



Lucky Fish: A Fortune of Data



Lucky Fish Games is a six-year-old, market-leading company in the rapidly-growing social gaming market, which is estimated at nearly \$5 Billion dollars globally in 2017.

Lucky Fish developed OMG! Fortune, one of many social games developed to run on Lucky Fish's platform of casual casino games for social networks and mobile phones. Players can enjoy the social aspect of casino games without actually playing for money—they can participate in tournaments with friends, give and receive gifts, and share coins. Games are offered free, and players deposit micro-payments to upgrade to premium and get access to more game features.

OMG! Fortune was an instant hit when it first appeared as a Facebook app in 2012, and today has over 2.6 million likes on its Facebook page and 15 million users on Facebook, Android and iOS. With millions of "spins" occurring in the company's games every day, this explosive growth quickly started to generate very large sets of data.

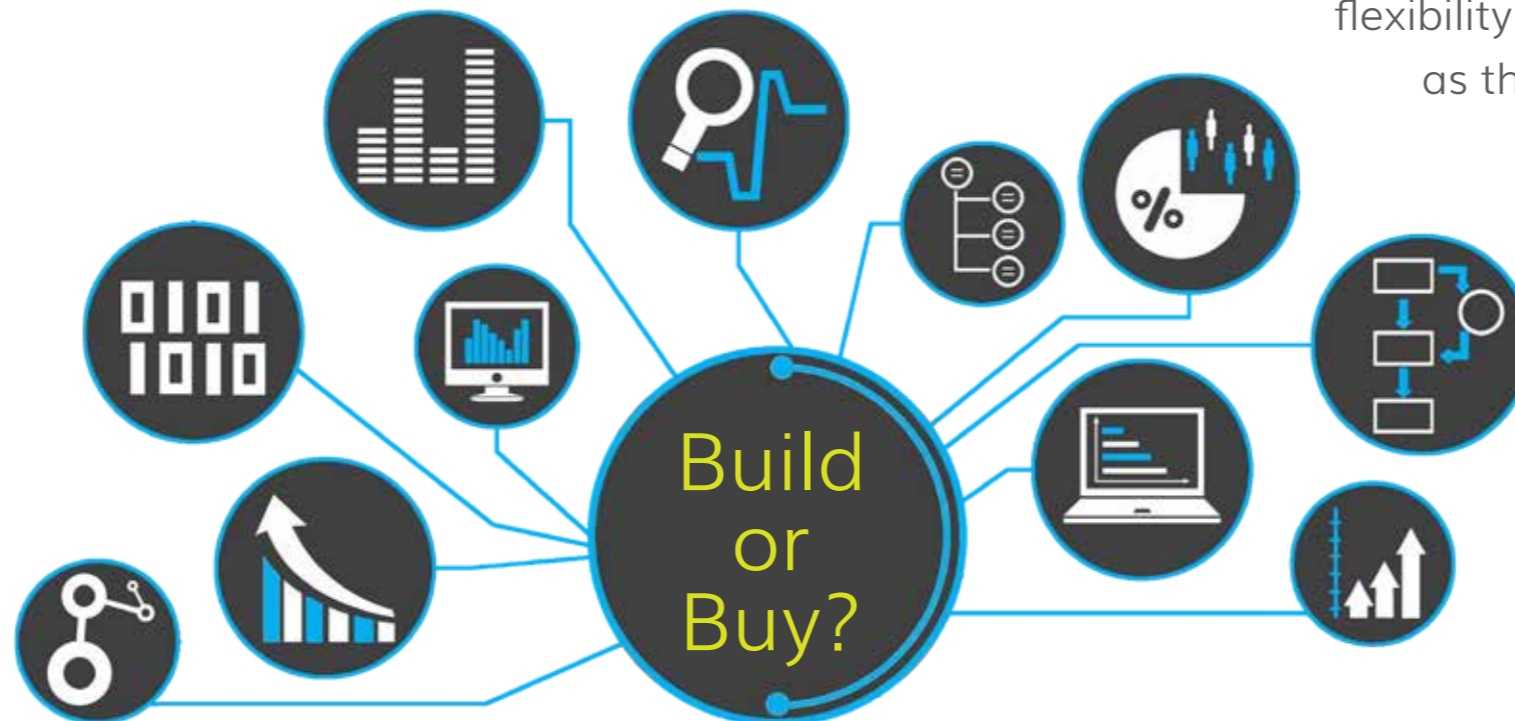


The Big Data Challenge: Build or Buy?

In the beginning, Lucky Fish stored usage data in a regular database, and was able to save and query only a small fraction of their data. They had a choice: to build their own big data infrastructure, a major effort which would take resources away from building the product—or to buy a solution.

The preferred choice was to buy, not build. But most of the solutions out there either required complex integrations with multiple moving parts, or provided an out of the box solution with limited flexibility. For example, many tools aggregate data and would force Lucky Fish to use specific reports, without giving them the flexibility to slice and dice or present the data as they wanted.

Lucky Fish wanted the best of both worlds—a fully integrated solution, which would also give them access to the full raw data and freedom to analyze it any way they wanted.





Enter CoolaData:

All-in-One Data Infrastructure with BI Included

Lucky Fish found CoolaData, a technology that offered the best of both worlds. It worked immediately out of box, but with complete flexibility to slice and dice data at any level of granularity.

Lucky Fish has been using CoolaData for the past four years to serve their entire data pipeline:

- Data ingestion
- Data warehousing and storage
- Data treatment, optimization and processing
- Visualizations, dashboards and BI analytics

Most importantly, CoolaData enables Lucky Fish to record an event in their data warehouse for almost every user activity in their games platform—many millions of events every day—with no time limitation or pre-aggregation of data.

Over the preceding four years, CoolaData freed the team at Lucky Fish to focus on developing a great product and growing their startup, while their data and analytical needs were completely taken care of.

Reports for Every Department

CoolaData is used by every department within Lucky Fish to understand what is going on with their millions of players, and how to optimize experience and outcomes.

It may be surprising that the same data and analytics tool is used by the CEO, support staff, operations, marketing, and game development teams. But this is exactly the flexibility Lucky Fish was looking for—they wanted access to their raw data, and an easy way to conduct and visualize analysis needed by different parts of the business.



CEO and Finance: Gauging Economic Potential

Lucky Fish's Founder and CEO, Roi Fishman, uses CoolaData on a daily basis by consuming both dashboards and reports. Fishman, together with Lucky Fish's CFO and finance team, use CoolaData to get a high level view of revenues, user base trends, and economic potential across games, segments and acquisition channels Marketing and Acquisition: Connecting Campaigns to Usage and ROI.

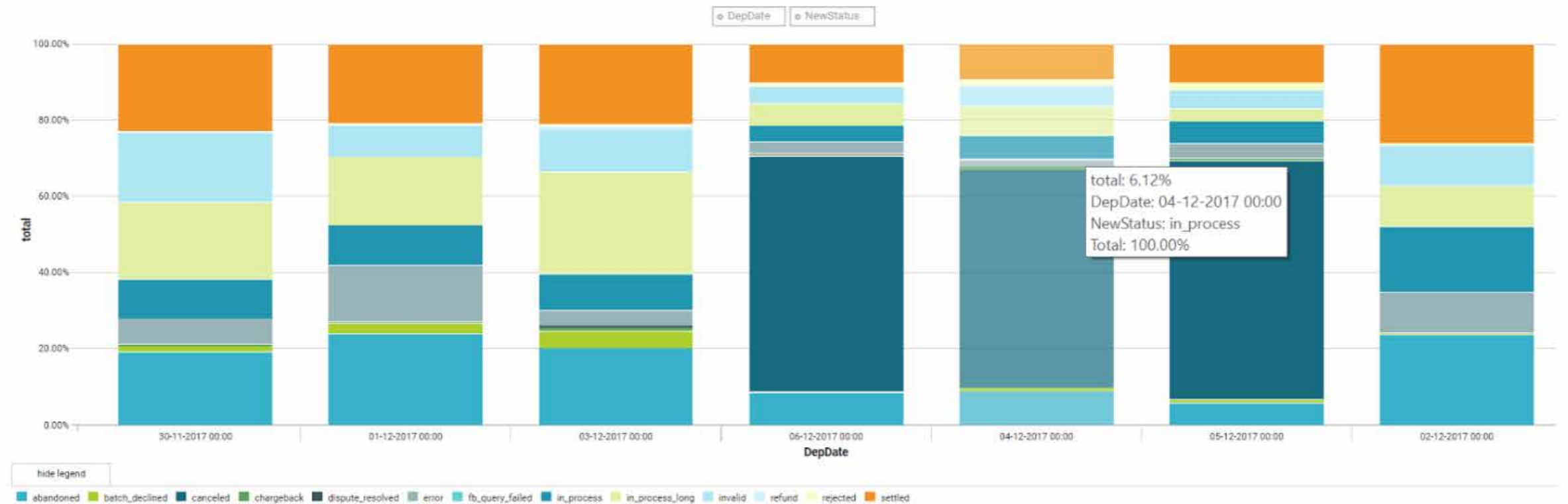
Thanks to this wealth of real-time data on key business trends and activity, Roi and his team have realized some significant business benefits from using Cooladata. The marketing team uses CoolaData to assess performance of campaigns. They set up a dashboard comparing players coming in through paid channels vs. those coming from "viral" acquisition channels. For example, do paid campaign users have the same level of engagement and likelihood to convert to premium as viral users? CoolaData also shows exact ROI per campaign, tying together data from ad platforms, usage analytics and revenue data.

CoolaData is also used for marketing automation. At the end of every day, the marketing team exports a segmented list of active users from CoolaData (e.g. players who made a first deposit, players who were particularly active that day, players about to churn). Based on this list, emails are automatically sent to different user segments to help move them to the next stage of the funnel.



Operations and Support: Proactively Helping Users

At Lucky Fish, keeping millions of players happy and ensuring game machines are running correctly day-to-day is a non-trivial task. If there is a software bug or other issue affecting gameplay, operations and support teams need this data in real time to intervene and resolve the situation.



Error deposits by type—a report used by operations to refund users who made micro-payments in error

Note: Data in the above graph - and all other graphs in this case study - have been altered and are included for visualization purposes and do not reflect actual business metrics from Luckyfish.

The operations team built dashboards that show interruptions in gameplay, unusual gaming activity or game behavior that does not comply with statistical models—which indicates a potential problem in production. The support team focuses on data showing specific players who seem to be having trouble, or are very positively engaged, and proactively contact those users.



Retention Team: Identifying Users at Risk

The retention team uses CoolaData dashboards to analyze both backwards-looking and forward-looking data, which indicates user segments at risk of churn. The data helps understand what is the problem causing these users to churn, and the retention team responds with targeted campaigns. They use the same dashboards to understand if retention activity is succeeding in improving user engagement and conversion.

Trends in the last 2 months - by state

Region	Trend Sessions	sessions in last 30 days	sessions in previous period	users in last 30 days	users in previous period
California	25.16%	872,408	697,034	709,093	527,639
Texas	33.59%	329,452	246,606	256,118	177,296
New York	43.94%	317,490	220,571	244,812	145,117
Florida	53.65%	306,925	199,762	244,111	146,698
Virginia	30.10%	209,970	161,392	188,248	140,414
North Carolina	39.90%	542,880	388,048	149,074	109,745
Illinois	39.83%	175,003	125,157	138,642	96,345
New Jersey	76.61%	185,365	104,958	128,875	62,058
Michigan	22.29%	126,663	103,579	110,967	69,251
Pennsylvania	64.58%	152,808	92,847	108,984	71,999
Ohio	82.90%	128,105	70,042	102,038	60,160
Massachusetts	21.07%	123,522	102,024	99,000	77,944
Georgia	10.38%	113,408	102,744	98,000	64,851
Washington	11.54%	96,000	86,070	79,000	61,419

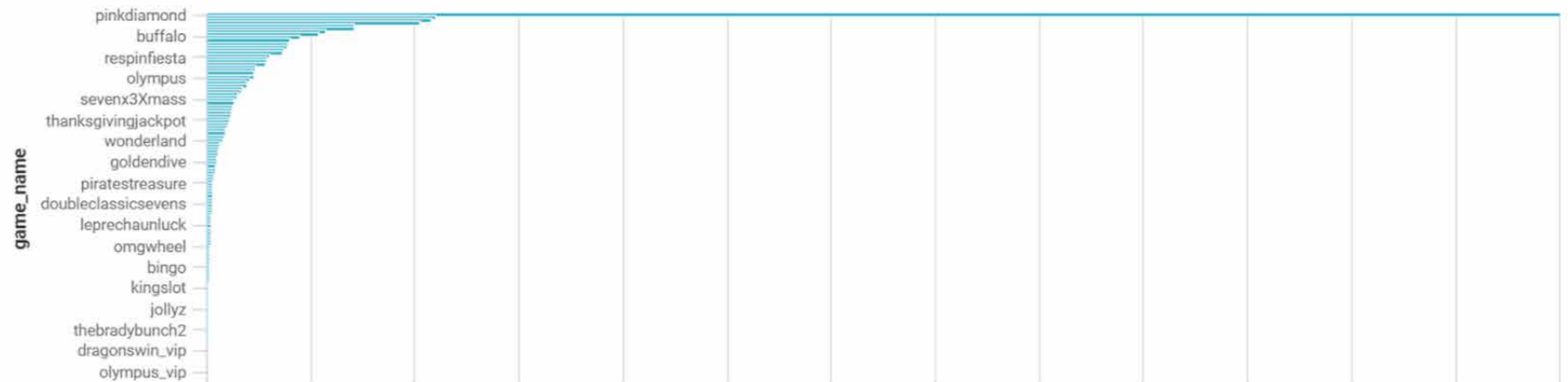
Easily view user growth and retention by geography, licence type, browser, mobile device, or virtually any other attribute. Note: Data in the above graph has been altered and is attached for visualization purposes and does not display actual numbers from Lucky Fish.

Game Production: Learning Which Games Work

The game production department is responsible for developing, testing and improving games within the OMG! Fortune platform. They release a new game every two weeks on average. Game production uses CoolaData dashboards to learn:

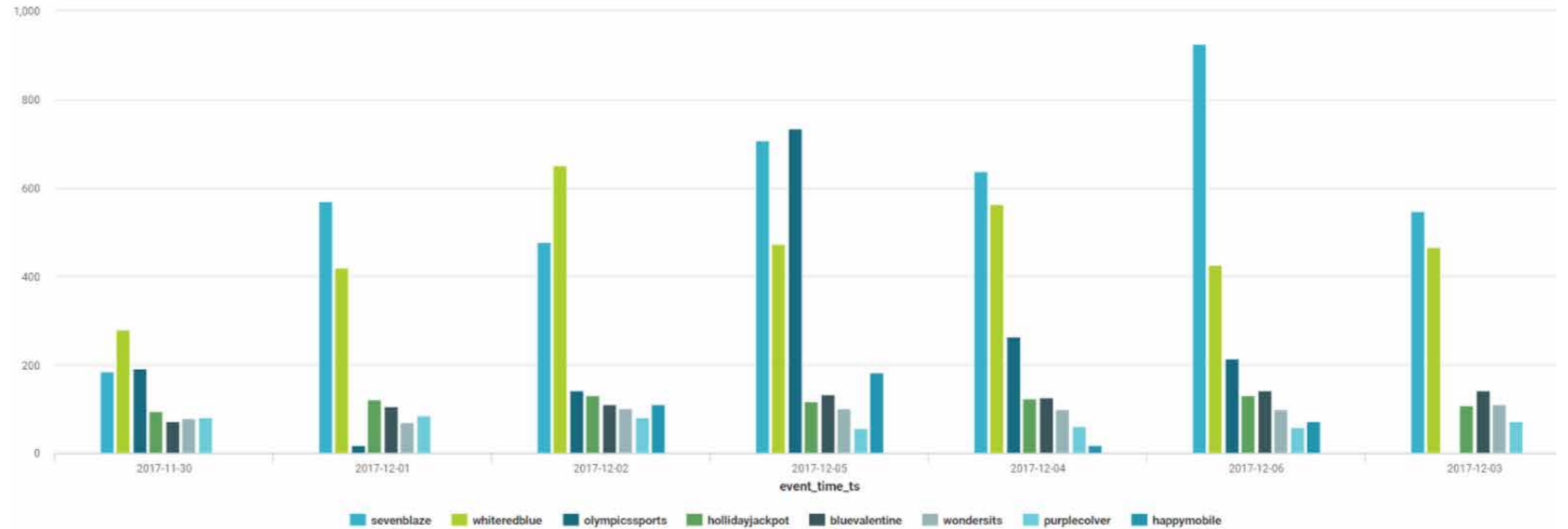
- **Popularity of new games**—how many players join a new game as it is rolled out.
- **Usage and engagement metrics**—number of logins per player, number of spins, bonuses and micro-payment deposits. Every stage within the game—lobby, first game, first deposit, subsequent deposits, etc—is tracked and visible on Cooladata dashboards.
- **Statistical modeling**—is the game behaving according to its planned statistical model? Casino machines within the game could be dispensing too many or too few coins to users, indicating a problem.
- **Game ROI, conversion and churn**—how many spins are required for a user to make their first micro-payment deposit? What is the likelihood of additional deposits? When and which types of users typically churn in a new game?

- **Events related to conversion or churn**—every event within the game is tracked, and the game production team can learn which specific events lead to more user engagement or conversion, and which lead to churn.
- **Comparative game performance**—how does a new game compare to similar games in its class, or to benchmark games that are the best performing?



Game performance—number of spins

Note: Data in the above graph - and all other graphs in this case study - have been altered and are included for visualization purposes and do not reflect actual business metrics from Luckyfish.



Spins per user per game per date

Note: Data in the above graph - and all other graphs in this case study - have been altered and are included for visualization purposes and do not reflect actual business metrics from Luckyfish.

This rich data allows the team to understand what makes a game successful, build better games and improve existing ones in light of current usage and acquisition.

The 10,000 Foot Report

This is the central CoolaData dashboard viewed by the entire company. It shows a view of the entire system over the last day, compared to the previous day:

- Acquisition
- Number of users in the system—freemium vs. premium users
- Conversion and revenues
- Churn and retention metrics

Looking at this gives an immediate view of the current situation—are we doing better or worse? And allows specific teams to drill down into reports that provide more detailed metrics.





4 Years Down the Line:

"We Built the Product, CoolaData Delivered the Data"

Guy Regev, VP R&D at Lucky Fish, implemented the CoolaData platform and is one of its primary users. He says:

"CoolaData is an intelligence tool that just works. There's no need to maintain servers and build a BI infrastructure, but on the other hand it gives you full BI capabilities."

"My advice to others building startups—focus your effort on building the product, and let people who know about BI build that part. Many R&D teams get fascinated with the data and start building their old tooling with Hadoop, MongoDB, and so on—it's possible but it's a draining, de-focusing exercise. It will deplete the valuable resources you could be using to build a better product and a stronger business."

"CoolaData allowed us to forget about the data part and just build the best game we could."



Lucky Fish won at the proverbial casino of game developers, and quickly reached millions of players, an admirable achievement. But with that win came a fortune of a data and a big responsibility to understand those users, keep them happy and learn how to monetize their traffic.

Luckily, CoolaData took the complexity out of data processing and analysis, leaving Lucky Fish to analyze the metrics and take daily action to make their game even better.