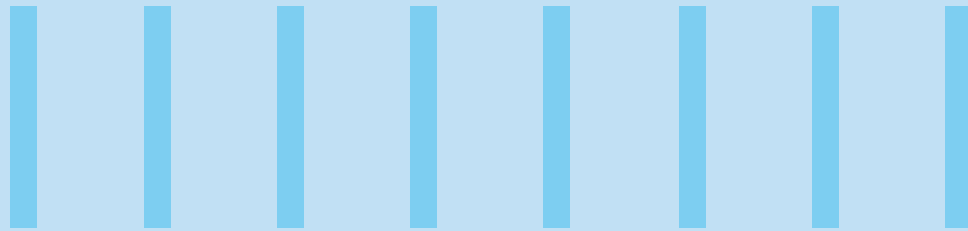# HOW SHARING CUSTOMER DATA CAN HELP DMVS PERSONALIZE SERVICE DELIVERY

Abstract

The expansion of meaningful self-services within the Department of Motor Vehicles (DMV) revolves around the DMV's ability to identify and authenticate the customer. This opens the door for service integration and introduction of AI and automation, which can help agencies personalize service delivery. Unfortunately, complex, legacy IT systems play the spoiler.

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One data. Many sources. Many formats

Legacy information systems that support the DMV core processes contain multiple and often inconsistent entries for the same data elements. For example, a customer may register a vehicle at a dealership and use the name 'Jim Jones'. He may later register a second vehicle at the DMV and use the name as 'James Jones'. Due to the fact that there is no single authoritative source for a customer, both applications will be processed with two versions of the customer's name. This is a common problem that occurs when stovepipe applications are designed and implemented using non-sharable data structures.

In the above example, a registration record will be created for both the transactions. The registration records will reside in a Registration Master file used by Vehicle Services but not shared with Driver Services. This lack of integration and inconsistent references make it nearly impossible for DMVs to "know" the customer and personalize service delivery. This problem (lack of integration) also affects the customers. They are inconvenienced by having to provide various DMV business units with the same information – name, DOB, address, etc.

Figure 1 shows an example of what the business users must deal with, when accessing and confirming customer information. As you see, the information is captured in many different systems. What you cannot detect from this diagram is that the information is captured in many different formats as well. For example, data collection in the registration process may be as: Last Name, First Name and Middle Initial, all as one contiguous field with a field length delimiter such as 40 characters. While, data collection in the driver licensing application may be collected using three separate name fields: Last Name 35 characters in length, First name 35 characters in length and Middle Initial 1 character in length.

Each application, for example registration and driver licensing, may be governed by different business rules and edit criteria. This introduces inconsistencies in data collection and its usage. And, this makes it nearly impossible for the DMV to accurately determine, identify and "know" their customer and the services they should receive.
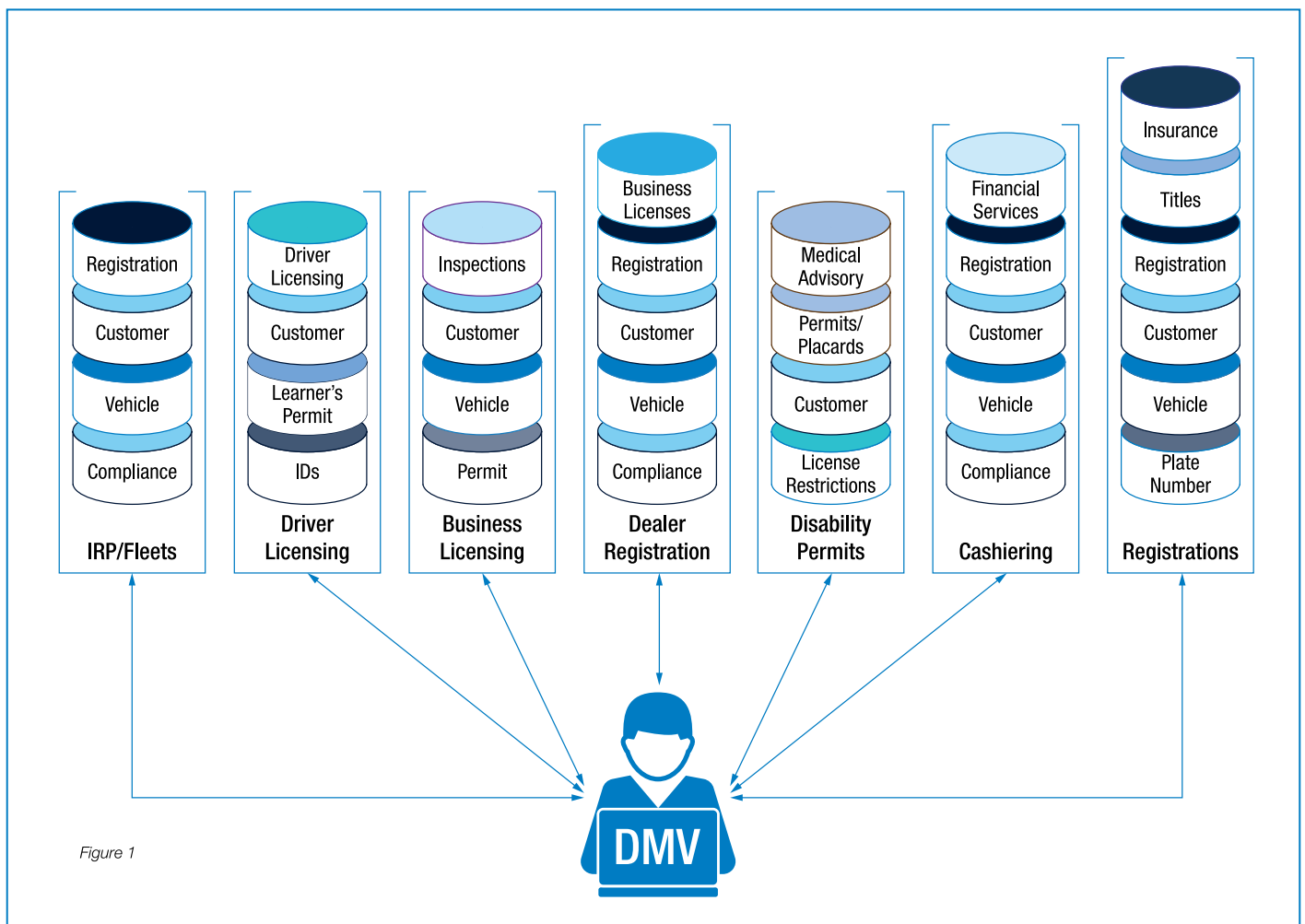
Figure 1

One data. One source. One format

If each of the categories of information were implemented as a shared data environment, customer (as well as other categories), would be stored in and be accessible from one place by all applications/units rather than once for each application. Figure 2 shows such a shared database environment.

In this environment, there will be a single authoritative source for the customer accessed by many different applications/ business units. A shared common process will be used to create and maintain the customer information. This ensures consistency, data integrity, improved service delivery, and decreases the chance of fraud.
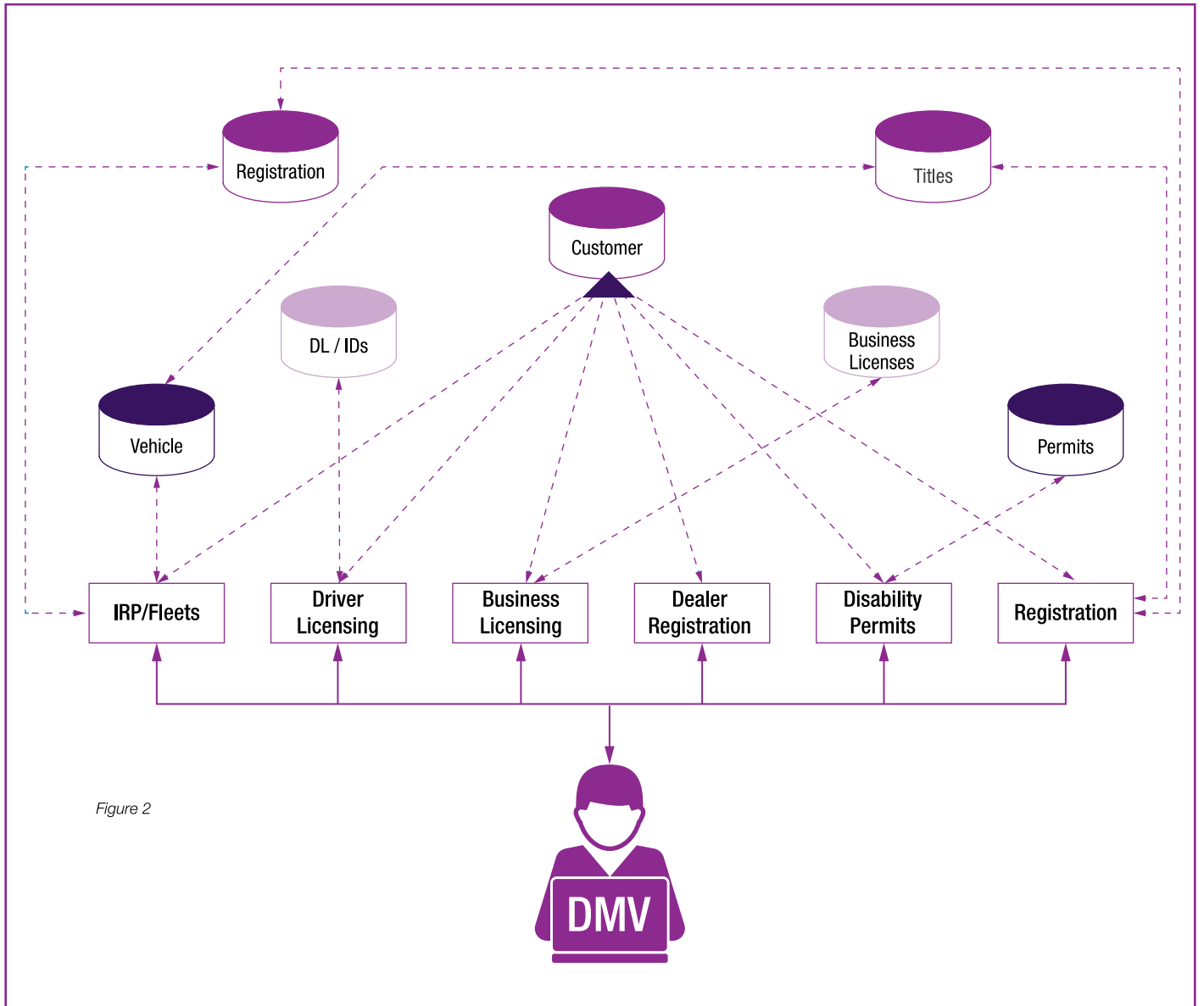

Figure 2

Implementing one data. One source. One format

A customer's information is generally administered and consumed by nearly every business unit in the DMV through various transactions and services. In a shared database environment, any administration of customer information will have an immediate effect on all the DMV agents who perform transactions on behalf of the customer.

Therefore, it's important to take into account the information that each unit needs to know about a customer, and also how that information is processed. Let's call this information the Customer Component.

Agencies must "catalogue" the data elements in the customer component and also define the set of routines that would maintain this information consistently at an enterprise level. A suggested approach to do the above should:

1. Understand the business rules for both data and process that will provide guidance in the establishment and on-going maintenance of a Customer Component.

2. Map the current application environment and determine the steps that must be taken to implement a common Customer Component.

3. Define the target, shared-database environment and supporting operational Customer Component.

4. Provide an incremental solution to a Customer Component implementation with minimal impact on the existing business and supporting applications.

Agencies will also need to incorporate the concept of a Customer Component in the business (as a business practice). This requires them to:

1. Revise/adjust business processes as well as the supporting forms and applications.

2. Store Customer Component information in a customer table and "reference/link" to that information as opposed to the redundant storage of the same data in each application file.

3. Make the creation, verification, retrieval of Customer Component data a formal process(es). By this I mean that the business rules governing the identification of customer are constantly applied and that no shadow or unauthorized processes are allowed.

An example of an incremental operational implementation of the Customer Component is described here:

1. Prototype the Customer Component through an existing project. This will allow agencies to work through the data cleansing, customer creation and governance of business rules in a more controlled environment with a smaller customer population. Basically, establish best practices before a larger roll out that will affect a larger population.

2. Use the experiences and lessons learned from the prototype to create processes and procedures that can be applied to other projects. These best practices will set the stage for integration of the customer with other systems.

3. Build on the prototype by including core business applications in manageable increments

01 PROTOTYPE
Prototype the Customer Component through an existing project.

02 LESSONS LEARNED
Use the experiences and lessons learned from the prototype to create processes and procedures that can be applied to other projects.

03 BUILD
Build on the prototype by including core business applications in manageable increments
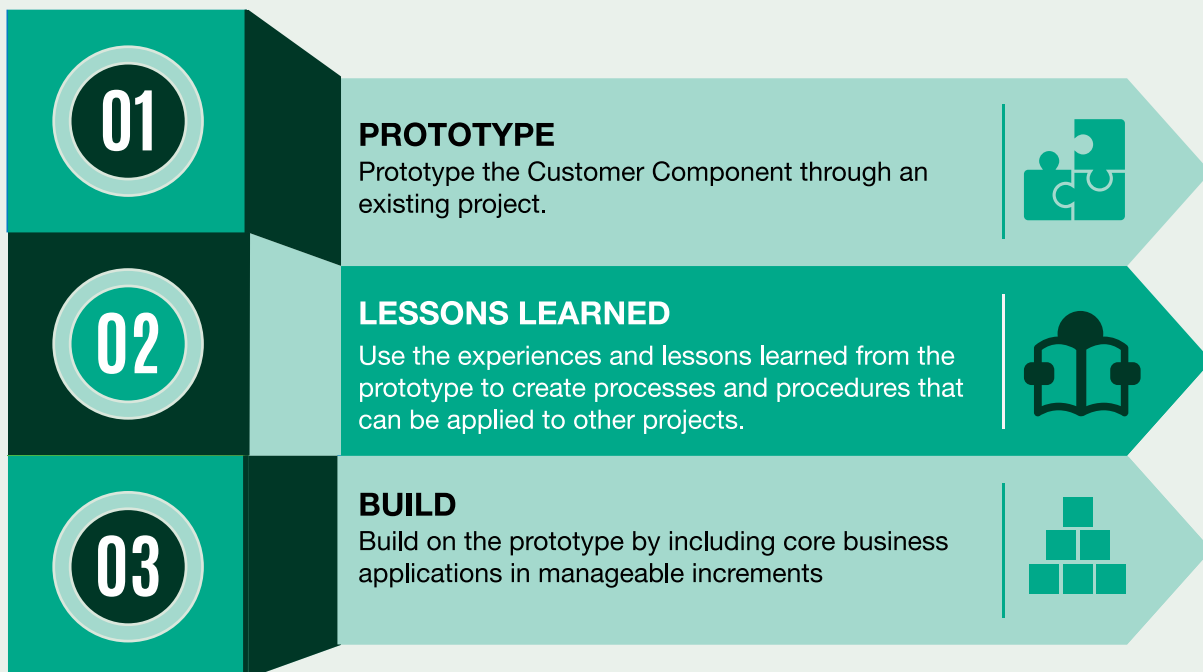
Conclusion

The paper presented an organizational view of the challenges that are faced in an attempt to create a single authoritative source for DMV customers' data. DMVs must involve both the business and technical communities in order to define "who" is a customer, "what" all information will be used for various transactions, "how" will this information be used within the business operations, and "which" technical solution can best meet these demands. DMV's ultimate goal should be to create and define solutions that will provide a single source of accurate and timely customer data, that can be used throughout the enterprise. Once the customer is identified and authenticated, DMV's ability to adopt emerging technologies like AI will improve and so will their ability to personalize service delivery.

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