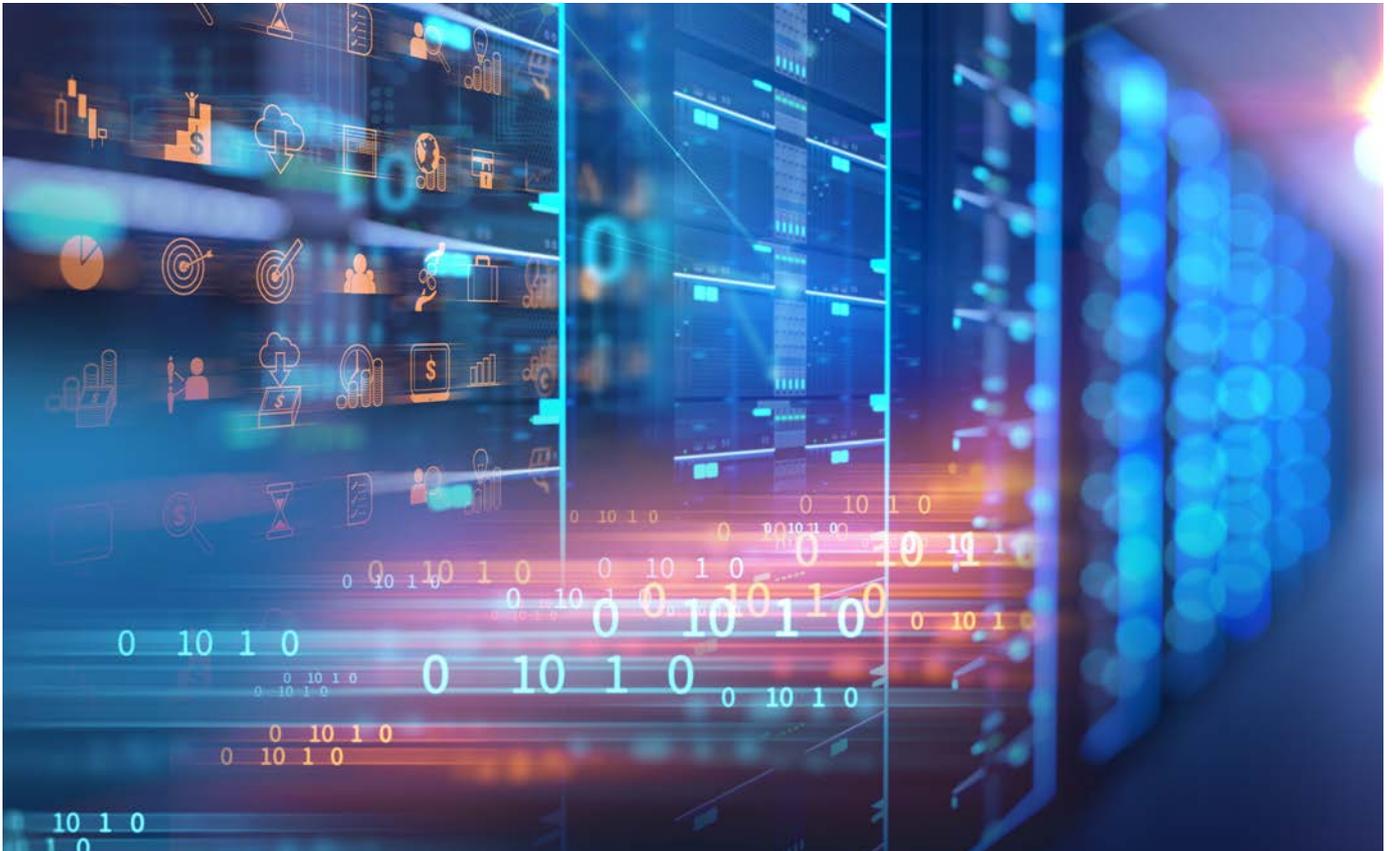


CANNABIS BANKING
FEATURE

Published September 2019

REAL-TIME DATA CHALLENGES

Advantages of Aggregate Data Over
Real-Time Data in Cannabis Monitoring
Platforms



1980 Festival Plaza Drive | Suite 450
Las Vegas, Nevada 89135
www.ICSLV.com
702-844-8723
info@icslv.com

REAL-TIME DATA CHALLENGES

Advantages of Aggregate Data Over Real-Time Data in Cannabis Monitoring Platforms



As the leaders in cannabis banking compliance and monitoring, we are often asked by financial institutions whether they should track sales activity in real-time. The emphatic answer is, "No."

The adage "garbage in, garbage out" seems to apply best when analyzing the challenges associated with real-time data collection for cannabis activity. To provide context, let's look at the sources of real-time data; the challenges with accuracy or completeness of each source of data; why real-time data is not reliable or meaningful for analytics; and the myth of why it makes for a better compliance monitoring program.

Sources of Real-Time Data

The sources of real-time data can be:

- State-operated real-time Track-and-Trace systems.
- Seed-to-sale systems.
- Third-party payment providers.

State Track-and-Trace Systems

Most states in which marijuana has been legalized maintain track-and-trace systems that are utilized to help combat money laundering and to prevent product from entering the black market. These systems require each entity type to track the product from seed or clone all the way through the ecosystem using an RFID tag and barcode system. The idea is great in concept, but the push to get the data in real-time has caused delays, data inaccuracies and frustration for licensees.

For example, when new inventory is received, each item must be barcoded. The barcodes can take days to receive and there is a cost to obtaining them.

For smaller individual items, the barcode may obstruct the product packaging itself and an entire counterfeit barcode industry has now sprung up as a result.

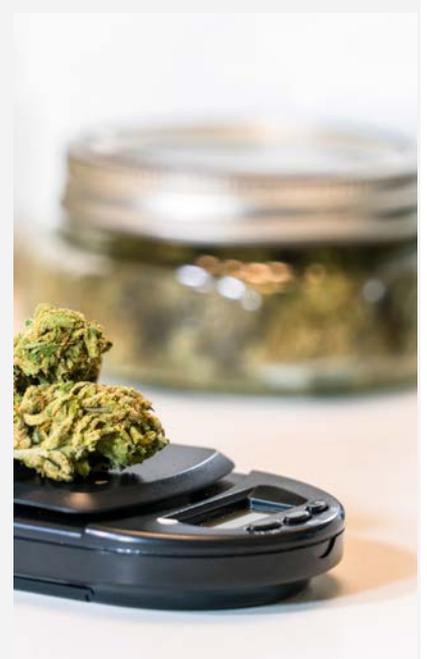
System outages or maintenance periods, or system updates causing the API connection from the seed-to-sale to the track-and-trace system to no longer work, also present challenges in reporting data in real-time.

There is no seed-to-sale solution that has 100% uptime. There have been some unfortunate times when seed-to-sale systems have gone down for weeks at a time and experienced significant data loss. If you are relying on the track-and-trace system for data, you are relying on knowingly incomplete and inaccurate data.

Weights and measures issues may also result in inaccuracies in real-time data, as there can be discrepancies in weights and measures between the seed-to-sale system and the track-and-trace system. For example, the track-and-trace system may track everything in 1/8th gram increments. If a dispensary sells a gram of that product, through an API they would pass in quantity 1. The track-and-trace system would receive the quantity 1 and interpret it as 1/8th of a gram, thereby skewing the amount actually sold. The solution would be to pass in quantity 8 for 8 x 1/8th grams to equal a total gram.

The State of Washington was one of the first to publicly admit challenges with their track-and-trace system and ultimately switched to another system, only to experience further challenges. When auditing the system, they found tremendous discrepancies in inventory and sales data and ultimately determined that the data was not reliable.

We can also look at California to examine data challenges. California has a track-and-trace system, but only approximately 100 user IDs have been granted and therefore only a small subset of the ecosystem is reporting their sales data. Others that have a temporary license granted by the State have not yet received their user ID for the track-and-trace system, thereby limiting data.





Seed-to-Sale Systems

Every licensee has a seed-to-sale system that is used to track product from seed-to-clone through eventual harvest, lab testing, infusion, distribution and sale to an end customer.

There is naturally system downtime for maintenance or changes in APIs to the state database. There have also been observed cases of data loss through system outages. Keep in mind that input errors can be made at the point-of-sale and must be corrected.

If you are relying on real-time data to ultimately aggregate, you are not allowing for enough time to account for necessary corrections due to data loss, system outages, reporting timeouts or inaccurately entered point-of-sale data.

Vertically integrated businesses present additional challenges. When a conglomerate owns both grow and dispensary licenses, they do not often utilize transfer pricing or record the movement of product from the grow to the dispensary at the true all-in cost, but rather a cost of \$0, which can skew analytics that rely on COGS or gross margins.

Third-Party Payment Providers

With the lack of participation in the industry from major credit card networks, many closed-loop mobile wallet, blockchain-based, and other alternative payment types have become prevalent in the industry. Issues arise when the companies offering such alternative payment options claim to be able to report all transactions in real-time to a financial institution, with the emphasis on "all."

In reality, the highest observed customer adoption rate has been 8%. Therefore, those companies only see 8% of total transactions.

Further, the companies can only see the payment total, not the product sold, cost of the product, gross margin, etc. This means that the data that is captured is not in a form that is useful for performing necessary analytics.

Dispelling the Myth

Does real-time monitoring have any value to a financial institution? The answer to that question comes back to the data a financial institution needs to perform its monitoring obligations, and the time intervals that match the normal deposit and withdrawal cycles of the underlying business. A financial institution's responsibility is to monitor for suspicious activity and red flags, in accordance with guidance issued in 2014 by the Financial Crimes Enforcement Network (FinCEN). FIN-2014-G001 outlines Bank Secrecy Act (BSA) expectations for financial institutions that provide services to marijuana-related businesses.

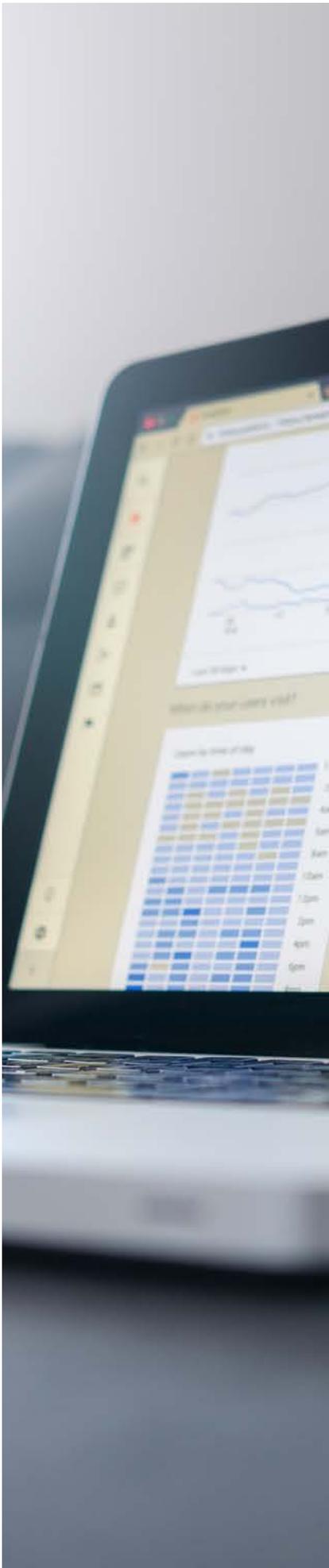
FinCEN guidelines specifically address transactional data and currency movements. A financial institution has a responsibility for "developing an understanding of the normal and expected activity for the business, including the types of products to be sold and type of customers to be served, (e.g. medical versus recreational customers)."

The guidelines also outline the following indicators of potential money laundering:

- The business receives substantially more revenue than may reasonably be expected given the relevant limitations imposed by the state in which it operates.
- The business receives substantially more revenue than its competitors or than might be expected given the population demographics.
- The business is depositing more cash than is commensurate with the amount of marijuana-related revenue it is reporting for Federal and state tax purposes.
- The business is unable to demonstrate that its revenue is derived exclusively from the sale of marijuana in compliance with state law, as opposed to revenue derived from (i) the sale of other illicit drugs, (ii) the sale of marijuana not in compliance with state law, or (iii) other illegal activity.
- The business makes cash deposits or withdrawals over a short period of time that are excessive relative to local competitors or the expected activity of the business.
- Deposits apparently structured to avoid Currency Transaction Report (CTR) requirements.
- Rapid movement of funds, such as cash deposits followed by immediate cash withdrawals, wires or other funds transfers.
- Deposits by third parties with no apparent connection to the accountholder.
- Excessive commingling of funds with the personal account of the business's owner(s) or manager(s), or with accounts of seemingly unrelated businesses.
- Individuals conducting transactions for the business appear to be acting on behalf of other undisclosed parties of interest.
- Financial statements provided by the business to the financial institution are inconsistent with actual account activity.
- A surge in activity by third parties offering goods or services to marijuana-related businesses, such as equipment suppliers or shipping servicers.

None of the above require real-time data...and it would not be beneficial for proper analysis.





In practice, receiving real-time data creates an unnecessary burden on the financial institution that would ultimately need to aggregate the data, via manual processes prone to data entry errors, to make it useful in matching deposits and withdrawals with underlying sales activities.

The thought of a BSA Officer sitting in front of a computer screen watching real-time transactions occurring across hundreds of entries hardly lends itself to the highest or best use of his or her time, and illustrates how real-time data is neither practical nor meaningful when administering and monitoring marijuana-related businesses.

Ignore the buzz words and be mindful of your practical needs to ensure strong regulatory compliance.

Striving for Meaningful Data

For data analytics to be meaningful, the data must be a large enough sample size and be captured for the same period of time to be comparable. Real-time data has a sample size of 1. Let's look at how real-time data can hinder analytics:

Example

A financial institution must monitor products and sales margins by product type month over month as compared to normal and expected activity per FinCEN guidelines. For a meaningful analysis, the data must capture a full month interval. Real-time data would have no value.

Example

A financial institution must monitor the amount of currency being deposited compared to the underlying legal sales that have occurred. Let's look at an average dispensary depositing cash via armored car on a weekly basis. An aggregation of sales data for the week prior is necessary to compare sales receipts to cash deposits. If attempted cash deposits exceeded sales, a red flag would be triggered. Real-time data would have no value.

THE CONCLUSION

Aggregate data over a time horizon that matches the normal operating patterns of the underlying merchant is the only data on which a financial institution can rely to properly monitor activity, as a monthly review of the data allows for anomalies, data loss, time-out issues, etc. to resolve themselves and for the data to normalize.



Integrated Compliance Solutions, LLC (ICS) is a financial technology, banking compliance and innovative payment solution provider helping financial institutions with complex solutions. Our experience in financial services and payments technology allows us to apply the heightened Federal requirements to preferred providers that meet the strictest of requirements; The result is a competitive, complete, and stable set of services that compliment merchant goals. As the industry's SEED-TO-BANK™ compliance partner, ICS has been used by more banks, more marijuana-related businesses, and for longer than anyone else in the space. Our services are proven and well respected in the industry.

EMPOWERING OUR CLIENTS

With nearly 100 years of financial services and technology experience that has driven us to be on the forefront of cannabis banking solutions, we partner with our clients to build sound CRB programs to maximize revenue for your institution, while preserving and enhancing value for the CRB.

Contact Us

1980 Festival Plaza Drive
Suite 450
Las Vegas, Nevada 89135
info@icslv.com
702-844-8723
www.icslv.com