Lean Live Ops: Free Your Devs!

Joe Raeburn
Product Owner, Space Ape Games

Hi! Welcome!

This is the annotated version of this presentation. Please watch the original in the GDC vault.

But if you'd just like to flip through the slides, then these handy speech bubbles summarise what I said.

Anyhow, I'm from New Zealand, so people make jokes about me having a pet sheep. What a stereotype!

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Instead, I had a goat!

And while out walking with her I discovered ten stone tablets.

It took me years to discover we'd unearthed the **TEN LEAN COMMANDMENTS.**

These are the secret to freeing up your developers to focus on the future of your company, not the past.

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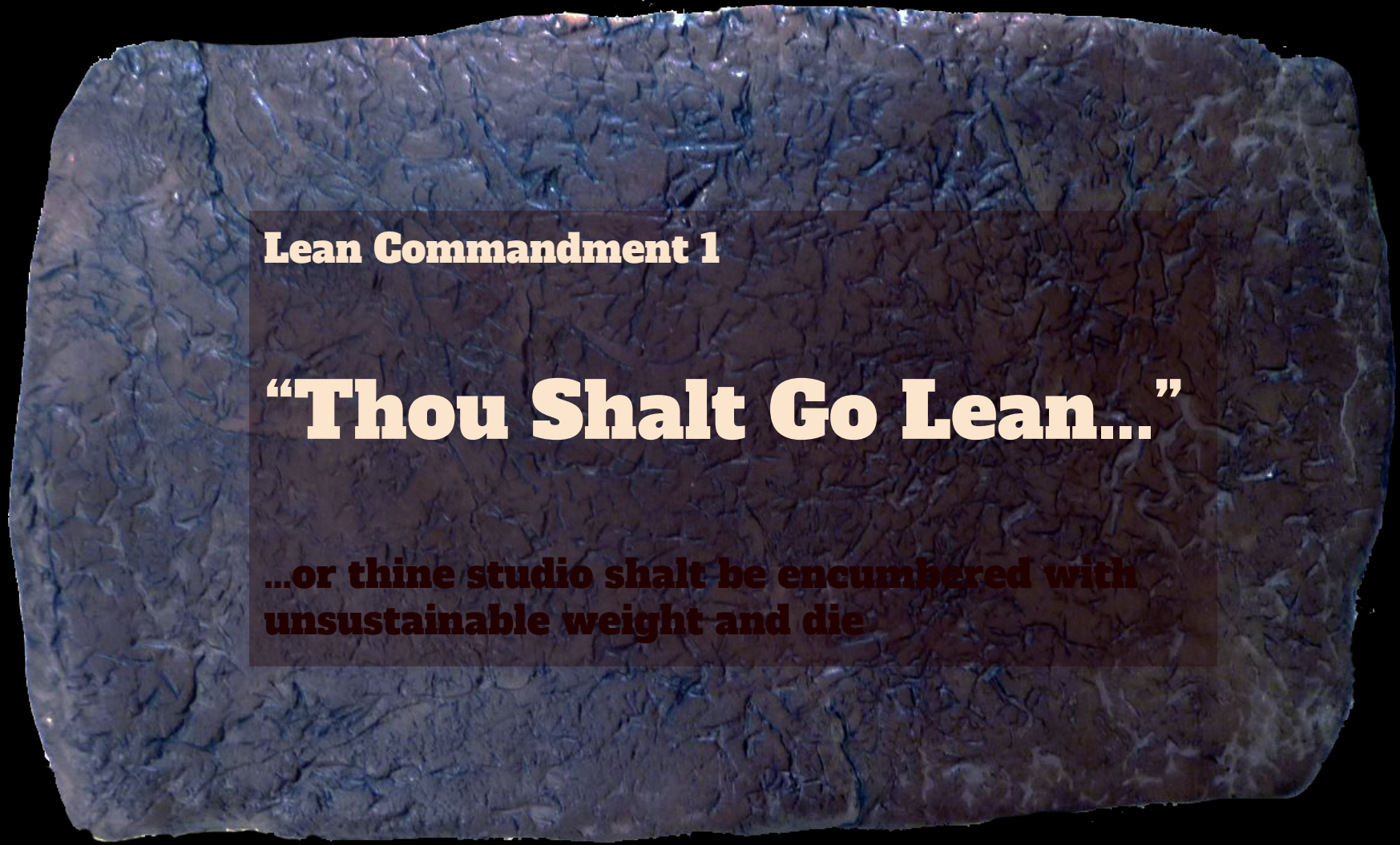

Lean Commandment 1
“Thou Shalt Go Lean…”
…or thine studio shalt be encumbered with unsustainable weight and die

I was lucky enough to learn a bunch about Live Ops at Playfish, which I've applied to my own games at Space Ape.

Live Ops

Live Ops are great, but...
Doing it **lean** means finding smart ways to reduce the headcount required to do great live ops.

Done Lean

Why Lean?

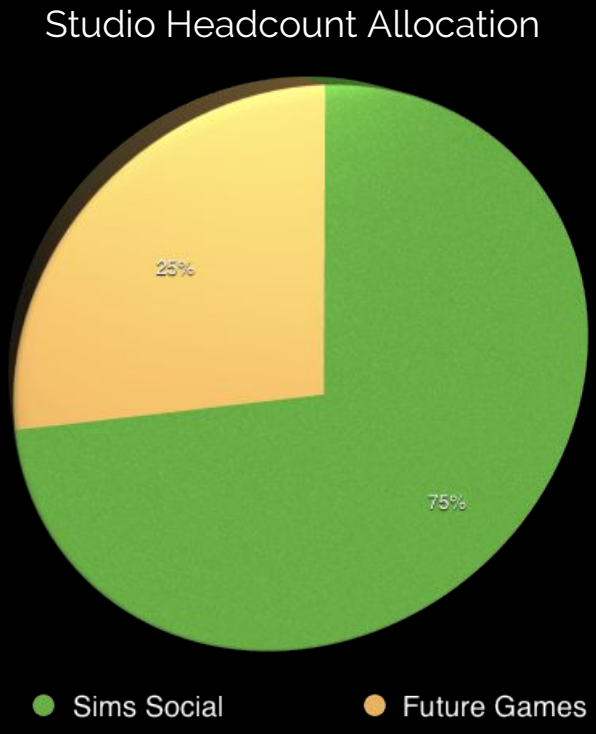
Great Live Ops...

The Sims Social

The Sims Social had a very rich set of features and content released to players...

...but not lean

But is wasn't **lean.** **75%** of the studio was focused on running this one game. That's not enough people thinking about the future!



And if you don't focus on the future, **you have no future**.
The sheer **weight** of operating The Sims Social was a big factor in the death of Playfish.

Lean Commandment 1
“Thou Shalt Go Lean…”
…or thine studio shalt be encumbered with unsustainable weight and die

Talk Structure

1. INTRO

- Why Lean?
- How to get Lean?

2. CONTENT

- How to make enough content?
- What if content is complex?

3. EVENTS

- What's the event's essence?
- How can I do events without devs?
- How can I keep events fresh?

4. BUNDLES

- How can I maximise event intensity?
- How to engage without intensity?

Spoiler alert. It's through **measuring** how lean you are. Look out of the lean KPIs in the next few slides.

How do you get Lean & stay Lean?

At Space Ape, we're well known for running great Live Ops on Strategy games.
How did we get there?

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SAMURAI SIEGE

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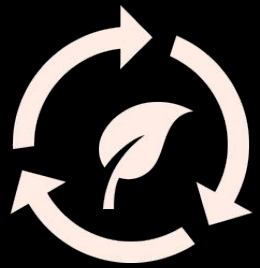
Space Ape Gross Bookings

Continue Supporting Samurai Siege

Kill Samurai Siege

Go Lean



We thought the choice was black and white. Keep going with a full team, or kill the game. But there was a third way. A **lean** way!

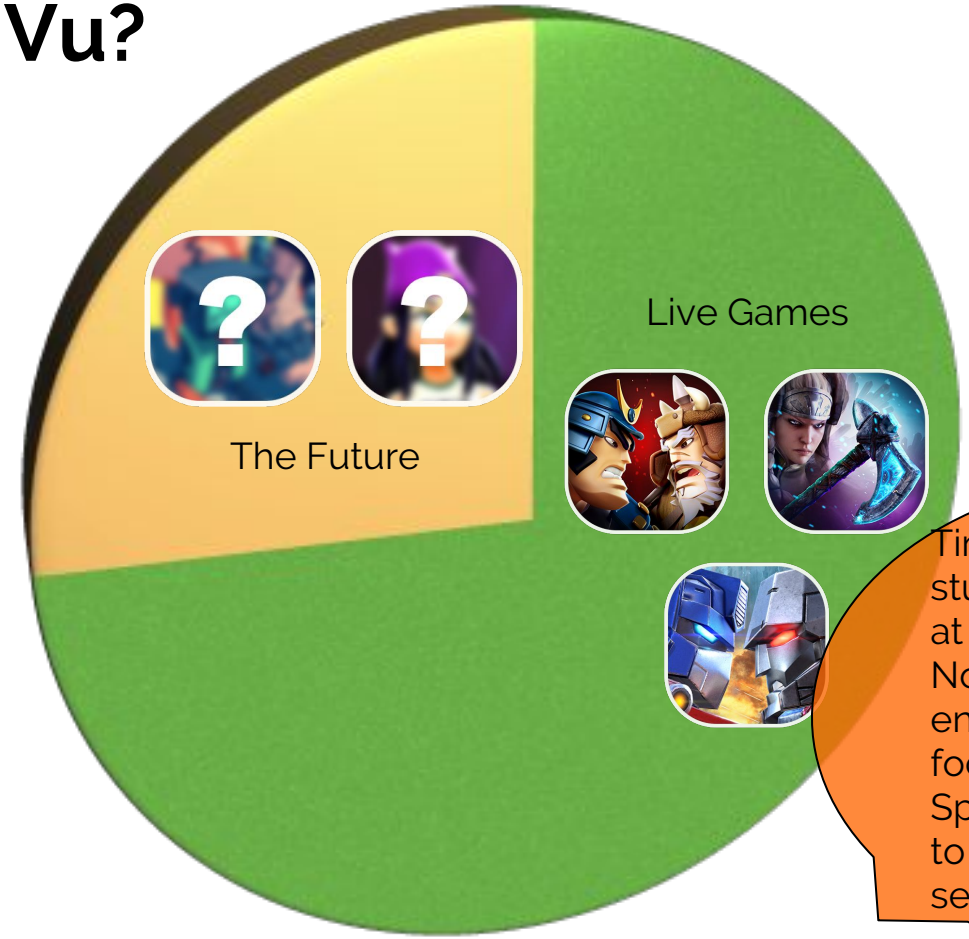
Profit per Team Member on Samurai Siege

Space Ape Gross Bookings

They stablised the game.
We're done here right.
Time to rest on our laurels?

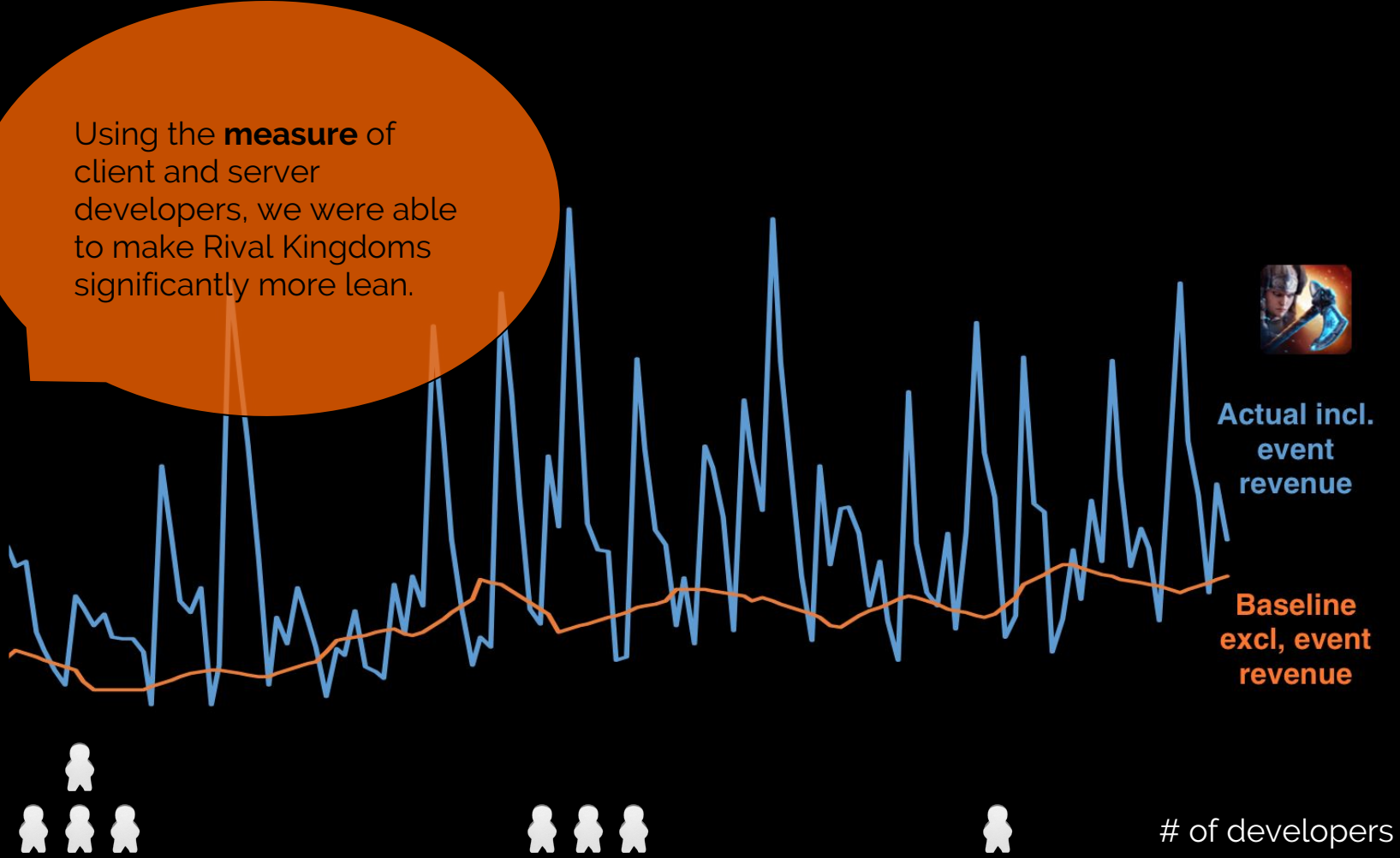
Aug-13 Dec-13 Apr-14 Aug-14 Dec-14 Apr-15 Aug-15 Dec-15

Deja Vu?



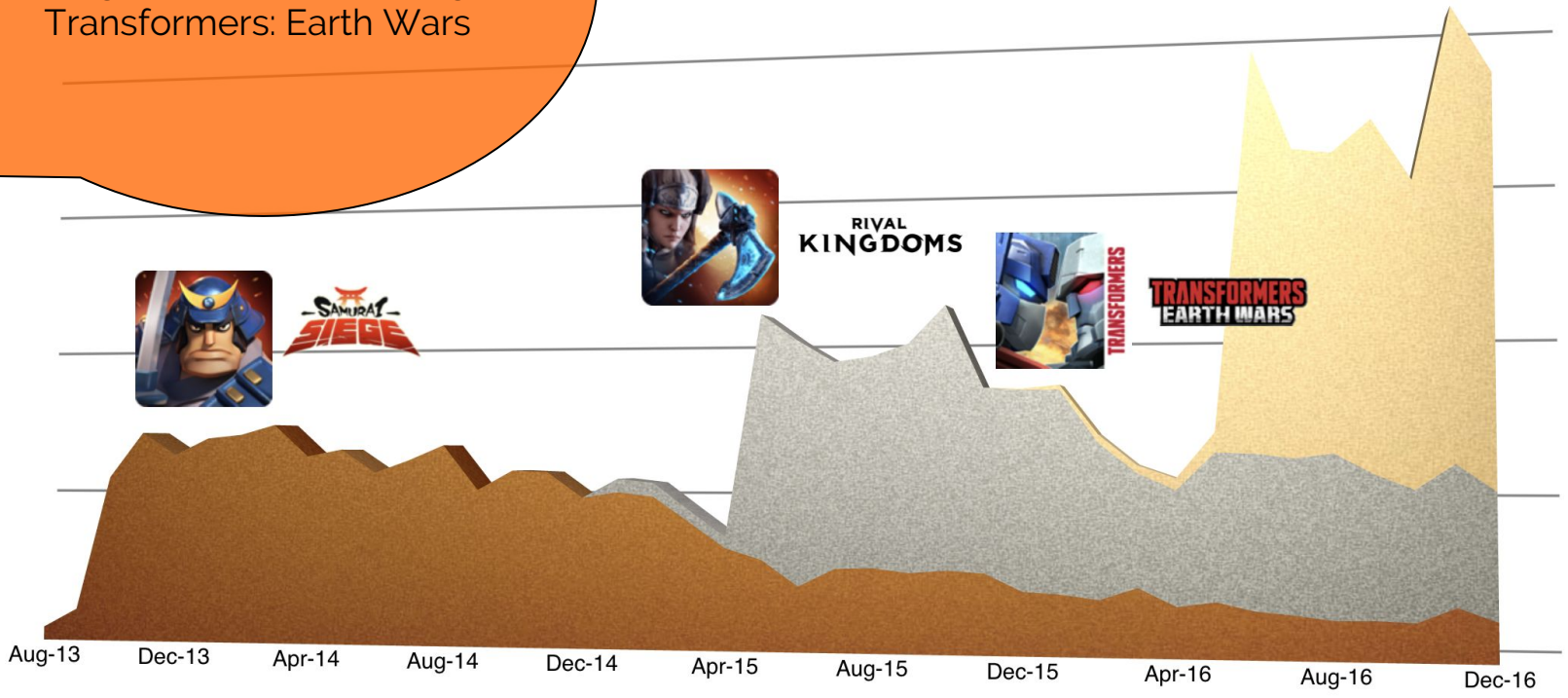
Time to **measure** our studio again, by looking at headcount allocation. Nope! We didn't have enough of our studio focusing on the future! Specifically, we needed to free up client and server developers.

Using the **measure** of client and server developers, we were able to make Rival Kingdoms significantly more lean.



Space Ape Gross Bookings

...stabilising Rival Kingdoms, and launching Transformers: Earth Wars



This is what it's all about. Making more bets on the future.

Being able to afford to kill game ideas.

It's all possible if your live games aren't weighing you down.

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Jan 2017 Stat:
75% of devs working on unreleased games

Lean Commandment 2

“Thou Shalt Ceaselessly Quantify Lean”

- % of studio on in-dev games
- Profit per employee on live games
- # of developers on live games

These are some ways Space Ape has measured “Lean”.

Invent your own, or copy these!

But the key it to measure it!

1. INTRO

Why Lean?

How to get Lean?

2. CONTENT

How to make enough content?

What if content is complex?

3. EVENTS

What's the event's essence?

How can I do events without devs?

How can I keep events fresh?

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How can I maximise event intensity?

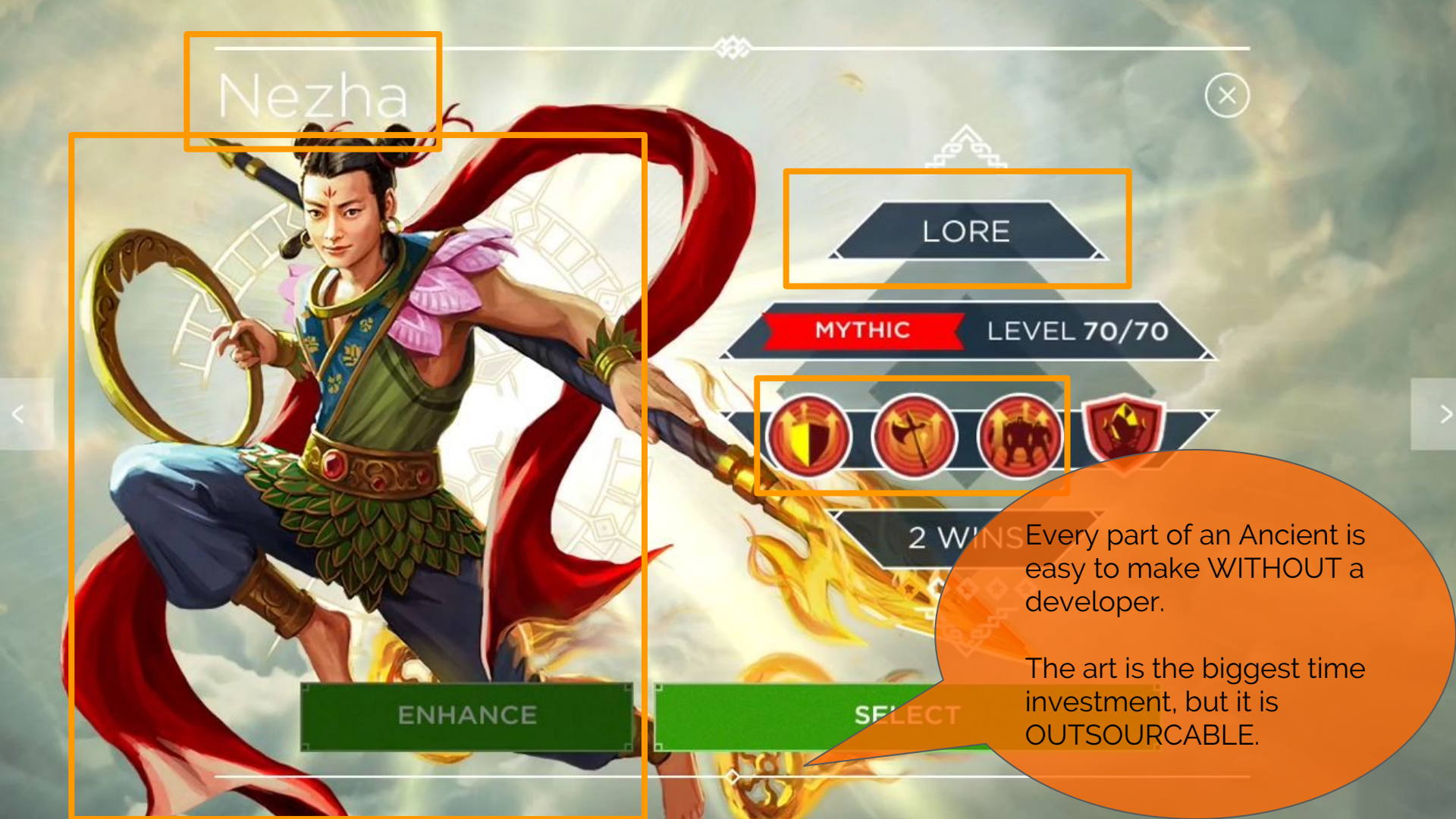
How to engage without intensity?

First figure out what content players really, really REALLY want.

In TF:EW it is Transformers. In RK it is “Ancients”

ANCIENT PREVIEW
NEZHA

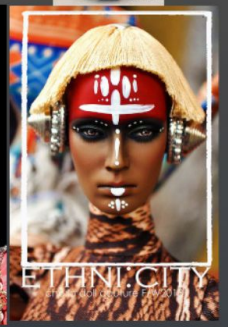
How can you make enough irresistible content?


Nezha
LORE
MYTHIC
LEVEL 70/70
ENHANCE
Every part of an Ancient is easy to make WITHOUT a developer.
The art is the biggest time investment, but it is OUTSOURCABLE.

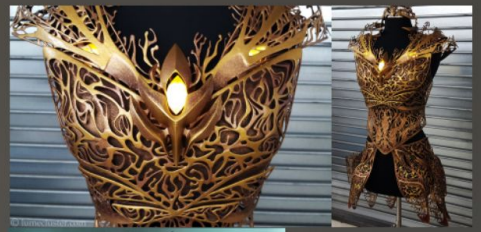
Outsource Brief

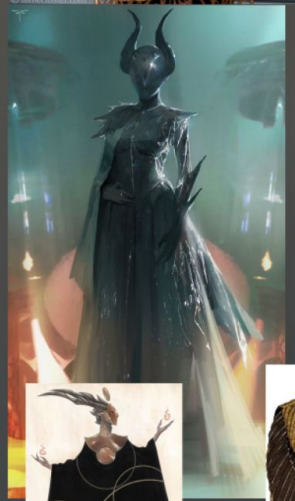
Give her a mask like above, but more feminin in shape.
Use shapes like in the top left image.

Could try some of the more sculptural elements from the right image.



Try something sticking out either side of the mask. Hanging beads (top left) or short horns (top right)

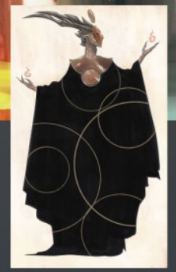


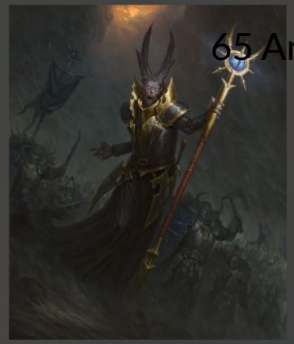


Light body armour segments like above image, simplify the shapes and make the central piece a glowing pale pink stone.

She will be wearing a dress with a cape hanging over one shoulder.

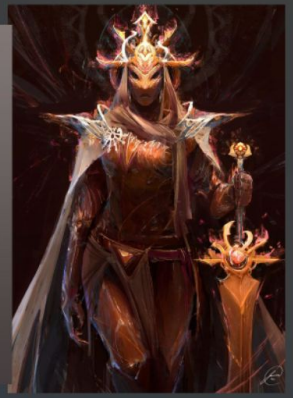
Cape has gold feathery appearance like below.





65 Ancients Total

Her staff should look something like the left image, but also needs to fit with the other mages staffs. Crystal will need to be pink for Chaos.



To make the silhouette more interesting experiment with sculptural shapes around the neck and on the head.

This is the results of the outsource brief.

Evolution materials make a BIG different to the power of an ancient. But the production costs are even lower.

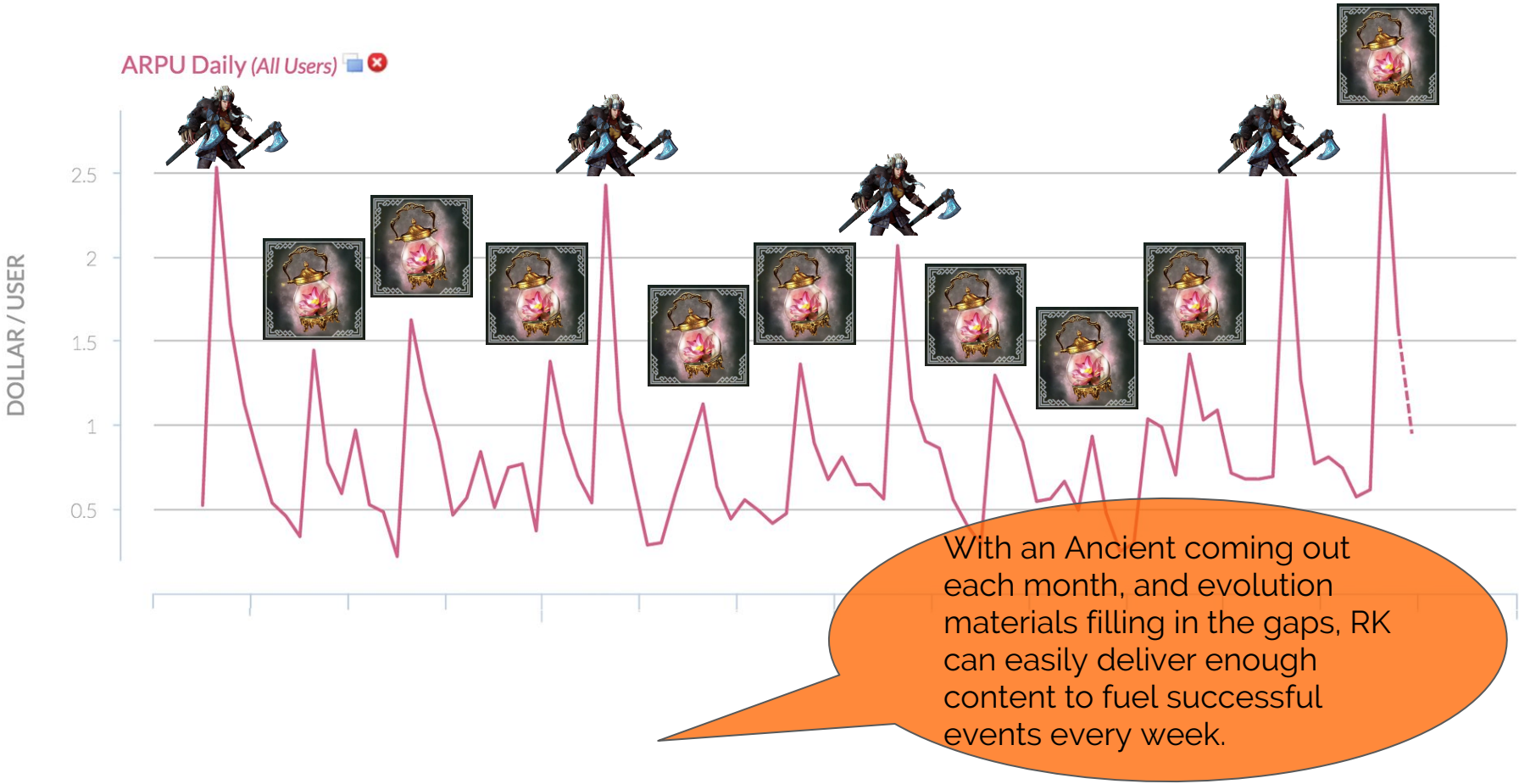
New Inventory Items!

Iron Lotus Lantern

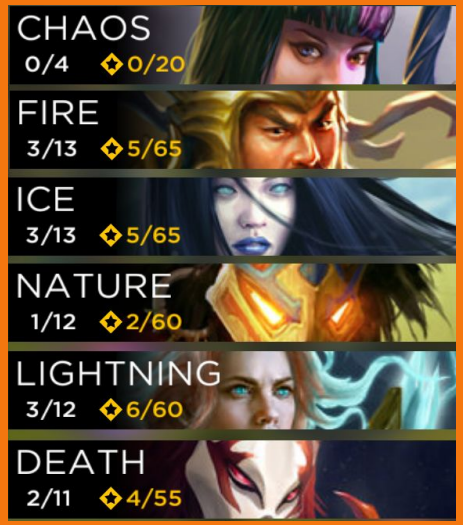
Golden Lotus Lantern

OK

Rival Kingdoms ARPU



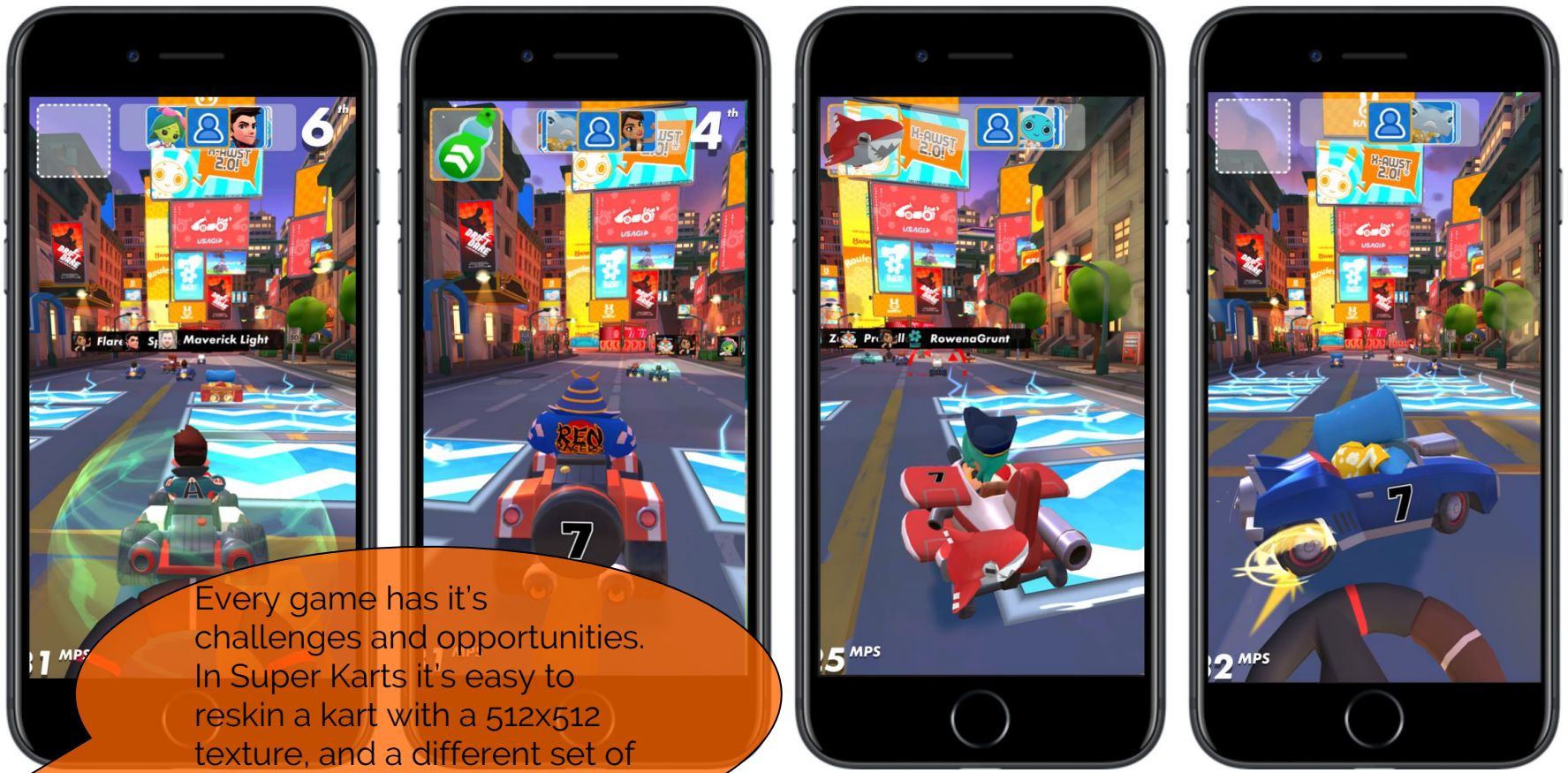
The proof is in the pudding! We've been able to consistently release Ancients, while staying lean.



65 Ancients Total

RIVAL KINGDOMS

EYE OF DESTRUCTION



Every game has it's challenges and opportunities. In Super Karts it's easy to reskin a kart with a 512x512 texture, and a different set of ability slots.

We think about how Live Ops will work when designing the meta.
The “parts” here are like Evo Materials - easy to make, but with big impact.
This does mean you need to code abilities to be scriptible in content by game designers, which is more work upfront.

SUPER KARTS

Parts & Gacha

Lean Commandment 3
“Thou Shalt Ensure Desirable Content is Easy to Make…”
…and Outsource as much as possible

But what if the desirable content is
a big, complex, 3D model?

Making a full 3D model with normal & specular maps, animations and custom sfx is a LOT of work, and...

STORY MODE
250
MAX SQUAD POWER 107
CAMPAIGN 1:
GET OPTIMUS!
0% COMPLETION
RECOMMENDED POWER 50
No time to waste, the Decepticons are here! We must find a way to get our leader to Earth!
CAMPAIGN REWARD
OPTIMUS PRIME
BATTLE NOW!
CAMPAIGN 2:
0% COMPLET
Complete pr
...we gave away Optimus Prime for free in the onboarding campaign!

...but by using “Star Levels”, we were able to make Optimus Prime a chase item again.

Revenue *(All Users)*

...and the chase 3* and 4* Optimus Prime sustained some great weekends for TF:EW.

1 10 24 7 21 5 19 2 16 30

AUG SEP OCT NOV DEC JAN

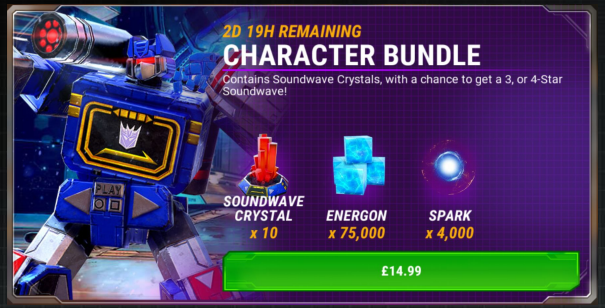
LIVE OPS: LIFECYCLE MANAGEMENT

New Transformer

Event Release

4 Weeks

Bundles



3 Weeks

2-3 Weeks

Premium Crystal Pool

We use a “lifecycle” to ensure players have a few shots at chasing every Transformer. We make the chase epic!

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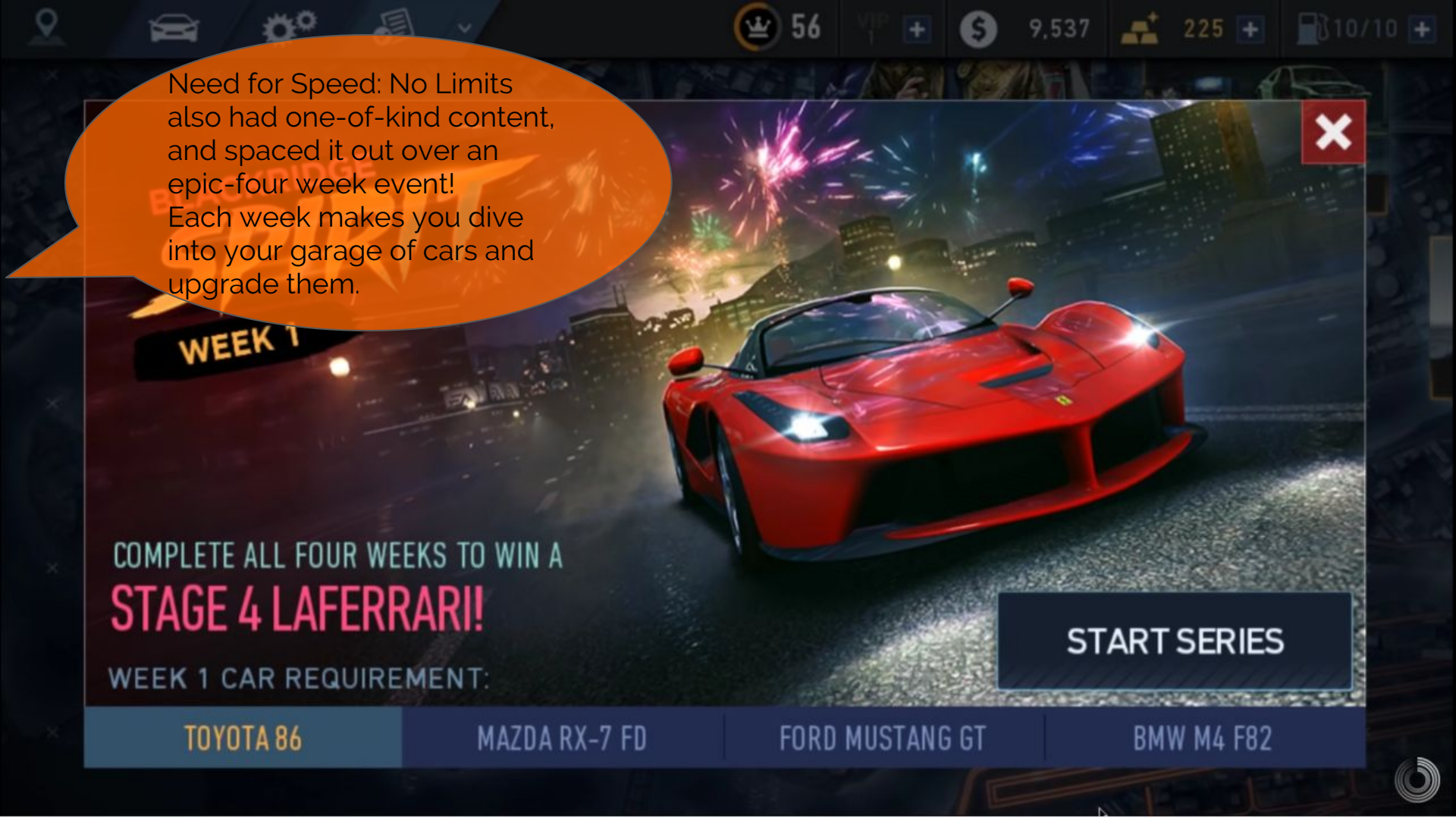
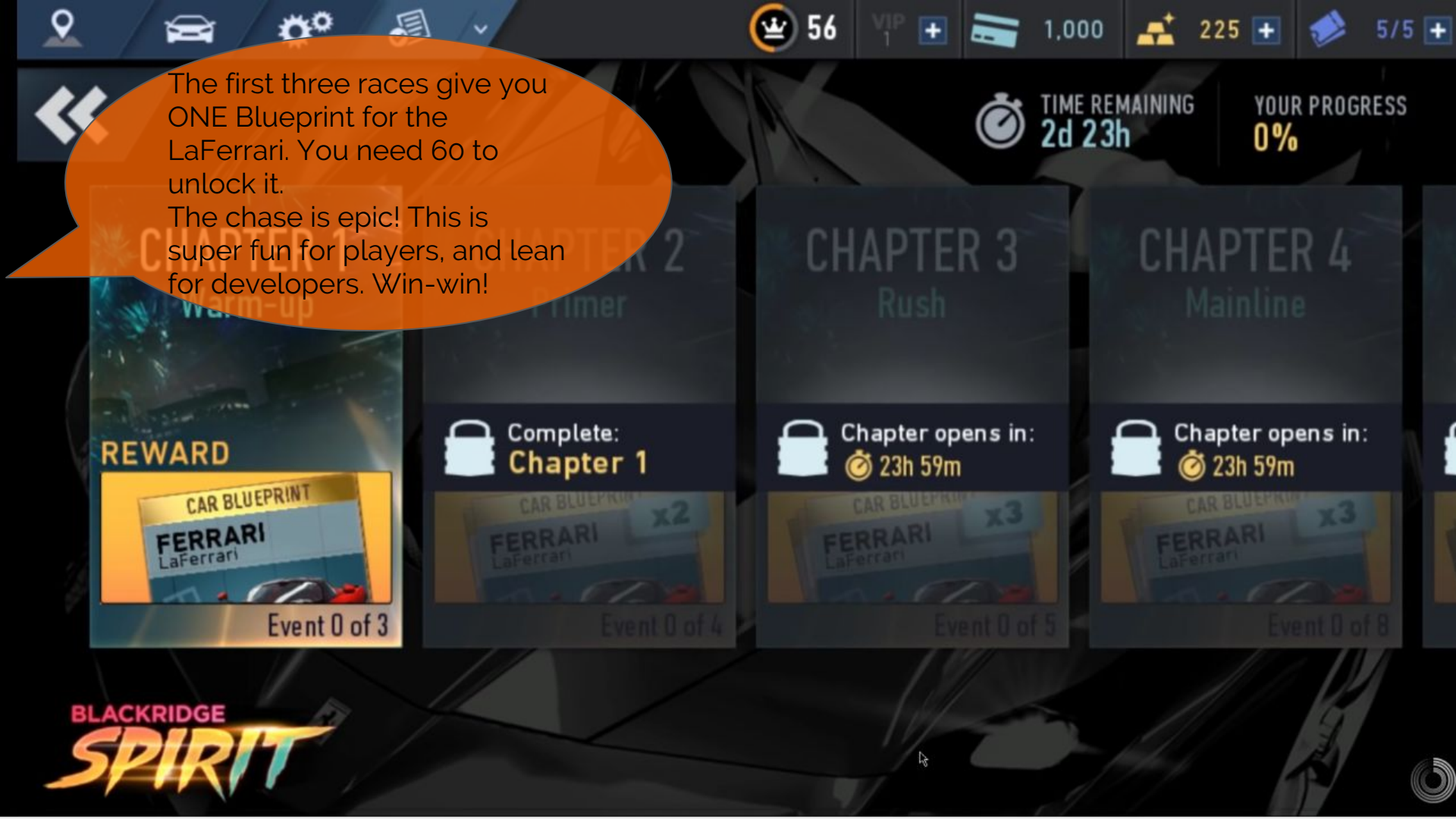
TRANSFORMERS EARTH WARS


Need for Speed: No Limits also had one-of-kind content, and spaced it out over an epic-four week event! Each week makes you dive into your garage of cars and upgrade them.
56
9,537
225
10/10
WEEK 1
COMPLETE ALL FOUR WEEKS TO WIN A
STAGE 4 LAFERRARI!
WEEK 1 CAR REQUIREMENT:
START SERIES
TOYOTA 86
MAZDA RX-7 FD
FORD MUSTANG GT
BMW M4 F82


56
VIP 1
1,000
225
5/5
TIME REMAINING
2d 23h
YOUR PROGRESS
0%
The first three races give you ONE Blueprint for the LaFerrari. You need 60 to unlock it.
The chase is epic! This is super fun for players, and lean for developers. Win-win!
CHAPTER 3
Rush
CHAPTER 4
Mainline
REWARD
CAR BLUEPRINT
FERRARI
LaFerrari
Event 0 of 3
Complete:
Chapter 1
Event 0 of 4
Chapter opens in:
23h 59m
x3
Event 0 of 5
Chapter opens in:
23h 59m
x3
Event 0 of 8
BLACKRIDGE
SPIRIT

Lean Commandment 4
“Thou Shalt Make the Chase Epic”
Especially if the content is expensive to produce!

1. INTRO

- Why Lean?
- How to get Lean?

2. CONTENT

- How to make enough content?
- What if content is complex?

3. EVENTS

- What's the event's essence?
- How can I do events without devs?
- How can I keep events fresh?

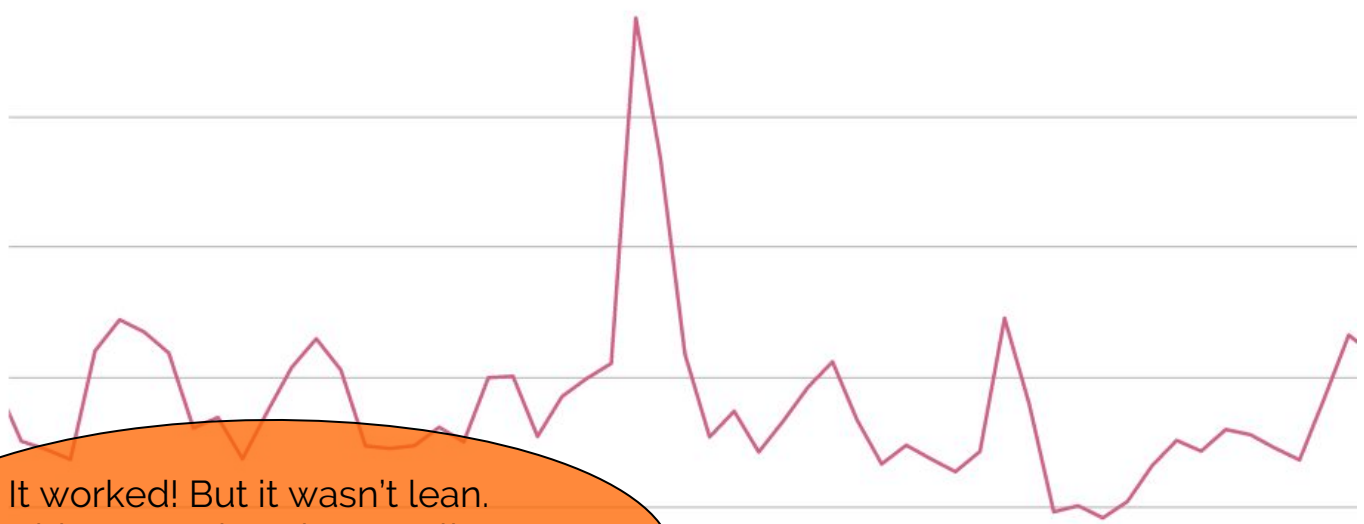
4. BUNDLES

- How can I maximise event intensity?
- How to engage without intensity?

Alliance War Points	Rewards
500	Santa Oni Mercenary Camp
2500	500 Diamonds
10000	Santa Oni Mercenary Camp
25000	Dragon Statue

We may have gone a bit overboard with event content.
New canvas, snow on buildings, a visually-upgrading Xmas tree, special music, Oni Trolls wearing Santa Hats....

Samurai Siege Gross Bookings



It worked! But it wasn't lean. Did we need to change all those things, or was there some "essence" to the event?

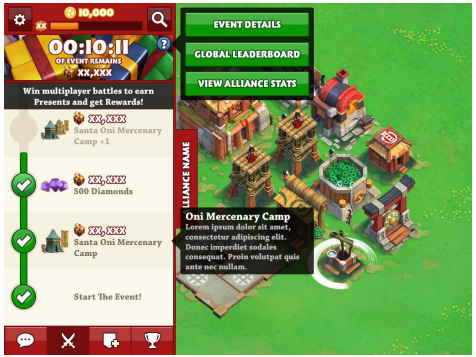
What is the essence of your event?

And what is tasty fat?

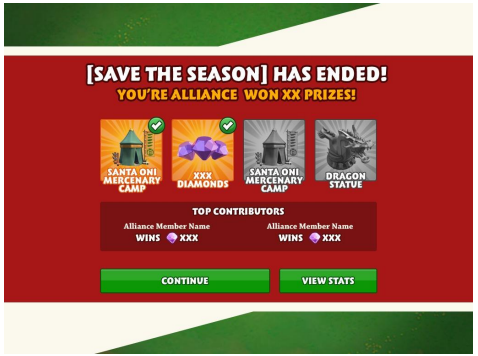
Alliance Event Format (AvE)

Battle!

You need to find your **own** essence for you events.
For our build and battle games, this is our core.



Earn War Points for your Alliance



Unlock Rewards

Compete on a Leaderboard against Alliances

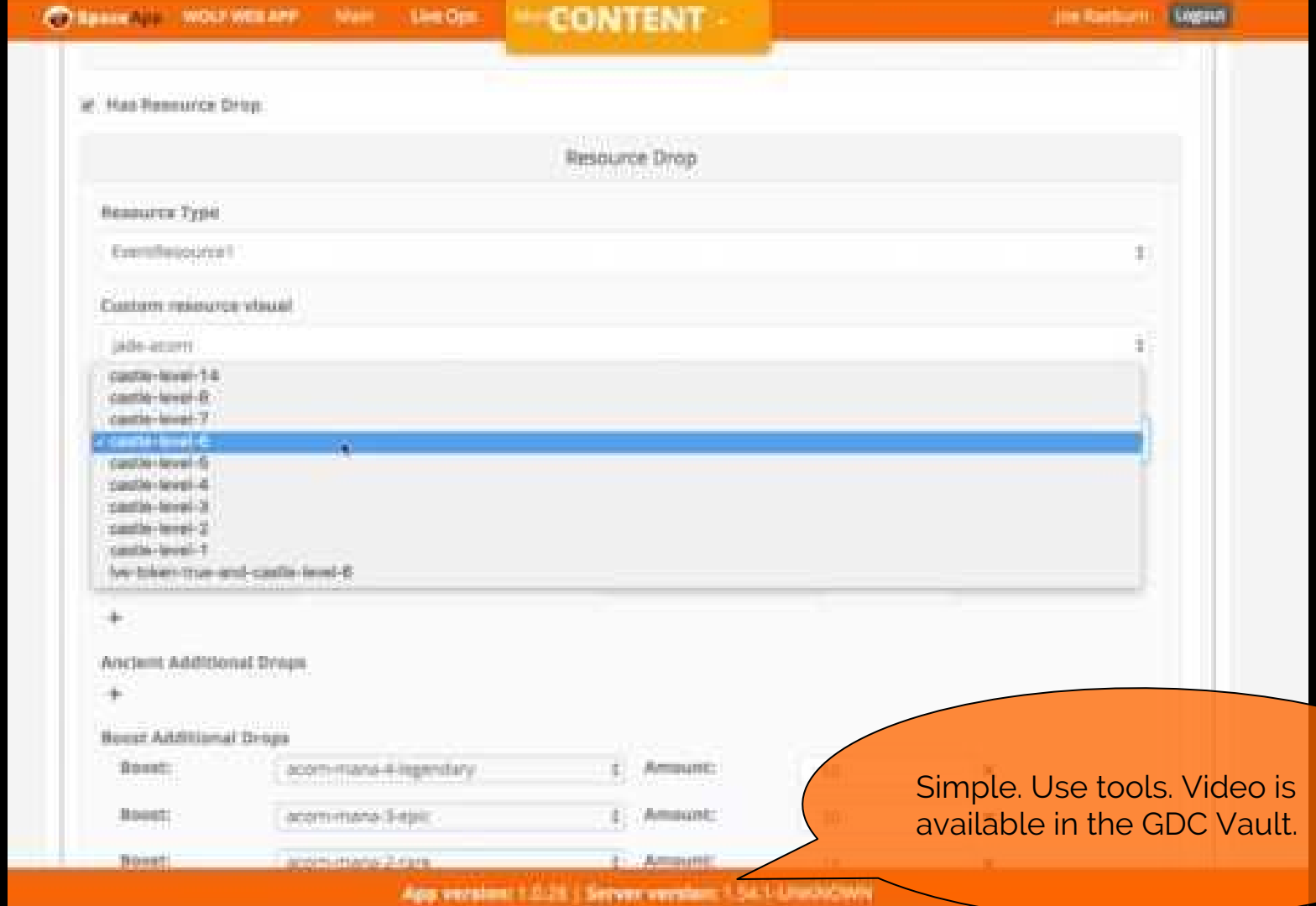
4-STAR
STRAFE VS. SCOURGE
4-STAR
BATTLE
LEADERBOARD
REWARDS
MEMBERS
LEADERBOARD RANKS 1 - 5
4-STAR STRAFE CRYSTAL
4-STAR STRAFE CRYSTAL
4-STAR STRAFE CRYSTAL
2 ALWAYSHOSTILE 528,739
2 ALWAYSHOSTILE 528,739
2 ALWAYSHOSTILE
Notice how he calls out "his guildies" who put in a great amount of effort. There's a lot of social obligation and social

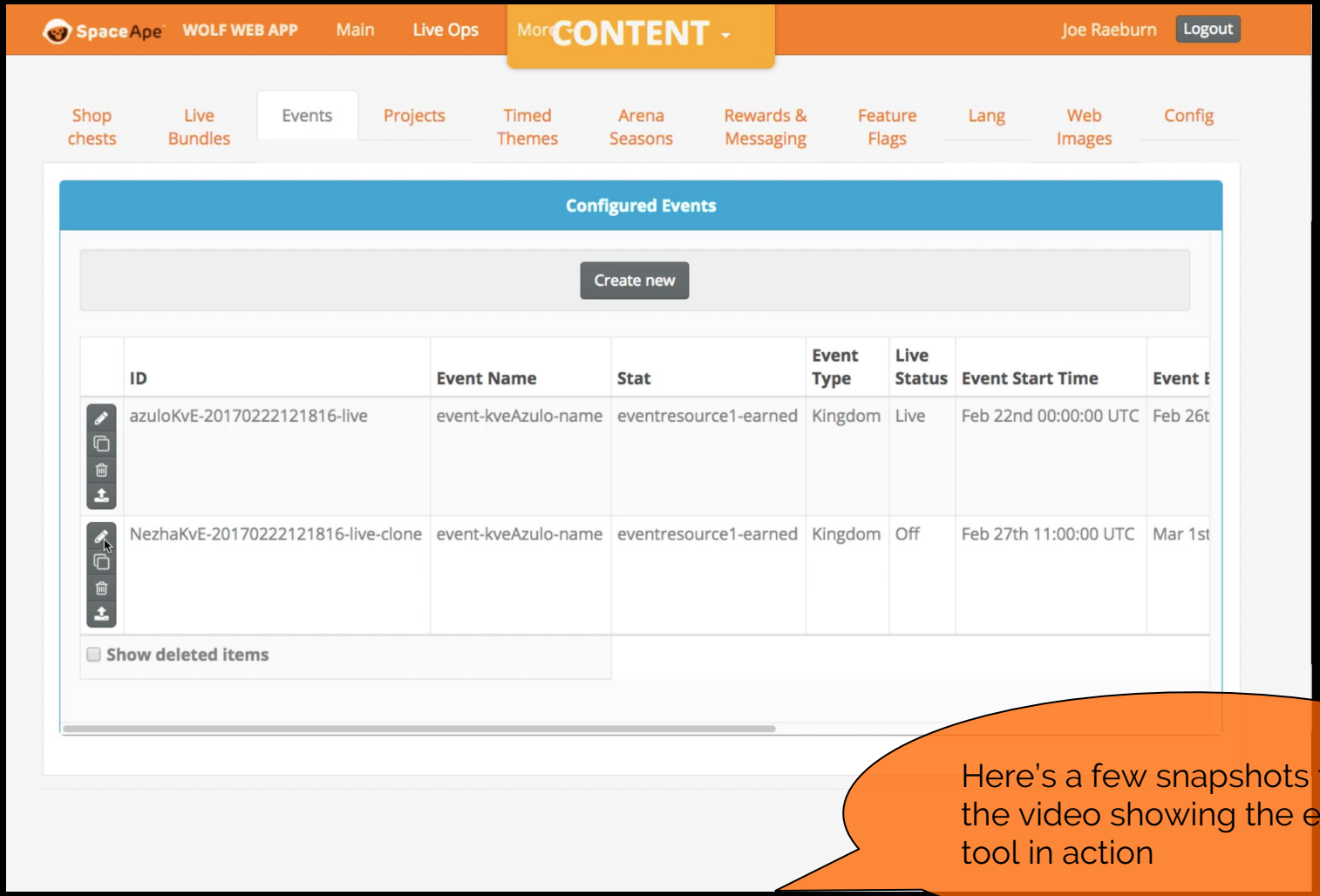
Lean Commandment 5

“Thou Shalt Find Your Events’ Essence”

Such as Rewards + Co Op + Competition

How can I run a lot of events
without developers?


CONTENT
Has Resource Drop
Resource Drop
Resource Type
Custom resource visual
castle-level-14
castle-level-8
castle-level-7
castle-level-6
castle-level-5
castle-level-4
castle-level-3
castle-level-2
castle-level-1
Ancient Additional Drops
Boost Additional Drops
Boost:
Amount:
Simple. Use tools. Video is available in the GDC Vault.


SpaceApe
WOLF WEB APP
Main
Live Ops
More
CONTENT
Joe Raeburn
Logout
Shop chests
Live Bundles
Events
Projects
Timed Themes
Arena Seasons
Rewards & Messaging
Feature Flags
Lang
Web Images
Config
Configured Events
Create new
ID
Event Name
Stat
Event Type
Live Status
Event Start Time
Event E
azuloKvE-20170222121816-live
event-kveAzulo-name
eventresource1-earned
Kingdom
Live
Feb 22nd 00:00:00 UTC
Feb 26t
NezhaKvE-20170222121816-live-clone
event-kveAzulo-name
eventresource1-earned
Kingdom
Off
Feb 27th 11:00:00 UTC
Mar 1st
Show deleted items
Here's a few snapshots from the video showing the event tool in action

en *Kingdom Event*

de es fr it ja ko pt ru zh-cn zh-hk

Event Flavor

Custom lang string?

event-kveAzulo-flavour

Status in current LangConfig:

en *Sacrifice of the Damned*

de es fr it ja ko pt ru zh-cn zh-hk

pt – Portuguese

Sacrifício dos Condenados

Description

Custom lang string?

event-kveAzulo-desc

Status in current LangConfig:

en *Prepare to fight for your Kingdom. Earn Chaos Gems and unlock amazing prizes including Azulo's Symbols of Exile, Crystal and Chaos Primus. Symbols of Exile will allow you to craft Azulo or his Ascension Materials. You must be Stronghold 6 or above to participate*

Show Duration: 84 hours, 0 minutes (Show end date - Show start date)
Event Duration: 48 hours, 0 minutes (End Date - Start Date)

Timing

Show start date

26-02-2017 | 11 | 0 UTC

Start date

27-02-2017 | 11 | 0 UTC

End date

01-03-2017 | 11 | 0 UTC

Show end date

01-03-2017 | 23 | 0 UTC

☑ **Has Totaliser** ☑ **Has Leaderboard**

Stat ID

eventresource1-earned

Event Type

○ Personal ◉ Kingdom

Has Totaliser Has Leaderboard

Stat ID

eventresource1-earned

Event Type

Personal Kingdom

Live Status

Staging Off

Leaderboard Rewards

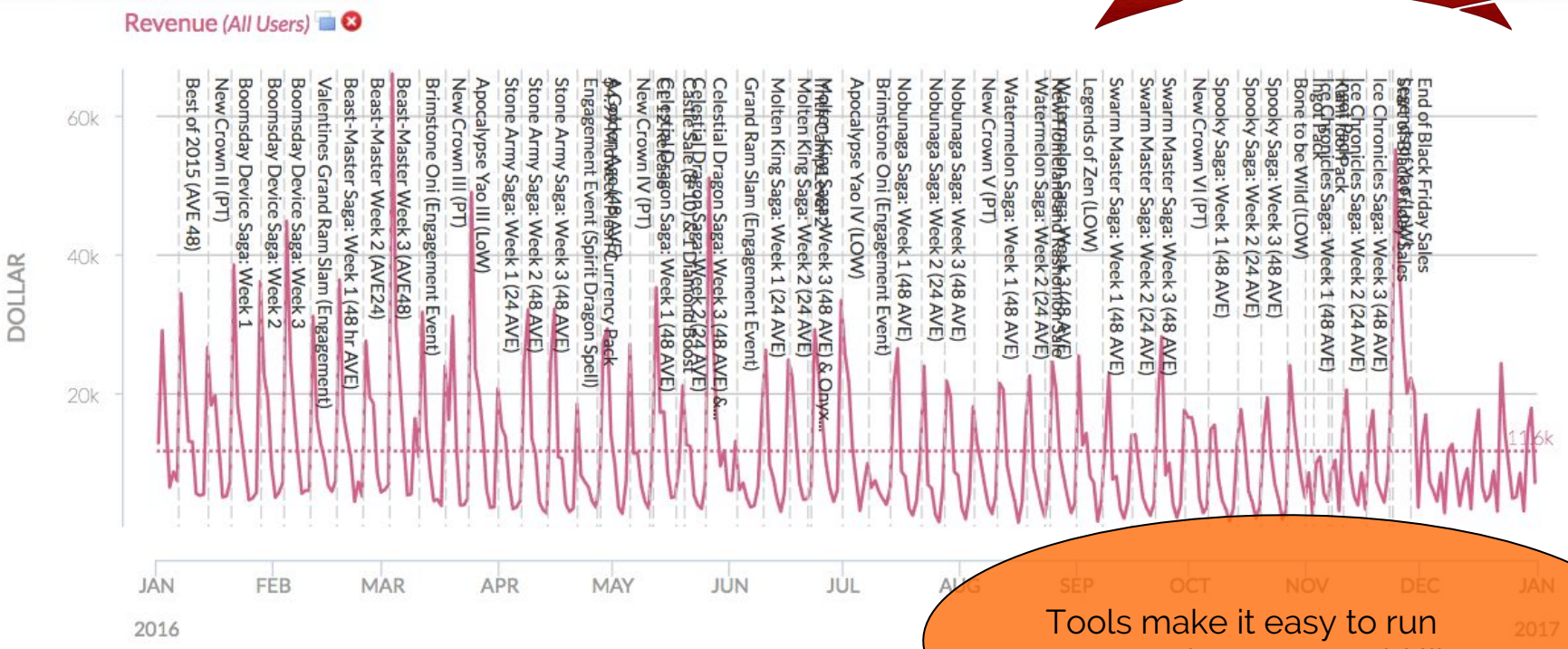
1: evo-mat-nezha-mythic
2: primus_chaos_440000_reward
3: statue-gold-all

Add prize

Min Rank: 1 **Max Rank:** 1

Remove Reward

1: evo-mat-nezha-mythic
2: primus_chaos_440000_reward

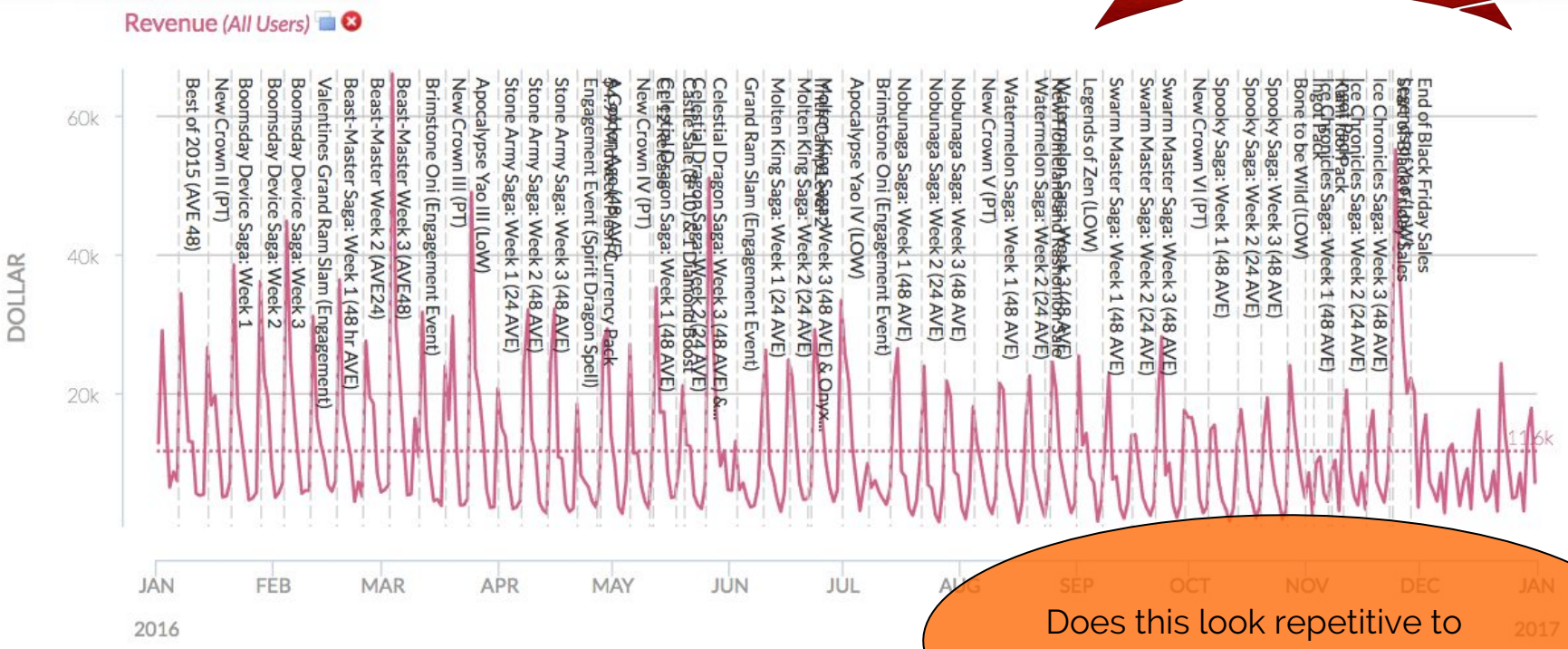


Tools make it easy to run events whenever you'd like.

Lean Commandment 6

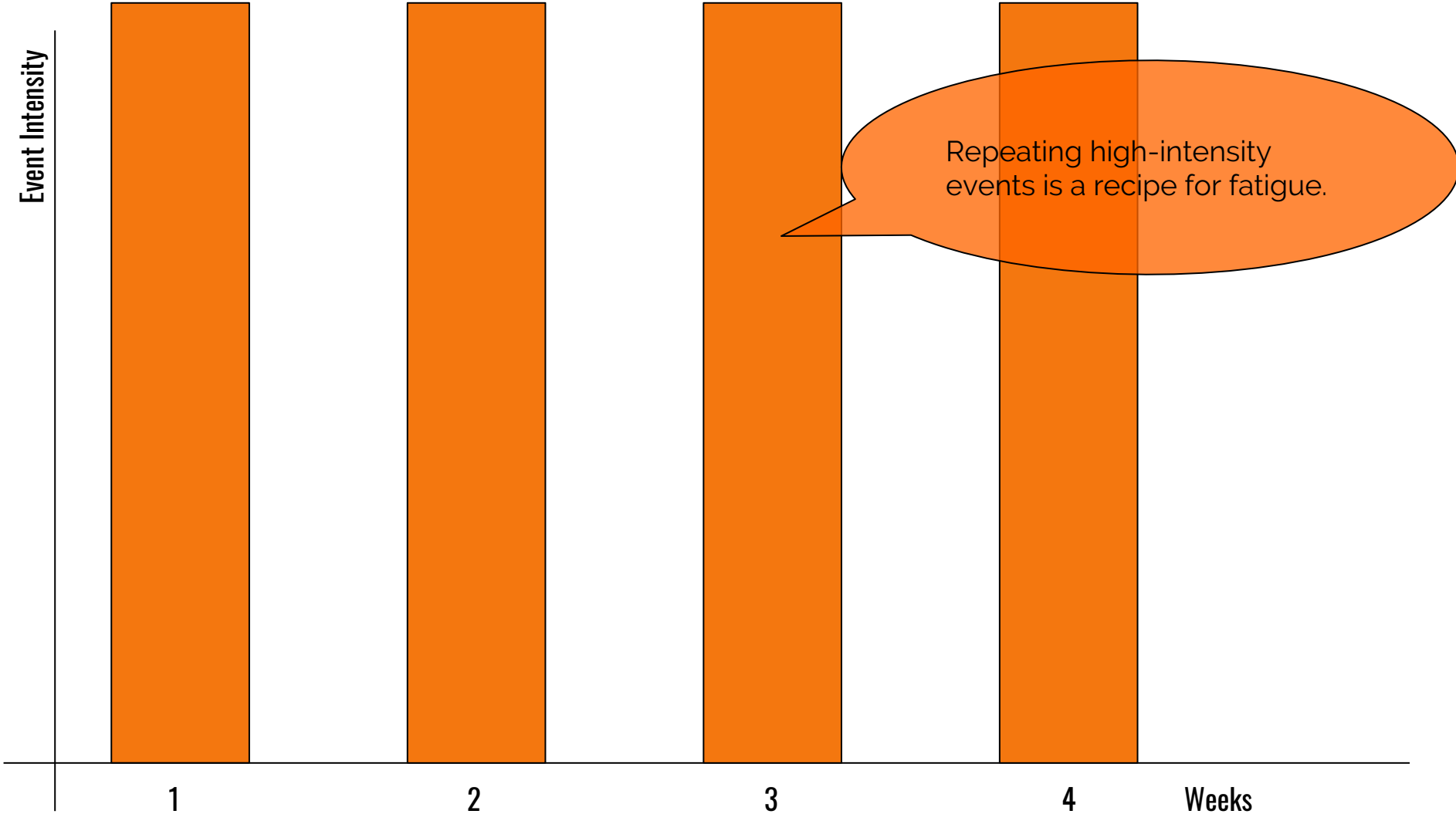
“Thou Shalt Tool-Up Your Events…”

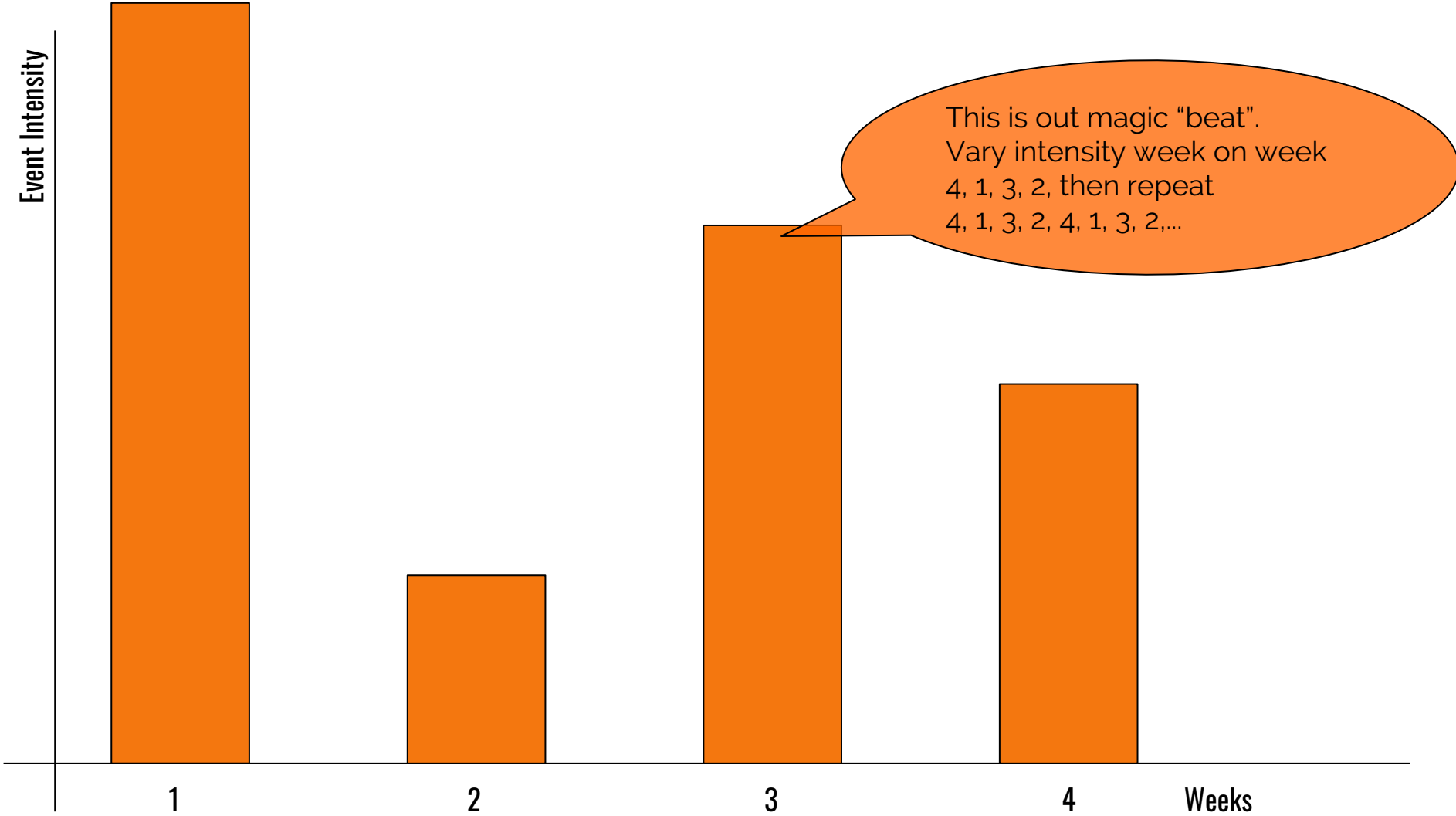
…once your know your events’ essence, you know which tools you need to build

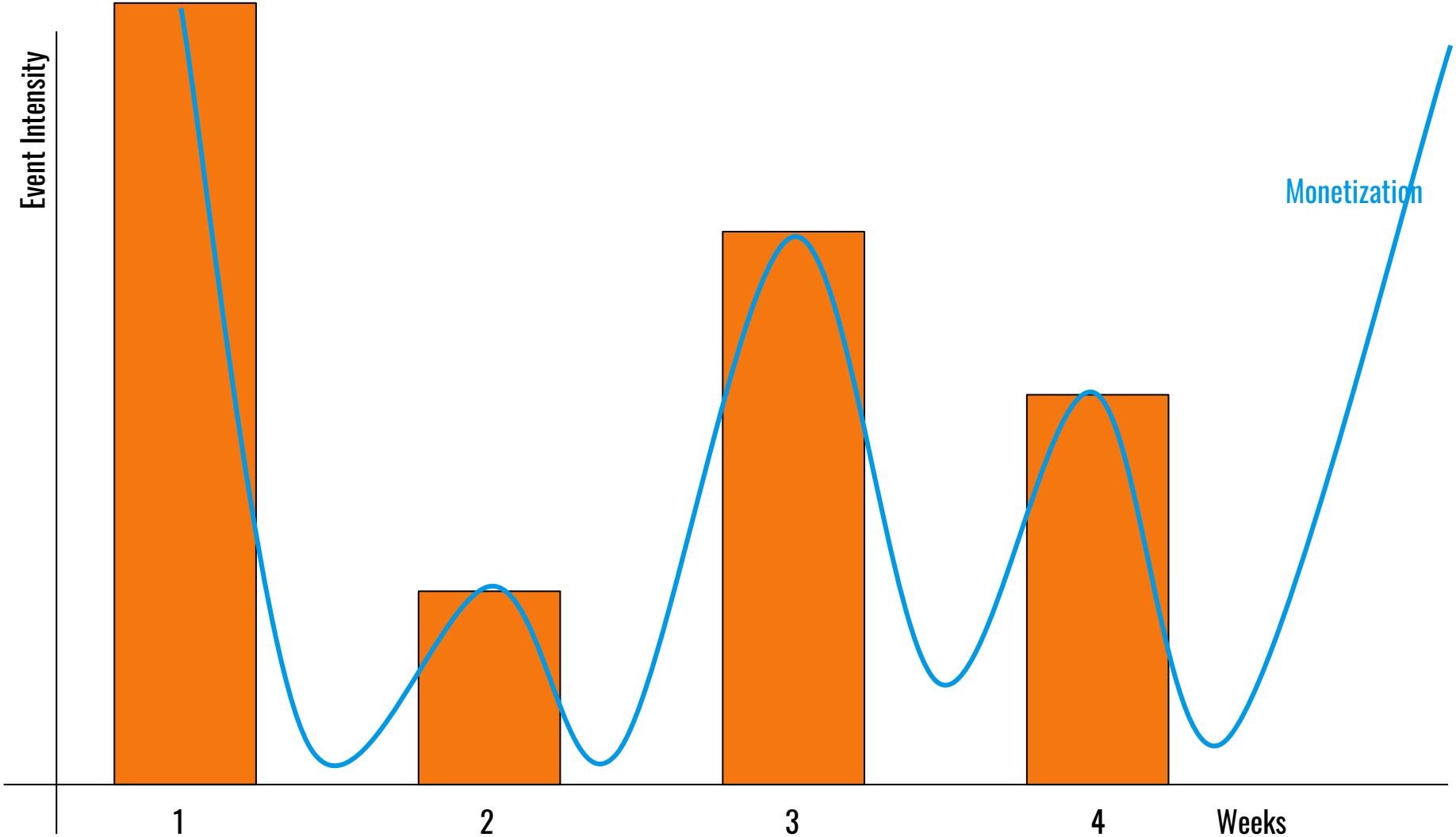


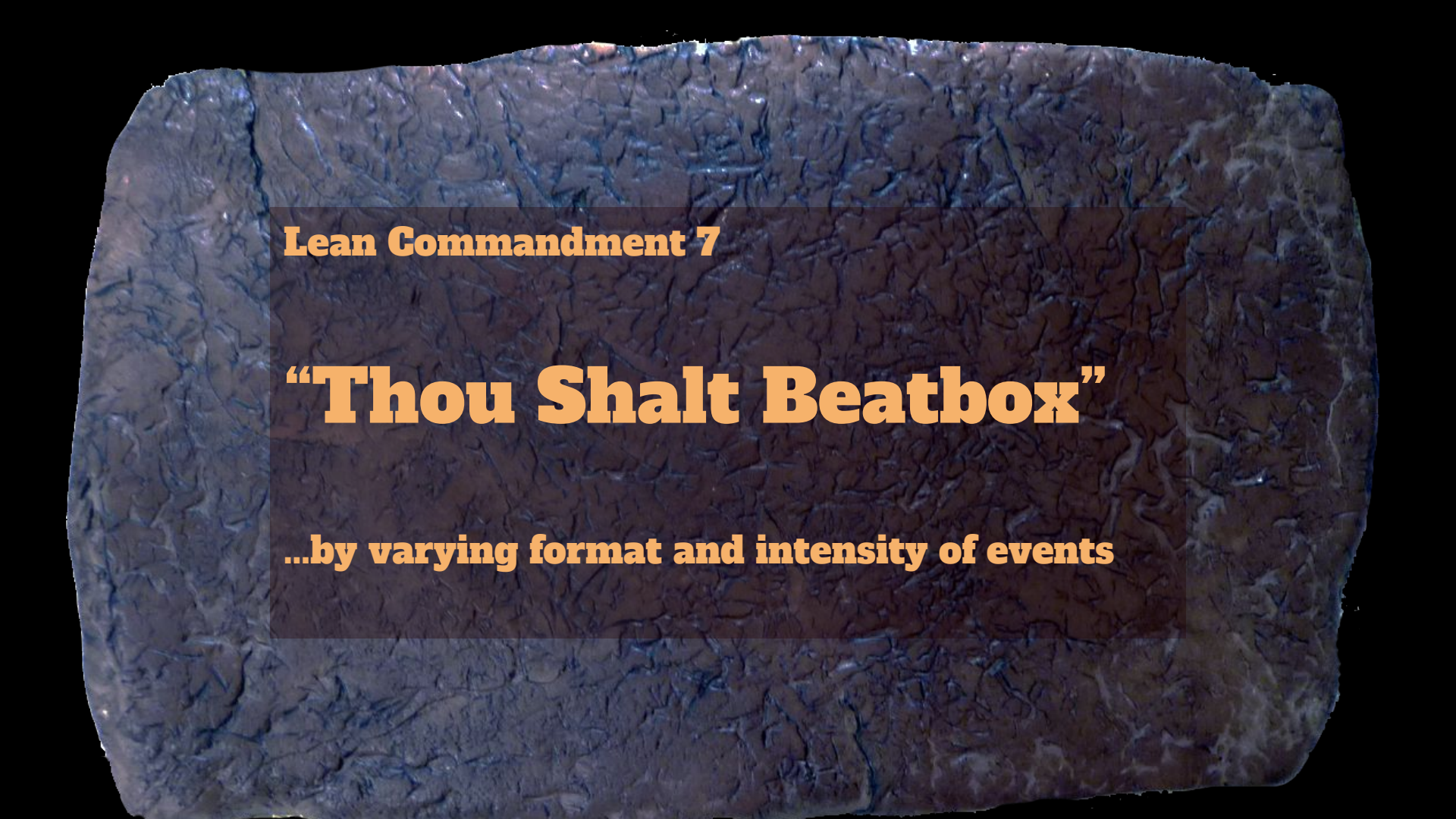
Does this look repetitive to you?

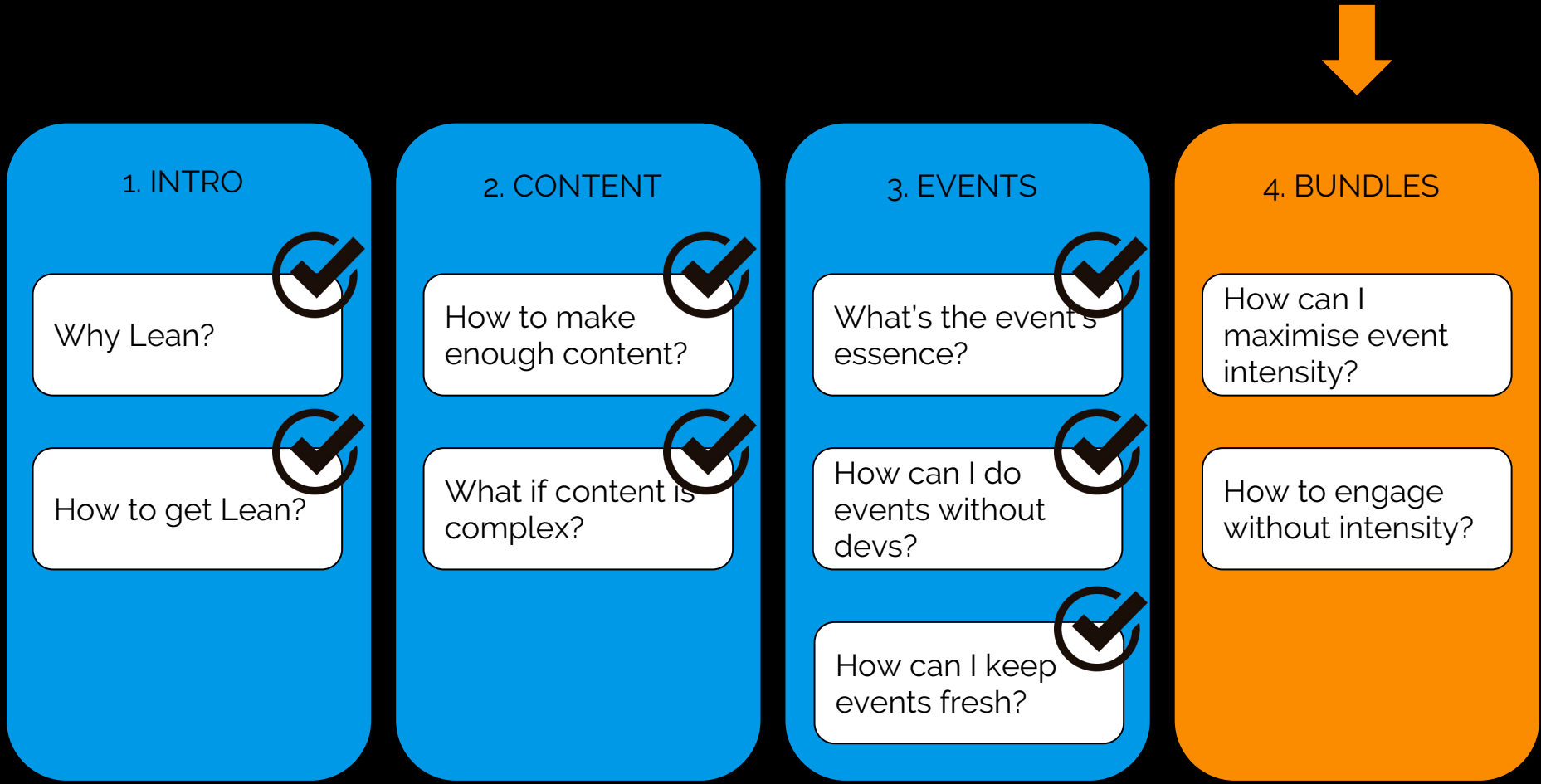
How can I keep events fresh?

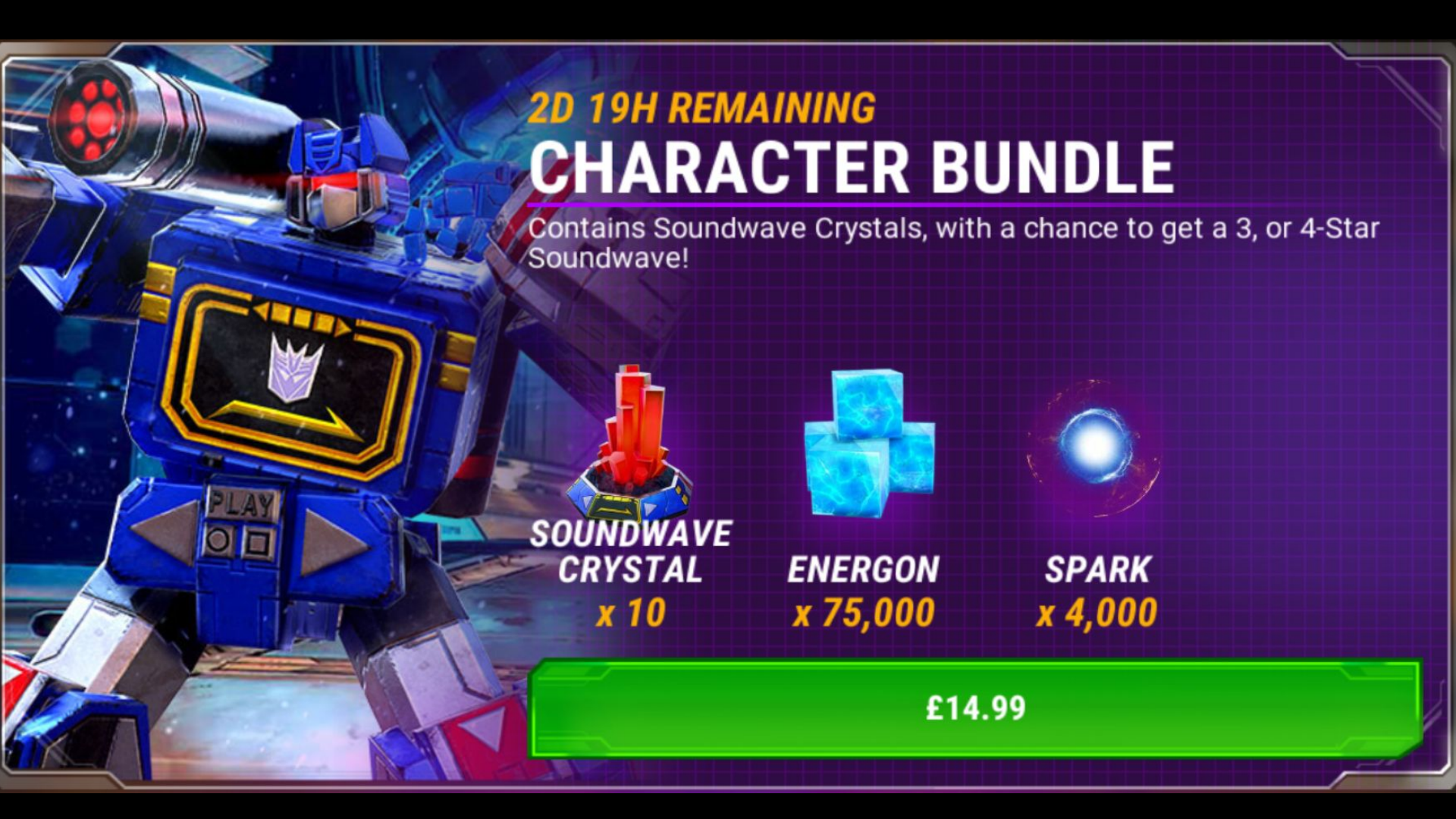

Event Intensity
Repeating high-intensity events is a recipe for fatigue.
1
2
3
4
Weeks


Event Intensity
This is out magic “beat”.
Vary intensity week on week
4, 1, 3, 2, then repeat
4, 1, 3, 2, 4, 1, 3, 2,...
1
2
3
4
Weeks


Event Intensity
Monetization
1
2
3
4
Weeks


Lean Commandment 7
“Thou Shalt Beatbox”
...by varying format and intensity of events


1. INTRO
Why Lean?
How to get Lean?
2. CONTENT
How to make enough content?
What if content is complex?
3. EVENTS
What's the event's essence?
How can I do events without devs?
How can I keep events fresh?
4. BUNDLES
How can I maximise event intensity?
How to engage without intensity?


2D 19H REMAINING
CHARACTER BUNDLE
Contains Soundwave Crystals, with a chance to get a 3, or 4-Star Soundwave!
SOUNDWAVE CRYSTAL
x 10
ENERGON
x 75,000
SPARK
x 4,000
£14.99

CHAOTIC BUNDLE

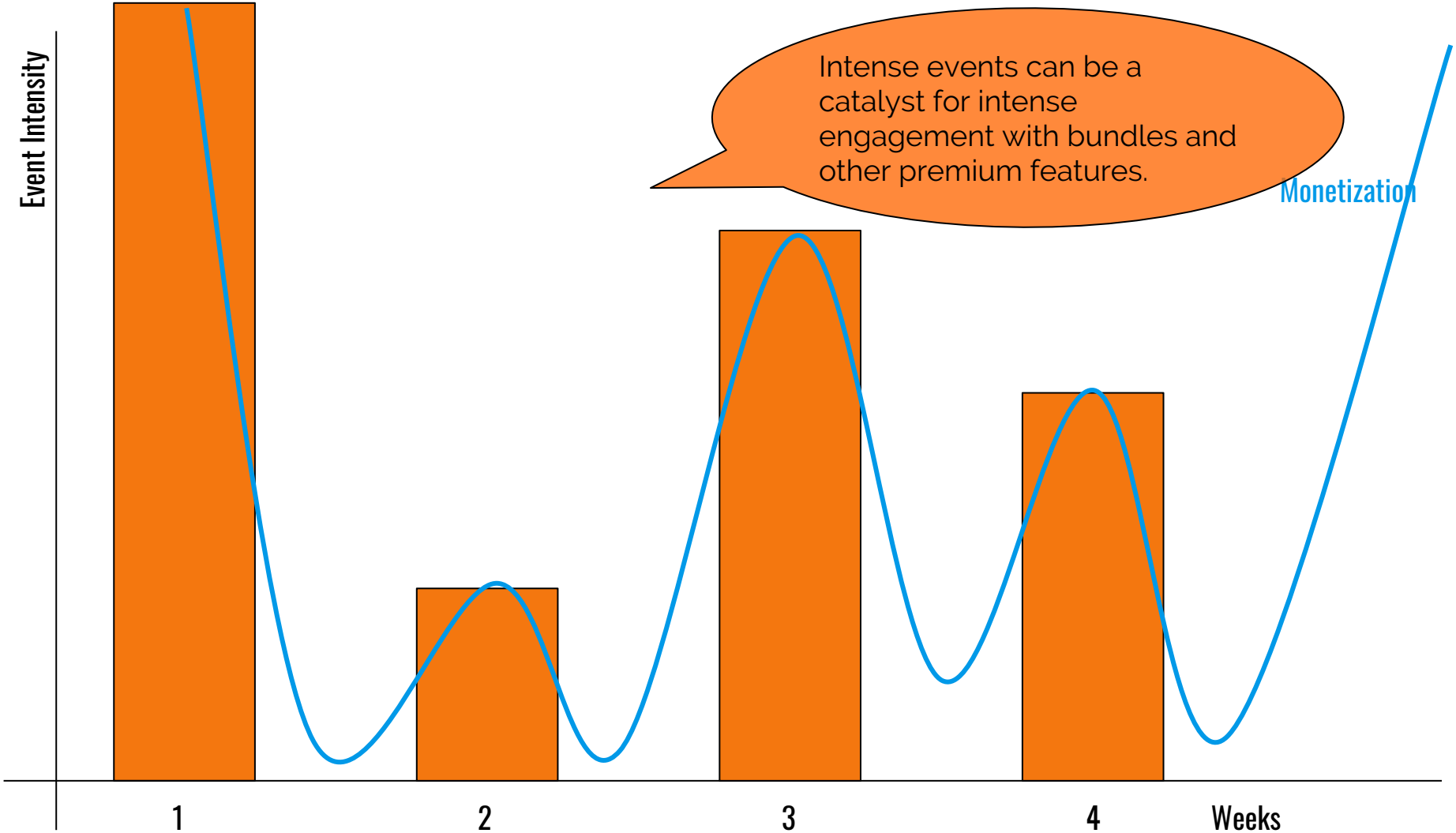
TIME LIMITED BUNDLE

22h 21m 07s

Give yourself an edge with this exclusive event bundle! Limit 1 purchase per player.

£4.99

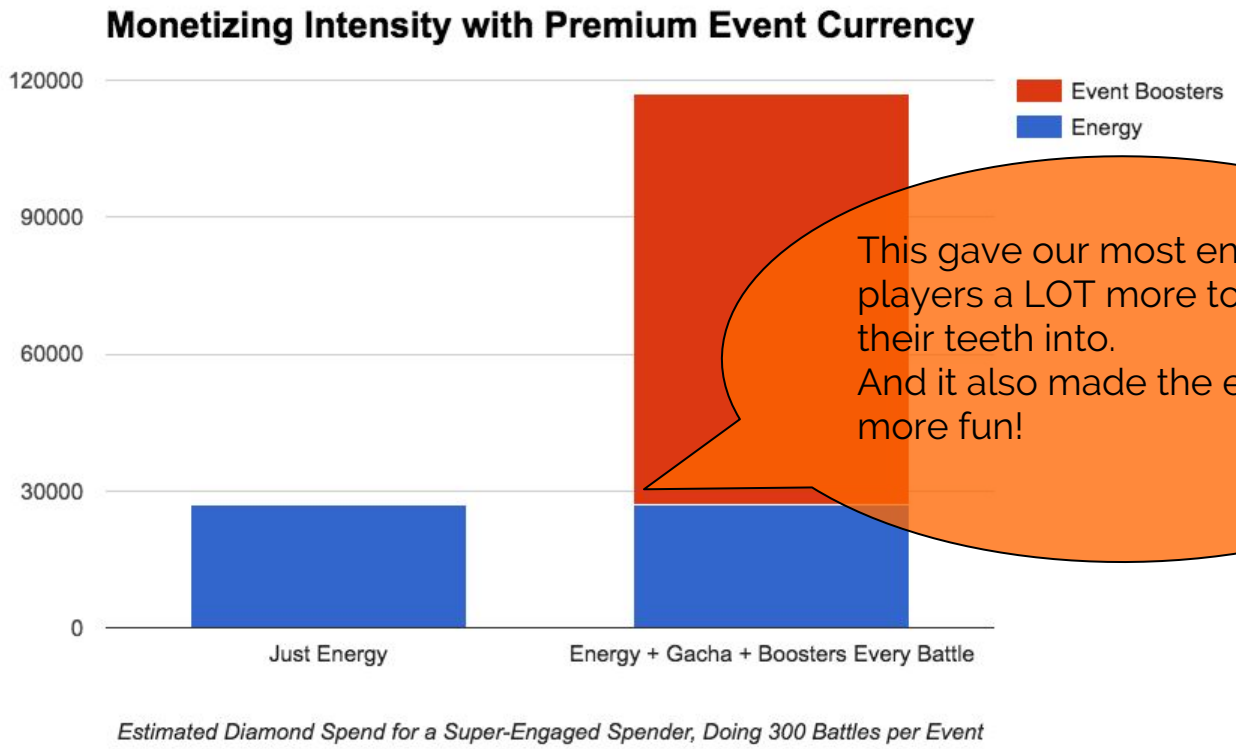
How can I make the most of event intensity?


Event Intensity
Intense events can be a catalyst for intense engagement with bundles and other premium features.
Monetization
1
2
3
4
Weeks

SpaceApe™

Battles per Player during Events

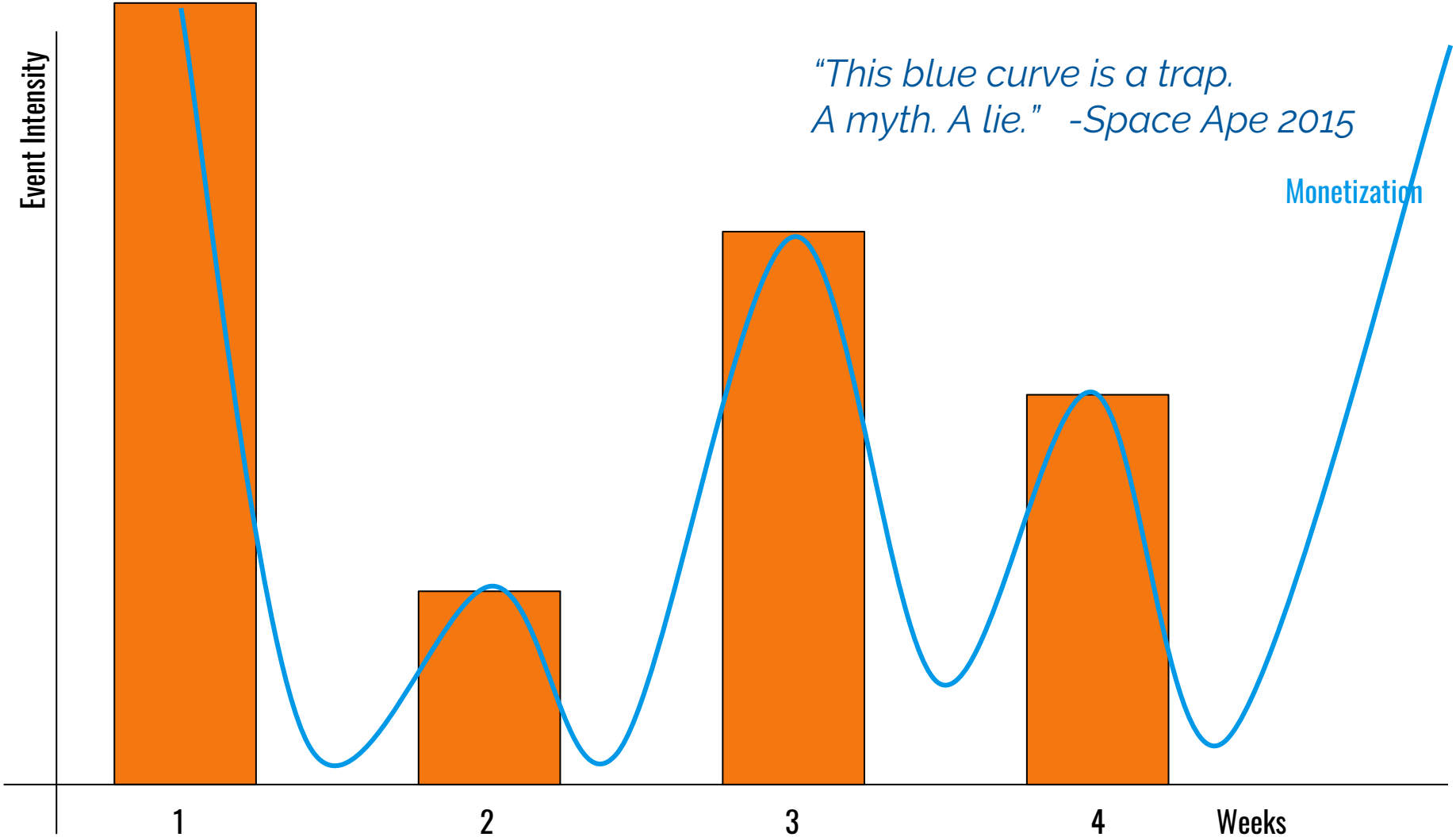
Rather than just allowing people to stretch your existing restriction mechanics, we brought in new event enhancing mechanics. Acorn Boosters accelerate your progress in the event, and hence are really valuable. They formed an excellent “runner up” prize in a Gacha box we ran during the event.

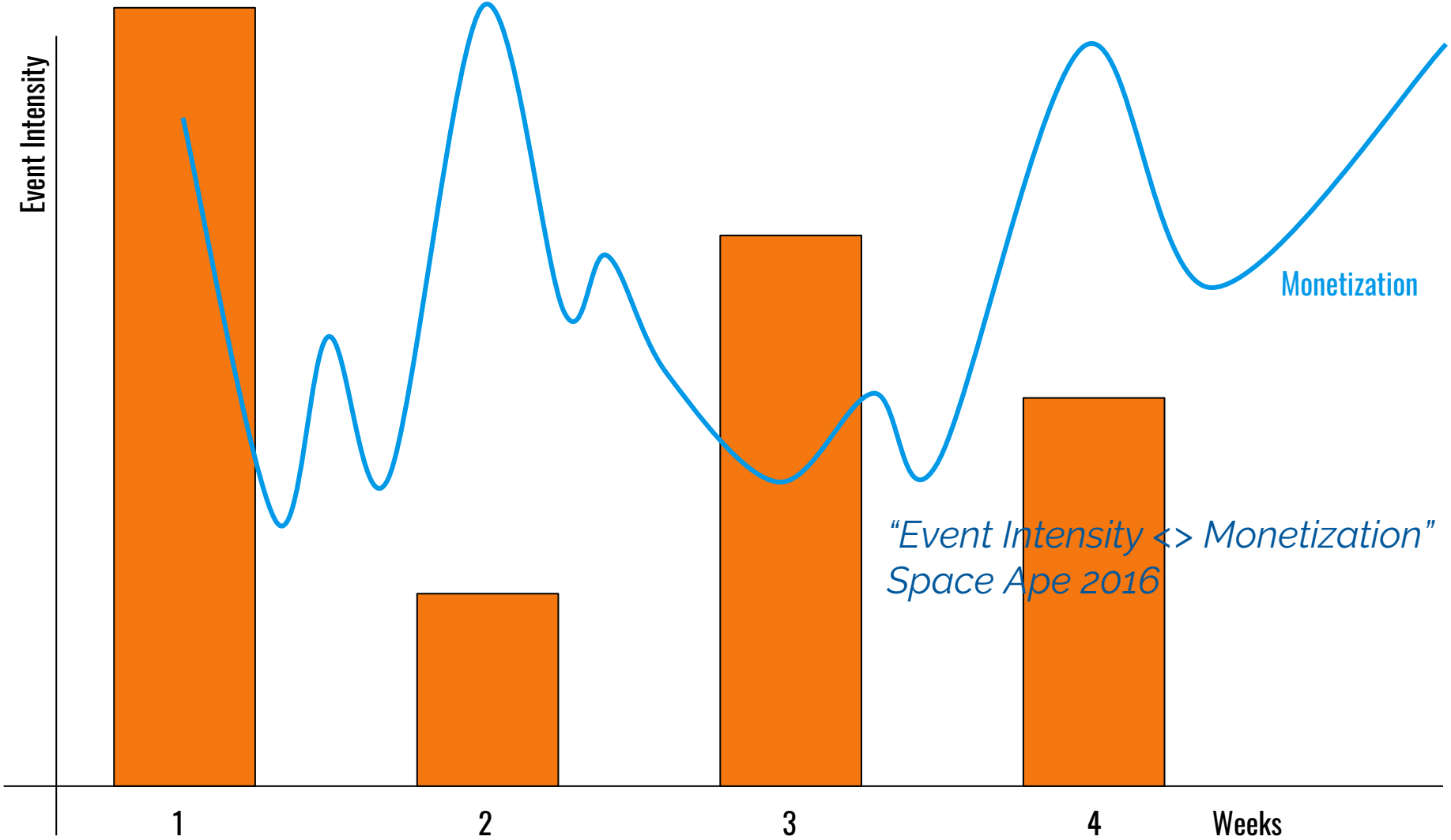

Monetizing Intensity with Premium Event Currency
120000
90000
60000
30000
0
Event Boosters
Energy
Just Energy
Energy + Gacha + Boosters Every Battle
This gave our most engaged players a LOT more to sink their teeth into.
And it also made the event more fun!
Estimated Diamond Spend for a Super-Engaged Spender, Doing 300 Battles per Event

Lean Commandment 8

“Thou Shalt Make Intensity Your Ally”

…by making event energy premium, and running symbiotic bundles


Event Intensity
"This blue curve is a trap.
A myth. A lie." -Space Ape 2015
Monetization
1
2
3
4
Weeks


Event Intensity
Monetization
"Event Intensity <> Monetization"
Space Ape 2016
1
2
3
4
Weeks

How can bundles be engaging
without event intensity?

LIVE OPS: LIFECYCLE MANAGEMENT

New Transformer

Event Release

4 Weeks

Bundles

3 Weeks

Premium Crystal Pool

2-3 Weeks

But Crystal Sale

Free Crystal Pool

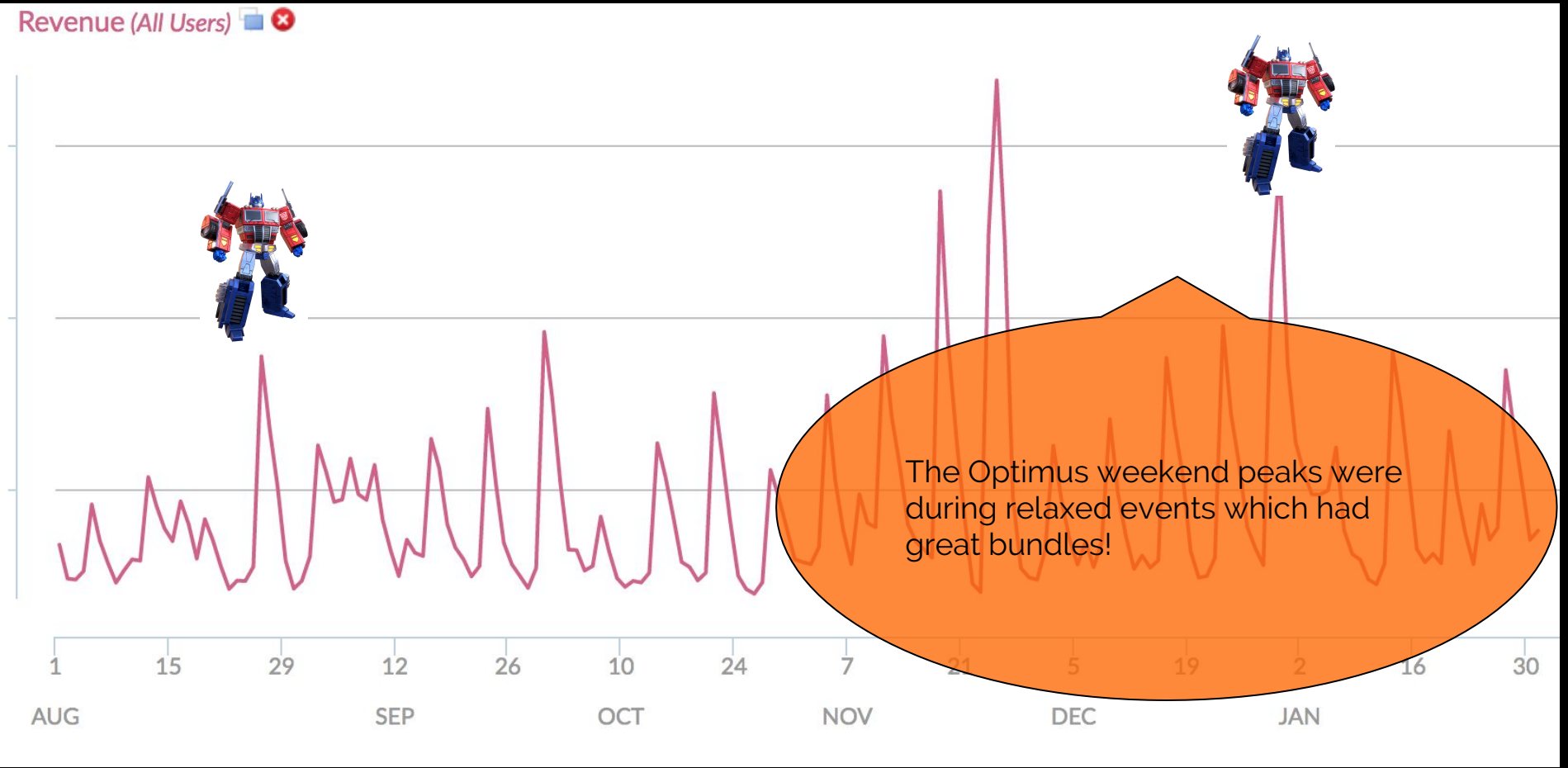
In more “casual” events, intensity will be lower.

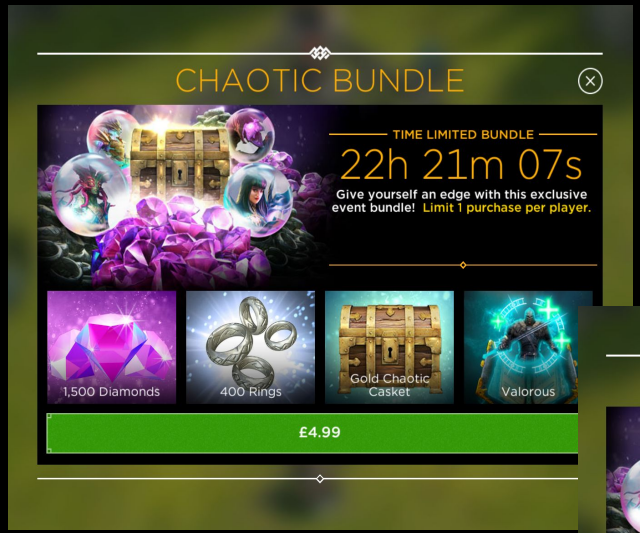
This is a GREAT time to offer a bundle.

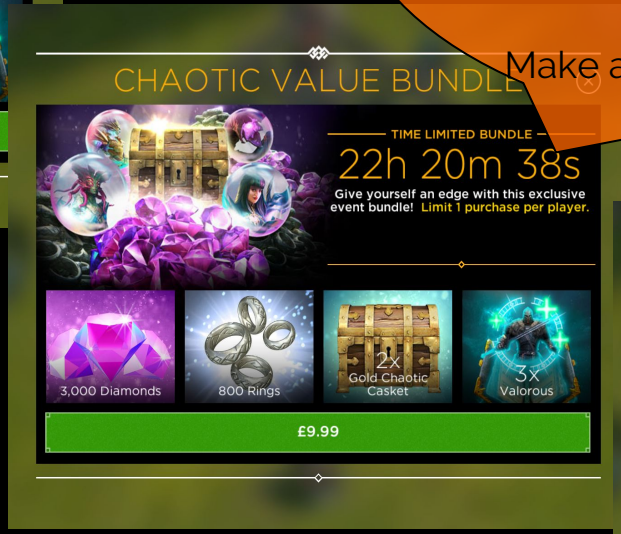
Especially for players who value their time a lot. They have a shot at prizes without doing dozens of battles per day.

Hasbro BACKFLIP STUDIOS SpaceApe

TRANSFORMERS EARTH WARS


Revenue (All Users)
The Optimus weekend peaks were during relaxed events which had great bundles!
1
15
29
12
26
10
24
7
21
5
19
2
16
30
AUG
SEP
OCT
NOV
DEC
JAN

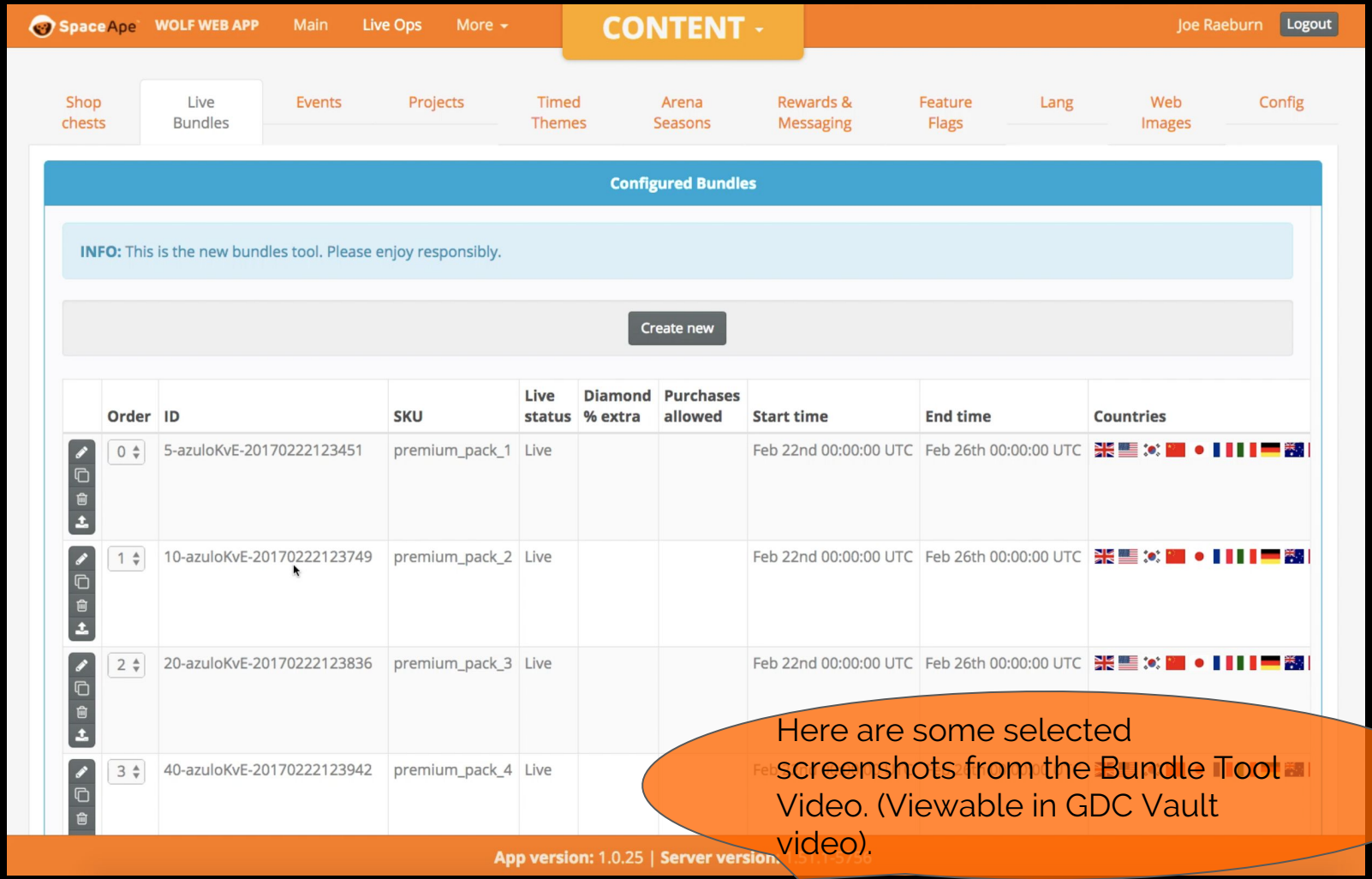




We offer LOTS of bundles.
In this one weekend, it had FOUR different variations of the bundle.

This meant we could offer a “limit one per customer” $5 bundle with insane value and limited time.

Make a MULTITUDE of bundles!


SpaceApe WOLF WEB APP
Main
Live Ops
More
CONTENT
Joe Raeburn
Logout
Shop chests
Live Bundles
Events
Projects
Timed Themes
Arena Seasons
Rewards & Messaging
Feature Flags
Lang
Web Images
Config
Configured Bundles
INFO: This is the new bundles tool. Please enjoy responsibly.
Create new
Order
ID
SKU
Live status
Diamond % extra
Purchases allowed
Start time
End time
Countries
0
5-azuloKvE-20170222123451
premium_pack_1
Live
Feb 22nd 00:00:00 UTC
Feb 26th 00:00:00 UTC
1
10-azuloKvE-20170222123749
premium_pack_2
Live
Feb 22nd 00:00:00 UTC
Feb 26th 00:00:00 UTC
2
20-azuloKvE-20170222123836
premium_pack_3
Live
Feb 22nd 00:00:00 UTC
Feb 26th 00:00:00 UTC
3
40-azuloKvE-20170222123942
premium_pack_4
Live
App version: 1.0.25 | Server version
Here are some selected screenshots from the Bundle Tool Video. (Viewable in GDC Vault video).

Edit

Update Cancel

ID *

5-azuloKvE-20170222123451

→ Actual ID used: **5-azuloKvE-20170222123451**

SKU

premium_pack_1

Diamond % Extra

50

Purchases Allowed

1

Start Date

22-02-2017 0 0 UTC

End Date

26-02-2017 0 0 UTC

HUD Text

Custom lang string?

premium_bundle-5-event-azuloKvE-name

Status in current LangConfig:

en *Phase Shift Bundle*

de es fr it ja ko pt ru zh-cn zh-hk

Shop Image

Image Type

Internet Select Image

Drag and drop image(s) here

Image Rect

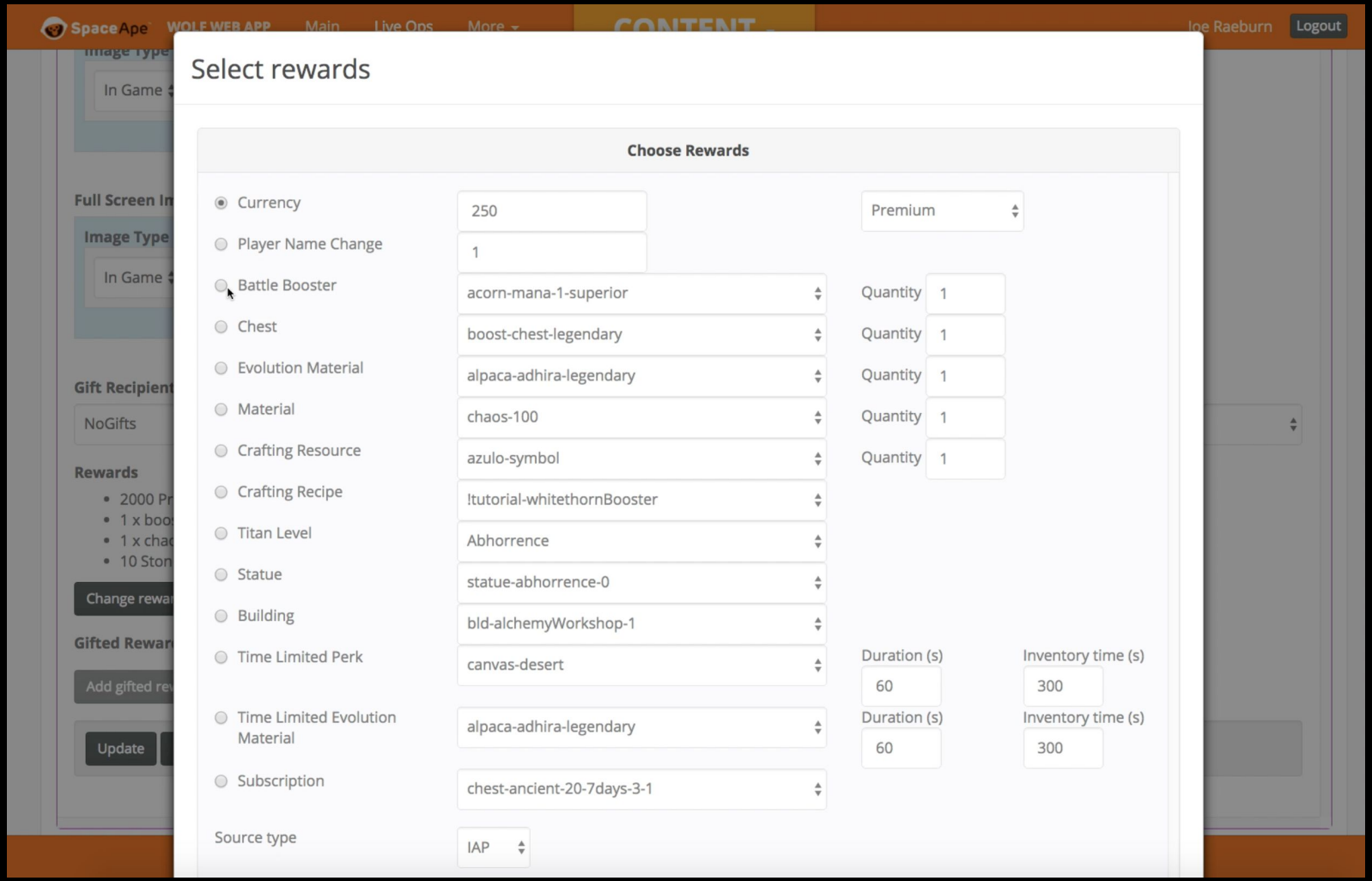
x	y	w	h
0	0	1	1

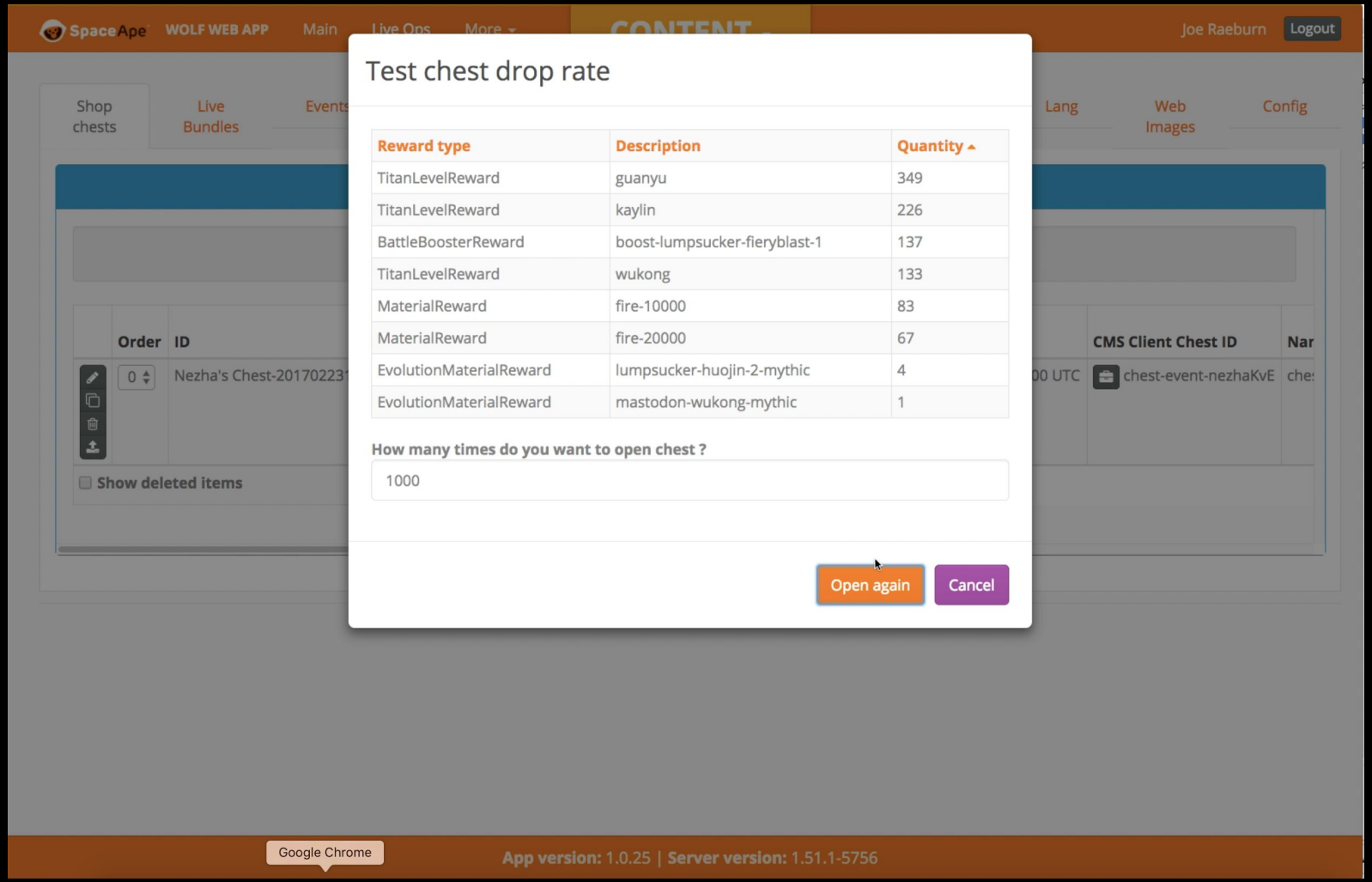
Dimensions:

Fallback

HUD Image

Image Type


SpaceApe
WOLF WEB APP
Main
Live Ops
More
Joe Raeburn
Logout
Select rewards
Choose Rewards
Currency
250
Premium
Player Name Change
1
Battle Booster
acorn-mana-1-superior
Quantity
1
Chest
boost-chest-legendary
Quantity
1
Evolution Material
alpaca-adhira-legendary
Quantity
1
Material
chaos-100
Quantity
1
Crafting Resource
azulo-symbol
Quantity
1
Crafting Recipe
!tutorial-whitethornBooster
Titan Level
Abhorrence
Statue
statue-abhorrence-0
Building
bld-alchemyWorkshop-1
Time Limited Perk
canvas-desert
Duration (s)
60
Inventory time (s)
300
Time Limited Evolution Material
alpaca-adhira-legendary
Duration (s)
60
Inventory time (s)
300
Subscription
chest-ancient-20-7days-3-1
Source type
IAP


SpaceApe
WOLF WEB APP
Main
Live Ops
More
Joe Raeburn
Logout
Shop chests
Live Bundles
Events
Lang
Web Images
Config
Order
ID
CMS Client Chest ID
Show deleted items
Test chest drop rate
Reward type
Description
Quantity
TitanLevelReward
guanyu
349
TitanLevelReward
kaylin
226
BattleBoosterReward
boost-lumpsucker-fieryblast-1
137
TitanLevelReward
wukong
133
MaterialReward
fire-10000
83
MaterialReward
fire-20000
67
EvolutionMaterialReward
lumpsucker-huojin-2-mythic
4
EvolutionMaterialReward
mastodon-wukong-mythic
1
How many times do you want to open chest ?
1000
Open again
Cancel
Google Chrome
App version: 1.0.25 | Server version: 1.51.1-5756

Lean Commandment 9
“Thou Shalt Offer a Multitude of Bundles”
…by the liberating power of tools, more players can engage with amazing offers.

1. INTRO

- Why Lean?
- How to get Lean?

2. CONTENT

- How to make enough content?
- What if content is complex?

3. EVENTS

- What's the event's essence?
- How can I do events without devs?
- How can I keep events fresh?

4. BUNDLES

- How can I maximise event intensity?
- How to engage without intensity?

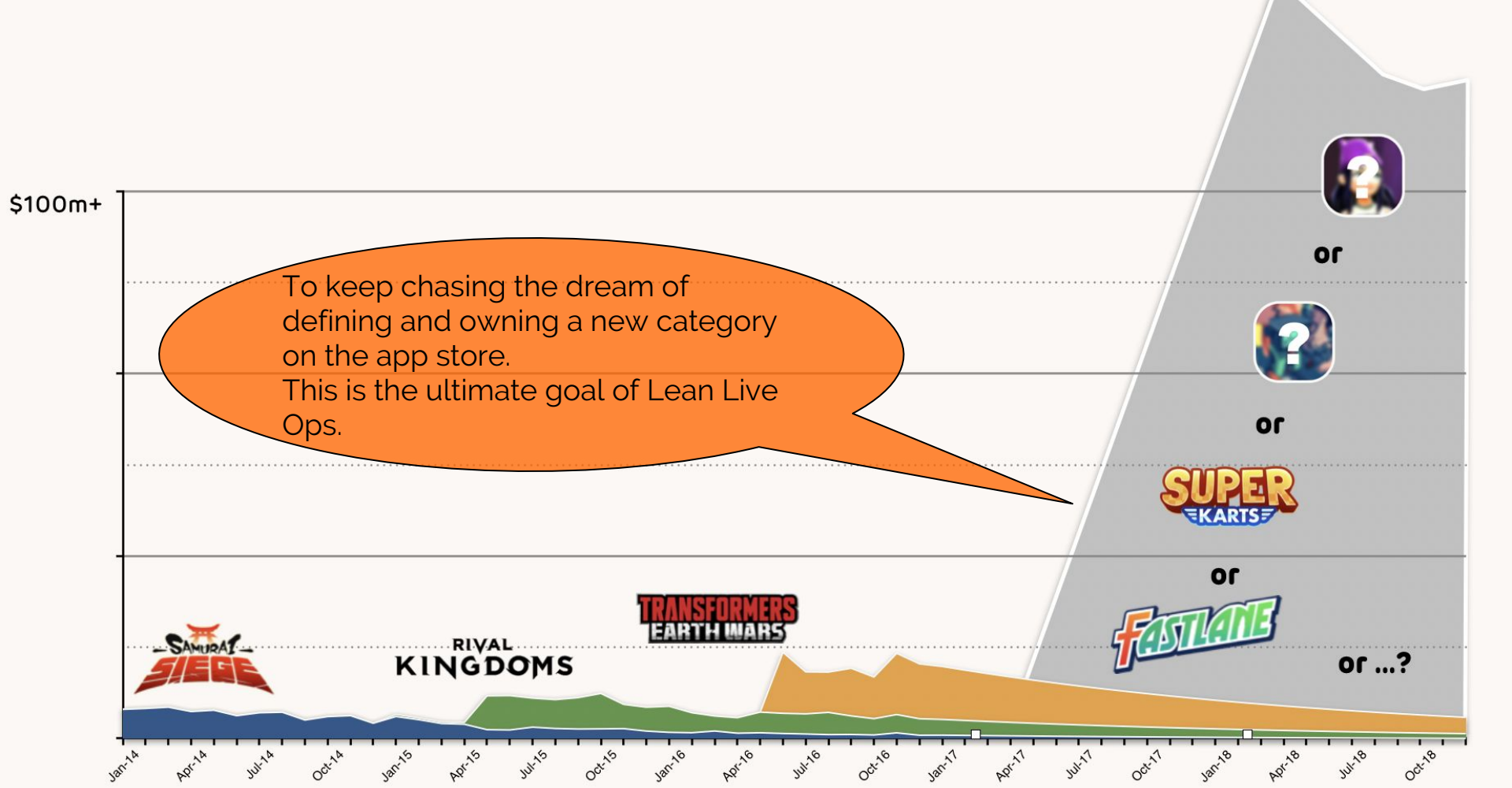
SpaceApe™

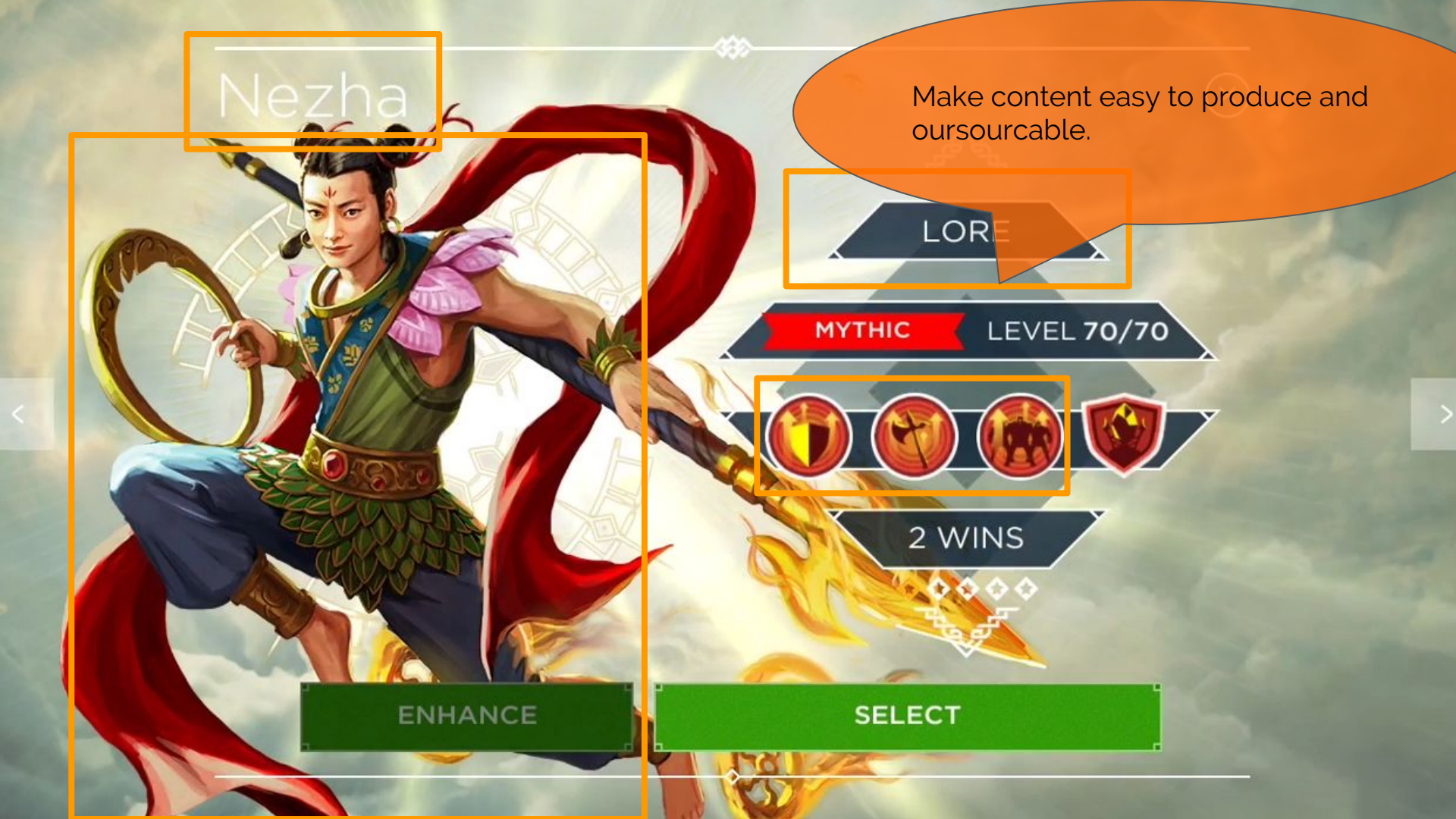
Lean live Ops stopped us being weighed down by our success in Build-and-Battle games

SpaceApe™

And allowed us to focus on making new games

Jan 2017 Stat:
75% devs working on unreleased games

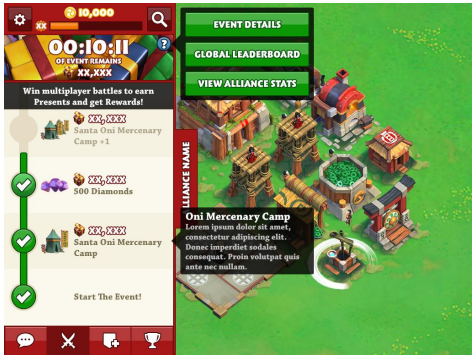

$100m+
To keep chasing the dream of defining and owning a new category on the app store.
This is the ultimate goal of Lean Live Ops.
or
or
SUPER KARTS
or
FASTLANE
or ...?
SAMURAI SIEGE
RIVAL KINGDOMS
TRANSFORMERS EARTH WARS
Jan-14
Apr-14
Jul-14
Oct-14
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Apr-17
Jul-17
Oct-17
Jan-18
Apr-18
Jul-18
Oct-18


Nezha
Make content easy to produce and oursourcable.
LORE
MYTHIC
LEVEL 70/70
2 WINS
ENHANCE
SELECT

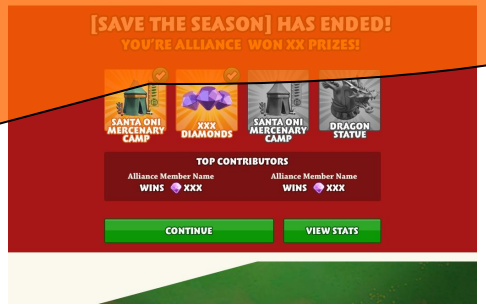
Alliance Event Format (AvE)

Find your events' essence, and tool up.

Battle!

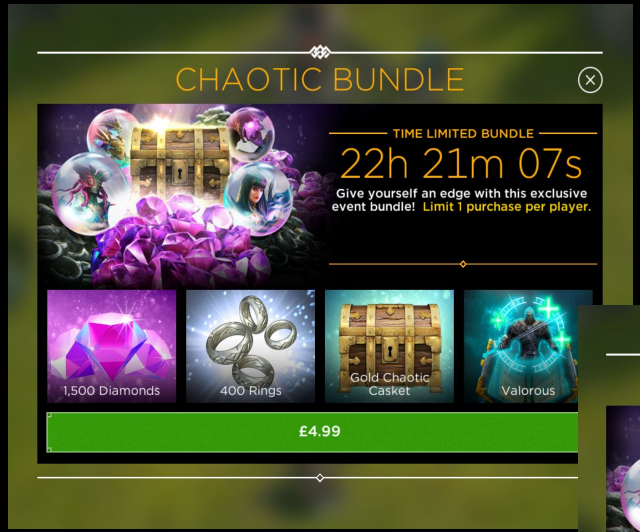


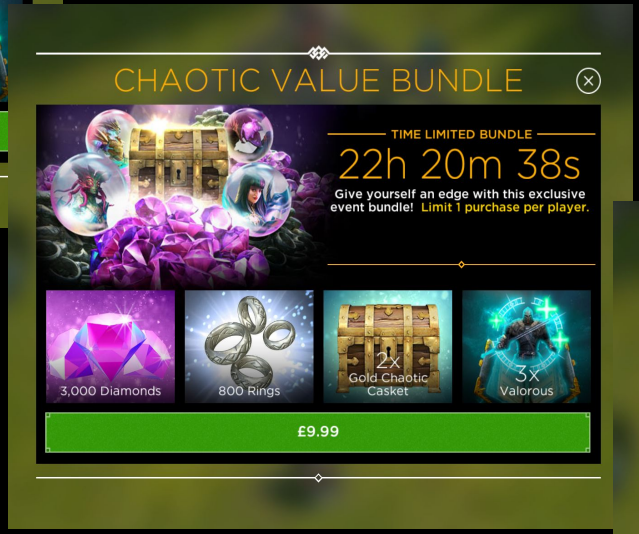
Earn War Points for your Alliance



Unlock Rewards

Compete on a Leaderboard against Alliances





Tool up again to run a multitude of bundles... and that's it!

The Ten Lean Commandments

Thou Shalt...

Go **lean**

Make content **outsourceable**

Find the **essence** of your events

Make **intensity** your ally

Ceaselessly **quantify** lean

Make the **chase** epic

Tool up your events

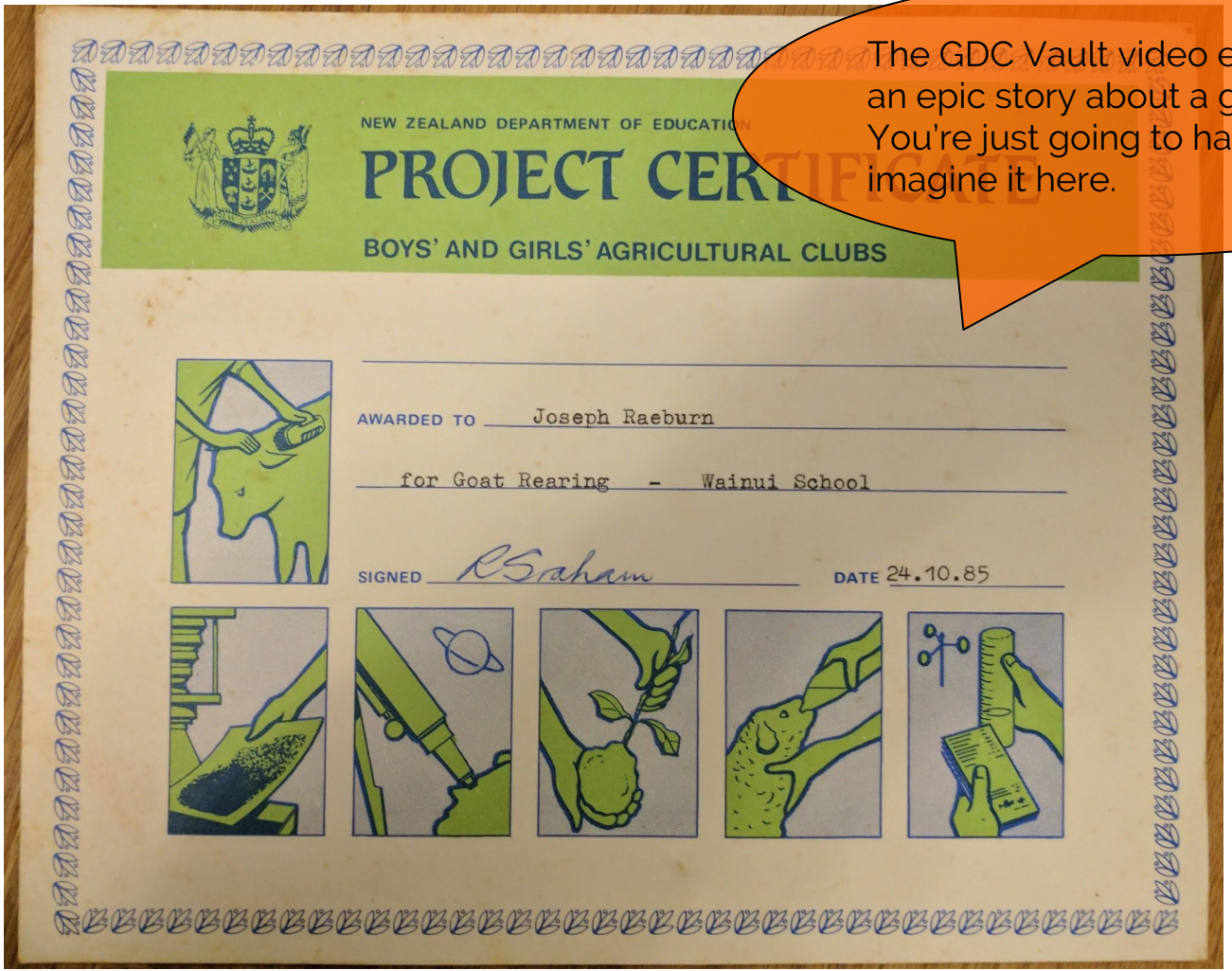
Offer a **multitude** of bundles

Hmmm that's just nine commandments.

Beatbox

Who wants to live forever?

As in, “who wants to be live forever”.
(This homonym joke falls a little flat in text form).



The GDC Vault video ends with an epic story about a goat. You're just going to have to imagine it here.

Lean Commandment 10

“Thou Shalt Forget D1. Thou Shalt Design for Day 1000.”

Don’t build a deaf goat, and thou shalt live forever.

The Ten Lean Commandments

Thou Shalt...

Go **lean**

Make content **outsourceable**

Find the **essence** of your events

Make **intensity** your ally

Ceaselessly **quantify** lean

Make the **chase** epic

Tool up your events

Offer a **multitude** of bundles

Beatbox

Design for Day 1000

THANKS!!

Q?

Again, I recommend you watch the video in the GDC vault. There is a bunch of insightful questions. And a story about a goat.
Thanks! - Joe R