

Regulating gambling-like loot boxes in video games: what has failed and where to next?

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Conflict of interest

- ✦ Full: <https://sites.google.com/view/leon-xiao/about/conflict-of-interest>
- ✦ I have worked for a technology company that has a video game business.
- ✦ I have worked with a law firm that advise the video game industry.
- ✦ I have contributed to research that was made possible by data access provided by the video game industry.
- ✦ I have been invited to advise policymakers and regulators, which may affect my views of them as individuals and their actions.

Plan

- ✦ 11:00: What are loot boxes? 🎮📦
- ✦ 11:15: Loot box regulation around the world 📜👮🌍🌍🌍
- ✦ 11:45: Q&A for 15 minutes 🤔?

What is a loot box?

- Virtual items in video games that contain **randomised** rewards.
- Some loot boxes are **purchased with money**. Others are **obtained for free**.
- Conceptually similar to **gambling**.
- Loot box purchasing is **positively correlated** with **problem gambling**.
- Subject to public controversy and regulatory scrutiny.



© Blizzard Entertainment

ARKENTASS 33

5

Welcome to the Overwatch Closed Beta!
[MrMs]: le niveau est tellement faible ...

PRESS ENTER TO CHAT

ESCAPE BACK

ROGATIONAL

965



How to play
How to use
How to use

OPEN LOOT BOX SHOP



BUY BACK

Four types of loot boxes

Cost - Value	Description	Example Games
Embedded-Embedded	Costs real-world money to engage and its reward does have real-world value.	<i>FIFA 20XX</i> (in breach of the terms of service)
Embedded-Isolated	Costs real-world money to engage but its reward does NOT have real-world value.	<i>Hearthstone</i>
Isolated-Embedded	Does NOT cost real-world money to engage but its reward does have real-world value.	<i>Path of Exile</i> (in breach of the terms of service)
Isolated-Isolated	Does NOT cost real-world money to engage and its reward does not have real-world value.	<i>Yoshi's Crafted World</i>

Source: Nielsen and Grabarczyk (2019) <https://doi.org/10.26503/todigra.v4i3.104>

Not all loot boxes are alike

 Point of Purchase	 Pulling Procedure	 Contents	 Audiovisual	 Unpaid Engagement	 Social
<ul style="list-style-type: none">→ Currency Conversion→ Purchase Directness→ Platform Availability→ Odds Disclosure→ Limited Discounts	<ul style="list-style-type: none">→ Duplicate Handling→ Undesirable Target Handling→ Pool Size→ Pooling→ Progression Influence→ Item Supply→ Item Types→ Batch pulls→ Pity	<ul style="list-style-type: none">→ Otherwise Acquirable→ Mechanical Effect→ Seasonal Items→ Rarity-Power Relationship→ Rarity Classes→ Rarity Dimensions→ Rarity-Item Relationship→ Duration→ Contents Quantity→ Set Completion	<ul style="list-style-type: none">→ Near Misses→ Audiovisual Gambling Resemblance	<ul style="list-style-type: none">→ Teasers→ Free Samples	<ul style="list-style-type: none">→ Multiplayer→ Tradable contents→ Tradable boxes→ Viewability

Source: Ballou *et al.* (2020) <https://doi.org/10.31234/osf.io/xeckb>

Cosmetic vs Competitive advantage

- Some rewards are only **cosmetic**, e.g., they merely change the colour of the player character's sword.
- Other rewards may influence the game more significantly, e.g.:
 - unlocking **additional game content** not otherwise available;
 - granting **competitive advantages** (the sword from the loot box deals more damage and makes beating enemies easier).

'Paid' loot boxes

Cost - Value	Description	Example Games
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Source: Nielsen and Grabarczyk (2019) <https://doi.org/10.26503/todigra.v4i3.104>

Prevalence of loot boxes

- ✦ Amongst the 100 highest-grossing iPhone games?
- ✦ **59%** contained loot boxes in the UK 🇬🇧 in **2019**.
- ✦ **77%** contained loot boxes in the UK 🇬🇧 in **mid-2021**.
- ✦ As did **91%** in China 🇨🇳 in **mid-2020**.



What a 'loot box' means?

- ✦ 77% contained 'in-game purchases with random elements' in mid-2021.
- ✦ 'Social/simulated casino games' were included.




© Huuuge Games



© KamaGames

Money involved...

- *Allegedly... O_o*
- Loot box spending was **US\$15 billion [€14.1 billion]** in 2020.
- Loot box spending will exceed **US\$20 billion [€18.7 billion]** by 2025.
- Do I trust those estimated numbers? meh... 

Extreme individual cases reported

- One UK player 'spent nearly **£700** [**€792**] in **a month**' (BBC, 2019)
- Another spent over '**[US]\$10,000** [**€7,370**] in just **two years**' (Eurogamer, 2018)
- Four children spent 'nearly **£550** [**€623**] in **three weeks**' of their father's money without permission and still failed to obtain the rare item they were hoping for (BBC, 2019).


Total spending

- ❖ No conclusive data as **the video game industry does not release data**.
- ❖ The loot boxes of one **single game** is known to generate over US\$500,000 [€468,800] of **daily** revenue in one **single country** (albeit China 🇨🇳) alone. (Source: <https://doi.org/10.31234/osf.io/5k2sy>)
- ❖ The virtual items of three popular Steam games (*CS:GO*; *DOTA 2*; *PUBG*) have been transacted **1.45 billion times** between players, with an aggregated value of over **US\$1 billion** [€938 million]. (Source: <https://doi.org/10.1038/s41562-020-0900-3>)

Children's/young people's engagement

- In 2019, **23%** of 11–16-year olds in the UK  reported paying real-world money to buy loot boxes (UK Gambling Commission, 2019).
- **HOWEVER**, this figure decreased to **10%** in 2022 (UK Gambling Commission, 2022).
- The research methodology did not change... What does this reflect?
- Super popular games removing/not implementing loot boxes?

Potential Harms of Loot Boxes

- Structural **similarity** between loot boxes and gambling
 - “If it looks like a duck, swims like a duck, and quacks like a duck, then it probably is a duck.”  QUACK!
- Poor decision-making caused by demonstrable gambling-related psychological effects, *i.e.*, **irrational** decision-making **biases and fallacies**
- Empirical link between **problem gambling** and loot box spending

Loot box spending-Problem gambling

- 'The more severe that participants' problem gambling was, the more money they spent on loot boxes' (Zendle & Cairns, 2018).
- Source: <https://doi.org/10.1371/journal.pone.0206767>
 1. Problem gamblers (vulnerable consumers) spending more money?
 2. People who buy loot boxes then become problem gamblers...?
 3. Some other explanation...

Longitudinal studies: migration!

- ✦ Two VERY recent studies...
 - ✦ Young people who buy loot boxes are **more likely to gamble six months later** (<https://doi.org/10.1016/j.chb.2023.107685>)
 - ✦ They are also **more likely to spend more money on gambling** (<https://doi.org/10.1016/j.chb.2022.107605>).

Psychological distress: Mixed literature

- Drummond *et al.*: "...loot boxes ... appear to be **disproportionately purchased by [psychologically distressed and vulnerable] people...**" (<https://doi.org/10.1038/s41598-022-20549-1>)
- Etchells *et al.*: "...**no associations** between [loot box spending] and either mental wellbeing or psychological distress." (<https://doi.org/10.1098/rsos.220111>)
- More research needed... Depends on how you analyse the data?

Regulatory approaches



- ✦ Regulate as **traditional gambling** 🎰

or...

- ✦ Regulate as **loot boxes** 🎮
 - ✦ By **law**
 - ✦ By **industry self-regulation**



Legal recognition as gambling?

- Three elements that are defined differently in different countries...

1: Stake

2: Chance

3: Prize

Requires real-world money to purchase?

Randomised?

Contains rewards that can be exchanged for real-world money?

Legal recognition as gambling?

- In **Belgium**, according to the **Belgian Gaming Commission's interpretation of the law**, *all* paid loot boxes are recognised as gambling and are effectively **banned** (as no gambling licences can be granted to video game companies under current law).
- In **the UK (and most other countries, e.g., the Nordics)**, *only a small minority* of paid loot boxes whose rewards can be sold to other players for real world money are recognised as gambling (although gambling regulators have **not** enforced the law!). Other loot boxes remain **unregulated!**
- In **Austria**, the position is identical to the above, but the court **has recently enforced** the law.
- In **the Netherlands**, a recent court judgment decided that loot boxes generally should **not** be examined and regulated using the gambling law framework.
- In **China**, loot boxes are not examined or regulated with a gambling law framework.

Divergent approaches

	Cost - Value	Belgium	UK/ Nordic Countries (unenforced)	Austria (enforced)	The Netherlands	China
Embedded-Embedded					NOT gambling	NOT gambling
Embedded-Isolated			NOT gambling	NOT gambling	NOT gambling	NOT gambling

Source: Xiao *et al.* (2022) <https://doi.org/10.1007/s40429-022-00424-9>

Legal recognition as gambling?

Requires real-world money to purchase?	Randomised?	Contains rewards that can be exchanged for real-world money?	Example jurisdictions	
			Is gambling	Is NOT gambling
Yes	Yes	Yes	UK and Belgium <i>and most other places</i>	The Netherlands
Yes	Yes	No	Belgium	UK and The Netherlands <i>and most other places</i>
No	Yes	Yes	N/A	Everywhere?
No	Yes	No	N/A	Everywhere?



How to regulate?

- **Banning** or regulating loot boxes as gambling is **only one** (very restrictive) approach.
- **Doing nothing** is also a very extreme approach.
- There are **many other middle-ground approaches**:
 - **China** has adopted a different (less restrictive and arguably more nuanced) consumer protection approach inspired by gambling harm reduction measures:
 - **Not** preventing players from buying loot boxes, **but** requiring companies to **disclose the probabilities** of obtaining various potential rewards.

Nuffield Public Health Ladder

Range of intervention options

Explanation

Eliminate choice (Belgium 🇧🇪)

Regulate in such a way as to entirely eliminate choice, for example through compulsory isolation of patients with infectious diseases.

Restrict choice

Regulate in such a way as to restrict the options available to people with the aim of protecting them, for example removing unhealthy ingredients from foods, or unhealthy foods from shops or restaurants.

...?



Do nothing or simply monitor the current situation (UK 🇬🇧) N/A

Nuffield Public Health Ladder

Range of intervention options

What this means in a loot box context?

Guide choice through
disincentives

Require companies to obtain an **expensive** licence to sell loot boxes

Guide choices through
incentives

Make tax relief **contingent** on whether loot boxes are implemented

Guide choices through
changing the default policy

Make **direct purchase**, and not opening loot box, the **default** option

Enable choice








Allow players to **buy ALL items without engaging** with loot boxes

Provide information (China 🇨🇳) Make **probability disclosures** and reveal other important information

Monitor and evaluate responses

- **Whichever approach** is adopted, compliance and effectiveness need to be continually evaluated.
- The adoption of an approach should **NOT be treated as a solution**.
- **Some examples** from countries that have adopted loot box regulation...

Case studies


1. Belgium's "ban" on loot boxes 
2. China's LEGAL probability disclosure requirements 
3. The UK's industry self-regulatory probability disclosure requirements 
4. The age rating organisation's loot box presence warning labels    

Was Belgium's 🇧🇪 ban successful?

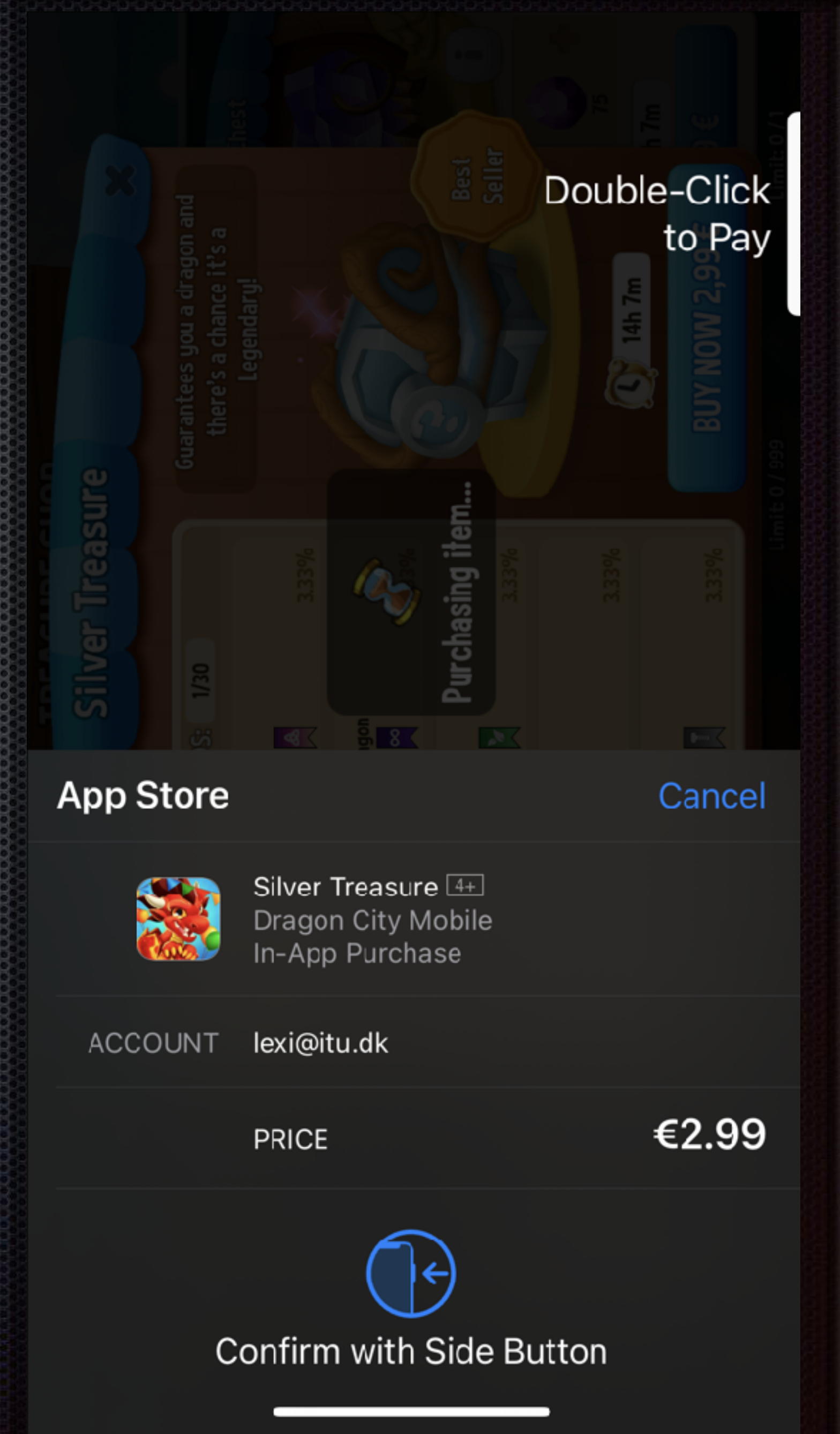
- ✦ Belgium “banned” all paid loot boxes, so the product should no longer be available on the market.
 - ✦ Prevalence rate **should** be 0%.
- ✦ Some companies have reported **removing loot boxes** from their games.
- ✦ Other companies have **removed their games** that rely on loot boxes from Belgium.
- ✦ But can I still find loot boxes? 🤔



Was Belgium's ban successful?

- ✦ I travelled to territorial Belgium physically, so Belgian law applied to me. 
- ✦ I played the 100 highest-grossing iPhone games in Belgium...
- ✦ I found **82% (!!!)** contained paid loot boxes.
- ✦ **Higher** than the 77% in the UK in 2021...

Screenshots



Was Belgium's ban successful?

- ✦ We **cannot know** how many games were removed from the Belgian Apple App Store.
 - ✦ **Unable to find** and **could not download** certain games that Nintendo said it removed (e.g., *Fire Emblem: Heroes* and *Mario Kart Tour*).
- ✦ Reputable companies generally did comply...
 - ✦ But most of the App Stores are Chinese and other 'foreign' companies.
- ✦ Interestingly, two games were still available for download (and highest-grossing) but **took technical measures to prevent purchase** from Belgium...

Preventing purchase 1 (explicit!)



Wait... This doesn't make sense...

How can the game be top grossing
if the game literally can't sell anything?



Preventing purchase 2 (not explicit...)



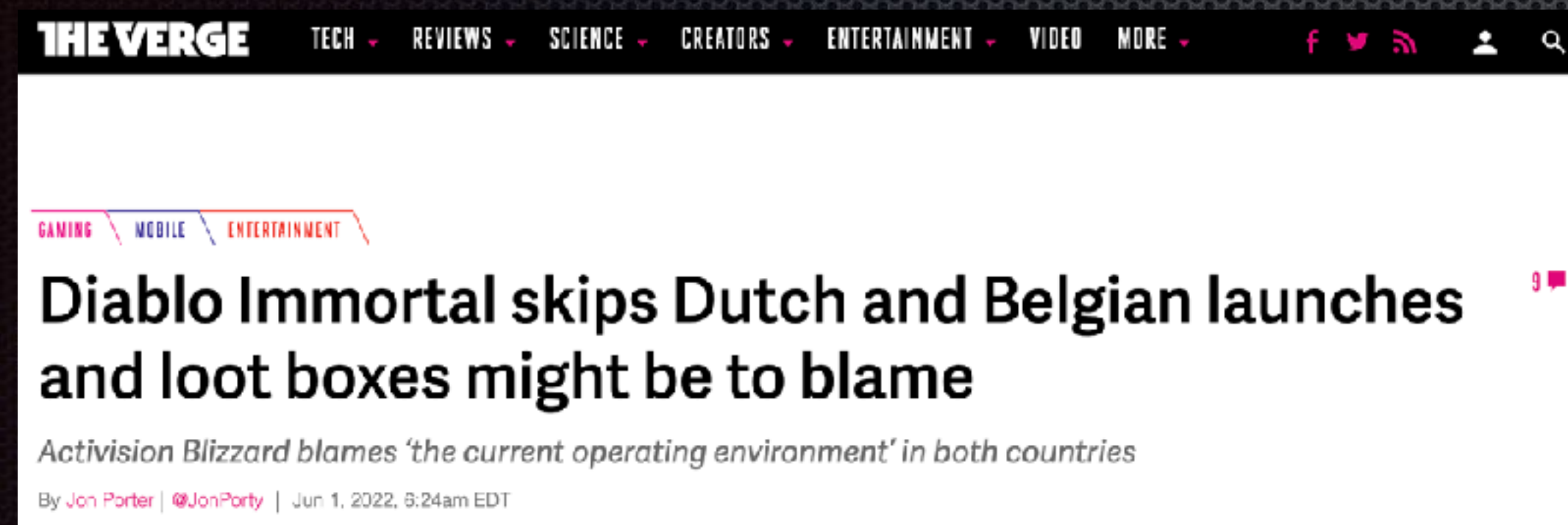
<- Before



After->
(with VPN)

Diablo Immortal in Belgium 🇧🇪

- ✦ Reportedly did not release in Belgium. There is not such thing as 'loot box law'!



THE VERGE TECH REVIEWS SCIENCE CREATORS ENTERTAINMENT VIDEO MORE

GAMING MOBILE ENTERTAINMENT

Diablo Immortal skips Dutch and Belgian launches and loot boxes might be to blame

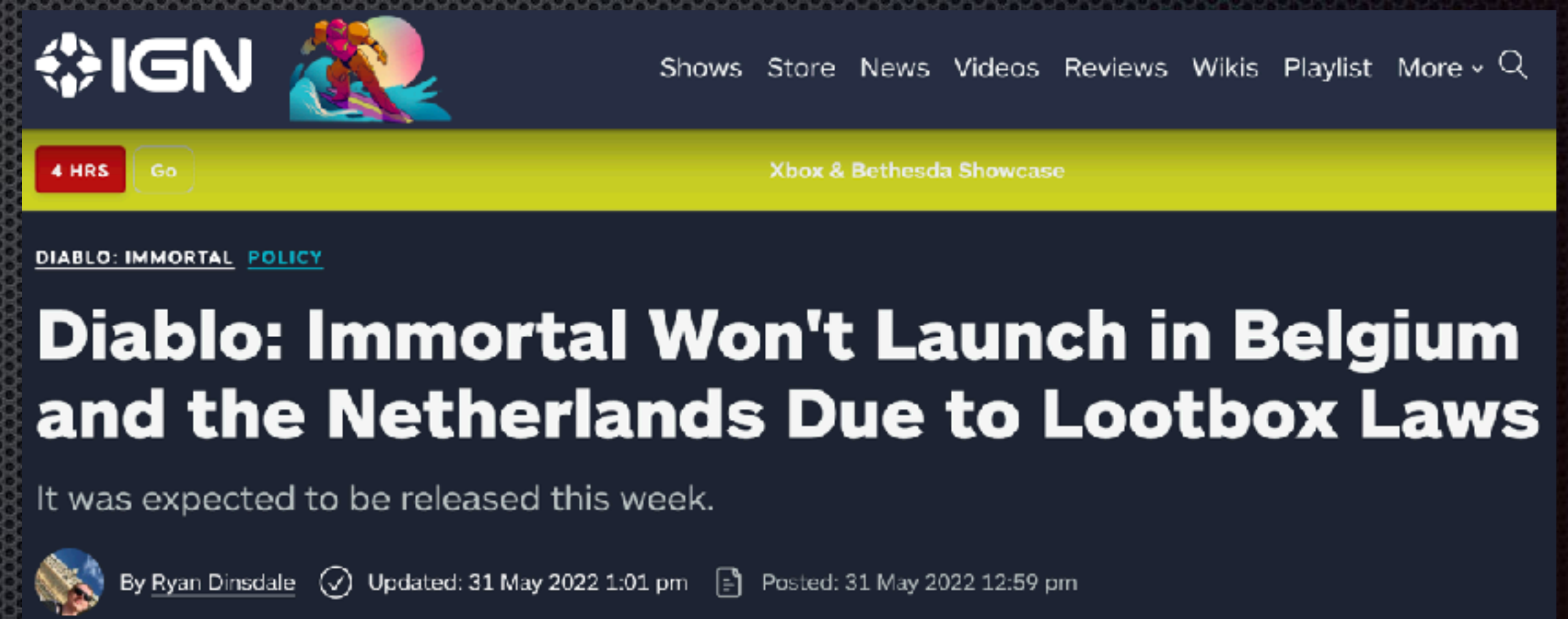
Activision Blizzard blames 'the current operating environment' in both countries

By Jon Porter | @JonPorty | Jun 1, 2022, 8:24am EDT

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Diablo Immortal won't launch in Belgium and the Netherlands

Probably due to their lootbox legislation



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Diablo: Immortal Won't Launch in Belgium and the Netherlands Due to Lootbox Laws

It was expected to be released this week.

By Ryan Dinsdale Updated: 31 May 2022 1:01 pm Posted: 31 May 2022 12:59 pm

- ✦ Indeed, the game cannot be found on the Belgian Apple App Store.

Diablo Immortal in Belgium 🇧🇪



Summary of Belgium's 'ban'

- Most games (82%) were still selling loot boxes and were likely relying on them to monetise, despite the 'ban' by the Belgian Gaming Commission.
- 2 out of 84 possible games took technical measures to prevent loot box purchase with real-world money (2.4%).
 - But easily circumvented with a VPN and many players obviously do so, otherwise these two games cannot be so high-grossing.
- Removal of games from national stores also does not work: easily able to change country to download from a different country's store (*Diablo*).

Was Belgium's ban successful?

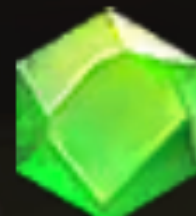


- ✦ The Belgian Gaming Commission gave consumers (including children and parents) **the false impression** that players are safe from loot boxes because it has been 'banned,' but these products are still widely available.
- ✦ Arguably **worse than doing nothing at all** because consumers might have been lulled into a false sense of security (e.g., a parent deciding not to educate their child about loot boxes).

The takeaways from this failure

- ✦ Regulating loot boxes is practically difficult
 - ✦ Regulators are faced with attempting to somehow regulate app stores with **1,000,000+ games** (in addition to frequent updates to those games)
 - ✦ Can **platform regulation** help? **Shift the burden** onto Apple/Google to enforce the ban?
- ✦ Is another country's gambling regulator (somehow) going to be **significantly better at enforcing the law** than the Belgian Gaming Commission? (Both in terms of proactivity with taking action and getting it done cheaply.)
- ✦ Perhaps we need a more **realistic and honest** goal: if complete elimination is not possible, try removing loot boxes from the 500 highest-grossing games.
 - ✦ We know that **spending is highly concentrated in the most popular games.**




Probability Disclosures

Produces All Heroes

	Common Tier Heroes	51.69%
	Rare Tier Heroes	43.70%
	Elite Tier Heroes	4.61%

Appearance Rates

High-End Spotlight

	Mario (Happi)	1.0000%
	Quickshaw	1.0000%
	New Year's Kite	1.0000%

High-End

	Pauline	0.2500%
	Mario (Hakama)	0.2500%
	Peach (Kimono)	0.2500%

UK (and the Nordic Countries *et al.*): Industry self-regulation?

- ✦ China is the **only** country to require probability disclosure as **law**.
- ✦ However, the same measure has been adopted as **industry self-regulation** in almost every other country:
 - ✦ For example, Apple requires all iPhone games to disclose loot box probabilities internationally.

China 🇨🇳 vs UK 🇬🇧:

Law vs Industry self-regulation

- ✦ In 2020, we found the Chinese 🇨🇳 disclosure rate was 95.6%.
- ✦ In 2021, we found the UK 🇬🇧 disclosure rate was only 64.0%.
- ✦ Self-regulation must be treated with a degree of scepticism.

Good disclosures

20h 7m 5s

GEMS!

Exclusive Gem Pack

Gems Chest
Try your luck and get your hands on those precious Gems!

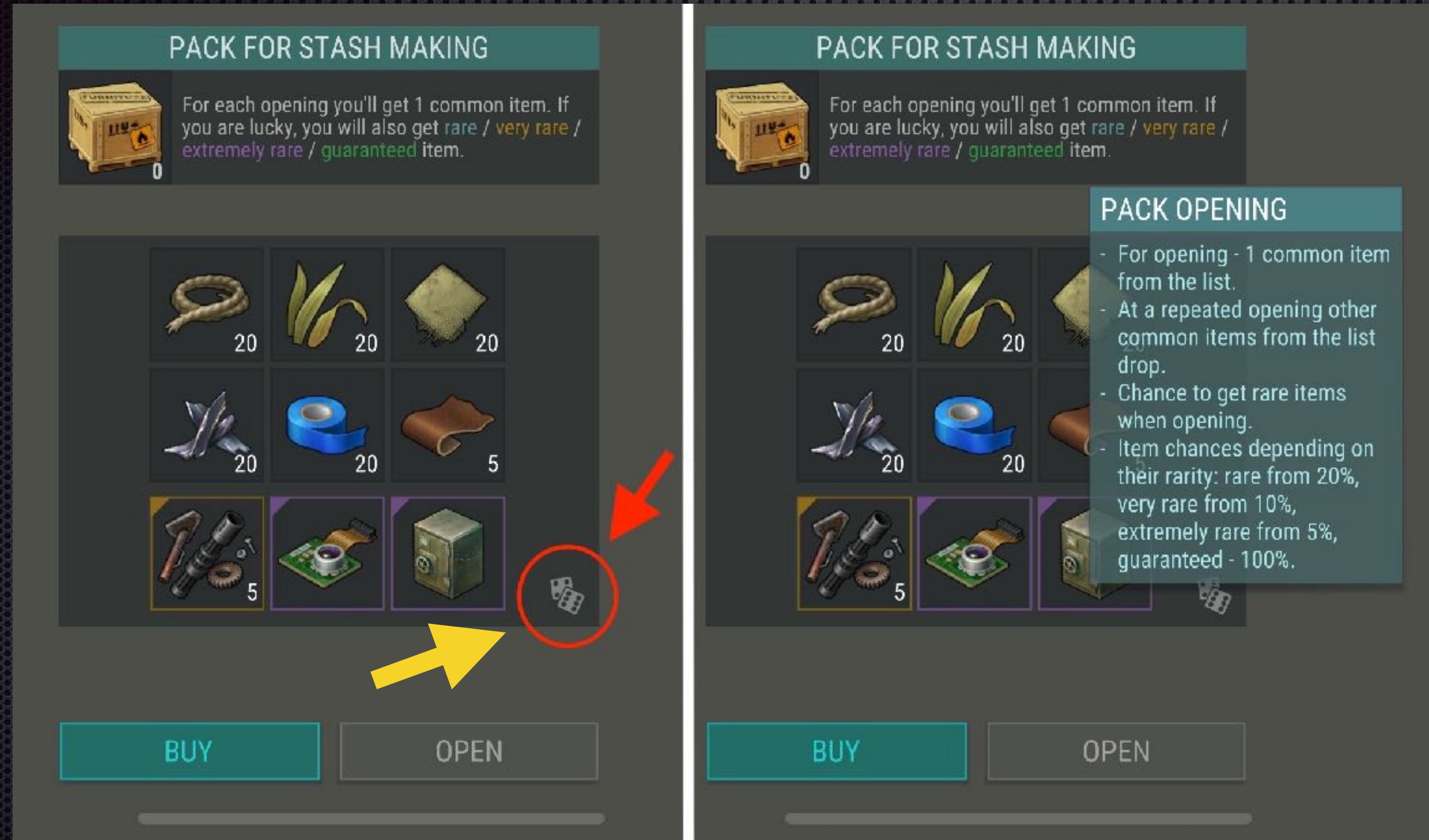
£1.99
~~£2.99~~

Any 1 of

1%	10%	19%	70%
500	150	75	50

BUY NOW

Suboptimal disclosures



- Tapping the dice button does not work; must instead PRESS and HOLD the button.

Inaccurate disclosures

Rarity	Prize Type	Chance
Common	Build Mode	96%
Common	Simoleons	1.8%
Common	Lifestyle Points	1.8%

Insufficient disclosures

CONTRA RETURNS DROP RATES

2021.07.08

Dear Contra warriors

Here is the drop rates of the top prize in game:

Lucky Draw	Prize	Chance
Ultimate Weapon-Basic Training Ground	Purple Weapon Fragment	0.5%-2%
	Blue Weapon Fragment	30%-40%
	Green Weapon	3%-10%
	Other Materials (Weapon Advance Materials, Super Weapon Upgrade Materials, etc.)	45%-70%

Overly complex disclosures

MITHRIL CHEST
FREE IN 28M 15s

MITHRIL CHEST REWARD PROBABILITY

2 Hour Building Rush	0.08000%
5 Hour Building Rush	0.00080%
500 Gold	2.10553%
1000 Gold	2.52252%
3000 Gold	0.51480%
10,000 Gold	0.00515%

REWARDS

WINNERS

 **OKAY**

THERE IS A 50% CHANCE ONE OF THE 5 HEROES WITH THE MOST FRAGMENTS THE USER HAS WILL BE DROPPED. THIS CHANCE IS CALCULATED AS FOLLOWS:

- 5 heroes with the most fragments (no matter evolved or not) are weighed as

$$\frac{1000000}{\text{AMOUNT OF SOUL STONES}^{1.5}}$$

- the calculated weights are used to receive a probability
- this probability is used to determine which hero's fragment is to be dropped next
- the exact amount of fragments to be dropped is calculated with the following chances

Hero's name	Amount of fragments	Chance %	Amount of fragments	Chance %	Amount of fragments	Chance %
Aurora	1	32.52%	3	32.52%	7	34.96%
Galahad	1	32.52%	3	32.52%	7	34.96%
Keira	1	32.52%	3	32.52%	7	34.96%
Astaroth	1	44.54%	3	44.54%	18	10.91%
Kai	1	44.54%	3	46.84%	30	6.32%
Phobos	1	32.52%	3	32.52%	7	34.96%
Thea	1	32.52%	3	32.52%	7	34.96%
Daredevil	1	44.54%	3	44.54%	18	10.91%
Heidi	1	32.52%	3	32.52%	7	34.96%
Faceless	1	32.52%	3	32.52%	7	34.96%
Chabba	1	46.84%	3	46.84%	30	6.32%
Arachne	1	44.54%	3	44.54%	18	10.91%
Orion	1	32.52%	3	32.52%	7	34.96%
Fox	1	44.54%	3	44.54%	18	10.91%



A Further Study

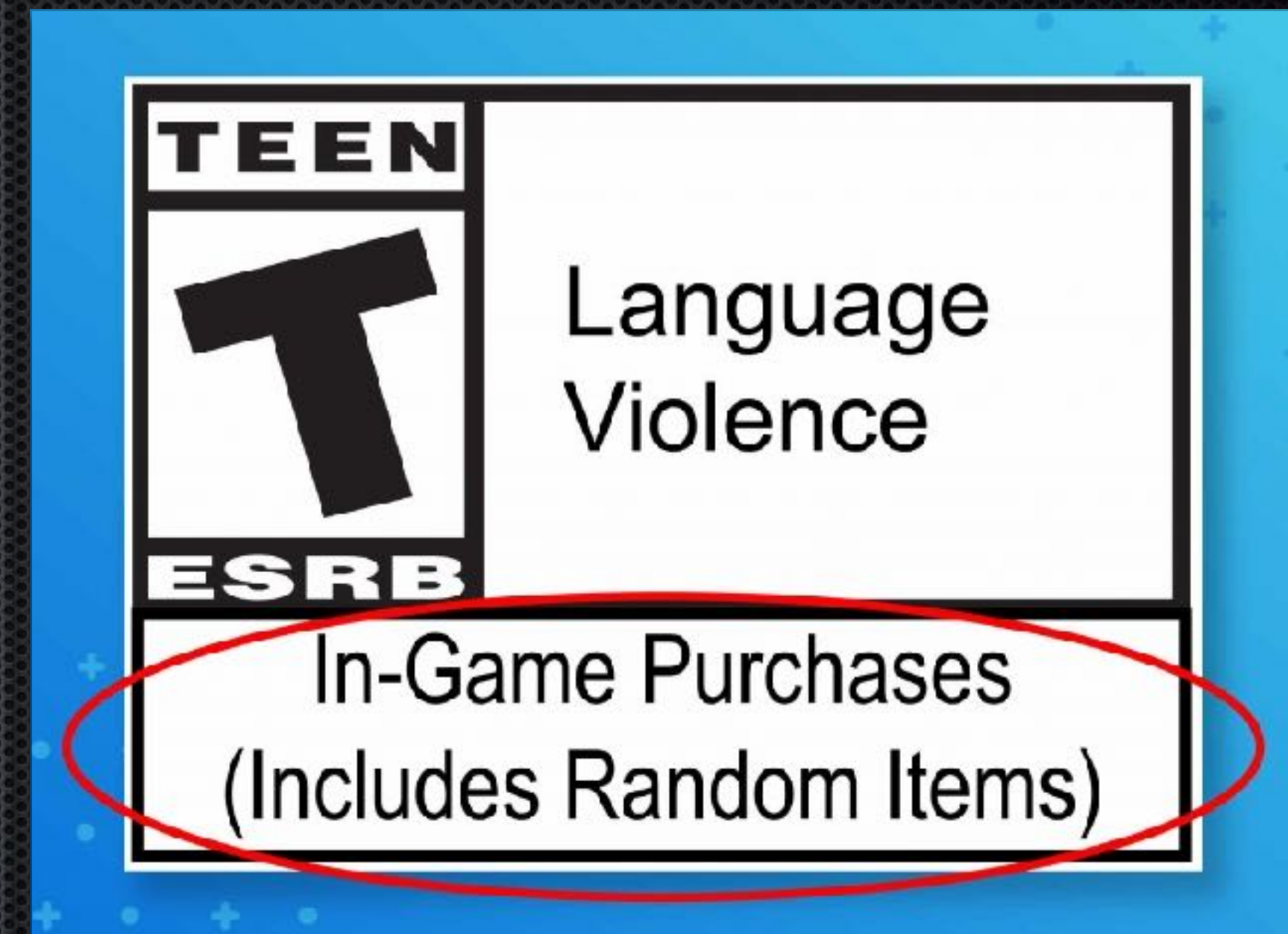
- We asked 879 video game players living in China whether they have seen probability disclosures in games they play: <https://doi.org/10.1007/s10899-022-10148-0>.
- Of 428 participants who **self-reported having purchased loot boxes** in the past 12 months, **362** reported having seen probability disclosures (**84.6%**).
- Most loot box purchasers have in fact **seen** disclosures **despite** them being implemented through **suboptimal** methods.

Did disclosures reduce spending?

- We then asked whether players bought **fewer** loot boxes and **spent** less money **after seeing** probability disclosures.
- Of 362 loot box purchasers who saw probability disclosures,
 - 262 participants (**72.4%**) reported that their loot box purchasing behaviour has **not been affected** by probability disclosures;
 - 70 participants (**19.3%**) reported buying **fewer** loot boxes and spending **less**; and
 - 30 participants (**8.3%**) reported buying **more** loot boxes.

ESRB's and PEGI's self-regulation

- ✦ "... many game consumers and enthusiasts (not necessarily parents) [asked] the ESRB to include additional information to **identify games that include randomized purchases.**"
- ✦ "The In-Game Purchases (Includes Random Items) Interactive Element was **developed in response** to those requests."
- ✦ "By including more specificity about the randomized nature of the in-game purchases, consumers can **make more informed decisions** when purchasing or downloading a game, instead of finding out after the fact."



© ESRB

© PEGI



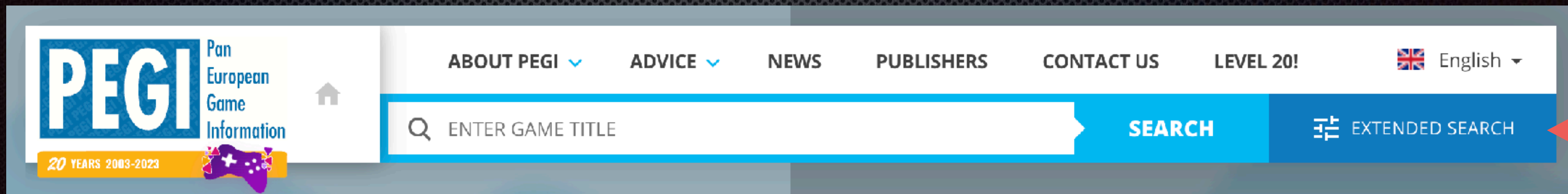
Where can you find this?

- Physical games:

1. on the packaging (probably on the back); &
2. through the search tool: <https://pegi.info/>.




© PEGI & Electronic Arts

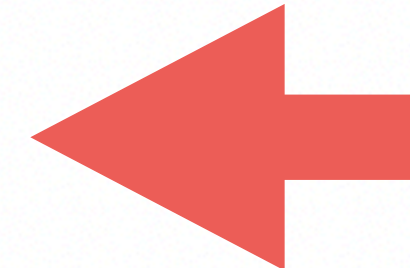
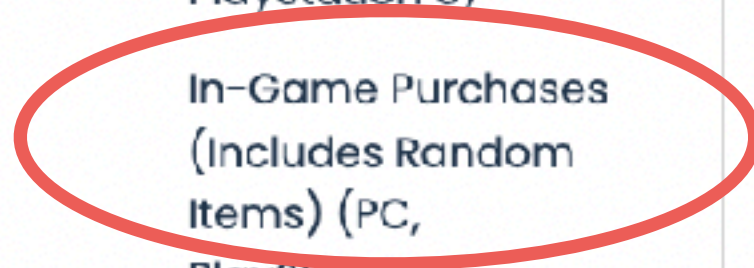
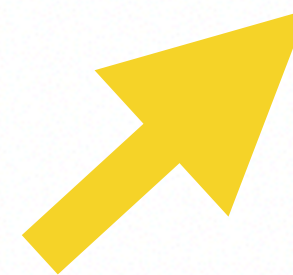


FIFA 23


Windows PC, PlayStation 4, PlayStation 5, Stadia, Xbox One, Xbox Series



RATING	CONTENT DESCRIPTORS	INTERACTIVE ELEMENTS	RATING SUMMARY
	No Descriptors	Users Interact (PC, PlayStation 4, Xbox One, Stadia, Xbox Series, PlayStation 5) In-Game Purchases (Includes Random Items) (PC, PlayStation 4, Xbox One, Stadia, Xbox Series, PlayStation 5)	This is a soccer simulation game in which players engage in realistic matches with teams across international leagues. Players can practice penalty kicks, assign on-field strategies,



© ESRB




FIFA 23

EA Swiss Sarl

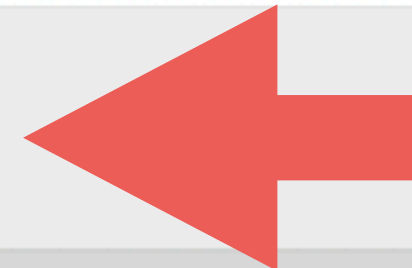
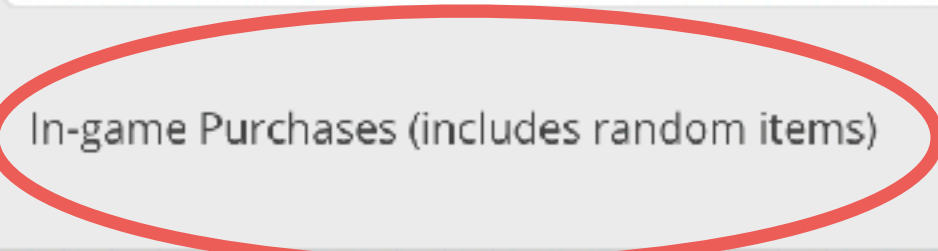
Football simulation game in which players can choose from over 600 real teams across various national and international leagues.

Release Dates & Platforms:

- 30/09/2022 - Xbox Series X|S
- 30/09/2022 - Xbox One
- 30/09/2022 - PlayStation 4
- 30/09/2022 - PlayStation 5
- 30/09/2022 - PC
- 30/09/2022 - Stadia

 In-game Purchases (includes random items)

[MORE INFO +](#)


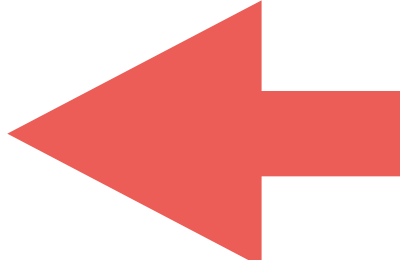



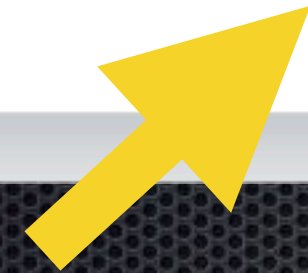
© PEGI

Hunt: Showdown – Limited Bounty Hunter Edition

PlayStation 4, Xbox One



RATING	CONTENT DESCRIPTORS	INTERACTIVE ELEMENTS	RATING SUMMARY
	Blood and Gore, Violence	Users Interact (PlayStation 4, Xbox One) In-Game Purchases (PlayStation 4, Xbox One)	This is a first-person shooter in which players assume the role of a bounty hunter battling monsters amid the swamps of Louisiana. Players form groups of hunters to hunt and kill  



© ESRB



Hunt: Showdown - Limited Bounty Hunter Edition

PLAION GmbH

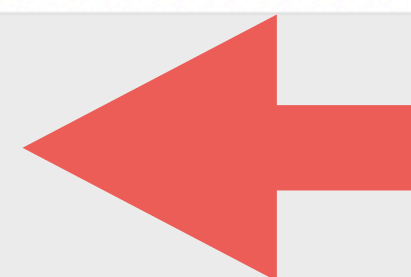
Re-release of the first-person shooter in which a group of bounty hunters have to rid the world of nightmarish monsters that roam the Louisiana swamps. Banishing the creatures results in pay that can be...

Release Dates & Platforms:

- 13/10/2022 - Xbox One
- 13/10/2022 - PlayStation 4



In-game Purchases (includes random items)



MORE INFO +



© PEGI

Study 1: Final Results

- 31 games total:
- 26 games were duly labelled by both but
- 5 games were missing the label from one of either organisation.
- Consistency rate of 83.9%
 - Lower than the preregistered satisfactory consistency rate of 95%.
- Don't know how many games (if any) were missing the label from both.

PEGI enforcement actions

- Following my study, PEGI **fined two companies €5,000 each** for **failing to disclose loot box presence** during the rating process.
- *Diablo Immortal*, one of the games fined, made **over US\$300 million by Nov 2022**, so the **fine was 0.0018% of the earnings** up to that point only. 😊

**Activision Blizzard fined just €5k over
Diablo Immortal loot boxes**

A measly cent-ence.

**Activision Blizzard och Plaion bötfälls
av PEGI för att ha hållit loot-lådor
hemliga**

DIABLO IMMORTAL

**Activision Blizzard é multada
na europa, mas valor
ridiculamente baixo vira
motivo de piada**

**Blizzard dostał po uszach za lootboxy w
Diablo, ale kara jest śmiesznie niska**

IARC on the Google Play Store

Guns of Glory: The Iron Mask

FunPlus International AG
In-app purchases

4.2★
577K reviews

50M+
Downloads

Everyone 10+ ⓘ

Install

Add to wishlist

Guns of Glory: The Iron Mask

FunPlus International AG
In-app purchases

4.3★
577K reviews ⓘ

50M+
Downloads

7
PEGI 7 ⓘ

Install

Add to wishlist

IARC on the Google Play Store



US Store:
ESRB Rating

E 10+ Everyone 10+

Fantasy Violence

Users Interact **In-Game Purchases (Includes Random Items)**

Learn More Got it

7 PEGI 7

Implied Violence, Mild Violence

Users Interact **In-Game Purchases (Includes Random Items)**

Learn More Got it



Danish Store:
PEGI Rating

IARC on the Google Play Store

- ✦ 71 of 100 popular games containing loot boxes did *not* attach the label.
- ✦ ESRB: "Google Play didn't update to the IARC version with IGPR until February 2022."



- ✦ 77 of 84 games that I suggested for labelling have since been labelled.

IARC on the Google Play Store

- PEGI's official response:
- Sheer volume of content on the Google Play Store described as a 'challenge.' No solution proposed.
- 'we don't have these issues with other storefronts.'



IARC on other stores

Storefront	Number of available games	Number of labelled games	Compliance rate
Epic Games Store	14	1	7.1% 🤡
Microsoft Store for Windows and Xbox	55	49	89.1%
Nintendo eShop	24	13	54.2%
PlayStation Store	37	26	70.3%


Industry self-regulation = meh...

- Consumers **cannot trust** either industry self-regulatory (i) probability disclosures or (ii) loot box presence warnings.
- Industry self-regulation **must not be assumed** to 'work' effectively.
- **We** need to critically think about and plan to assess the efficacy of industry promises, given the **conflicts of interest**.
- 'We' = researchers, policymakers, regulators, and non-industry stakeholders

Proposed laws around the world

- ✦ Spain 🇪🇸 is proposing to regulate loot boxes that have rewards with 'economic value' (i.e., can be cashed-out) with an ad hoc regime that is separate from its gambling law regime.
 - ✦ Proposed required measures include: mandatory age verification, pre-commitment spending limit-setting, probability disclosures, etc.
- ✦ Finland 🇫🇮 is considering changing the definition of 'lotteries' to cover all paid loot boxes (but this would actually be useless due to a technical legal issue on 'jurisdiction' due to Finnish criminal law). (Brazil 🇧🇷 is considering a similar bill.)
- ✦ Austria's 🇦🇹 court finally enforced gambling law against illegal loot boxes that can be cashed-out. (Will other countries with largely identical gambling laws be following suit?)
- ✦ The US State of Illinois 🇺🇸 considered requiring a loot box warning label. (Bill is dead... 🦴)

Other gambling-like products and crypto gambling

- ✦ A lot of **other gambling-like products are exactly like loot boxes** (at least legally speaking): e.g., card packs, mystery/blind boxes, gachapon, etc.
 - ✦ We should do more research on those and '**gamblification**' in general: are those other gambling-like products actually **different from loot boxes**? Less harmful perhaps justifies less/non-regulation.
- ✦ Crypto gambling poses **compounded risks**:
 - ✦ Crypto gambling providers **do even worse** than online gambling providers in terms of providing consumer protection features.
 - ✦ **Mere ownership** of cryptocurrency is **risky** and arguably gambling-like. 

Thanks for listening! Questions?

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