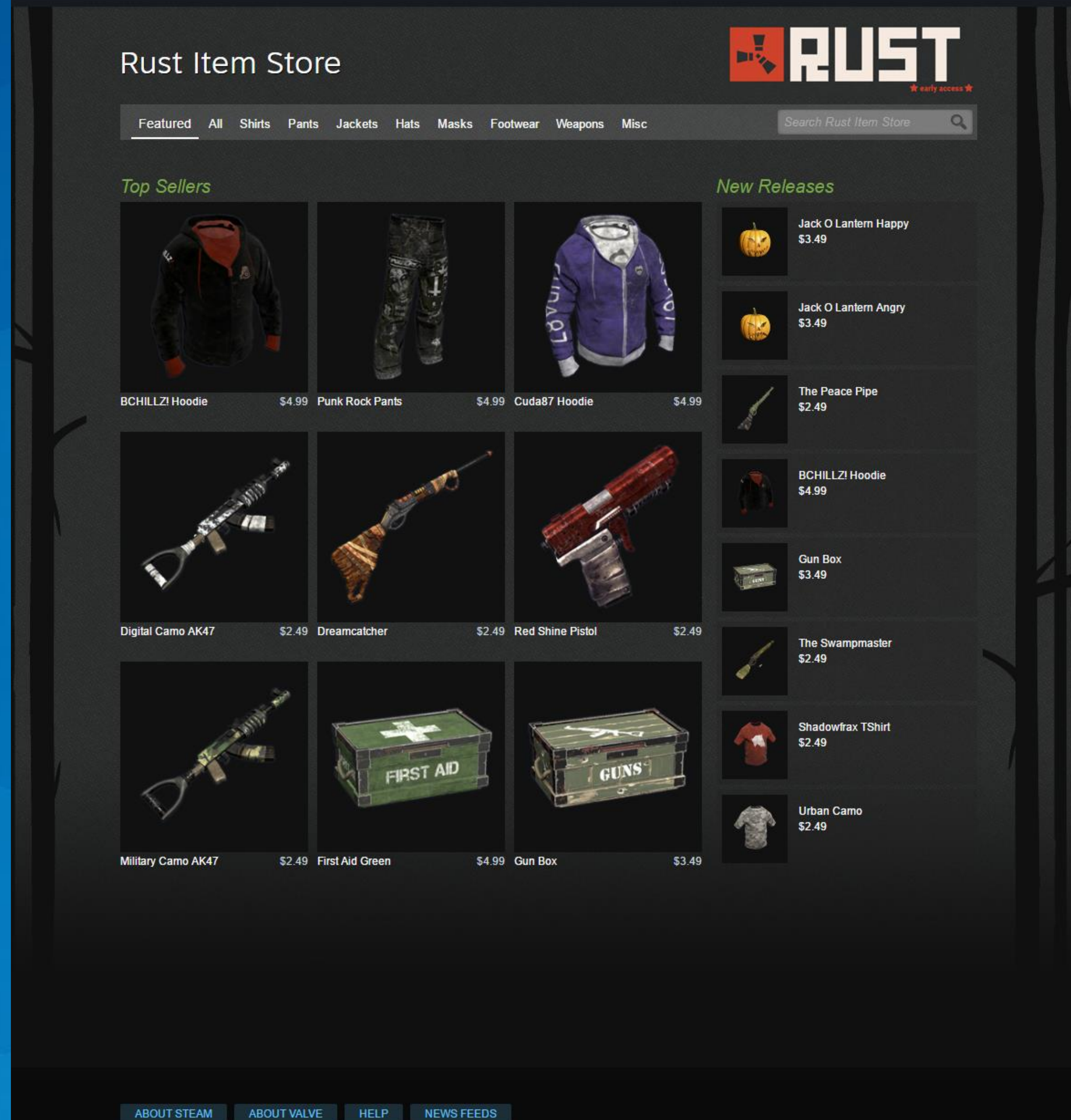
- Choose items
- Configure store





# Pricing

- Use Community Market data
- Consider tradability
- Remember customer expectation





## 3.16.0.0 Update Notes

AUGUST 19 - SDGNELSON

### Russia Map:



The map you've all been waiting for is finally here - Russia

Russia is Unturned's new largest map clocking in at 4x the size of the previous map, giving you tons of room for bases and exploration, and the new map provides an interesting blend between survival and combat. Many of the features from the past couple months have been designed into the new map. For example the best items are hidden away in the new radioactive zones. You can loot the lower portions of the map for gasmasks/filters.

It's also been a bit of an experiment: until now Unturned's development has been entirely solo, but for this project I worked together with several community members popular for their

### Russia Map Mystery Box



Does not require a key to open.

*Contains one of the following:*

Vintage Ushanka  
Chamsai Fury  
Cakemix Calling Card  
Honeycomb Snayperskya  
Plaid Kryzkarek  
Warhead Rocket Launcher  
Engine Vonya  
Gold Neck Chain  
Blueprint Nykorev  
Toxic Sludge Yuri  
Nuclear Matamorez  
Voidstream Ekho  
Hypertech Zubeknakov  
or a **Super Rare Mythical Item!**

\$0.99

Add to Cart

Tags: Tradable

After purchase, this item:

- will not be tradable for one week
- this item is considered an "in-game item" for the purposes of the **Steam Refund** offer



# Steam Inventory Service - Suggestions

Get Started

Reward Positive Behavior

Sell Items Directly

Use the Curated Workshop

Provide Long-term Value





# Curated Workshop

- User-generated content
- Community discussion and voting
- Accept items into your game

The screenshot shows the Steam Workshop interface for the game **Unturned**. At the top, the Steam logo and navigation links (STORE, COMMUNITY, ABOUT, SUPPORT) are visible. The user profile 'perf' is in the top right. The game title 'Unturned' is prominently displayed, with a 'Store Page' button next to it. Below the title, a navigation bar includes links for All, Discussions, Screenshots, Artwork, Broadcasts, Videos, Workshop (selected), News, Guides, and Reviews. A large banner features a character in a yellow hard hat and orange vest, with the text 'Creative Survivors Needed' and a description: 'Download and play community created maps, items, vehicles, models, translations and more!'. A 'Learn More' link is also present. Below the banner, a search bar is labeled 'Search Unturned'. A 'Vote' section encourages users to vote for community-made items. A carousel of item thumbnails is shown, with a blue arrow overlay that says 'Click to get started voting in your Queue.' Below this, a section titled 'Most Popular Ready-To-Use in the past week' displays a large image of a workshop interior with a sign that says 'RIOT GEAR'. To the right of this image is a sidebar with navigation options: 'Browse Curated' (with sub-options 'Accepted for Game', 'Your Voting Queue', 'Most Recent') and 'Browse Ready-To-Use' (with sub-options 'Most Popular', 'Top Rated All Time', 'Most Recent'). At the bottom right, a 'Browse By Tag' section lists asset types and their counts: Map (5,504), Localization (83), Item (821), and Vehicle (155).

STEAM® STORE COMMUNITY ABOUT SUPPORT

perf

## Unturned

Store Page

All Discussions Screenshots Artwork Broadcasts Videos Workshop News Guides Reviews

### Unturned

Free to Play

**Creative Survivors Needed**  
Download and play community created maps, items, vehicles, models, translations and more!  
[Learn More](#)

Home Browse ▾ Discussions About

Search Unturned

**Vote** for community-made items you want to see in the game

Click to get started voting in your Queue.

NEONBLAST

Most Popular Ready-To-Use in the past week

RIOT GEAR

Npc for H4ke

Browse Curated

- Accepted for Game
- Your Voting Queue
- Most Recent

Browse Ready-To-Use

- Most Popular
- Top Rated All Time
- Most Recent

Browse By Tag

ASSET TYPE

- Map (5,504)
- Localization (83)
- Item (821)
- Vehicle (155)



- Curated *or* community votes?
- Speculation and discussion in the community
- Compensate artists directly
- Feedback guides development

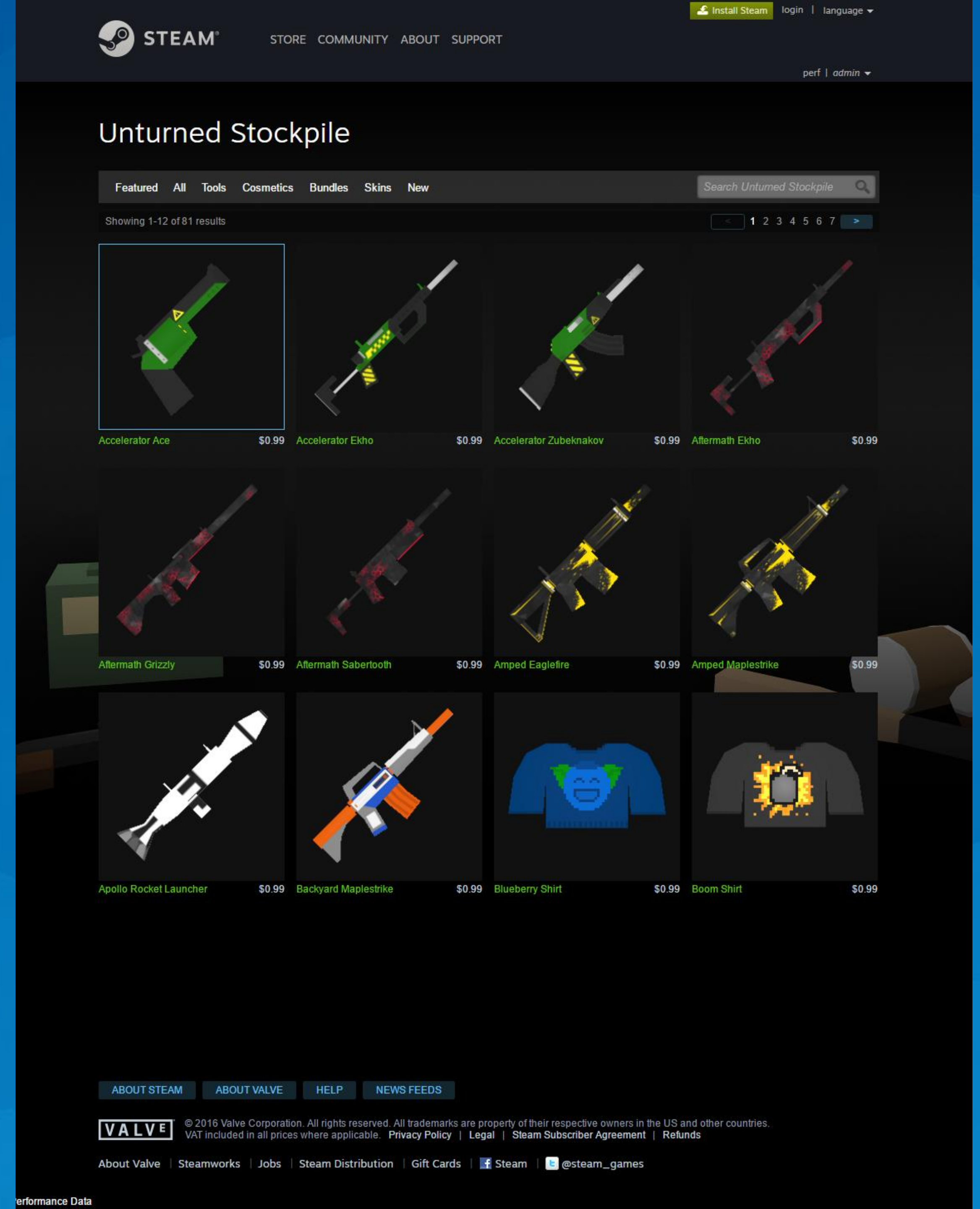




# Curated Workshop

“... the initial workshop item release was prompted by the community’s excitement / impatience for it...”

- Link item definition to workshop ID
- Steam handles revenue-share and payout



# Steam Inventory Service - Suggestions

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Provide Long-term Value





# Long-term value: Collections

- Release as collections
- New items displace old
  - Rarity value of retired items
- Generate buzz around a release





# Long-term value: Special Events

- Adjust drop rates for special events
- Limited-time item releases
- Release special items via DLC





**WRAPPING UP**

# Improvements

## Goals - can we:

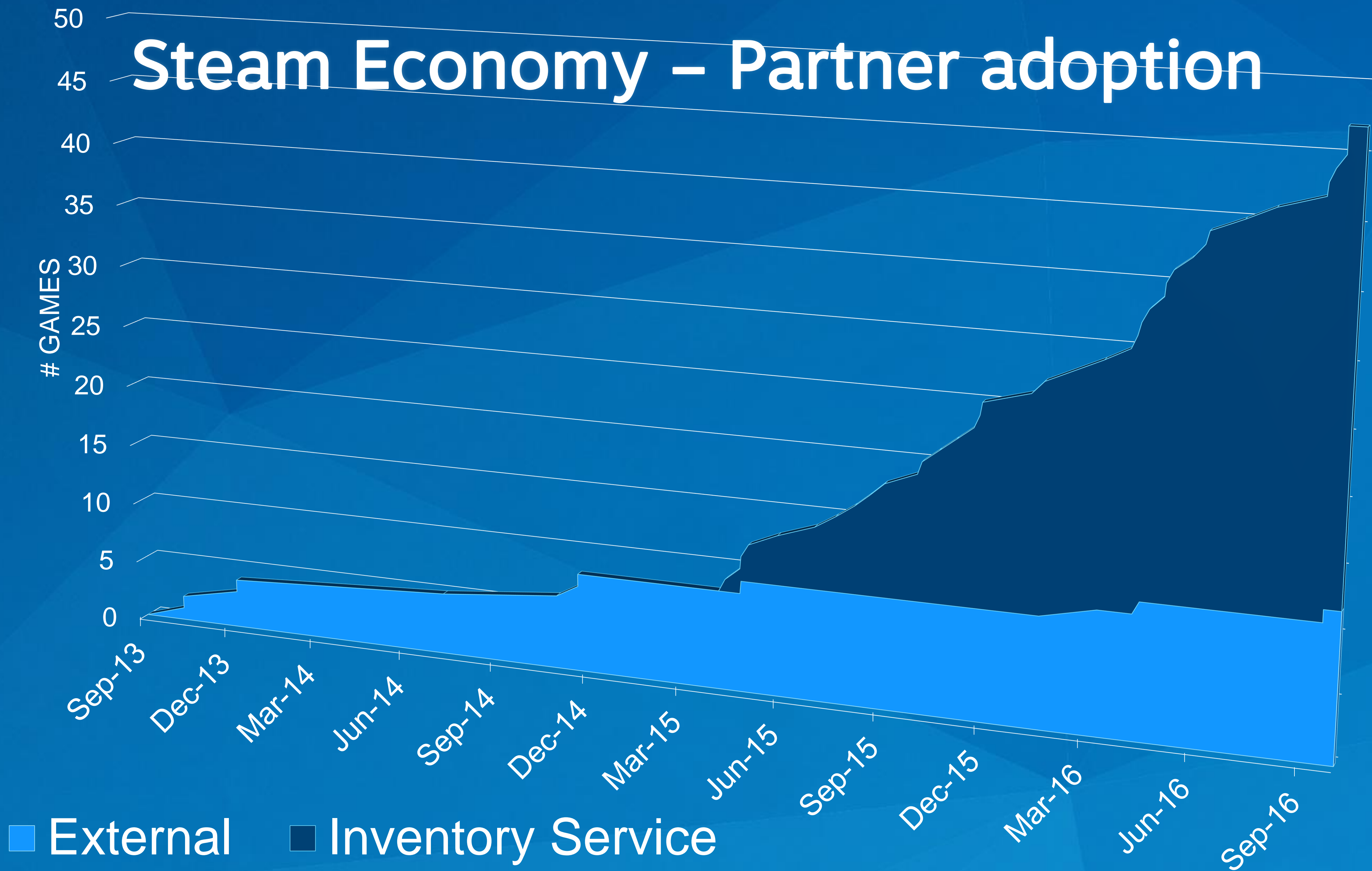
- Lower the barriers enough to increase participation?
- Enable *really* small development teams?
- Scale to huge player economies?

## Solution characteristics:

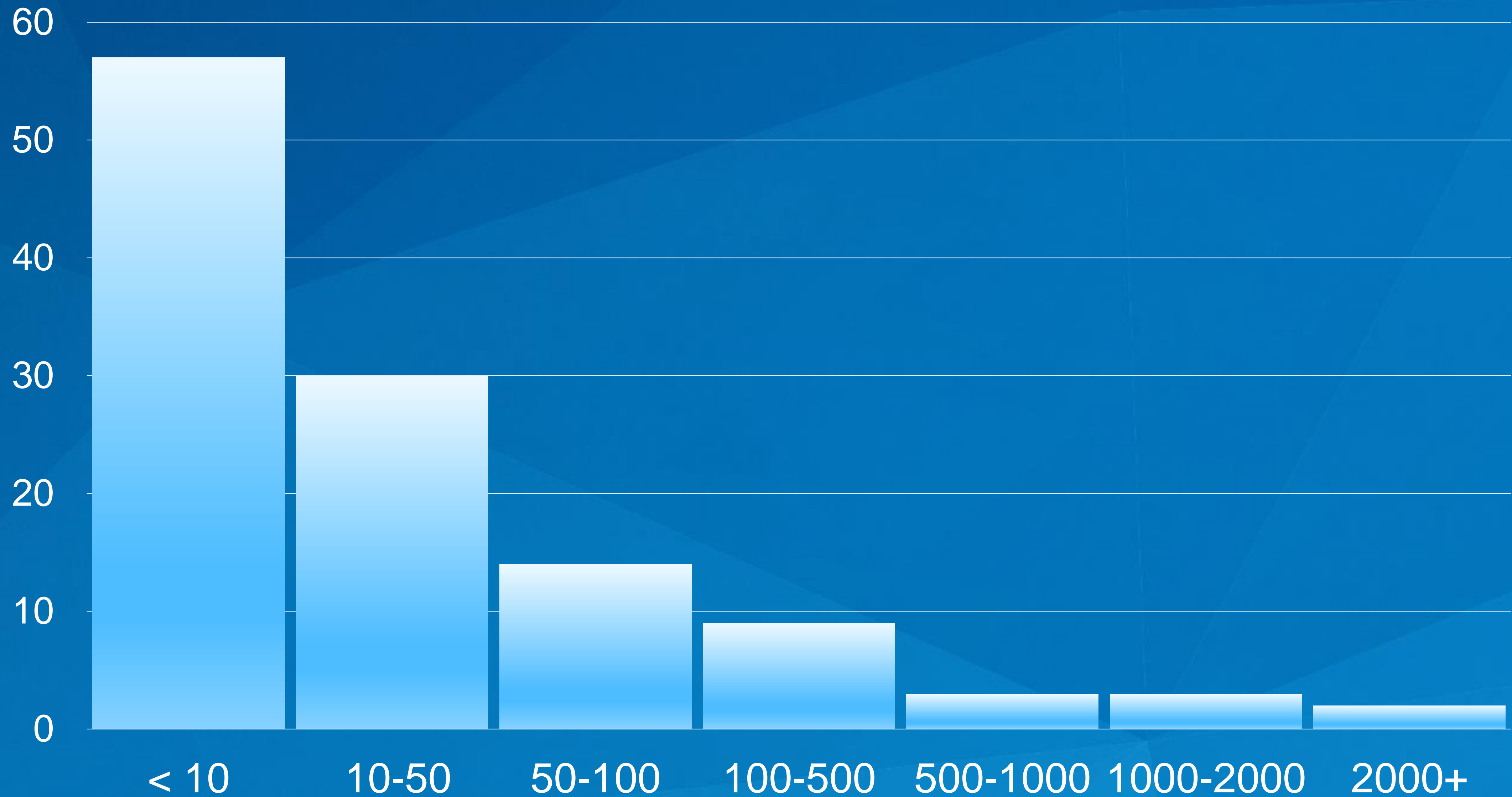
- Hosted
- Low up-front work
- Support small experiments and iteration



# Steam Economy – Partner adoption



# Inventory Service - Item types per game





# Questions – Help – Feedback

Steam Inventory Service discussions:

<http://steamcommunity.com/groups/steamworks/discussions/21/>

Documentation (“It’s getting better”)

<https://partner.steamgames.com/documentation/inventory>

[jonp@valvesoftware.com](mailto:jonp@valvesoftware.com)

