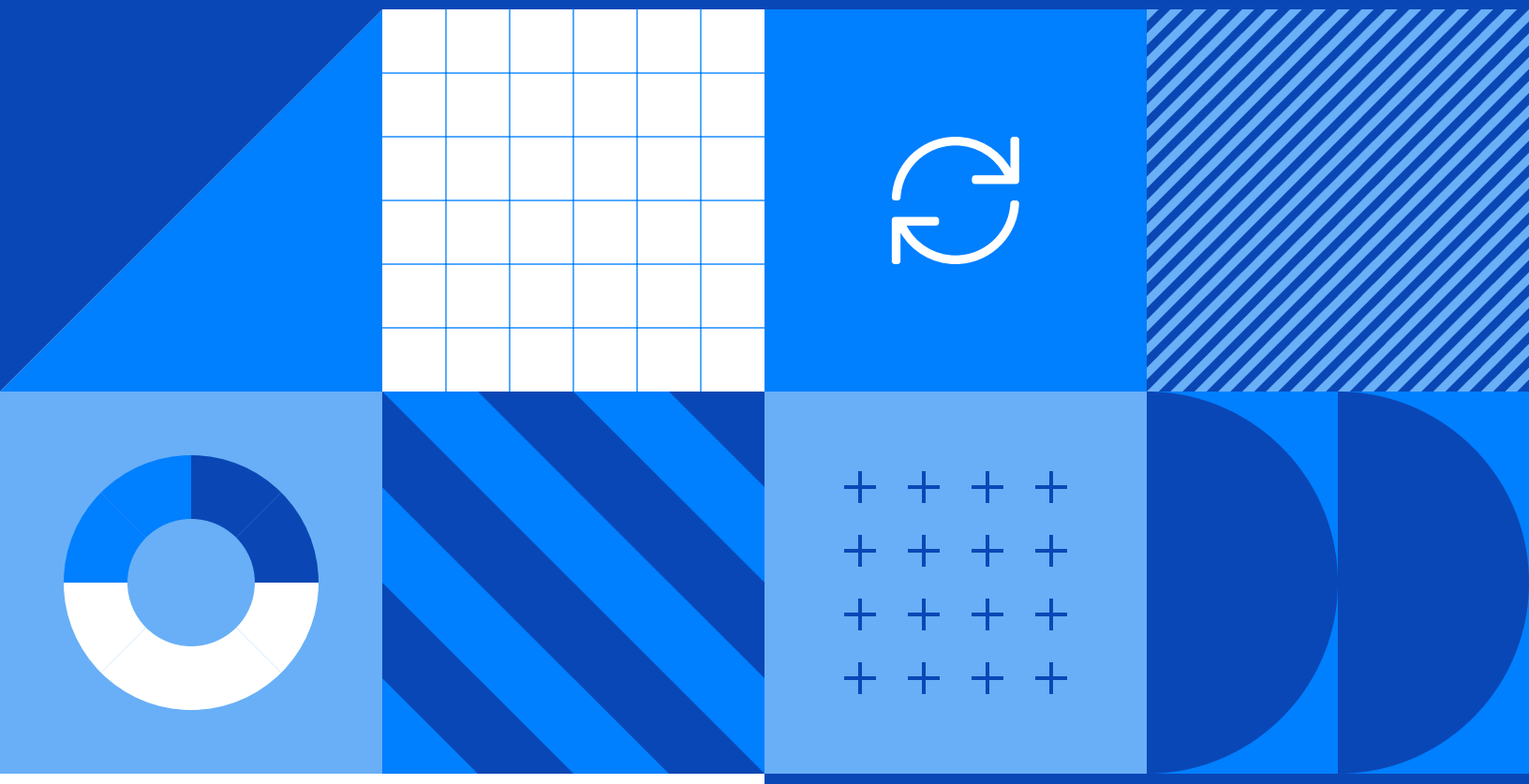
Single Customer View & Personas

Using Integrated Analytics to Win in Fintech



Fivetran

INFINITE LAMBDA

This paper will cover:

- How to use integrated analytics to understand your customers and create Personas.
- How Personas can help reduce cost and increase profitability.
- How to identify the Persona of a fraudster.

Introduction

The Financial Technology (a.k.a. FinTech) industry is becoming highly saturated. Some reports estimate there to be over 1,600 FinTech companies in the UK alone![1] The vast majority of these companies are faced with the same two challenges – grow a large-enough customer base to be relevant and then find ways to monetise that customer base in order to be profitable.

Unfortunately, for many, a larger customer base means the opposite of profitability. With the fierce competition for market share, cost of acquisition grows higher and higher. Add onboarding and servicing costs, including both technical infrastructure and human operations, and scale can quickly become unattainable for most.

Firstly, this paper will explore how you can leverage integrated analytics in order to focus your resources on attracting the "right" type of customers – the ones who can help you prove your business model and achieve profitability early on, laying the foundation for sustainable growth.

1 https://tinyurl.com/ybknt8t8

Secondly, this paper will address "sharks". The FinTech industry has a huge fraud problem. UK Finance's report shows that mobile banking scams in 2019 are up 94% compared to 2018.[2] In the haste of sorting out critical infrastructure, growing the customer base and shaping a unique brand, many companies simply lack the resources to enforce an appropriate level of fraud-prevention. Scammers are often the first to jump onto a new product and exploit its immaturity. The effects can be profound and include actual financial losses to the business due to compensations, regulatory risk, and loss of customer trust, hampering growth. This paper will demonstrate how integrated analytics can be used to identify and prevent fraud.

Fraud affects the business in three main ways:

- Actual financial losses to the business due to compensation
- Regulatory risk
- Loss of customer trust (further financial impact)

These two problems of profitability and fraud prevention have a common solution: a better understanding of the people who use your product.

Combine Data to Understand Customers

To really understand your customers, you have to be able to take all the data you have about them and join it all together. Only then does this data become information that you can extract

insights from and apply to the real world. For example, you may have data from your internal users and transactions databases, customer support (e.g. Zendesk), various

2 https://tinyurl.com/y9q9dux9

marketing channels (e.g. Facebook Ads) and mobile application logs. To know what all this data is telling you about a customer, you need to create a Single Customer View (SCV).

An SCV is created when you tie together all the data, across multiple sources and platforms, with a single identifier. This way you can tell basic things about a customer – who she is, what, where and when she spends money, what support tickets she raises, what marketing channel she was acquired from, how she uses the mobile app and much more. We call this integrated analytics. It is a step up from raw, disconnected data, because it helps us see the full picture. It helps us understand things.

SCVs are only possible once you have all your data in one place, sanitised and pre-processed in a way that allows it all to be joined together. With the help of Infinite Lambda and Fivetran, you can quickly connect to a wide range of data sources and immediately begin extracting and loading to a data lake. Our expertise lies in building-cutting edge data warehouses and advanced analytics platforms for FinTech. In order to do so, we use a modern data stack, consisting of an automated data integration solution, cloud-based data warehouse, and business intelligence tool.

An automated data integration solution not only provides a comprehensive view of your data but saves skilled labor. As our customers have attested:

"One of our clear wins is the ability to connect different data sources together so that we can draw insights – combining web events data with transactional data and seeing where people are most moved to put their funds. Because of Fivetran we can measure social impact and partner health – all of these together help us serve Kiva's mission better." - Melissa Fabros, Software Engineer at Kiva

"Fivetran has been kind of revolutionary — they allow us to unify the many databases we used to run on our system into a single analytic database, so we can ask questions on a full data set. And there's no labor. You set up Fivetran once, and you're done. It just works. There's essentially zero engineering resources put into Fivetran maintenance." – Dave Abercrombie, Senior Staff Engineer, Sharethrough

Creating Personas

Once you have an SCV, you can start building Personas. A Persona is a fictional character who is a good-enough representation of a group of people. Personas help us gain insight into what our customers like, what they do now and what they could do in the future. They are also useful because a company's customers are usually too heterogeneous to describe with anything more than just broad generalisations. Splitting customers into persona subgroups allows us to analyse and therefore predict behaviour in different scenarios more accurately.

For example, suppose we ran a Facebook campaign that reads "Investment Millionaires Don't Look Like They Used To" portraying a young woman wearing a casual attire, sitting in front of a laptop (some readers might recognise this Nutmeg campaign). We then analyse the information in our SCV data warehouse and identify the following: 62% of the users that signed up to our product by directly following the link in the Facebook Ad are female. Of these 62%, nearly half deposited over £400 into their account in the first month. The vast majority of them then immediately moved most of the money into a savings/investment account on our platform.

What does that tell us?

It tells us that this campaign might be effective at adding more female customers with

an inclination to use our saving/investment products. Let's call this Persona Anna. If our product makes money on Anna, then we probably want more Annas on our platform. If we lose money on Anna, we probably want to change our campaign strategy. These are valuable insights for our marketing/creative department.

So how do we get more Annas? We can try running the same campaign for longer or run campaigns of a similar look and feel. Alternatively, we can try to shoot an in-app notification and show the creative we used for the Facebook Ad to our existing customers. This could convert some of them into Annas as it is probable that some young females who are inclined to save/invest will respond well. The point is, we now have an actionable insight. We know what an outcome can look like – more or fewer customers that fit the Anna persona – and we have some levers we can pull to get the desired effect.

> When done properly, this is a very powerful tool.

Using Personas to cut costs & increase profitability

Most companies can only tell how much they spend on customer support per year, in total. Many speak in averages:

"Our average CAC is £25 and our average cost of service is £40."

> In our experience, the average FinTech cannot tell how much a particular persona costs them per year.

Most companies can only tell how much they spend on customer support per year, in total. Same with marketing, or onboarding. Many speak in averages: "our average CAC is £25 and our average cost of service is £40". However, in our experience, there can be significant variance. For example, Annas can cost £5 on average to acquire and £15 to service. They respond well to fairly inexpensive, well-targeted marketing campaigns, do not raise many customer support tickets, and have a fairly light-touch (yet, profitable) engagement with our product. This is significantly less compared to our average (£20 vs £65 per customer). Note: this is an actual real-world example from one of our FinTech partners.

> This also applies to any business that has to deal with acquisition, onboarding, customer support, fraud, and others.

Another Persona, Jess, on the other hand, might be difficult to target. Suppose Jess represents under-22 year olds who mainly use their debit cards when travelling abroad, ask for PIN resets quite frequently, and have a higher tendency to ask for replacement cards. They often fail automated onboarding processes like KYC, frequently forget their PINs or otherwise necessitate a higher CAC and service charges. In the same real-

world example, a Jess costs nearly £80, 4 times more than an Anna. Armed with this information, we can immediately cut any marketing campaigns that advertised the benefits of using the card abroad and ended up signing far fewer Jesses in the coming months – much to the benefit of reducing service costs!

> Clearly it pays to have a holistic view of how much a user costs us. How do we get there? The answer is simple: Single Customer View

Only an SCV can allow you to have a data-driven, bottom-up approach to cutting costs. If you can attribute a CAC and a servicing cost to each customer, it is much easier to generalise through personas, and then examine the most expensive personas.

Besides informing marketing strategy, the SCV approach can also drive product optimisation. Using the SCV we created for another partner, we identified a Persona – Giovanni – who almost always failed automatic KYC. This meant that for every new Giovanni trying to sign up, the partner needed a customer support rep to spend a significant amount of time reviewing documents manually. Needless to say, the whole point of FinTech is using technology, not humans, for such laborious tasks. Who was Giovanni? Turns out it was nearly every Italian customer. The partner's KYC provider couldn't process Italian national ID cards, only passports. This problem was alleviated with minor UX improvements such as adding instructions for Italians to use a passport for KYC instead of an ID card. This is one of many ways an SCV can be used to improve a product and reduce friction.

How does one increase profitability using Personas? Suppose our business model is such

that we make money on customers if they invest at least £250 per month into their savings accounts. Our product team has implemented all sorts of clever nudges to inspire customers to save more. One of our partners used IFTTT (If-This-Then-That) rules to trigger savings automatically, like moving £2 from the current account into the savings account every time it rained, or £5 every time Donald Trump tweeted.

Let us introduce another Persona, called Jake. Using our SCV, we have established that Jake is a heavy user of such IFTTTs. He has also set up a monthly deposit of £150 into his savings account and uses "round-ups" – a concept many digital banks offer now, whereby each transaction is rounded up to the next highest whole number, putting the difference into a savings account. The IFTTT, consisting of scheduled deposits and roundups, easily put Jake over the £250 per month threshold. Clearly, Jake is a good customer for us (at least in terms of profitability). Now suppose we have another Persona called Mike. Using our SCV, we identified the Persona as someone who consistently gets very near to the £250 mark, but rarely hits it.

Therefore, our goal is to make Mike more like Jake.

Using the SCV, our analysts are able to easily contrast the key features of Jake and Mike, and quickly discover that Mike has never tried the IFTTT rules.

Armed with this information, we can reach out to the "Mikes" on our customer base and send them funny messages like "If Donald tweeted more often, you could be rich!", showing them how they can save seamlessly thanks to Mr Trump's ubiquitous use of Twitter.

Personas are not only useful for cutting costs, they can be a great tool for increasing profitability per customer too.

The persona of a fraudster

Let us introduce one last Persona. Let's call him Bernard. He opens an account and deposits a relatively small amount in the first week – no more than £40. He takes no further action for 3 months. Then Bernard creates a support ticket to recover his PIN and, suddenly, there is a fusillade of incoming high-value transactions into his account, e.g. 4 transactions of £900 within 5 minutes. Each transaction arrives from a different account. Then, just as suddenly, the account is emptied. The newly deposited £3,600 (plus the £40 from week one) is all sent to an external account that has not been linked to this customer before.

Bernard's Persona, as our analysts will establish in time, is one of a fraudster. They might even call him 'Bernard the Sprinter' (or more accurately 'Bernard the Sprinting Money Mule') in order to differentiate him from other fraudster Personas. We helped one of our partners painstakingly identify 5 such Personas who together accounted for the most common types of fraud. Our analysts synthesised a few "rules," consisting of a series of actions like the ones listed above, to characterise each persona.

Put together, several rules can help us identify a fraudster Persona. One such rule alone is not enough – e.g. just depositing £40 or sending £3,600 to another account – as it would be both too specific an amount and too generic as it is not individually indicative of fraud.

However, when all the rules are met, we can be fairly certain that we have identified a fraudster. Indeed, in this FinTech's case, we had a very high true positive rate (i.e. probability of correctly identifying a "Bernard") and a very low percentage (<18%) of false negatives.

Note that to fully understand this criminal behaviour, we needed the full picture made possible by automated data integration. Only by using integrated analytics over data from customer support, transactions ledger, payments and fraudster databases were we able to identify the Bernards on the platform and block them. Having an SCV, therefore, helps make fraud analytics more sophisticated by allowing us to take into account behaviours beyond the transactional/financial. This is a step above traditional AML software.

It is our hope that this paper demonstrated some of the crucial utility that a Single Customer View can provide. There are, of course, technical challenges to creating an SCV. Data exists in many different places, it does not refer to the same customer in the same way and "doesn't speak the same language". Many organisations don't even trust their data.[3]

The Path to Integrated Analytics: Single Customer View & Personas

Here at Infinite Lambda and Fivetran, we have developed a blueprint for creating high-quality SCVs. We pride ourselves on our ability to create bespoke integrated analytics platforms in 4 weeks. We can quickly integrate your data and help you to make sense of it.

Here is our process:

- Use carefully designed data connectors to extract data from all relevant sources

3 https://tinyurl.com/y8mz92zj

(including batch and real-time).

- Build an SCV data model which enables advanced analytics with a high degree of granularity.
- Store all this data in a data lake and apply data governance (e.g. data dictionaries).
- Utilise various techniques to build Personas, from exploratory analytics in a BI tool to more sophisticated Data Science methods.
- Use data transformation processes that clean, validate and secure the data, storing it in a "trusted" data layer. Model and integrate the data (so that it is now homogeneous and "speaks the same language").
- Work closely with business stakeholders to make sense of the data, automating useful analytics into regular reports that allow us to gather insights and measure the efficiency of actions taken.

> This process works equally well with B2C and B2B companies.

The Personas and the use cases may vary, yet in our experience, the ability to perform integrated analytics and build an SCV is always a game-changer.

Once you have the technical capabilities in place, you must build a data-driven culture. Teams who proactively seek information and see value in acting on the data insights excel at using concepts like SCVs, personas, and more.

What's next?

We invite you to reach out to Infinite Lambda and Fivetran and find out about our

newest offering: Integrated Analytics Platform in four weeks! We've put years of work into building components that automate many of the processes mentioned above, allowing us to concentrate on tailoring the data models and analytics to your specific needs.

Drop us a line

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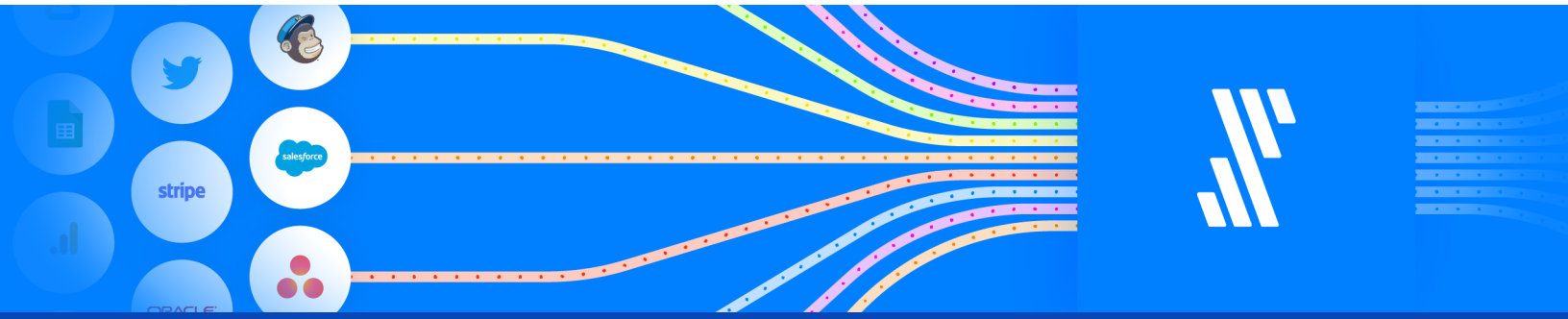

Ready to take your analytics to the next level?

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