

Exception Based Reporting (EBR) – State of the Industry



A White Paper

www.ebrgroup.net

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Summary

Introduction

Mission Statement:

EBRgroup.net is a network of LP retail professionals involved in data analytics that share their knowledge and expertise, collaborate on ideas and use technology to help support the retail industry. It is a place where members exchange best practices and leverage partnerships to maximize the effectiveness and performance of their organizations' LP Systems.

Formation

The EBRgroup has been formulating for many years as end-users of exception-based applications networked at various conferences to find better ways to utilize their tool and maximize their LP Systems.

The EBRgroup was started due to a strong need for a network that could provide best practices and guidance as well as a safe place to exchange ideas, challenges, and knowledge. We make every effort to keep the EBRgroup vendor-free and application agnostic as this allows all members regardless of system to participate and gain knowledge on the principles of exception based reporting.

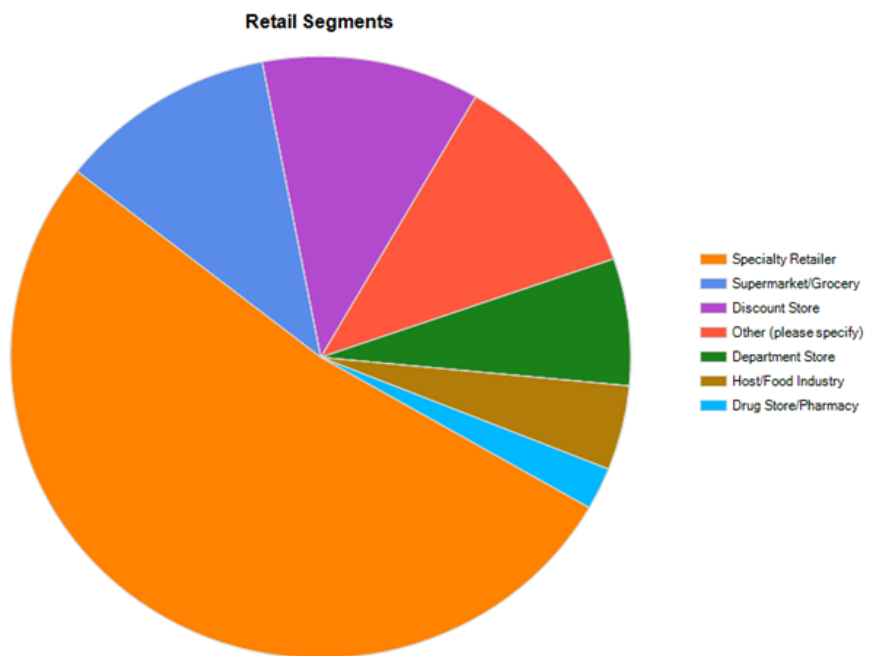
In November 2007, we officially formed EBRgroup.net with an initial count of 20 to 30 people. Today, we have over 150 individual members representing 104 companies across the USA, Canada and in the United Kingdom.

The EBRgroup conducts monthly conference calls on topics surrounding exception based reporting, maintains their own website www.ebrgroup.net and has a LinkedIn group (EBRGROUP).

Participating Members

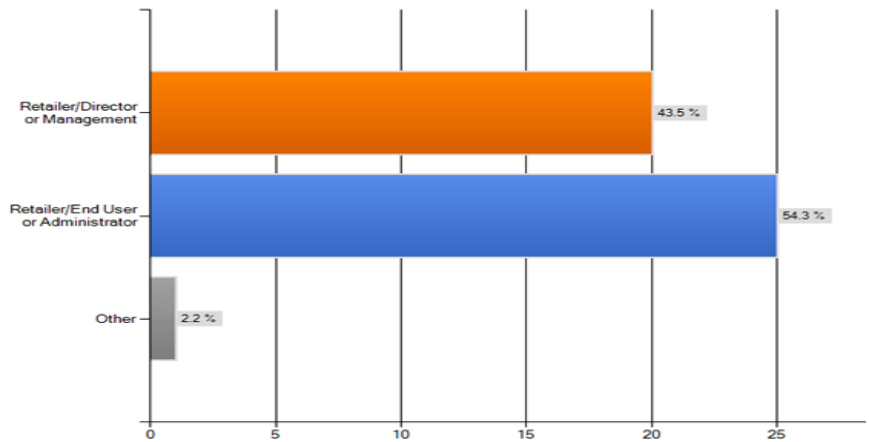
The EBRgroup conducted a survey in May 2010 of all of its membership and included in this document are the results of the 46 companies that responded. The response rate was 39.4%.

The retail segments represented are broken up in the following categories: Specialty Retailer (52.3%), Supermarket/Grocery (11.4%), Discount Store (11.4%), Department Store (6.8%), Host/Food Industry (4.5%), Drug Store/Pharmacy (2.3%) and other (11.4%) which included Office Supply/Electronics, College Bookstores, Lighting/Housewares, and Restaurant/Retail.



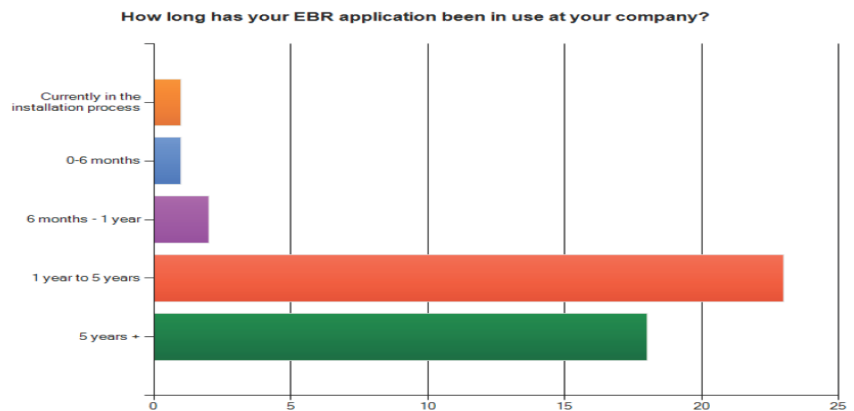
Participating Members

Of the responding participants, we asked what role they support within the EBR industry. This allowed us to get a sense of whether the results were from someone with hands on experience with the application or whether we had respondents who were driving the EBR program within their company's from a Director or Management role.



43.5% of the respondents were in a Director or Management role that is responsible for their company's EBR System. Respondents who were end-users or administrators of their EBR applications represented 54.3% of the surveyed group and 2.2% were not specified.

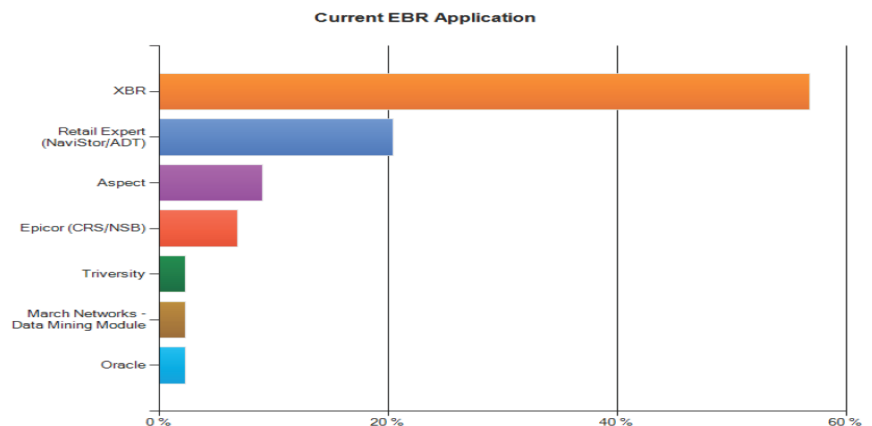
In order to know how long our respondents had been working with their EBR system, we asked how long their application has been in use at their company.



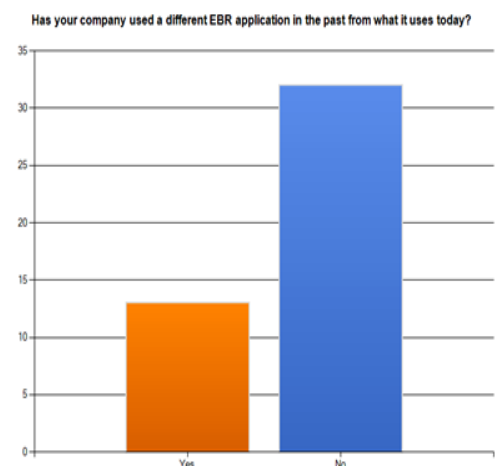
Participating Members

The majority (91.1%) of all respondents have had an EBR application within their company for over a year. Companies who have had their system one to five years had the greatest response at 51.1% and another 40% have had their application for more than five years. Companies with applications in place six months to a year represented 4.4% while categories of “less than 6 months” and “currently in the installation process” each represented 2.2%.

The application makeup of those who responded is: XBR (56.8%); NaviStor (20.5%); Aspect (9.1%); Epicor/NSB (6.8%); and Triversity, March Networks, and Oracle all with (2.2%). There were also three respondents who have applications built in-house developed by LP and IT and customized to fit their business model.



When asked if their company had ever used a different EBR application than what they use today, 28.9% said YES. The question we now have is why have almost 30% of companies upgraded or otherwise traded in their EBR system?

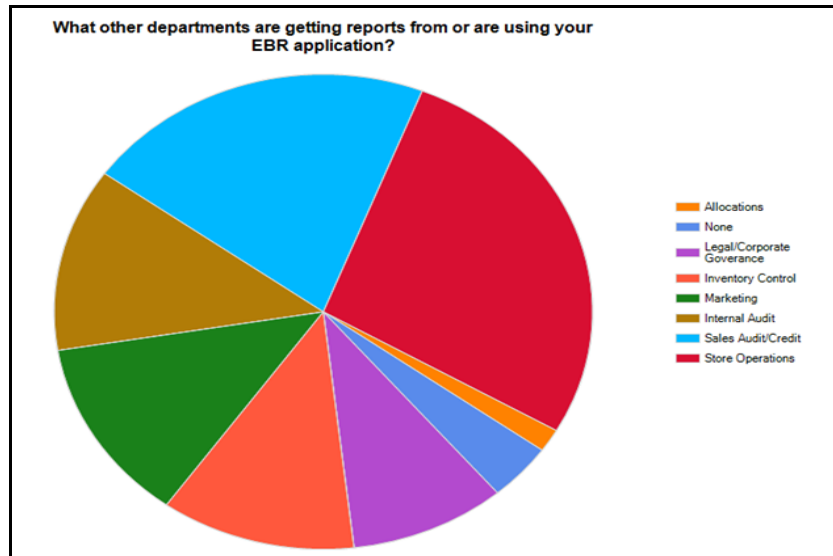


EBR Usage

To determine how companies were using their EBR application we asked what the primary and secondary purposes were. For example, what other departments besides the initially invested department are using the application or receiving reports directly from the application? Just over half (56.5%) indicated that they are not only using EBR for Loss Prevention, but also using the application for Operational and Business Reporting while just under half (43.5%) indicated that they are using it primarily for identification, researching and resolving suspect transactions or employees.

Primarily use EBR to identify, research and resolve suspect transactions or employees		43.5%	20
Use EBR not only for Loss Prevention but also for operational and business reporting		56.5%	26

When asked what other departments are either using the EBR application or are receiving reports from the application, we got quite a wide response. With the most commonly expected partners being Store Operations (81.4%), Sales Audit/Credit (62.8%) and then closely followed by Internal Audit and Marketing both at 37.2%. Inventory Control hit the list at 34.9%, followed by Legal/Corporate Governance (27.9%), and 4.7% were sharing it with Allocations.

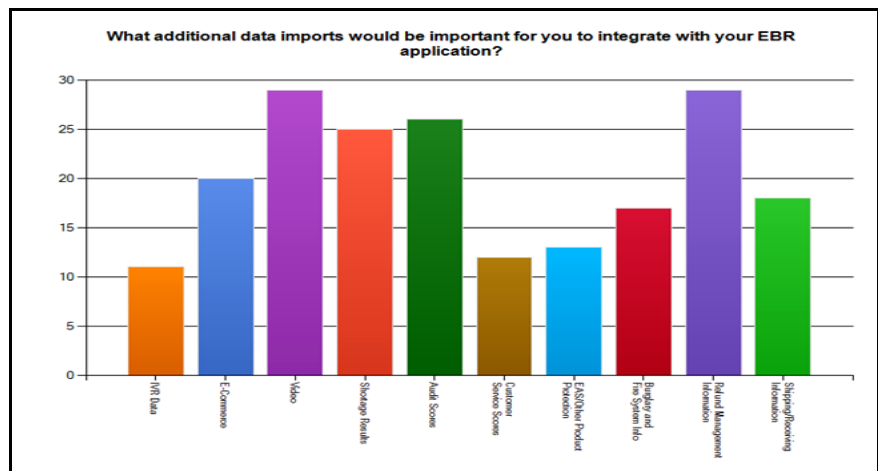


Interestingly enough, there were 11.6% of the respondents indicating that they were not sending reports or having any other department utilize their EBR application.

EBR Usage

Over the past year, the EBRgroup has identified the fact that many EBR experts are using tools outside of their application to augment their systems, query the data, or overlay reporting capabilities for their systems. We asked what other tools are being used to supplement their EBR efforts. The most utilized tool was Microsoft Excel (85%), followed by Microsoft Access (40%), and SQL Query Tools which consist of software such as: SQLDeveloper, AnyMaestroSQL, mySQL and SQLServer Management Studio (27.5%), Business Objects (25%), Micro Strategy (25%), Visual Basic (15%), Crystal Reporting (12.5%) and other (25%) which was specified as being: Blue Martini, BRIO, IBI, EDW Data, TOAD, & Cognos c8.

EBR users have had to find creative ways to push and pull data to and from their EBR applications and utilize the tools listed above to integrate and correlate various data points. Constantly resonating throughout the group is the question of how to merge, integrate and correlate data from the POS system along with other retail data to help paint a better picture of operational exposures and connect the dots to identify theft. Below are the additional data imports most important for integration with today's EBR applications.



Video and Refund Data both topped the list at 63%. Audit Scores (56.5%), Shortage Results (54.3%), E-Commerce (43.5%), Shipping/Receiving Information (39.1%), Burglary & Fire System Information (37%), EAS/Product Protection (28.3%), Customer Service Scores (26.1%) and IVR Data (23.9%). Other requests were Rx data, direct and drop shipping data, traffic, turnover and tenure, known losses, internal cases, customer loyalty data and cash over/short data.

EBR Challenges

Industry Challenges

Gone are the days when a simple report containing only POS data will suffice. Today Loss Prevention demands reporting that provides insight into how stores are operating as a whole which requires not only data from the POS, but also data from Operations, Inventory, Shipping, CCTV and other aspects of the business that are brought together in a single view. This makes data integration a must for the EBR industry. One challenge identified through the survey is that existing EBR applications that many retailers have in use lack technical **integration to other data sources**. EBR is not being used solely to catch bad guys anymore, rather it has become necessary to analyze and correlate data which requires integration of multiple data sources with the added feature of systemic analysis.

Respondents also were quick to realize that there is an inherent challenge for solution providers to keep up with client “wish lists”. However, for various EBR systems in a variety of settings, some respondents felt that the end user is forced to live with system limitations because the EBR companies try to be all things to all people. Respondents with internally built applications said that one of the benefits to utilizing an internally constructed system is that it provides a more customized product. Every retailer wants something different, which makes it difficult for a vendor to create that dynamic product, as well as it is a challenge for the retailer to find the product that works best for them. When setting up a new customer with an EBR system, vendors need to work more with the individual retailers to understand their environment. This means having various departments (from installation teams to training representatives) that work together and have some basic Loss Prevention knowledge to improve the installation process. This becomes even more important as EBR applications are transitioning from their existing platforms into new mediums, i.e. replicating the power of client server in the java language, while continuing to **allow users the flexibility of customization**.

Members of the EBRgroup who are administrators or are responsible for the EBR applications within their company must address their own “customer base” and the success of the program depends on our own end-user acceptance. Therefore, any **issues related to performance and/or design results in a lack of confidence in the system** and the lack of understanding (what is actually driving the issues) among each company’s end-user group can be counter-productive.

EBR Challenges

Industry Challenges

The EBR industry needs to continue to leverage technology to build more targeted and concise exceptions. EBRgroup members are constantly in search of finding the right criteria and thresholds to identify “true exceptions”. LP is always in search of how to change or build new flag identifiers, more efficient ways to sort through false positives, and effective ways to identify sliding cases and cash shortages.

The greatest challenge facing the EBR industry is to sustain the effectiveness of the core function of exception reporting – ***identifying true exceptions***. With so many advancements in technology, exceptions must be more intelligent and self-adjusting than they are today. When exception reporting was first introduced to the industry, it was great to have so much data at our fingertips; however, a common response from many of our members today is that there is too much data to filter through. To combat this, EBRgroup members struggle with the challenge of ***sharing "best practices"*** and learning what is working for similar retail partners. Another known struggle in the industry is ***finding knowledgeable analysts*** that possess a good balance of both IT skills and LP experience.

Some EBR applications use outdated technology and are slow to catch up to improvements in the IT world. Additionally, there hasn't been a real big breakthrough by solution providers in the last 5-7 years. Given the expanding scope of LP and trying to juggle both the extra work while not losing focus of our core responsibilities means we need ***systems that do exactly what we expect them to do and that can eliminate the “noise”*** (i.e. in the past users would just maneuver around the system and sift through all the false positives). Companies are continuing to evolve their POS systems and with that comes the challenge of developing an application that easily adjusts with POS changes and helps us to stay ahead by enhancing the EBR application with top priority requests first.

IT resources for most companies are hard to secure, so providing the ability for non-IT personnel to use EBR without the need of programming experience to write queries is still a desirable feature. If there cannot be a more IT independent application, then there is a stronger need for better documentation or explanation is needed for some companies to get IT to understand EBR and what is needed by LP and this requires both teams working together.

EBR Challenges

User Challenges

Company IT Departments are spending more time keeping up to date with PCI compliance concerns. EBR systems are often part of that maintenance. Sometimes it is best to protect data so that it is PCI compliant coming into the application, this may hopefully take the application out of the scope of PCI audits. Since we all struggle with obtaining and coordinating vendor resources and IT support, along with our own EBR application experts we need a tool that is much more IT and/or vendor independent. Enterprise Software applications are on the rise for implementation to many retailers and with that some members felt that one more challenge to the EBR industry is *for the application not to be taken over by more robust Business Intelligent tools.*

A key thing to remember about the LP industry in regards to software technologies and applications such as an EBR implementation is that the industry is very cost sensitive! This means not only initial costs for the application, but also ongoing annual maintenance.

Challenge 1: System Functionality, Flexibility, & Integration

According to our survey 30% of responses indicated that one of the biggest challenges that EBR users face today had to do with functionality of their systems, the ability to customize, and additional features needed.

Below are the challenges that EBR users identified:

- Customization of the core product – not flexible
- Waiting time for new processes to be built
- Getting the data in the format needed
- Developing reports specific to the retailers environment (Trend Analysis and benchmark reports)
- Investigations Management with the software
- Combining data sources and integration with other data
- System Performance: Application Speed and efficiency
- Building & Modifying queries consistently (as the business changes so do some of the queries)
- Development onto other platforms
- Protecting Data (PII, PCI) while still providing a robust tool for the end user
- Developing a more flexible query builder

EBR Challenges

User Challenges

- Usability and flexibility of the application – ease of use for new users. GUI needs to be more intuitive
- Documentation of resolution to identified problems as a reporting feature
- After the fact data and non-intuitive data rules
- Flexibility for admin to import additional data sources and program without vendor involvement

Challenge 2: Understanding Data & Proper System Training

Approximately 21.2% of the responses said a challenge for user is that they lack an understanding of the data and of their systems. This can result in a company failing to make the most of their LP Systems and when the application is not being maximized to its potential, it doesn't progress with the company needs and will not provide a long-term return on investment.

Training challenges that the users identified during the survey:

- Need more proper training during initial setup and development
- Understanding and Interpretation of the data
- Technology gaps
- Ongoing and consistent training for end-users
- Under utilizing their systems (only using one or two features)
- Training on properly building queries and the various types and differences
- Technical know-how to produce reliable results
- Understanding complicated systems, SQL Statements and how the back end of the system works
- The ability to determine the right set of variables to use for fraud analysis
- Lack of knowledge to do back end reporting
- Understanding how to use the EBR application to its full potential
- Lack of support/training offered by company/vendor

EBR Challenges

User Challenges

Challenge 3: Building “True” Exceptions

LP departments for years have purchased EBR applications for the core function of increasing the identification of dishonest employees at the point-of-sale. Many have thought the application would be their end all solution. However, even after an exception flag hits, there may be more work to be done to “prove” that this is truly an act of dishonesty. With technology our systems have become more sophisticated. At the same time individuals have also progressed with more covert methods of manipulating transactions at the POS. If exceptions are still only identifying employees with a high count or dollar without the addition of specific criteria, these will not always identifying behaviors of theft, and will soon become exceptions of the past.

EBR Managers are looking for criteria that is fluid and can change with the transactional data and which can identify behaviors that are indicative of theft instead of relying on human interaction to make the system smarter, the EBR applications need to be able to assess and analyze the data to provide the retailer with recommended indicators for use in exception rules.




Survey responses identifying Building “True” Exceptions as a challenge for users were listed as follows:

- Pinpointing true exceptions amongst all the “noise”
- Distinguishing fraud from Operational Errors or anomalies
- End-Users want a “magic button” on identifying issues or dishonesty.
- It’s been difficult to teach the concept that an “exception” is something that needs to be investigated and resolved and that it will not always provide a “stat”
- Changing factors of internal fraud
- Reduce the false positives – too much data to sift through
- Finding a system that *intelligently* links exceptions
- Identifying employees moving directly into merchandise theft
- Data being scrubbed limits what users can identify
- Review is still manual, no real downstream logic in the tools. Exceptions check for high level transaction types but does not do the next 2-3 steps in the process automatically (i.e. checking for re-rings and giving an exception set of Post-Voids that are not re-rung for cash)

Scope of EBR

Enterprise Tool

When asked whether or not users felt that the EBR tool could be an enterprise-wide solution, 80.4% indicated that they thought it could, 17.4% were unsure and 2.2% responded that it could not.

		Response Percent	Response Count
Yes		80.4%	37
No		2.2%	1
Not Sure		17.4%	8

In support of the above question, we asked what it would take to take their exception reporting system to an enterprise-wide solution. Here were their responses:

- It will take education of the end-user group and their diligence not to focus just on EBR issues.
- A vested interest in supporting the departments within an organization and not simply selling an off the shelf product for the Retailer to under utilize.
- More powerful web tool with mobile capabilities, as well as integrated labor and customer experience data
- Revamp the way applications connect to data:
 - Tap into Enterprise Data Warehouses (EDW) instead of loader jobs
 - Data feeds or hook-ins
 - Full Integration into Enterprise Database Warehouses - instead of separate data extracts/loads/database
 - More flexibility on loading additional dataset and/or ODBC connectivity
 - Integration of inventory management and merchandising
 - Data integration into Customer Loyalty system data.

Scope of EBR

Enterprise Tool

- Control access to certain data without huge time requirements to keep access clean.
- Multi-user profiles allowing access to data with the appropriate restrictions for users in other groups
- Ability to present data in different formats for different disciplines
- Ability to support multi-channel businesses, with increased flexibility for data feeds.
 - In the case of multi channel retailers, data inputs from all channels.
 - Interface with other applications easily. Video analytics; E-commerce; data warehouses
- LP needs a strong training and presentation team to develop the relationships to other departments. Data is directional, EBR is a tool, and used appropriately most departments can benefit from this type of relationship.
 - Show others in the organization what is capable. Once they understand EBR, it will become an organization wide concept.
 - Willingness for LP to share and willingness for other groups to spend the money
- Cleaner interfaces and stable operating platforms
- Logical back-end database; cleaner and more efficient to allow for greater data imports
- The ability to write more detailed queries (which already exists in the use of SQL - therefore allow SQL to be written within the application along with an interface for administrators who do not know SQL).
- I don't know that I want them to be enterprise-wide tools. I'd prefer they focus on their core competency but make available the ability for us to expand the tool as far as we see fit. To do that would take more ease of use to import data and modify rules and queries.

Scope of EBR

Enterprise Tool

The key question that we wanted to ask our users was how they are expanding the use of EBR within their organization and how they are building upon their EBR application.

“We feel we have focused on the LP/Theft related issues using the EBR application and we are expanding into the Operational issues. This has required writing our own front ends for the end users and using SQL to create more detailed queries”

Many responses indicated that companies are continuing to build better and more complex queries targeting dishonest activity and identifying fraud in a constant exploration to uncover new methods and new data flags that turn up cases and procedural violations.

“We are refining our existing KPI’s to be more specifically targeted and with more ease of use for our field.”

In addition, many companies are using their EBR application for reporting purposes, creating anything from management reports of multiple functions within the organization to basic data searches. Several respondents said that they were continuing to expand their reporting efforts to include business areas such as jewelry, fuel, e-commerce, Rx, direct selling business, inventory control, sales performance, marketing analysis, and Store Operations.

“We are definitely building more complex queries for LP use, and Store Operations is using more reports to help identify issues within their business.”

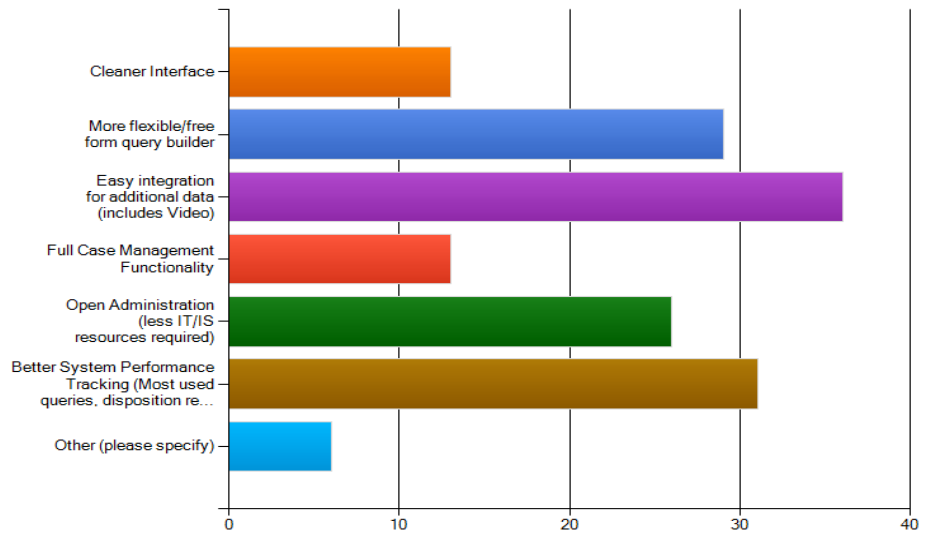
One other area that goes along with the expansion of reporting is the ability to utilize EBR as a way to identify and resolve training issues. This information can lead directly to cashier training, reduction of margin loss transactions, and improves the preventative efforts of EBR.

“We focus on compliancy reporting for Operations Field personnel to combat issues without jeopardizing potential investigations.”

Future of EBR

Enhancements &
 Innovations

EBRgroup members given a selection of features to choose from to see what they would like to see in their existing application and then an opportunity to add other items that were not included in the list. Of the selected items the highest response was Easy Integration for Additional Data (Includes Video) at 78.3%, Better System Performance Tracking (most used queries, disposition results, system usage by analyst, etc.) had a 67.4% response rate; More flexible/free-form query builder (63%), Open administration (56.5%), Full Case Management Functionality and Cleaner Interface both had response rates of 28.3%.



The other items (13%) which were listed by users include:

- The ability to write standard SQL statements in the language of the hosting server application (Oracle, MSSQL, etc...) and have that cleanly integrate into the EBR application.
- Remove the “built-in” case management program and have a way to auto export files that could be imported or linked to a case mgmt application of the client’s choice.
- Statistical analysis of data as it correlates to shortage as a way to predict future shortages based on new incoming data.
- Better alert system (one alert for one location) and better alerts to flag “low hanging fruit”
- Improved processing time

Future of EBR

Enhancements &
 Innovations

We know that every business likes to build their strategy roadmap on future enhancements and innovations. When we asked our members which elements their top priorities were in the categories of Exception Reporting, Video Analytics and Case Management they responded as follows: In Exception Reporting 31.7% selected Data/Video Integration as their Top Priority, Built in Statistical Analysis Tool (26.8%) as their second priority and Real-Time Decisions (25.6%) their third priority.

Exception Reporting

	Data/Video Integration	Case Management	SQL Building tool	Data Import Tool	More Use of GUIs to replace SQL Building	Built in Statistical Analysis Tool	Real Time Decisions
Top Priority	31.7% (13)	0.0% (0)	14.6% (6)	24.4% (10)	2.4% (1)	19.5% (8)	7.3% (3)
Second Priority	4.9% (2)	4.9% (2)	24.4% (10)	14.6% (6)	12.2% (5)	26.8% (11)	12.2% (5)
Third Priority	15.4% (6)	12.8% (5)	5.1% (2)	12.8% (5)	7.7% (3)	20.5% (8)	25.6% (10)

In Video Analytics the top priority was Real Time Alerts with video capture (42.9%); Exception vs. Data Overlay (36.4%) was the second priority and the third priority (but with the highest response of any category in this section) was the Analysis of Customer Behavior (46.9%)

Video Analytics

	Exception vs. Data overlay	Visit/People Counting	Analysis of customer behavior	Real time Alerts with video capture
Top Priority	40.0% (14)	8.6% (3)	8.6% (3)	42.9% (15)
Second Priority	36.4% (12)	9.1% (3)	27.3% (9)	27.3% (9)
Third Priority	12.5% (4)	18.8% (6)	46.9% (15)	21.9% (7)

Future of EBR

Enhancements &
 Innovations

Within the category of case management the top priority was having Full Case Management Functionality (60%), the second priority was having Printable Forms/Reports (32.4%) and the third priority was Case Reporting (54.5%). It is interesting to note that across all priority levels, there was a strong representation in response to having a logical transfer of data as well.

Case Management

	Full Case Management functionality	Printable forms/reports	Logical Transfer of data	Case Reporting
Top Priority	60.0% (21)	2.9% (1)	34.3% (12)	2.9% (1)
Second Priority	8.8% (3)	32.4% (11)	29.4% (10)	29.4% (10)
Third Priority	6.1% (2)	18.2% (6)	21.2% (7)	54.5% (18)

Summary

This white paper is an exploration into EBR – the State of the Industry to provide an honest snapshot of how users across the industry are using various EBR applications within the marketplace or those built within their own companies. We hope this will serve as a useful tool for both the end-users and vendors so that we can continue to evolve the EBR industry and make the most of our systems.

By outlining the challenges we face and what we are doing outside or in place of our applications to make them more efficient and accomplish our job requirements, we hope to collaborate and build partnerships that will continue to drive innovation and improve the continued advancement of EBR applications.

Our goal as an EBRgroup is to present the views of the EBR user community and to share how we are looking at data, using our current EBR applications and what innovations we are looking for in the future.

EBRgroup

About Us

This is our first report on the State of the Industry for EBR, which we hope to do annually. In the future we will include some questions from each vendor as part of the survey. This will make sure that we are providing the necessary information to drive changes within the industry.

We do have a public group set up on LinkedIn, which is open to any retail professional and/or vendor interest in keeping up with the EBR Industry.



We hope that EBRgroup.net can become a voice to the EBR user community by working with the vendors and providing a safe environment for end-users to share ideas, network, and develop their EBR acumen. Some of our members have already presented at various Vendor User Conferences, NRF - Investigator Network Meetings and NRF – Annual Conferences and we are willing to be resources out for any end-user.

The EBRgroup.net Membership will remain restricted to end-users only. If you think it will benefit your users, please feel free to refer them to our group. Our only requirements are that they are Retail Professionals who work with or are responsible for their company's EBR application or LP Systems. Our website is www.ebrgroup.net and there they can select the link for membership@ebrgroup.net to submit an email request for membership.

EBRgroup Board Members:

EBRgroup questions and comments can be directed to any of the board members listed below.

Shannon K. Stilwell, CPP, CFE, CFI

Bill Warrick, CFE

Art Silva, CISA, CFE