

**Data Driven Decision-Making:  
A Case Study of Implementation and Use of  
projectR.A.B.I.T.  
in Chittenden County, Vermont**

**August 2021**

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**This case study was developed for the National Liquor Law Enforcement Association (NLLEA) and the Vermont Department of Liquor and Lottery (DLL), with funding support from the National Highway Traffic Safety Administration (NHTSA). Please contact Carrie Christofes ([carrie.christofes@nllea.org](mailto:carrie.christofes@nllea.org)) or Skyler Genest ([Skyler.Genest@vermont.gov](mailto:Skyler.Genest@vermont.gov)) for information on dissemination or sharing of any of its contents.**

## Introduction

In 2017, the Vermont Department of Liquor and Lottery Office of Compliance and Enforcement developed an online data management system—the Resource Allocation Based on an Intelligence Toolkit (projectR.A.B.I.T.), to ensure its efforts are data-driven, and to increase the efficiency of its compliance, inspection, and investigation activity. As described in the Department of Liquor Control (DLC) website, projectR.A.B.I.T. is an “interactive dashboard to assist DLC to visualize, interpret, and drive decision-making based on data sources with relationships to alcohol and tobacco use, criminal and civil violations, and compliance programs throughout Vermont.” (<https://liquorcontrol.vermont.gov/enforcement>) This study examines the use of projectR.A.B.I.T. during the initial years of implementation. The purpose of this case study is to examine how investigators and stakeholders use projectR.A.B.I.T., how it has changed their capacity to use data, the value it adds, and identify areas of potential improvement.

### Background of projectR.A.B.I.T.

The Vermont Department of Liquor and Lottery (DLL) Office of Compliance and Enforcement “is charged with investigating possible violations of liquor laws and regulations, and carrying out law enforcement activities related to these incidents. Comprising a team of investigators and supporting staff, and working closely with other law enforcement agencies, this section protects the public safety and ensures that laws and regulations are followed.” (<https://liquorcontrol.vermont.gov/enforcement>)

The projectR.A.B.I.T. dashboard was designed to replace the prior paper-based system, which relied on hand-written information which was then entered into an Excel spreadsheet by a second party. Investigators relied heavily on their knowledge and familiarity with their assigned districts to guide their work and determine which licensed establishments warranted further investigation beyond mandatory minimum compliance checks and inspections. DLL wanted to make better use of the data it collects so it could use it more efficiently to direct and inform its work. The projectR.A.B.I.T. database is built on the Microsoft Power BI platform, which provides the flexibility, adaptability, and capacity for recording and analyzing alcohol and tobacco compliance activity as well as adding other databases to the system. The system is public-facing and housed on the DLL website (<https://liquorcontrol.vermont.gov/enforcement>). It is accessible to investigators on their own computers and smartphones, as well as accessible to the general public.

The projectR.A.B.I.T. dashboard is used by DLL investigators, law enforcement, evaluators, grant administrators, and coalitions. DLL investigators use the database to monitor compliance data and identify licensees that warrant attention. Law enforcement can access data on licensed alcohol establishments in their communities to inform their efforts. Data also supports the work of local coalitions, who can access alcohol and tobacco compliance checks results from the database and use that information in their work with their local licensees. Several coalitions recognize licensees that pass compliance checks and reach out to those that don't pass checks, to

offer assistance and support, such as connecting retailers to resources like responsible beverage server training. Grant administrators request information on grantee work with retailers that sell alcohol, and grantees use projectR.A.B.I.T. to access that information for reporting requirements, as well as using the information in grant proposals.

## **Funding and Support**

This study is supported by a grant from the National Liquor Law Enforcement Association (NLLEA) and the National Highway Traffic Safety Administration (NHTSA).

## **Chittenden County**

While projectR.A.B.I.T. is used statewide, the focus of this case study is primarily Chittenden County stakeholders. (Case studies of other Vermont counties or focus areas are planned in the coming years.) Chittenden County is 536.58 square miles and is the most populous county in Vermont, with an estimated population of 164,774 and a median household income of \$73,647 in 2019 (<https://www.census.gov/quickfacts/fact/table/chittendencountyvermont/PST045219> ). Chittenden County is home to Burlington, the state's largest city. Several colleges and universities are located in the county. It is served by an international airport and has an active tourism base, as it borders Lake Champlain and has easy access to numerous outdoor recreation areas, while featuring numerous historical sites and museums. Chittenden has the greatest number of licensed alcohol establishments of all Vermont's counties.

## **Methods**

This study employs a case study method to assess the utilization of projectR.A.B.I.T. using key informant interviews and an examination of projectR.A.B.I.T. The evaluator, NLLEA Executive Director, and key staff from the Office of Compliance and Enforcement met regularly to make decisions about the case study. This planning group helped identify stakeholders for interviews, focus of the interview questions, and provided feedback on findings and content.

The evaluator conducted semi-structured qualitative interviews with key informants. Interviews were conducted by telephone and took approximately 30 minutes. The evaluator explained the study, its partners and funders, its purpose, and offered the opportunity to ask any questions prior to the interview. Interviews were recorded, after obtaining permission from respondents, and transcribed. Interviews were analyzed to identify common and unique themes based on the interview topics. The evaluator facilitated a member check with the evaluation planning group to review and validate the main themes prior to drafting the case study document.

## *Sample*

The evaluator conducted 13 interviews with 14 people. (At their request, two individuals were interviewed together, to better facilitate their recall and detail.)

The geographic focus for the study is Chittenden County, so interviewees were selected who are familiar with and/or work in the county. While some interviewees work exclusively within Chittenden County, some users also work throughout the state. Interviewees included representatives from county and city agencies, licensed establishments, public health organizations, law enforcement, and prevention coalitions.

The Director of Enforcement and Compliance of the Vermont Department of Liquor and Lottery (DLL) helped the evaluator identify individuals to invite to be interviewed, based on their awareness of projectR.A.B.I.T., use of the system, diverse types of interaction with it, and how long they had been aware of it. The Director sent an email invitation to these individuals, explaining the study, its purpose, an introduction to the evaluator, and to request their participation. The evaluator followed up with these individuals to schedule and conduct interviews. From the initial list of 14 potential interviewees, one declined, two did not respond to multiple attempts to contact them, and two were no longer in the same position and either declined or offered substitution names. One interviewee identified two additional coalition representatives to interview. Three people from DLL were interviewed.

Interviewees' awareness of projectR.A.B.I.T. ranged from newer users who learned about the database less than a year ago, to respondents who have used the dashboard for several years, to those who had been involved in planning and development. The people interviewed learned about projectR.A.B.I.T. primarily from Vermont Department of Liquor & Lottery (DLL) staff at meetings, presentations, or trainings. Some learned about it through participation in grants that require collection and monitoring of compliance data or as part of a coalition that uses the data to inform their work.

# Overview of projectR.A.B.I.T. and Findings

The projectR.A.B.I.T. dashboard enables DLL investigators to focus their attention on licenses that have the greatest number of violations or incidents. Figure 1 shows the Welcome Page for projectR.A.B.I.T. when the system is opened from the DLL website (<https://liquorcontrol.vermont.gov/enforcement>). The opening page automatically populates a list of the three licensees with the greatest number of incidents. Individual investigators are able to pull up their assigned area's data from the pull-down menu and immediately see the top three establishments for their area. The Welcome Page also shows the statewide past 90-day compliance for tobacco and alcohol, and links to strategic inspections, complaints, and DUI data.

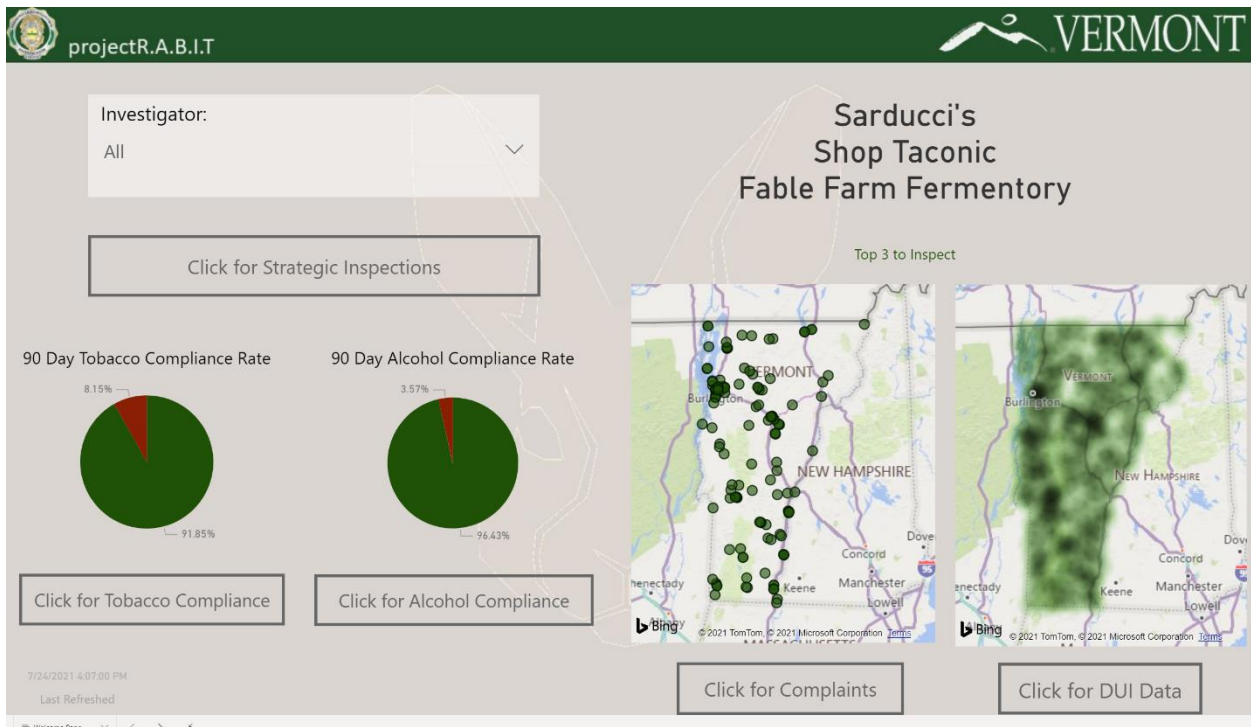
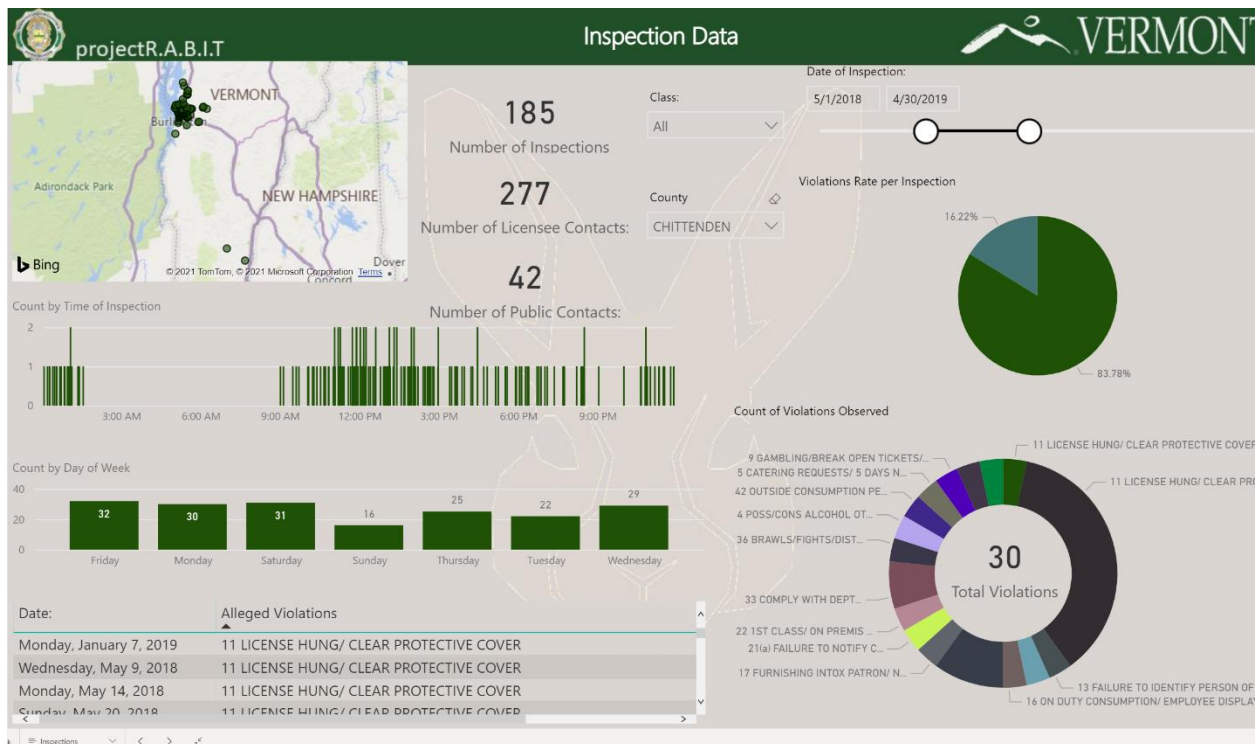


Figure 1: Welcome Page of projectR.A.B.I.T.

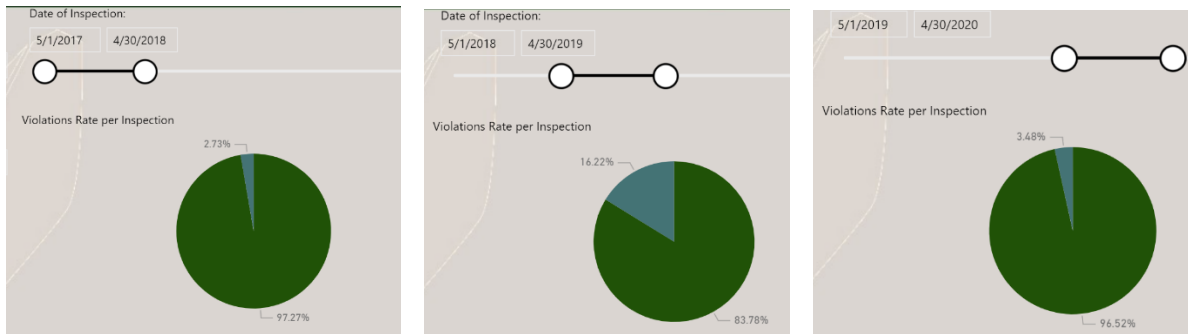
## Inspections Data

The pages of projectR.A.B.I.T. provide DLL investigators ample information that is easily searchable—information that is also useful for community partners such as coalitions and public health agencies. Figure 2 shows the Inspections Data page of projectR.A.B.I.T. This webpage shows inspection data for Chittenden County from May 1, 2018 to April 30, 2019. The Inspection Data page displays the number of inspections, licensee contacts, and public contacts for the time period and location entered. It also displays the violations rate per inspection, as well as the count of violations observed by categories, time of day of incidents, and day of the week. A scrollable list of licensees allows the user to scroll through violations for all licensees during the time frame.



**Figure 2: Webpage from projectR.A.B.I.T. presenting Chittenden County Inspection Data May 1, 2018 to April 30, 2019**

Figure 3 shows larger views of the Violations Per Inspection pie chart that appears on this page for Chittenden County for May 1, 2017 to April 30, 2018 and the following two years. DLL operationalized projectR.A.B.I.T. in 2018, so the first year of data serves as the control year, when the rate of violations per inspection was 2.73%. In the second year (May 1, 2018 to April 30, 2019), violations per inspection increased sharply to 16.22%, suggesting efforts were more focused on licensees with more violations, arguably a better use of investigator resources. During the third year (May 1, 2018 to April 30, 2019), the number of violations per inspection in Chittenden County decreased to 3.48%, still higher than the control year.



**Figure 3: Chittenden County Violations Per Inspection**

Table 1 below summarizes inspection data for these three years in Chittenden County. It shows that while the number of inspections was lower in 2018-2019 than in 2017 to 2018 (the year prior to operationalization), the violations rate per inspection increased, as well as the total violations. This suggests that investigators focused efforts on fewer establishments with more issues in the year after project R.A.B.I.T. was operationalized.

**Chittenden County Inspection Data**

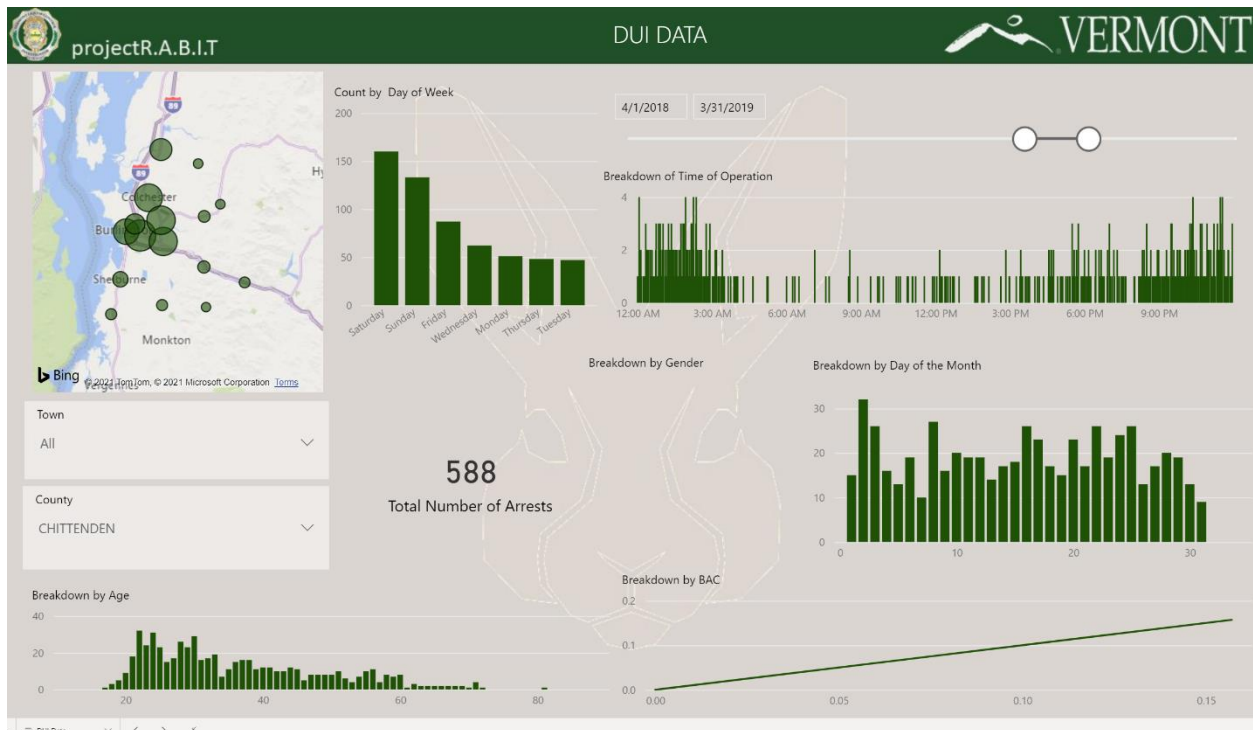
	# of Inspections	# of Licensee Contacts	# of Public Contacts	Violations Rate per Inspection	Total Violations
May 1, 2017 to April 30, 2018	660	941	276	2.73%	18
May 1, 2018 to April 30, 2019	185	277	42	16.22%	30
May 1, 2019 to April 30, 2020	402	440	282	3.48%	14

**Table 1: Inspection Data for Chittenden County**



## DUI Data

Figure 4 shows the DUI Data page of projectR.A.B.I.T., which presents DUI (Driving Under the Influence) data. This page displays DUI data for Chittenden County for April 1, 2018 through March 31, 2019. A map shows the concentration of locations of DUIs for the time period. The bar graphs in the top half of the page display number of DUIs by day of the week (showing Saturday as the day of the week with the greatest number of DUIs) and time of day of incidents. At the bottom of the page, age and the BAC (blood alcohol count) are displayed.



**Figure 4: Webpage of projectR.A.B.I.T. presenting Chittenden County DUI data April 1, 2019 to March 31, 2020**

Table 2 summarizes Chittenden County DUI arrest data for three years, starting with April 1, 2017 to March 31, 2018 compared with the following two years when projectR.A.B.I.T. was operationalized and being used for decision-making.

Chittenden County DUI Arrest	
April 1, 2017 to March 31, 2018	591
April 1, 2018 to March 31, 2019	588
April 1, 2019 to March 31, 2020	577

**Table 2: DUI data**



## Alcohol Compliance Data

Figure 5 shows the alcohol compliance data for Chittenden County for April 1, 2019 to March 31, 2020. The data can be sorted according to dates, investigator, establishment type, town/city, or county. The number of licensees that did not sell, that did sell, and incomplete checks are summarized on the right side of the page. The page also displays lists of establishments, the date they were checked, and if a sale was completed. Checks conducted for individual cities/towns within the county are shown with the bar graph. The page presents an easy-to-read snapshot of the status of alcohol compliance checks for the time period in Chittenden County.



**Figure 5: Webpage of projectR.A.B.I.T. presenting Chittenden County Alcohol Compliance Data April 1, 2019 to March 31, 2020**

Table 3 summarizes alcohol compliance check data for three years beginning with the year before projectR.A.B.I.T. was operationalized (April 1, 2017 to March 31, 2018), compared to the two years following operationalization. The percent of licensees that sold alcohol without verifying the person was of legal age to purchase decreased after operationalization, going from 14% in the first year, down to 6% and 7% in the two following years. The percentage of licensees that sold decreased even though a greater number of outlets were checked in the latter two years.

(Due to the COVID-19 pandemic and related bar closings and restrictions, 2020-2021 data was not examined.)

<b>Alcohol Compliance Chittenden County April 1 to March 31 2017-18; 2018-19; 2019-20</b>			
# of Establishments that...	2017-18	2018-19	2019-20
...did not sell	95	196	143
...did sell	16	13	11
...incomplete check	2	3	5
Total Establishments	113	212	159
Percent sold	14%	6%	7%
Percent did not sell	84%	92%	90%

**Table 3: Chittenden County Alcohol Compliance 2017-2019**

### **Other Information in projectR.A.B.I.T.**

There are 14 webpages in projectR.A.B.I.T. In addition to the pages discussed here, other webpages present data on tobacco compliance, strategic inspections, permitted events, point calculations by licensee, investigator assignments, and COVID compliance.

## Interview Findings: Using projectR.A.B.I.T. for Data-Driven Decision-Making

The Vermont Department of Liquor and Lottery **Office of Enforcement and Compliance** uses projectR.A.B.I.T. to inform its three core functions of compliance, inspection activity, and investigation.

*Inform and manage inspections work:* The primary users of projectR.A.B.I.T. are the director and investigators of the Office of Enforcement and Compliance who use it extensively in their work. An investigator typically looks up their area in the database to identify establishments to prioritize for compliance checks or attention.

“In terms of formulating a plan for the day, [projectR.A.B.I.T.] is pretty integral to know what’s going on and what places haven’t been checked in a long time, what places are at risk for possible violations, and/or if you’re just doing compliance, the places that you haven’t checked that need to be done.”

*Efficient assessment and monitoring of compliance status throughout the state:* The director relies on projectR.A.B.I.T. to efficiently monitor and assess the department’s efforts:

“So as a director, I think the real upside of projectR.A.B.I.T. is, it’s a very useful tool for me to just digest all of the data we have in a very concise package, instead of spending hours [layering] the different datasets on top of each other, maybe either in my brain, or looking at different disparate reports; this puts everything kind of all in one place.”

**Other stakeholders** use projectR.A.B.I.T. less frequently than DLL, but also use it to inform, support, and guide their work.

*Access local compliance information in their community:* **Local law enforcement** access information about their jurisdiction’s licensees, to be sure their information about licensees matches, and learn what DLL activity there has been in their area. The database makes it easy for them to access local compliance information about businesses in their jurisdiction.

*Inform community efforts to address alcohol-related service issues:* **Prevention coalitions** use projectR.A.B.I.T. to gather data for planning and setting priorities, as well as to monitor progress on their alcohol and tobacco prevention goals over time. Having easy access to data allows coalitions to develop data-driven plans and priorities. Some coalitions monitor compliance check data on establishments in their area and recognize licensees that pass compliance checks (such as through a letter or press release). If an establishment fails a compliance check, it creates an opportunity for the coalition to reach out to the business, offer help, or recommend corrective actions.

*Grant requirements:* Some **grant administrators** who oversee city and county coalition funding require or encourage grantees to use data that is available through projectR.A.B.I.T. The dashboard enables grantees to report accurate, timely data to their funders, and provides accountability. One person who administers grants observed, “It does impact the action of the grantees.”

*Educate stakeholders and decision-makers:* Readily accessible data enables **public health staff and evaluators** to provide information to educate municipal officials and communities. Some of them have used projectR.A.B.I.T. data to develop town, city, or county profiles of risk factors related to underage drinking and alcohol- and tobacco-related issues. These profiles can be updated periodically, to allow examination of trends and progress.

*Inform work with licensees to improve compliance and train staff:* **Alcohol licensees** who receive feedback from projectR.A.B.I.T. may become aware of issues they did not know about. They are more likely to learn of an issue from DLL investigators, rather than accessing the database themselves, but the information is still helpful to them to identify issues. An establishment owner said they work with DLL to obtain information on their establishment, identify areas for education and training, and to help reinforce to their staff the importance of responsible service:

“I encourage the staff to always be following what the rules and regulations are so that when an officer does come in, it should be fine, because we should be following the rules.”

### Using projectR.A.B.I.T. for Data-Based Decision-Making

#### By DLL Investigators—

- ✓ To inform DLL three core functions of compliance, inspection activity, and investigation.
- ✓ Inform and manage inspections work
- ✓ Efficient assessment and monitoring of compliance status

#### By Other Stakeholders—

- ✓ Access local compliance information in their community
- ✓ Inform community efforts to address alcohol-related service issues
- ✓ Meet grant requirements
- ✓ Educate stakeholders and decision-makers
- ✓ Inform work with licensees to improve compliance and train staff

**Table 4: Uses of projectR.A.B.I.T. data by DLL investigators and by other stakeholders**

## Improvements with projectR.A.B.I.T. for the Department of Licensing and Lottery

*Work is data driven:* For **DLL investigators**, the primary difference projectR.A.B.I.T. has made is using data to make decisions about the focus of their daily work. Prior to projectR.A.B.I.T., the DLL Director observed, “we were pretty ineffective at actually finding issues around alcohol and tobacco in any given community.” Previously, investigators needed to rely on their familiarity with their district and their intuition and judgement based on their experience. Investigators still make decisions based on their knowledge of their districts, but now, of the ten checks they are required to conduct each week, three of them are identified by projectR.A.B.I.T.

“Operationally, decisions are made based on data now... That was the key difference. By having projectR.A.B.I.T., that's all we changed, was have projectR.A.B.I.T. select three licenses of the 10. We jumped from the key performance indicator of 2 inspections out of the 100 where the investigators observed a violation, to around 15. I would say what is different now, where we are today in 2021, versus where we were back in 2016 or 2017, is we have certainly come to the realization that letting data inform our decision-making, even at a small level, increases our efficiency and puts us at the right place at the right time to impact public safety in the state of Vermont.”

*Increased efficiency/elimination of paper:* Prior to projectR.A.B.I.T., data was collected manually on paper, so it was more difficult for an investigator to know the real status of an establishment or if an establishment was making progress. Investigators explained how projectR.A.B.I.T. has changed their work:

“They handed me a four-inch binder and it was every compliance sheet for alcohol and tobacco in my area. And basically, as you used them, you took them out of the binder and the binder got smaller and smaller. And then guess what happened next year? They filled that binder back up again with all the sheets. So, the amount of wasted paper.”

*Accessibility and timeliness of data:* A substantial change with projectR.A.B.I.T. is the accessibility and timeliness of the data available to DLL investigators.

“This is so much easier because it's all there, and all the investigators have it—we can have it on our phones, we can have it on the computer. And it's 24/7—it's not just 8:00 to 4:00, Monday through Friday.”

Investigators are able to retrieve information about licensees from projectR.A.B.I.T. any time they need it on their phone or computer, increasing their efficiency as well as enabling them to have up-to-date information about any licensee at their fingertips:

“When I first started, everything was on paper. If you wanted to know any information about a liquor license, you had to look at it either at the place, and if they didn't have it posted you could only contact the office Monday through Friday, normal business hours,

in order to get that information. So, at nighttime, we had no access to that type of information. Now with the mobile data collection app, which helps feed projectR.A.B.I.T., and projectR.A.B.I.T. itself, that information is instant and is updated.”

*Ease of transfer of information between investigators:* Current, up-to-date information is also an asset when staff or assignments change, since all the information is in one place and accessible.

“I think an investigator in an area always kind of knew their problem establishments, but what projectR.A.B.I.T. does is, if a new investigator comes in, that strategic inspection module actually helps them be aware of the places that most likely could violate.”

*Improved accuracy:* Despite familiarity with their assigned areas, investigators say with the large number of compliance checks they do, projectR.A.B.I.T. helps ensure they don’t confuse or forget if an establishment is due for a check or had a recent issue.

“I’ll be honest with you, with the amount of compliance checks we do, they all start to blur together after a while, and you’re like, ‘Well, did I go there for alcohol or tobacco?’”

The projectR.A.B.I.T. dashboard increases accuracy and reduces the chance of errors that could happen from secondary data entry from handwritten paper forms, since the data is entered immediately by the investigator:

“All that data is pulled from the licensing system, so it’s the data that the licensee submitted, that we’ve vetted. And so, it takes away all the investigator’s ability to transcribe something wrong, like a number.”

*Increased effectiveness and efficiency:* Accurate, timely data combined with the familiarity that investigators have about their districts increases effectiveness and efficiency. Most investigators will visit a licensee when they fail a compliance check to share the information, discuss the situation, and be sure they are aware that an unlawful sale happened. Since the data in projectR.A.B.I.T. is current, it gives investigators more opportunity to visit licensees in a timely manner, when an incident is recent, and with accurate data.

*Adaptability—changes can be done quickly and in-house:* One advantage of the Power BI platform is that projectR.A.B.I.T. can easily be updated in-house. For example, if an additional level of filtering is desired, such as adding the ability to filter a dataset by county, it can easily be added by DLL staff. Rather than a lengthy process, such as hiring a contractor or issuing a Request for Proposals (RFP), staff can make adjustments in-house, often within a day. As one observer said, “That’s huge!”

## Improvements with projectR.A.B.I.T. for Community Partners

*Data is accessible to community partners and easy-to-use:* Stakeholders and community partners are more easily able to access data with projectR.A.B.I.T. Several described the “huge Excel spreadsheet” that required users to manually search for the data they needed. This process was cumbersome, and not always up-to-date, so several people said they would just ask an investigator or staff for the information they sought. Now, rather than ask a DLL investigator to pull the data they need, community partners can access it themselves and obtain current data when they need it. A respondent from a public health agency described the previous process:

“Before it was this huge Excel spreadsheet, it had every location in the state on it. You had to know how to navigate it and how to manipulate it to the point of just finding your location, [and it] wasn't always updated. [Most people would] just go to their local investigator to ask them and be like, can you just give me an update every quarter about the locations that you've been to, or they'd have to contact the central office at Liquor and Lottery to try to get them to pull the data. So, it took many more steps to get to what they can now access almost immediately in the R.A.B.I.T. system (sic).”

The director described the previous limits of responding to community requests for reports:

“We would gladly oblige, but it was really kind of a very delayed process. Sometimes it would be one quarter, two quarters, maybe six months, oftentimes old data. [Using] projectR.A.B.I.T. really kind of streamlined that, and we no longer had to generate a report based on our compliance work. As compliance was done, the report on projectR.A.B.I.T. would just simply update and reflect the results of those checks...[It] streamlined and increased our operational capacity in terms of responsible retailer recognition, just because they didn't have to wait on us to generate the reports.”

*Up-to-date, current data is always available:* With projectR.A.B.I.T., investigators enter data into the system while in the field, so data is continually being updated. A grant administrator observed that such efforts should be done in “real time to be effective.” As one user noted:

“Its immediacy—since it is a live system, you get real-time data. If an investigator has gone into a local store, the information is already uploaded the day that he does it. That's nice that you don't have to worry. There's no lag in the system.”

*Ability to manipulate/navigate the dashboard to obtain the data needed:* The projectR.A.B.I.T. dashboard makes more types of data and information available to users, and makes it more accessible. Users can search by the variables they need, such as by store, date range, location, type of incident, investigator, and more, so they can fine-tune the specific data they are looking for. Since investigators enter data immediately, the data is timely, so it's more useful and usable. Respondents say projectR.A.B.I.T. is easier to use: “It's more user-friendly than the huge Excel document of craziness.”



*Credibility of data:* The projectR.A.B.I.T. dashboard has credibility among users, stakeholders, and the retail community, who know the data is reliable and accurate. Users feel confident using the data in their work. It enables local community members and coalitions to know their local retail environment, and enables them to identify specific establishments to provide additional training or assistance.

“It’s very helpful to have this information publicly available...and that it’s updated so regularly, and really gives an idea of the scope of their work to the public.”

*Provides information needed to carry out grant requirements:* Many coalition grantees have a deliverable to recognize retailers who had passed their compliance checks, but were challenged to access up-to-date information. This posed a problem for coalitions that want to recognize a licensee who passes a compliance check, or try to offer help to a licensee that has failed. As one grant administrator observed:

“In the past, [grantees] used to struggle to easily find and access compliance data, and I have heard feedback that since the development of projectR.A.B.I.T., that has gotten easier.”

*Increased opportunity for collaboration:* Data is accessible to anyone who is aware of the system, not just staff people within DLL, so it reduces the need to make requests to staff for special data runs. Since data is more available, it also increases the opportunity for collaboration between departments and agencies to use the data. One coalition respondent explained the collaboration they have with DLL:

“DLL is really supportive of our coalitions and in connection with us, and looking for those types of collaborations...We work together. Like if they need to do a training, we help find the location. I’m usually there also doing like a little spiel about our coalition and how to get involved, just trying to connect more of our retail space...I feel like we’re in collaboration and we have good collective vision and really work together.”

*User-friendly for a wide array of users:* Many, especially more frequent users, find the system to be user-friendly. While many users are professionals, at least one coalition has engaged youth in accessing and assessing the data as part of its responsible retailer recognition efforts.

“I think a strong point is really just having an interface that is user-friendly and accessible to lots of different people...You don’t have to have a lot of knowledge to go in here and get a sense of generally what it’s telling you. I think data systems can feel intimidating to a lot of people. And so, the more that we can make them user-friendly, like this one, the better because it’s valuable for a lot of people to be able to look at data on their own and not just have to go through other channels to find it back. That can be a barrier a lot of times for community organizations. It just helps increase their capacity to work with data.”

*DLL investigators are still available:* Several people noted that the DLL staff are accessible for assistance if they have questions or need assistance:

“They’re great. They’re really helpful. Any questions that I’ve had, they were able to answer in a very timely manner.”

### **Improvements with projectR.A.B.I.T.**

#### **For DLL Investigators—**

- ✓ Work is data-driven
- ✓ Increased efficiency/elimination of paper
- ✓ Accessibility and timeliness of data
- ✓ Ease of transfer of information between investigators
- ✓ Improved accuracy
- ✓ Increased effectiveness and efficiency
- ✓ Adaptability—changes can be done quickly and in-house

#### **For Other Stakeholders—**

- ✓ Data is accessible to community partners and easy-to-use
- ✓ Up-to-date, current data is always available
- ✓ Ability to manipulate/navigate the dashboard to obtain the data needed
- ✓ Credibility of data
- ✓ Provides information needed to carry out grant requirements
- ✓ Increased opportunity for collaboration
- ✓ User-friendly for a wide array of users
- ✓ DLL investigators are still available

#### **Added Value of projectR.A.B.I.T.**

- ✓ Enhances investigator knowledge with data
- ✓ Saves valuable staff time
- ✓ Easier, more efficient data entry
- ✓ Timely information for decision-makers
- ✓ Strong return on investment

**Table 5: Improvements and Added Value of projectR.A.B.I.T.**

#### **Added Value of projectR.A.B.I.T.**

*Enhances investigator knowledge with data:* The projectR.A.B.I.T. dashboard is a valuable tool for DLL investigators, enabling them to use data to plan and manage their work. Investigators are knowledgeable about their assigned areas, but projectR.A.B.I.T. builds on the familiarity they have, allowing them to prioritize their attention on licensees that most need attention. Since

projectR.A.B.I.T. identifies the three top licensees in an investigator's district, attention is focused in the most needed areas. But investigators are still required to inspect ten licensees each week. The remaining seven are identified by investigators based on their knowledge of their districts.

*Saves valuable staff time:* Using projectR.A.B.I.T. also saves valuable staff time. Investigators previously responded to frequent requests to create compliance reports for community partners and stakeholders, to help them with their prevention work. Now, public health and coalition partners are able to run the reports they need, when they need them, and tailor them to their specific needs. This is valuable at the local level, but also provides the same indicators and data statewide, facilitating comparisons and examination of trends. As one community stakeholder said, "There's real power to the dashboard."

*Easier, more efficient data entry:* Since compliance data is recorded directly into the system, more cumbersome and time-consuming data entry using paper documents is no longer necessary. On-the-spot data entry by investigators means the system is timely and up-to-date. At the same time, historical data to examine trends is always available. Stakeholders value the immediacy of the data, noting that many types of survey data and reports can take substantial time to be available.

*Timely information for decision-makers:* Readily available data provides timely information for decision-makers. The public face of the system lends transparency and builds accountability. In addition, it has enabled disparate systems and stakeholders to work together more effectively.

*Strong return on investment:* The investment to build and maintain projectR.A.B.I.T. has been relatively inexpensive. As one respondent said, "From a budgetary standpoint, it's extremely cheap."

## **Areas of potential improvement**

Interview respondents identified some suggestions for potential improvement of projectR.A.B.I.T., including:

*Provide a manual or user guide:* The primary area for improvement identified by interviewees is user training and guidance. While many people feel the system is user-friendly, a few said it is challenging to use and somewhat counterintuitive. Several people recommended that a manual or user guide be developed, to help those who have not had training on projectR.A.B.I.T. or who use it infrequently. Topics suggested included:

- Functions and how to get to types of information
- Definitions (clarify meaning of terms for laypersons)
- Information on how often checks are done to give the information more context
- How frequently data is collected

*Additional availability of training to use the system:* One person said a training or tutorial would be helpful, although admitted this might have been offered at a meeting the person had missed.

*Additional content suggestions:* A few additional areas of content were suggested. One suggestion is to connect data displays to a mapping capability that could visualize the data selected by locations. Some specific additional data suggested includes alcohol-related hospitalizations, Emergency Medical Service (EMS) data, alcohol-involved domestic violence calls, or a display of trends over time.

### **POLD (Place Of Last Drink)**

One of the strengths of projectR.A.B.I.T. is the ability to add new information and datasets to the system. DLL recently began collecting and documenting Place Of Last Drink (POLD) data and entering it into projectR.A.B.I.T. POLD incidents are weighted based on the number of incidents:

$$1 \text{ POLD} = x, 2 \text{ POLD} = x^2, 3 \text{ POLD} = x^3$$

While it is too early to identify trends for this data, having POLD data easily accessible will be useful for both investigators and community partners. Identifying licensees with POLD patterns enables an investigator to present this information to the establishment owner and/or management and discuss potential strategies to avoid over-service. Reducing over-service can reduce the number of intoxicated drivers, and contribute to improved highway safety.

### **Synergy with other agencies**

There is potential for synergy with other agencies, since projectR.A.B.I.T. accesses data from licensing and other agencies. The dashboard is easily available for other agencies to use. Several community coalitions and public health departments use projectR.A.B.I.T. frequently. It is less clear if other agencies and departments take advantage of the system. There may be opportunities to expand the users of the database. For example, several local law enforcement agencies used projectR.A.B.I.T. to access licensee information to perform COVID inspections, and documented their activity. The ability of DLL staff to be able to adapt the dashboard to add new pages or ways to slice the data suggests there may be additional opportunities for collaborating and sharing data with other agencies and departments.

### **Cannabis and projectR.A.B.I.T.**

Currently projectR.A.B.I.T. focuses on alcohol- and tobacco-related data and incidents. Recent legislation will legalize the sale of cannabis in Vermont. The state legislature has mandated that oversight procedures for cannabis sales be based on best practices in use in other areas of enforcement and compliance. DLL will continue to be involved in planning and sharing best practices from its experiences with alcohol and tobacco compliance enforcement. Lessons

learned from projectR.A.B.I.T. may be able to inform Vermont's approach toward monitoring and compliance with cannabis sales.

## **COVID-19**

The COVID-19 pandemic presented both opportunities and limitations. As mentioned earlier, since projectR.A.B.I.T. can be easily modified, DLL was able to add a COVID inspections page to the dashboard. This made it easier for local law enforcement to identify licenses as they monitored them for compliance with restrictions and changes related to COVID in March 2020. While this feature was not widely used, law enforcement officers who did access the system found it useful to help them identify licensees in their jurisdictions and to document inspections.

In March 2020, the governor issued an executive order requiring on-sale alcohol to close for inside service in response to the COVID-19 pandemic. This impacted the work of DLL, and reduced the number of inspections in 2020. This limits the ability to compare data trends during this time.

In response to the financial hardship that COVID restrictions placed on licensees, the sale of to-go beverage alcohol/cocktails was allowed. As businesses have been allowed to reopen, the legislature determined that to-go beverage cocktail sales will continue to be allowed for two years (until 2023). During this time, DLL is required to conduct a public safety and financial study to determine the impact of to-go sales.

Future evaluation is planned in the next three years, so these limits will need to be taken into consideration and will provide the opportunity to examine new developments such as to-go cocktails. While pandemic restrictions also prohibited in-person meetings for the evaluation, these challenges were largely overcome by using virtual platforms (Zoom, Microsoft Teams). It is anticipated that virtual platforms will provide sufficient support for upcoming planning and implementation of future evaluation efforts.

## Recommendations for Replicating projectR.A.B.I.T.

Several elements were essential to the successful development and implementation of projectR.A.B.I.T. For agencies considering implementing a data-driven system similar to projectR.A.B.I.T., recommendations include:

1. Determine key decision-makers who need to approve and/or support development of the system. In Vermont, it was important to have buy-in from key Commissioners, and their support of the concept to incorporate projectR.A.B.I.T. into their operational capacity.
2. Determine the users and what is important for them. Who will be using the system, both initially and longer-term, and what do they need? Initially, DLL anticipated projectR.A.B.I.T. as a tool to support its investigators, facilitating easier documentation of and access to timely compliance data. “Initially, it was really just a process to get away from a lot of redundant work processes. You know, that’s kind of an apolitical thing—I don’t think anyone would sweat us kind of increasing our efficiency as a department.”
3. Make sure investigation and compliance staff understand it is a tool to assist them in their work, not monitor their job performance—the purpose is “to be a surveillance tool for how alcohol and tobacco issues impact the state.”
4. Engage stakeholders to get feedback from potential end-users, to get their buy-in and determine what is useful for them. Some may want a dashboard of high-level information, while others may want deeper access to data. In Vermont, this meant a system that is user-friendly for investigators using the data to plan their work as well as to coalition staff who use it to identify alcohol- and tobacco- related issues in their communities, and to undertake retailer recognition.
5. Early on, engage agency representatives who have datasets that will be useful to your users. Identify what they need to be comfortable sharing data, such as their capacity to share data regularly, Health Information Privacy & Protection Act (HIPPA) limitations, technical requirements for sharing data, and Memorandums of Understanding.
6. Develop and maintain cross-department relationships to broaden ownership and support for initiation as well as long-term maintenance and support for the system.
7. Decide on the platform, and be sure all early developers understand its capabilities to be sure it will work for your need.
8. Build a system that requires minimal maintenance with limited need for day-to-day upkeep.
9. Consider costs and identify a platform that is inexpensive. In Vermont’s case, Microsoft Power BI has been inexpensive compared to many database or IT projects.
10. Keep it simple—make the system easy-to-use and easy-to-understand. If it’s complicated, partners are less likely to use it.
11. Identify where the project is housed, who be responsible to maintain it, and be a champion for it. In Vermont, the DLL Director led development of projectR.A.B.I.T. He and the DLL staff ensure the system operates well and is up-to-date, as well as continue to look for additional opportunities to add datasets or improve functioning.

## **Conclusion**

Since its operationalization, projectR.A.B.I.T. has been a valuable tool for the DLL Office of Compliance and Enforcement and a resource for community partners and stakeholders. It improves the efficiency of DLL investigators, provides a more complete assessment of the current status of alcohol and tobacco compliance in Vermont, and provides timely information to multiple users. The public face of the dashboard lends credibility and transparency while being user friendly for stakeholders who use compliance data. The system is valued by investigators and community partners and enhances the relationship of DLL with its partners. As one partner observed:

“I’ve really appreciated [DLL’s] commitment to data-driven approaches to the work, and that has come through loud and clear. And I think it has, in my opinion, really advanced the work of DLL.”

## **Acknowledgements**

Evaluation work is only possible with the help and input of key stakeholders who inform the process. Numerous planning meetings between the evaluator, Linda M. Bosma, PhD, NLLEA Executive Director Carrie Christofes, Director of the Office of Compliance and Enforcement Skyler Genest, DLL Sergeant Melanie Gaiotti, and DLL Sergeant Michael Welch were essential to informing the development and administration of this work. These people were instrumental in providing background information, identifying interview participants, and reviewing content for accuracy. In addition, a thank you to all the individuals who agreed to participate in interviews for this project and share their perceptions and experiences.