EMV Preparedness Survey

for the

U.S. Convenience and Retail Fueling Industry

September 30, 2020

Version 1.0

Document Summary

From August 19 to September 4, 2020 Conexxus fielded a third electronic survey to determine the level of preparedness of the retail fueling industry for the EMV liability shift for automated fueling dispensers (AFDs). This is a follow up survey to the spring 2020 survey which was disrupted with the onset of COVID-19 in the middle of the polling period. In addition, after that survey closed, the major card brands (in light of COVID-19 challenges) moved the liability shift date to April, 2021.

Questions? Please email: info@conexxus.org

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1 Introduction

According to the 2019 NACS State of the Industry (SOI) report, the United States had almost 153,000 retail fueling and convenience stores. These stores perform 160M transactions per day with annual sales totaling almost $648B. Card transactions comprised the most popular payment method, at 73.2% of all sales transactions. Approximately 80% of stores sell fuel and over 60% of stores are owned by a single store operator.

Many stores carry “branded” fuel. While the brand (e.g., major oil) may not own the store, it has significant influence on equipment and solutions that the site installs. For major oils, as well as chains with larger store counts, it is typical to support multiple vendors for each component in the payment ecosystem (e.g., dispensers, POS, EPS, PINPad terminals). Due to the many combinations of equipment that can occur, development, testing, and certification requirements increase in order to fully support EMV across all stores in the chain or brand.

From August 19 to September 4, 2020 Conexxus fielded a third electronic survey to determine the level of preparedness of the retail fueling industry for the EMV liability shift for automated fueling dispensers (AFDs). This is a follow up survey to the spring 2020 survey which was disrupted with the onset of COVID-19 in the middle of the polling period. In addition, after that survey closed, the major card brands (in light of COVID-19 challenges) moved the liability shift date to April, 2021. The first survey from the summer of 2019 can be found on the Conexxus website, as well as the second survey from the spring of 2020. Note that while comparison data between all of the surveys is included, the sample size and store counts represented varied. There is no guarantee that the same respondents completed one or more surveys, therefore there will be discrepancies due to sample differences.

In an attempt to maximize the total number of responses, Conexxus reached out to over 1600 individuals (CEO, CFO, payment professionals) at 1100 organizations representing individual sites, retail chains, major oils, and fuel distributors and wholesalers. Recipients were encouraged to choose one person within their company with the most knowledge of the topic to complete the survey, in order to avoid duplicate responses. Respondents who did not own and operate sites in the US or did not have any sites that sell fuel were excluded from completing the survey. Utilizing convenience sampling methods, **55 unique completed surveys were received, representing 18,819 retail sites, with a median of 22 sites and a mean of 342 sites.** Not all questions were asked of every respondent (varied by answers to specific questions earlier in the survey) and not every respondent chose to provide answers to all asked questions. Therefore, the sample for each question varied and is shown in the results reported below. If the reported data is a number by itself or a number followed by a percentage in parenthesis, the number represents the total count for that answer to the question. In column headings where a number is shown in parenthesis, this indicates the sample size for the question.

No company identifying information (e.g., name or email address of respondent, company name) were captured as to encourage accurate disclosure. The following report details the aggregate results from the survey.

2 Executive Summary – Retailers of All Sizes Still Struggling

Site operators understand the risk of not upgrading to outdoor EMV, but financial and resource challenges, many of which have been compounded by COVID-19 challenges and uncertainties, still pose a threat to compliance.

The survey included a cross section of major oils, fuel distributors/wholesalers, and company owned/retail site operators. Only respondents who own and operate sites in the US that sell fuel were included.

This survey is a follow-up to the spring 2020 and summer 2019 Conexxus EMV preparedness surveys. The spring 2020 survey was disrupted with the onset of COVID-19 in the middle of the polling period. In addition, after that survey closed, the major card brands (in light of COVID-19 challenges) moved the liability shift date to April, 2021.

As with the spring 2020 survey, this survey only focused on outdoor EMV, including contact (when the card is inserted in the reader) and contactless.

Fuel island *contact* EMV status: the number of those surveyed that report full deployment remains flat over all three surveys at 14-15%.

- Store count of 50 or less are more likely to report 100% deployment.
- The trend against outright saying no to installing EMV continued with the most recent survey. However, there are still a number of site owners/operators undecided about what to do. The undecided respondents all cited financial concerns, exasperated due to COVID-19 uncertainties and hardships. The risk not justifying the expense showed back up in the results for the latest data.
- The trend that at least some progress is being made in deployment continued in the most recent data. The latest survey indicated 31% had 0 (zero) sites deployed, an improvement from 52% in the spring and 70% in 2019. This is

further evidenced by the increasing trends in other answers outside of 100% deployment.

- Outdoor EMV challenges saw some fluctuations in answers between the surveys. While some of the differences may be due to different respondents, there is a likelihood that the disruption from COVID-19 from a supply chain perspective as well as slowdowns in software availability and certifications from work at home circumstances where pumps cannot be relocated easily affected respondent's answers. Overall lack of software (30%), lack of certifications (27%), the effort/complexity (27%) and other reasons which cited COVID-19, financial challenges, technician availability among others (34%) were top reasons identified as challenges to getting 100% deployment. (Respondents could choose more than one reason.)
- Based on survey results and opened-ended comments, the ability to pay for and successfully rollout EMV upgrades amidst the COVID-19 pandemic and its hardships and uncertainties is top of mind for site owners/operators.

Fuel Island *contactless* EMV: 81% surveyed have implemented or plan to implement.

- The new data continues to show that owners/operators are reaching decisions about deploying contactless payments outside; 35% in 2019 vs 28% in spring 2020 vs 13% in fall 2020 were still undecided. The COVID-19 pandemic proved to be a catalyst for reaching a conclusion as evidenced in both 2020 surveys, where pre and post COVID-19 undecideds dipped dramatically.
- For those who have decided not to implement it, additional upgrades (60%), cost (40%), and other (30%) which include not much demand and not worth the investment were cited as top reasons. (Respondents could choose more than one reason.)

3 Survey Sample Description

3.1 Company Classification

Respondents self-identified as to whether they were a major oil, fuel distributor or wholesaler or a retail site operator.

Company Classification broken out by respondents	
Major Oil	2 (3.64%)
Fuel Distributor/Wholesalers	11 (20%)
Company Owned/Retail Site Operators	42 (76.36%)
Total	**N = 55**

Company Classification broken out by sites represented	
Major Oil	115 (0.61%)
Fuel Distributor/Wholesalers	630 (3.35%)
Company Owned/Retail Site Operators	18074 (96.04%)
Total	**N = 18,819**

3.2 NACS Store Count Categories

The NACS annual SOI report utilizes 5 categories (A, B, C, D, and E) to classify store count size. Some questions are broken out utilizing these same categories.

NACS Store Count Categories broken out by respondents	
A (1-10 stores) **	21 (38.18%)
B (11-50 stores)	16 (29.09%)
C (51-200 stores)	13 (23.64%)
D (201-500 stores)	2 (3.64%)
E (501+ stores)	3 (5.45%)
*The total respondent for this question is **N=55**. ** Note that 6 respondents were single store operators.	

NACS Store Count Categories broken out by sites represented	
A (1-10 stores)	86 (0.46%)
B (11-50 stores)	399 (2.12%)
C (51-200 stores)	1236 (6.57%)
D (201-500 stores)	548 (2.91%)
E (501+ stores)	16550 (87.94%)
Total	**N = 18,819**

3.3 Region

Areas of the Country Where Respondents are Located	
New England (Maine, Rhode Island, Vermont, Connecticut, New Hampshire and Massachusetts)	10.91%
Mid Atlantic (New York, New Jersey, and Pennsylvania)	10.91%
South (Virginia, West Virginia, Kentucky, Delaware, Maryland, North and South Carolina, Tennessee, Arkansas, Louisiana, Florida, Georgia, Alabama, and Mississippi)	27.27%
Midwest (Michigan, North and South Dakota, Iowa, Minnesota, Kansas, Nebraska, Ohio, Indiana, Illinois, Wisconsin, and Missouri)	29.09%
Southwest (Texas, Arizona, New Mexico and Oklahoma)	18.18%
Rocky Mountain (Montana, Idaho, Colorado, Utah, Wyoming and Nevada)	14.55%
Pacific (California, Oregon and Washington)	18.18%
*Note: This may not equal 100% in total as respondents could select more than one region. Data related to store count per region is not available. **N=55**	

4 Contact EMV Outside

4.1 Fall 2020 Survey Results

In the following tables, responses are split out by respondent's store count using the NACS store count categories, where:

- A = 1-10 Stores
- B = 11-50 Stores
- C = 51-200 Stores
- D = 201-500 Stores
- E = 501+ Stores

4.1.1 What percentage of your sites have contact EMV currently working outside at the dispenser?

Outside Contact Deployment						
	A (21)	B (16)	C (13)	D (2)	E (3)	Total Respondent Count (55)
0%	42.86%	25%	23.08%	0%	33.33%	30.91%
< 25%	9.52%	18.75%	46.15%	0%	66.67%	23.64%
25%-50%	9.52%	25%	7.69%	50%	0%	14.55%
50%-75%	9.52%	12.5%	15.38%	0%	0%	10.91%
75%-100%	0%	6.25%	7.69%	50%	0%	5.45%
100%	28.57%	12.5%	0%	0%	0%	14.55%

4.1.2 Do you plan on implementing contact EMV outside at some point in the future for at least some of your sites?

This question was only for site owners who have 0% deployment contact outside.

Outside Contact Plans						
	A (9)	B (4)	C (3)	D (0)	E (1)	Total Respondent Count (17)
Yes	77.78%	75%	100%	0	100%	82.35%
No	0%	0%	0%	0%	0%	0%
Undecided	22.22%	25%	0%	0%	0%	17.65%

4.1.3 Why aren't you implementing contact EMV outside?

This question was only for site owners who have 0% deployment contact outside and indicated they were either undecided about or definitely not implementing it.

Why aren't you going to implement outside contact? (Respondents could choose all that applied, therefore the total % may not equal 100%)	
	Respondent Count (3)
I don't know how	0%
It's too complex, requires too much effort	0%
Other priorities	0%
The cost is too high	100%
I'm not sure how to pay for it	0
My risk for not converting doesn't justify the expense	66.67%
Other (Haven't Decided)	0%

4.1.4 Outside Contact EMV Challenges

These questions were asked of respondents that do not currently have 100% deployment of outside contact EMV. A total of 18,709 sites are represented across 44 respondents.

Outside Contact EMV Challenges	
Hardware Status	
	Site Count (18,709)
I have deployed hardware that is functional as is	36.09%
I have deployed hardware but it needs to be upgraded	37.74%
I have not deployed hardware	22.73%
I have some sites that I won't be upgrading	3.44%
What is preventing you from being 100% deployed? (By Respondent) (Respondents could choose all that applied, therefore the total % may not equal 100%)	
	Respondent Count (44)
Lack of available hardware	13.64%
Lack of available software	29.55%
Waiting on certification	27.27%
Not sure how to pay for it	15.91%
Effort, complexity	27.27%
Other priorities	20.45%
My fuel brand has told me a solution is not available yet	11.36%
Other (*Specific reasons included COVID-19, spreading out deployment due to cash flow management concerns, sites are in process/started, equipment on order, waiting on installations, technician availability, software availability, certification availability for specific combinations of equipment, waiting for others to lead, waiting on networks to certify EMV fleet cards*)	34.09%
What is preventing you from being 100% deployed? (By Store Count) (Respondents could choose all that applied, therefore the total % may not equal 100%)	
Lack of available hardware	86.43%
Lack of available software	88.89%
Waiting on certification	61.63%
Not sure how to pay for it	55.14%
Effort, complexity	86.05%
Other priorities	2.88%
My fuel brand has told me a solution is not available yet	54.72%
Other: See Above	57.19%

Outside Contact EMV Challenges (By Respondent)	
What % of your sites do you expect to have EMV working outside by April, 2021?	
	Respondent Count (44)
0%	0
< 25%	6.82%
25%-50%	9.09%
50%-75%	11.36%
75%-100%	11.36%
100%	61.36%
Expectation for 100% deployment for sites you want to upgrade?	
	Respondent Count (44)
2020	25%
First half of 2021	43.18%
Second half of 2021	15.91%
2022	6.82%
2023	2.27%
2024 or beyond	2.27%
I don't know	4.55%

Outside Contact EMV Challenges (By Store Count)	
What % of your sites do you expect to have EMV working outside by April, 2021?	
	Site Count (18,709)
0%	0
< 25%	2.44%
25%-50%	54.20%
50%-75%	2.13%
75%-100%	31.21%
100%	10.02%
Expectation for 100% deployment for sites you want to upgrade?	
	Site Count (18,709)
2020	3.44%
First half of 2021	39.43%
Second half of 2021	2.07%
2022	0.94%
2023	53.45%
2024 or beyond	0.43%
I don't know	0.24%

The results are encouraging when one looks at the percentage of respondents (61%) who expect to have EMV fully deployed by the April 2021 liability shift date. However, when viewed by store count, the results are not so encouraging, as only 10% of the sites are expected to be upgraded. Respondents with lower store counts are much more optimistic and/or not facing as many challenges to complete their rollouts. Responses in the open-ended comments suggest that some owner/operators, particularly those with many stores, are struggling with the complexity of obtaining certified solutions (with the requisite software and hardware) for all the various equipment and combinations of equipment they have installed for all of their sites. In addition, the disruptions caused by COVID-19 and the continued uncertainty were mentioned several times in the open-ended comments.

4.2 Comparison Results and Trends

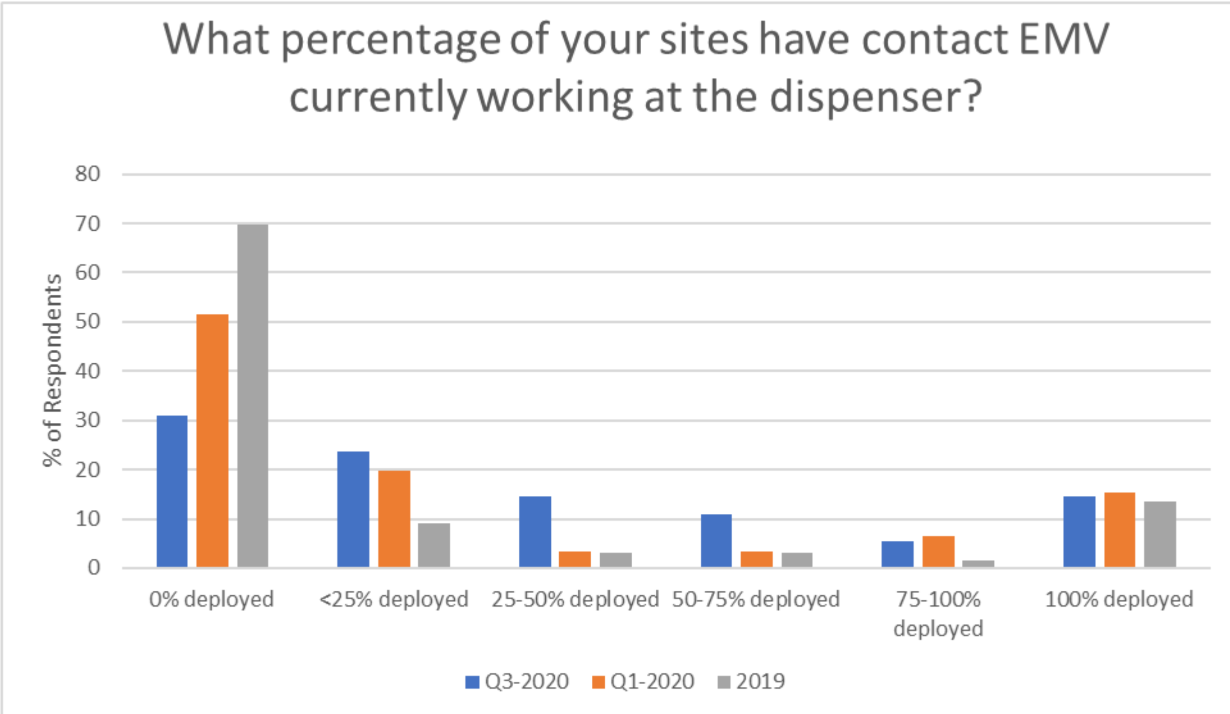
Note that the data in the surveys is completely anonymous and aggregated. There is no guarantee that same respondents completed both surveys, so care must be taken with blanket comparisons.

In some of the following graphs, responses are split out by respondent's store count using the NACS store count categories, where:

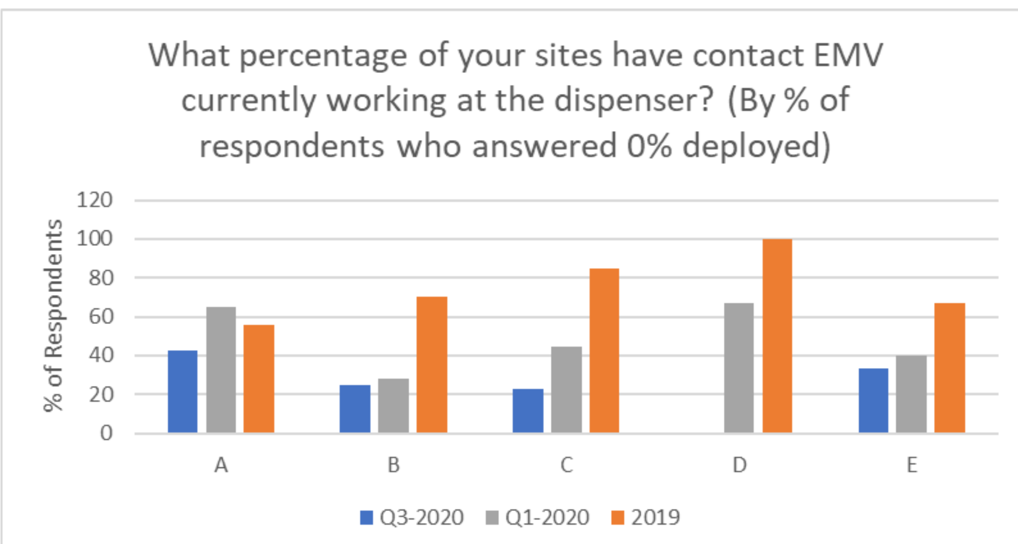
- A = 1-10 Stores
- B = 11-50 Stores
- C = 51-200 Stores
- D = 201-500 Stores
- E = 501+ Stores

4.2.1 What percentage of your sites have contact EMV currently working outside at the dispenser?

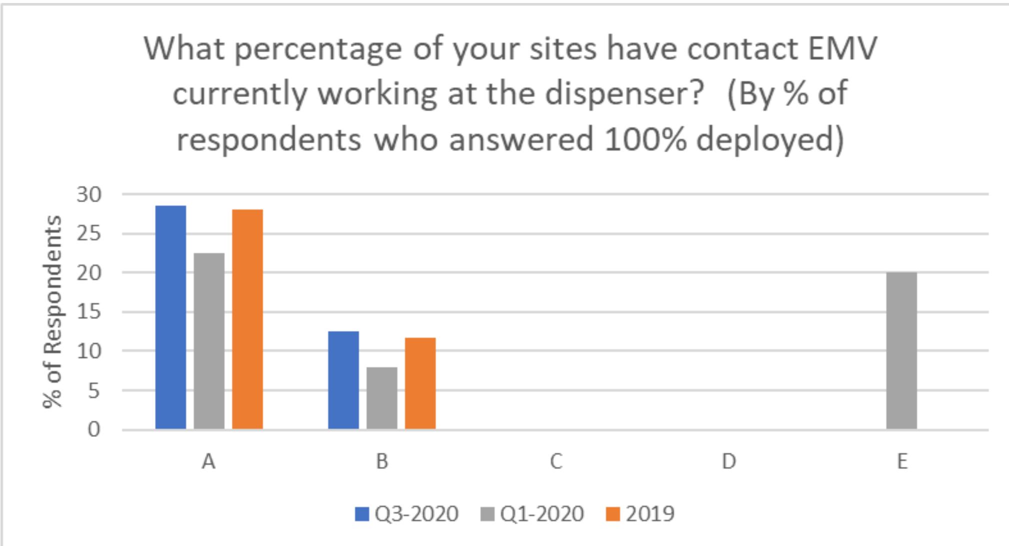
The following chart builds on the spring 2020 trend that shows owner/operators are making progress in outdoor EMV implementation. While the percentage of respondents that are fully deployed remains relative flat, the percentage of respondents who have shifted from no sites deployed to at least some sites deployed (whether they are test/beta sites or initial roll out of high fraud sites) has increased. This is especially evident when comparisons are made between the "0% deployed" answer (decreasing trendline) and the other answers (increasing trendline), again with the exception of 100% deployment. The flatness of 100% deployment could be a sign of less interest in participating in an EMV survey once rollout is completed, or it could truly be that the growth in outdoor EMV is reflected as making progress, not finishing.



The following chart show the % of respondents by store count who answered 0% deployed. Across all store counts, the percentage of respondents with no sites deployed has decreased significantly. The fluctuation in the A size category (less than 10 stores) is likely due to the actual participants in the survey and whether they were single store owners (i.e., a one-store count is all or nothing).



The following chart shows the % of respondents who answered 100% deployed. Across all store counts, the percentage of respondents with 100% deployment remains relatively flat. The outlier is in the E size category where one participant in the spring 2020 survey was completely deployed. Otherwise, for survey participants, only those with a store count of 50 or less have reported 100% deployment.



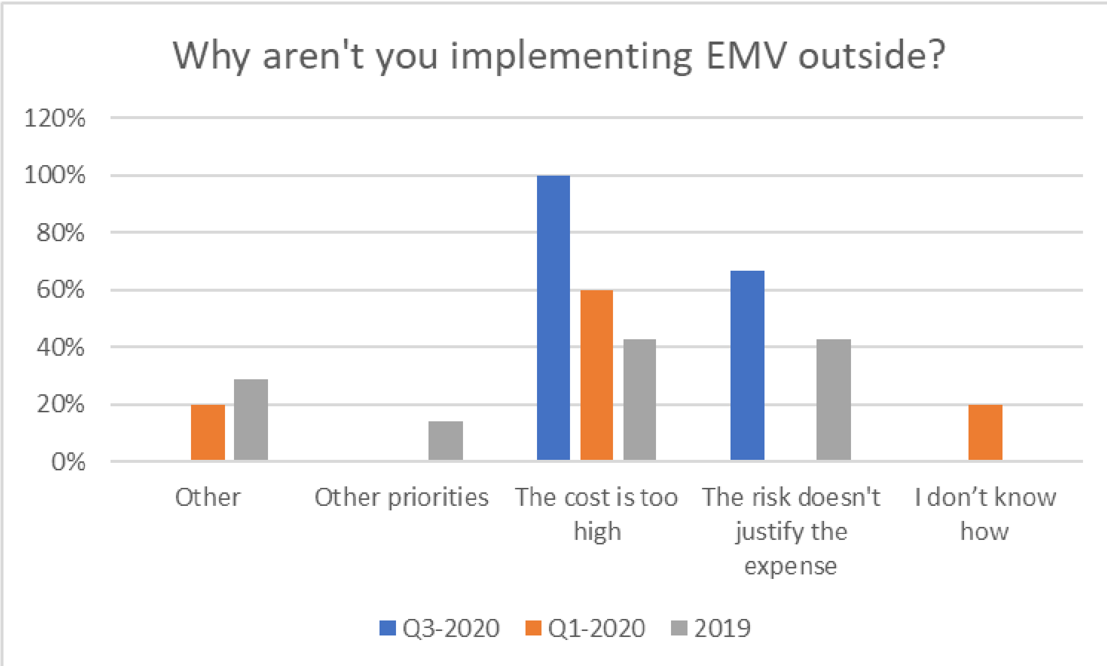
4.2.2 Do you plan on implementing contact EMV outside at some point in the future for at least some of your sites?

This question was only for site owners who have 0% deployment contact outside. In the 2019 survey, 7% of the “A” owner/operators (1-10 stores) had decided not to implement EMV outside. In the spring 2020 survey, that number fell to 0% and remained 0% in the latest survey. Other sized store count respondents showed 0% in 2019 and that trend continued in all of the 2020 data.

In the 2019 survey, a significant number of owner/operators in the A (21%), B (8%), and C (36%) categories were undecided about implementing outdoor EMV. The spring 2020 data revealed that all but a percentage (declining to 16%) of “A” owner/operators have decided to implement outdoor EMV. In the fall 2020 survey both “A” and “B” operators showed an uptick in the percentage of undecided responses, albeit a small overall number. This could be a result of different survey participants, or a result of the uncertainties (financial and other) smaller owner/operators face in light of COVID-19.

4.2.3 Why aren’t you implementing contact EMV outside?

This question was only for site owners who have 0% deployment contact outside and indicated they were either undecided about or definitely not implementing it. Note: All respondents except a very small number of A and B sized owner/operators were excluded from this question in the latest data (refer to section 4.2.2 above) as most respondents had made a decision to move forward with implementations. Respondents could choose all that applied, therefore the total % may not equal 100%.



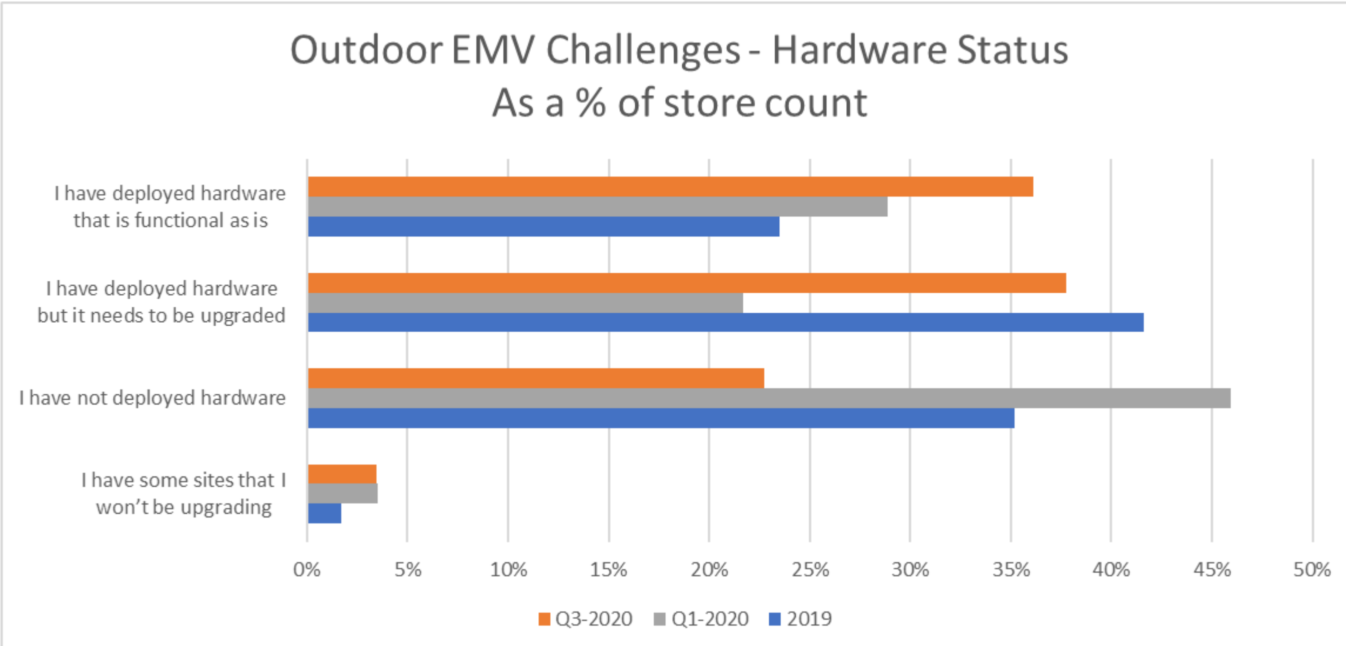
The latest 2020 survey results bring back into focus that at least some operators still do not understand the risks associated with not upgrading to EMV, and the cost of upgrades remains top of mind (increasing from 43% to 60% to 100%) when these small operators are considering their implementation plans.

4.2.4 Outside Contact EMV Challenges

These questions were asked of respondents that do not currently have 100% deployment of outside contact EMV. All of the 2020 data shows considerable progress in getting functional hardware installed at sites. As pointed out in the spring 2020 report:

> *The percentage of "not having hardware deployed" increased in 2020 data. This is perhaps due to survey respondents not necessarily being the same in both survey data sets. Alternatively, based on respondent free form comments that were received, some of these respondents may have realized that their hardware in place was not sufficient and needed significant and costly upgrades/replacements, which may have led to choosing this answer over "needs to be upgraded".*

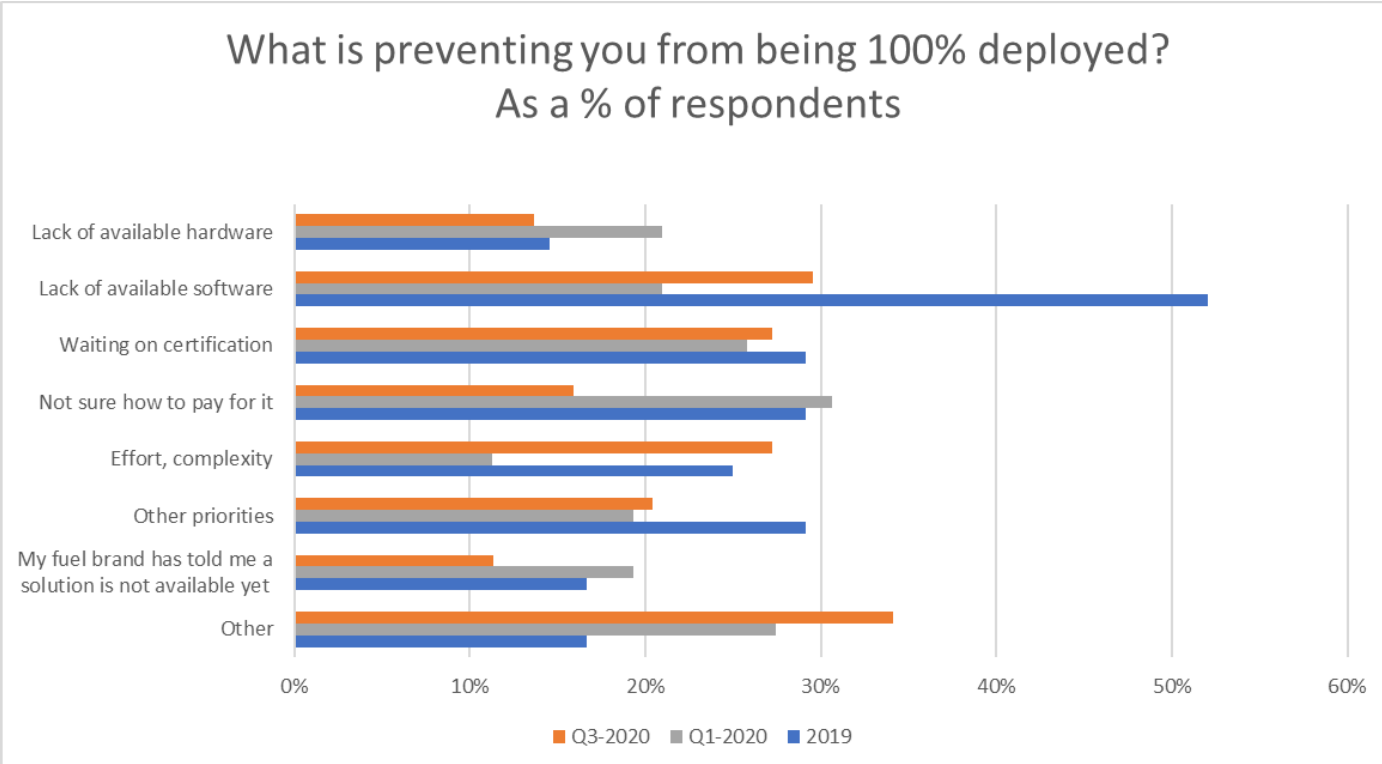
With the newest data set, the relative decrease in no hardware deployed and hardware deployed but needs to be upgraded is in line with the 2019 data and continued progress is exhibited for functional hardware deployment.



These questions were asked of respondents that do not currently have 100% deployment of outside contact EMV. Respondents could choose more than one answer, so the percentages may not equal 100%.

The data from the 2020 surveys show some fluctuations when it comes to hardware and software availability. This is perhaps due to survey respondents not necessarily being the same in both survey data sets. Alternatively, the impacts of COVID-19 may have influenced how respondents answered the survey. For hardware availability, COIVD-19 had disrupted the global supply chain and increased lead times for some hardware especially around the time of the spring survey and perhaps things are now returning to closer to normal in terms of supply. (Although in the open-ended comments in the fall 2020 survey, complaints of certain hardware availability continued.) For software availability (and certifications), continued remote work for many companies has delayed projects for outdoor, especially when the equipment needed to develop, test, and certify cannot be easily transported to an employee's house.

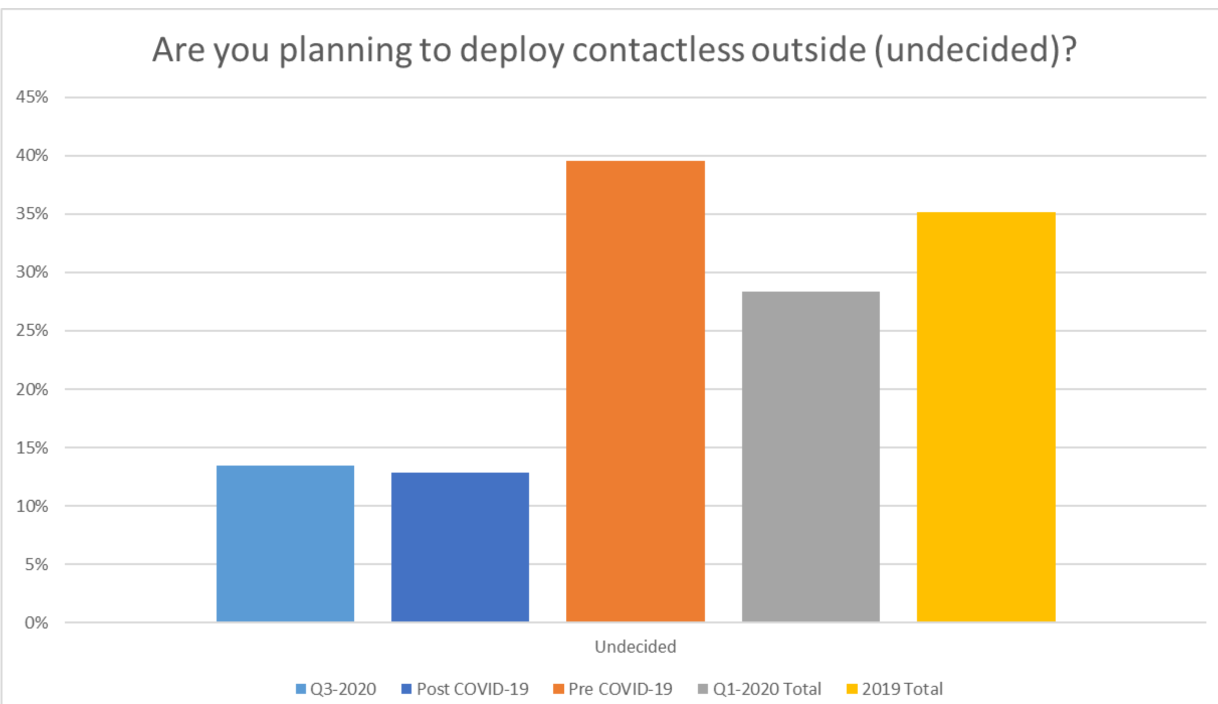
The "other" answer continues to see significant uptick (34% vs 27% vs 17%). Based on the free form text respondents could supply if they chose "other", cost, technician issues, and COVID-19 impacts continued to be popular reasons.


What is preventing you from being 100% deployed?
As a % of respondents
Lack of available hardware
Lack of available software
Waiting on certification
Not sure how to pay for it
Effort, complexity
Other priorities
My fuel brand has told me a solution is not available yet
Other
0%
10%
20%
30%
40%
50%
60%
Q3-2020
Q1-2020
2019

5 Contactless EMV

Contactless EMV	
Are you planning to deploy contactless outside?	
	Respondent Count (52)
Yes, and I'm 100% deployed at sites where I have contact EMV deployed outside	21.15%
Yes, but I'm not 100% deployed	59.62%
No	5.77%
Undecided	13.46%

The new data continues to show that owners/operators are reaching decisions about deploying contactless payments outside; 35% in 2019 vs 28% in spring 2020 vs 13% in fall 2020 were still undecided. The COVID-19 pandemic proved to be a catalyst for reaching a conclusion as evidenced in both 2020 surveys, where pre and post COVID-19 undecideds dipped dramatically.



Contactless EMV	
If you are not implementing contactless, why not? (Respondents could choose all that applied, therefore the total % may not equal 100%)	
	Respondent Count (10)
I don't know how	0 %
Effort, complexity	10%
Other priorities	10%
The cost is too high	40%
Not sure how to pay for it	20%
Requires additional upgrades	60%
Not Applicable	10%
Other*	30%

*Responses to "Other" cited "Not much demand, one site has contactless but I maybe get 3 transactions per month, not worth the investment, my major oil doesn't support, not sure how much extra business it would bring; inside contactless gets very little use."

Contactless EMV	
If you want to deploy but aren't at 100%, what's the primary reason for why not?	
	Respondent Count (31)
I need hardware	12.90%
Lack of available software	9.68%
Waiting on certification	6.45%
Not sure how to pay for it	6.45%
Effort, complexity	6.45%
Other priorities	0%
My fuel brand has told me a solution is not yet available	16.13%
Not Applicable	29.03%
Other*	12.90%

*Responses to "Other" cited waiting to deploy contact/contactless at the same time, in process, and on order.