



MOBILE
— S U M M I T —

Design By The Numbers: Using Data for Good

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GDC

GAME DEVELOPERS CONFERENCE

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The Value of Data

- Intuition is good – but not enough
 - Playtests only take you so far
 - The best answer to what will players do is what players **actually do!**
- Insights you can't get any other way

LOONEY TUNES WORLD OF MAYHEM



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Analytics & Logs

- Track **everything**
- Taps – Where do players tap?
 - Impressions – Which screens are opened?
 - Activities – What do players do?
 - Resources – What do players earn and spend?

The Usual Suspects: Key Metrics

- Product Manager 101: Key Performance Indicators
 - Retention, Conversion, ARPU/ARPDau
 - Everything sums up to lifetime value
- But there's more!

Tracking Behavior – Engagement

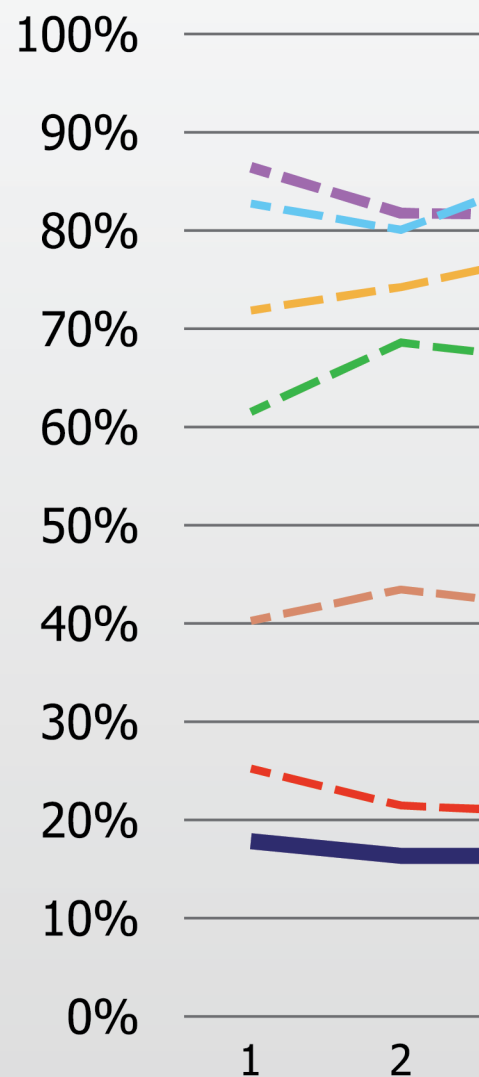
- Interactions
 - Opening screens
 - Using features
 - Granular actions
- What are players actually doing?



Tracking Behavior – Engagement

- Completing goals
- Finishing levels
- Accomplishing daily tasks

- Track what *isn't* done



47 X2
EVENT ACTIVE! 1d 22h
11625
22 +
335 +
466.1k +
10.2k +

DAILY GOALS
QUESTS
EVENT QUESTS

COMPLETE ALL DAILY GOALS.

XP +300
 +1
 +10
 +5

0/6

Refresh in: 22h 47m

BATTLE IT OUT
Complete 3 Invasion battles.

XP +150
 +3

0/3

GO

LEVEL-UP
Level up a toon.

XP +150
 +2k

0/1

GO

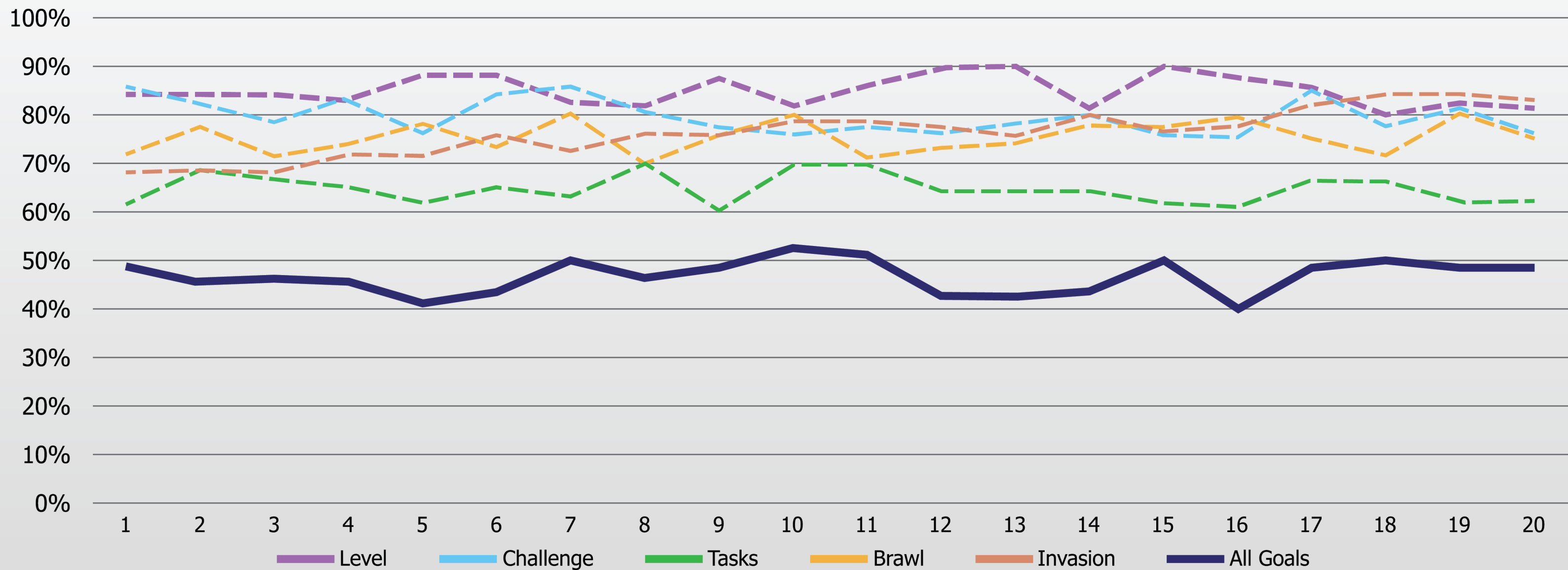
ENERGIZE!
Energize 1 reatomizers

XP +150
 +2

0/1

GO

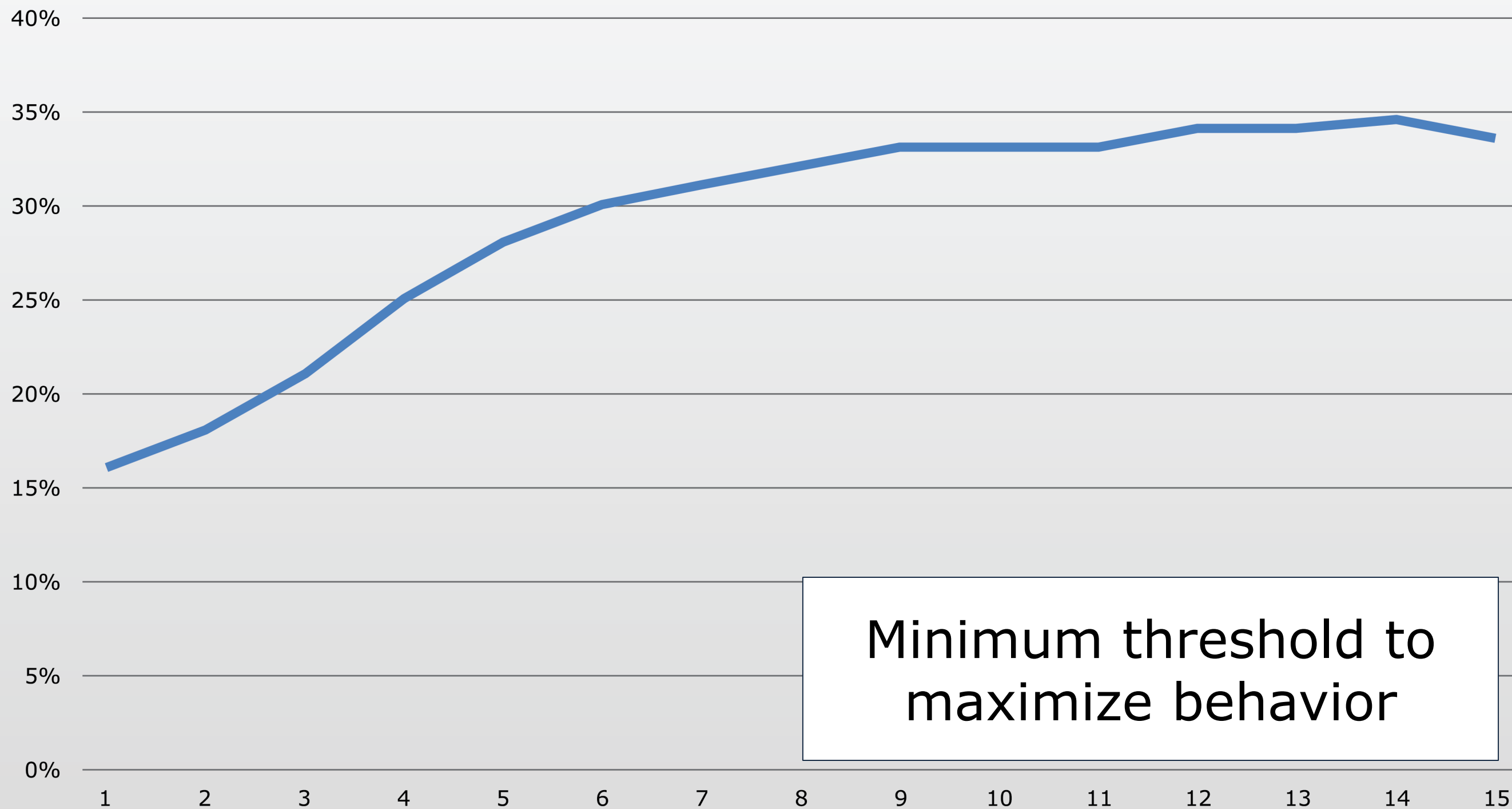
Daily Quest Completion Rates - After



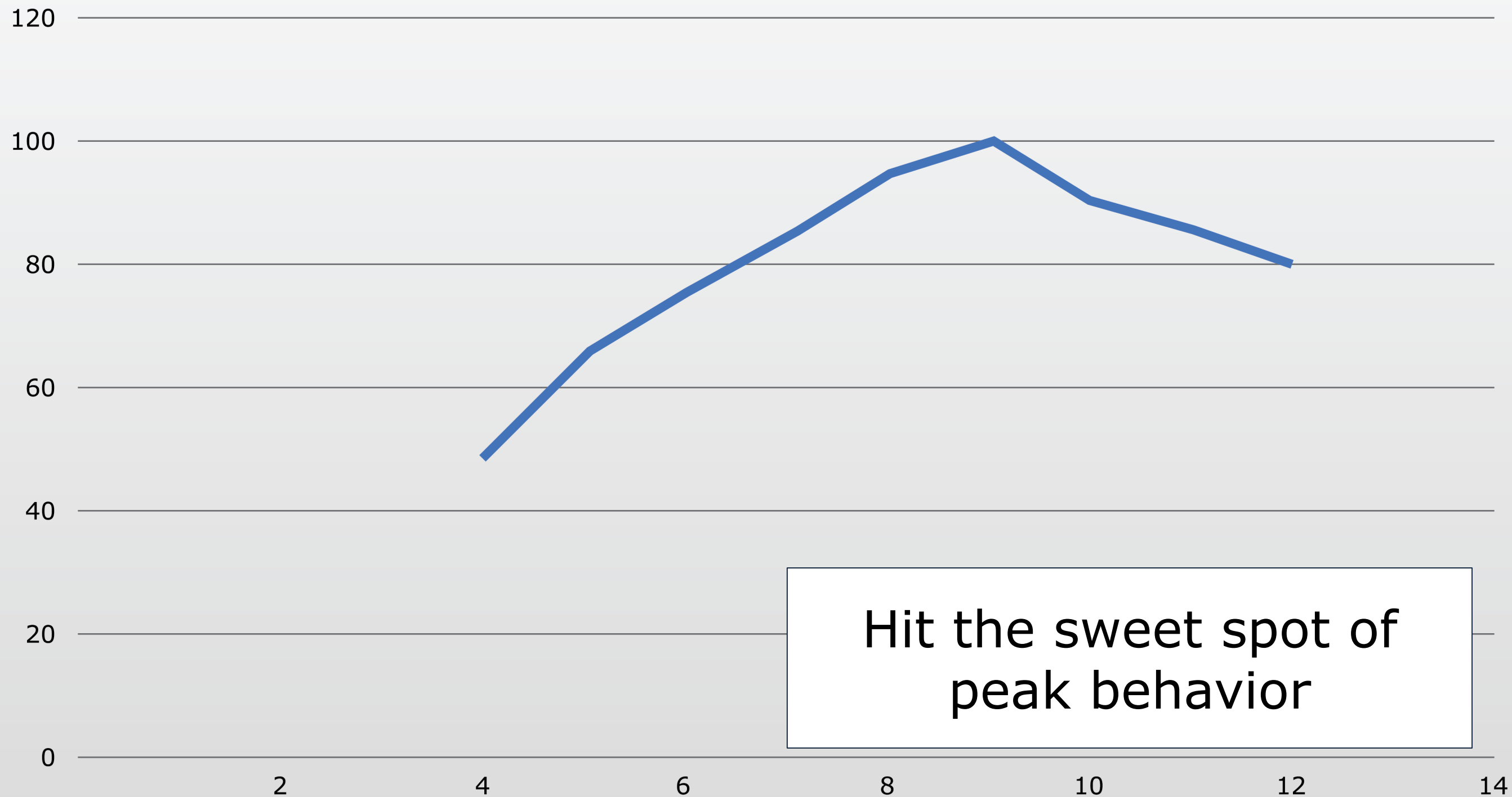
Tracking Behaviors – Questions

- Are there types of players that perform better or worse than others?
 - What do they do that's different?
 - How can you get every player to act like that?
- What do players do that you didn't expect?
 - Is it better this way? Or worse?

Day 1 Retention vs. Battles Done



Energy Spent vs. Characters Earned



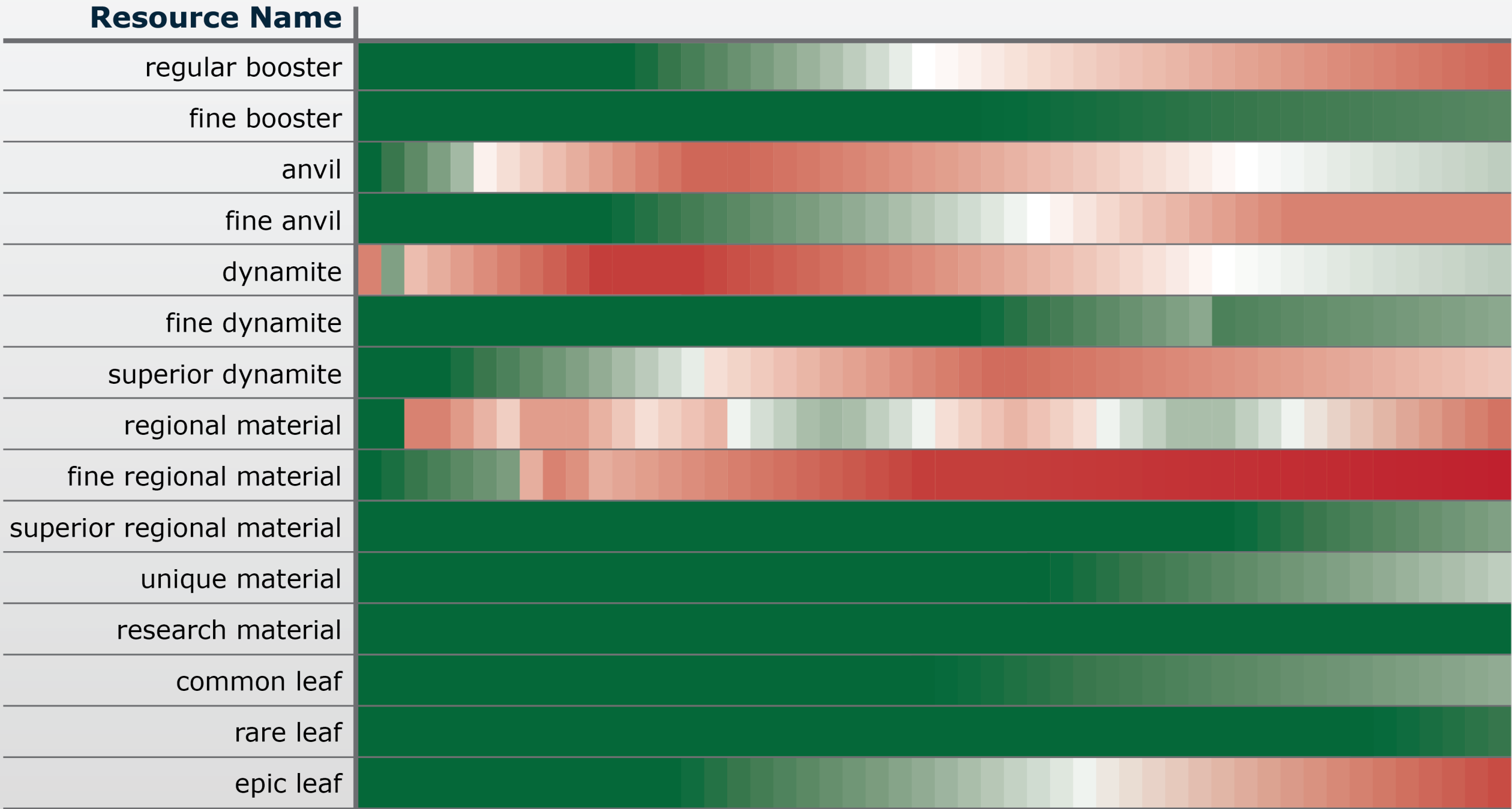
Tracking Resources

- Transaction log – Every time a resource is earned or spent
 - Average earned / spent per day
 - Segment by player type or lifecycle
 - Average carrying balance
- Compare to how much players need

Green:
Shortage

Red:
Surplus

Resources Used % vs. Player Level

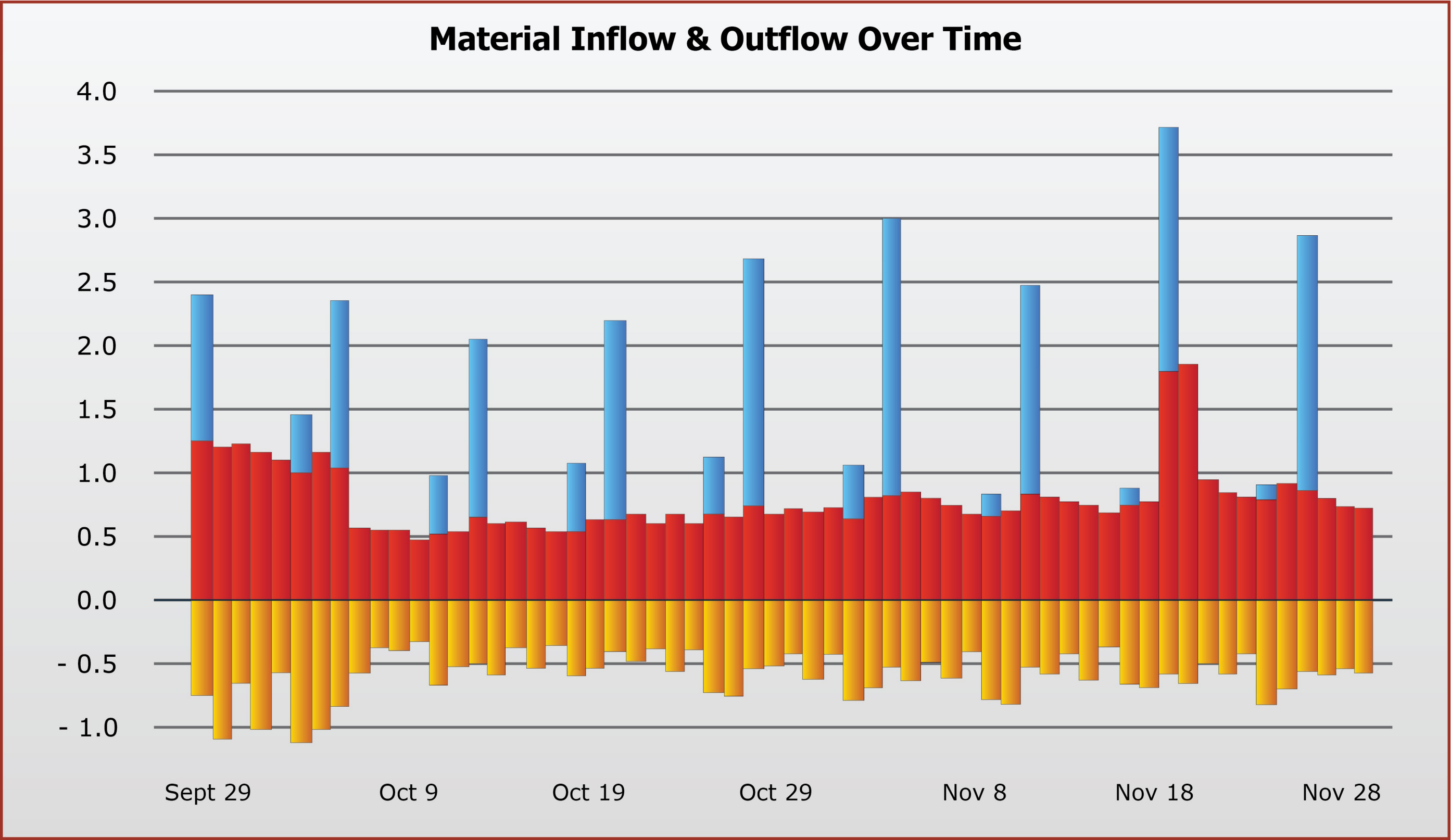


Economic Dashboards

- High level view at a glance
- Look for sudden changes
 - Unexpected drops or spikes
 - Slow increases or decreases over time
- Discover problems before players realize

Positive:
Inflow

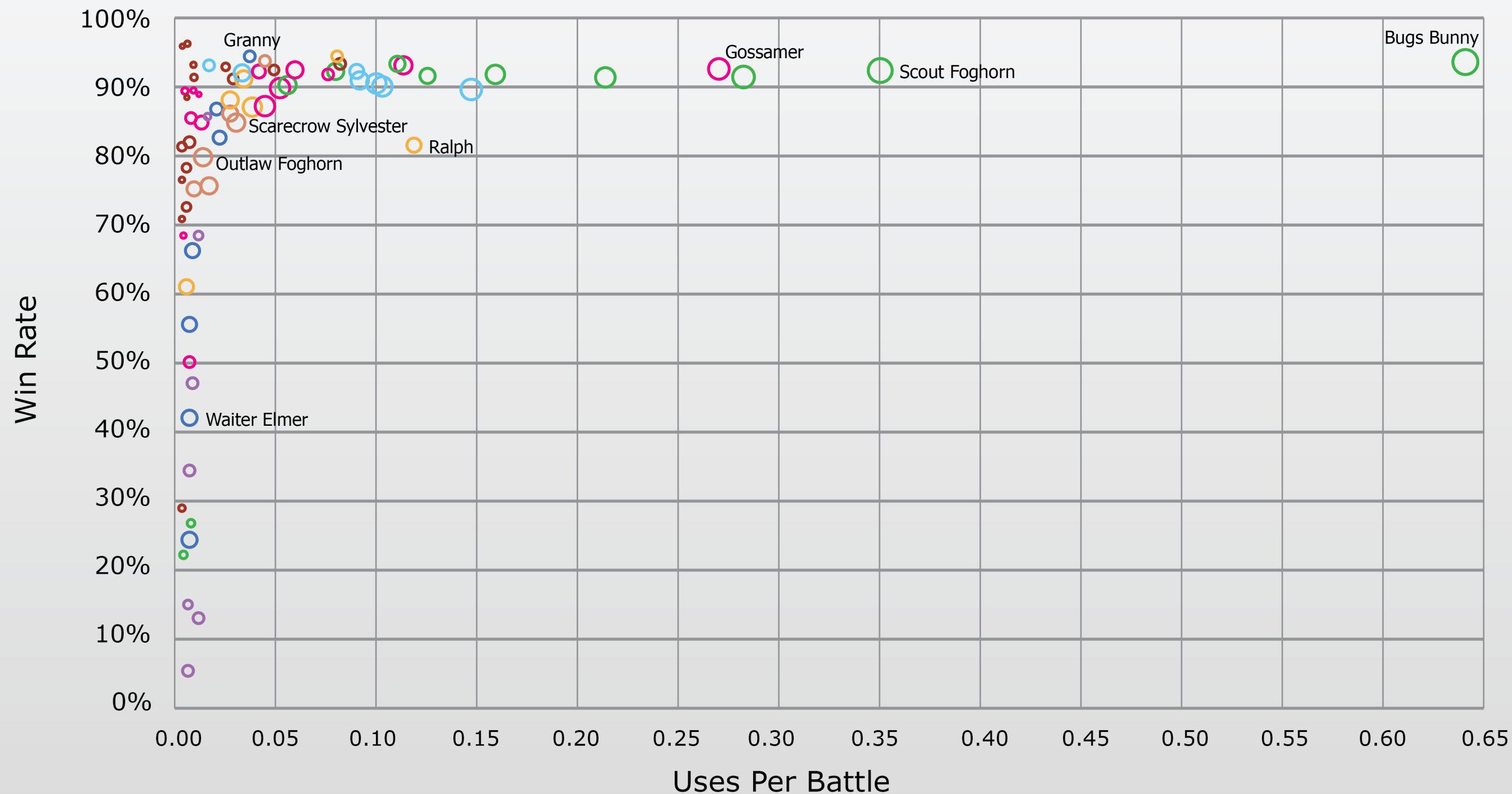
Negative:
Outflow



Content Usage and Effectiveness

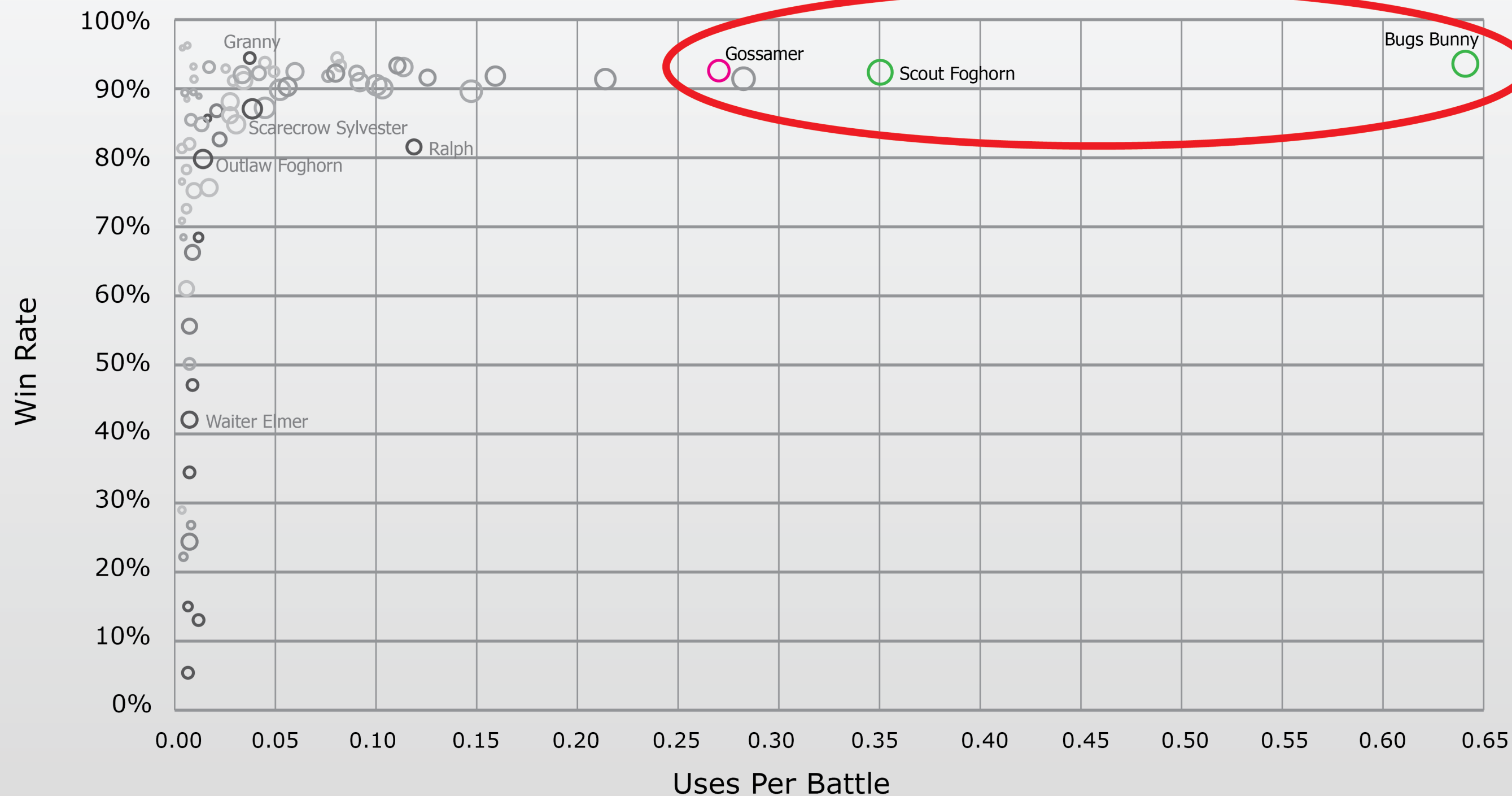
- How do players actually use the content they unlock?
- Example: Characters
 - Ownership Rate – How many people have it?
 - Usage Rate – How many people use it?
 - Win Rate – How many people succeed?

Character Dashboard



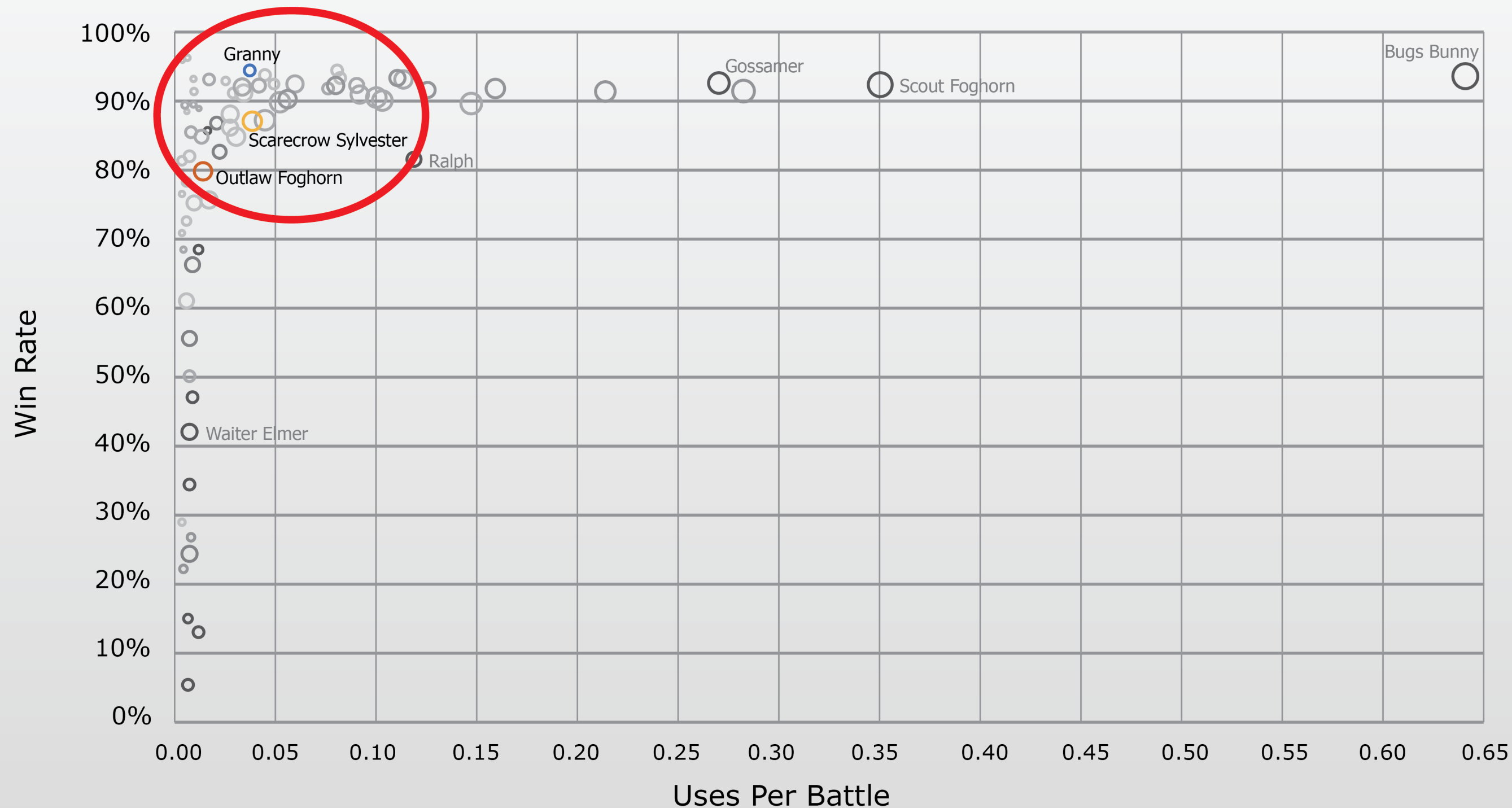


Character Dashboard - Stars



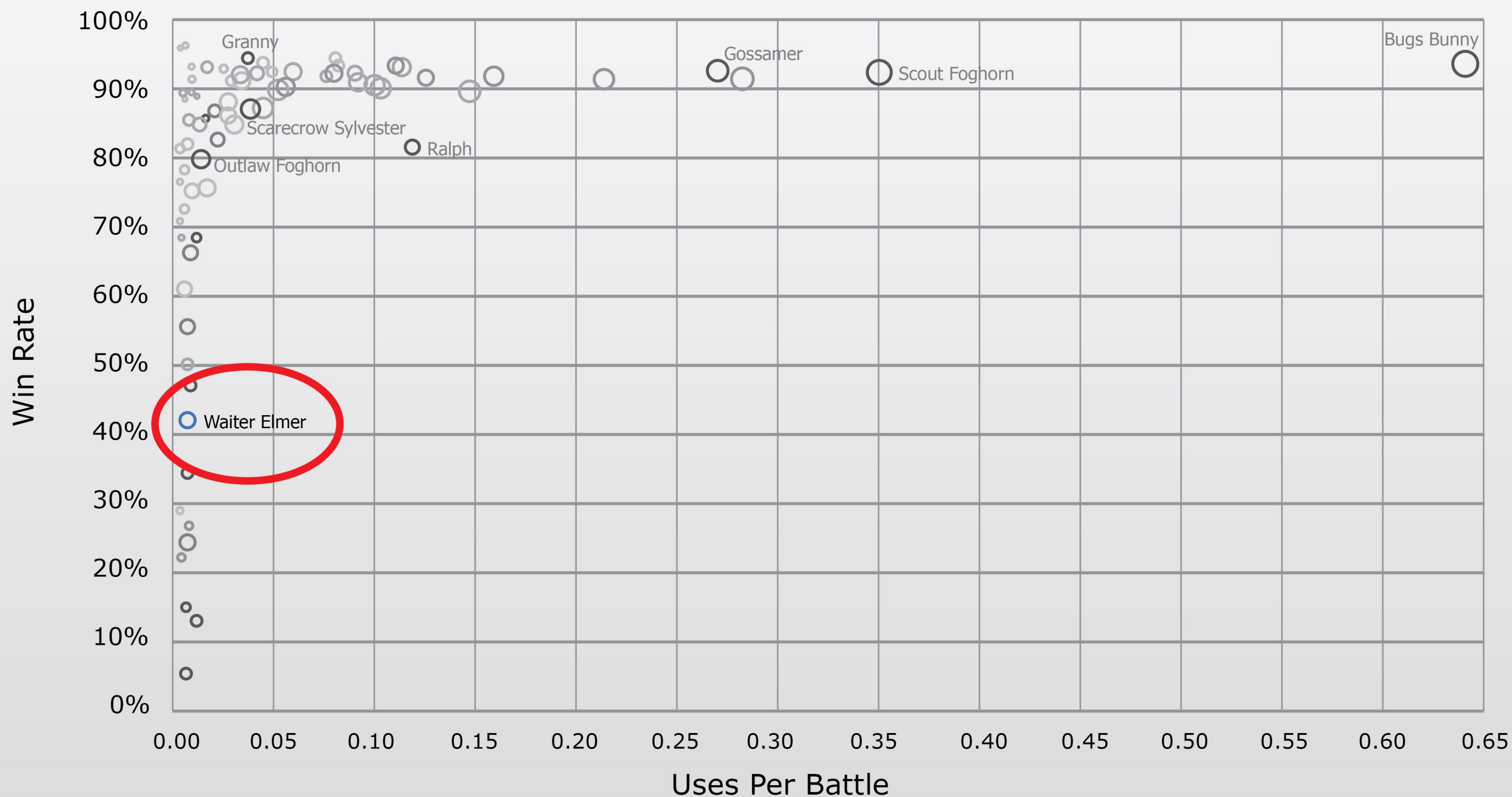


Character Dashboard - Sleepers



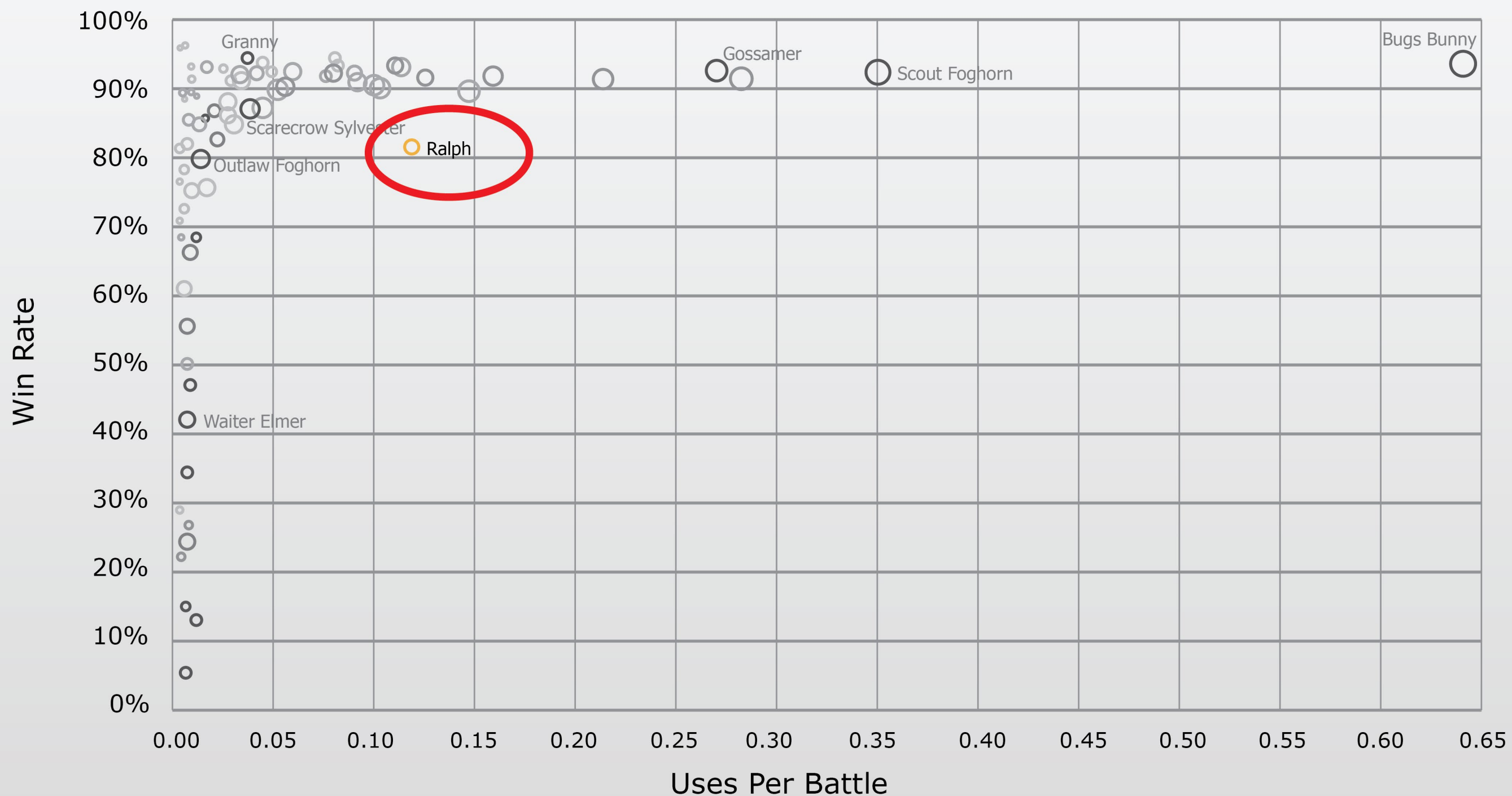


Character Dashboard - Underperformers





Character Dashboard - Fan Favorite



Combat Dashboards

- Again: Look for sudden changes or trends
- Be alert for over/under performing
 - Is a common character too good?
 - A rare prize too weak?
- Consider secondary effects
 - Popular character -> Related demand

What Does Good Look Like?

- Players are playing the game!
 - Steady retention and feature engagement
 - No one part of the game is neglected
- Items are acquired appropriately
 - Repeat purchase is a great indicator of value

Economic Constraints are Good

- Source *most* things just above their need
 - But players should always lack something
 - Fewer constraints are better than many
- Rare resources add excitement
 - And make for great rewards

Reality Matches Design

- No one character or item is much more effective than others of the same cost
 - Consider the context of the characters
- **Don't** just make powerful things expensive
 - No one likes pay to win

Summary

- Monitor performance of features and content
- Track resource inflow and outflow
- Create demand and supply accordingly
- Sell what players need and don't have
 - Or reward it from gameplay!



Contact Info

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Slides: <http://bit.ly/GDC19DataDesign>



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