A PRACTICAL MODERNIZATION APPROACH TO BUILD THE MOTOR VEHICLE AND LICENSING AGENCY OF THE FUTURE

Abstract
In our last paper we discussed the following trends and imperatives for jurisdictions to build their motor vehicle and licensing agency of the future, and deliver a comprehensive, secure, and seamless experience to customers and agency staff.

- Data sharing and collaboration: Initiatives such as State2State, Car2Car and facial recognition that increase safety
- New technologies: Autonomous Vehicles, Internet-of-Things, Artificial Intelligence and other types of automation that improve efficiency, effectiveness, and customer service
- Portability: Multi-channel access, mobile offices, and virtualization that increase reach
- Enforcement: Enablers such as intelligent cars and configurable business rules that enable agencies to quickly identify, automate and enforce regulations
- Simplification of financial management: Draw-down accounts, new payment models, and usage-based taxes that improve financial operations

Motor vehicle and licensing agencies face a rapidly changing environment – smart customers, new and intelligent technologies, evolving regulations – and the pace of this change is only going to increase. Staying ahead of these changes requires modernization of existing systems into intelligent, agile, secure, customer-centric systems.

In this paper, we discuss a practical approach that can help motor vehicle and licensing agencies modernize and embrace these near-term and future innovations to improve safety and service delivery.
Most motor vehicle and licensing agencies require a complete overhaul of the design and competencies of their systems in order to take advantage of new technologies and provide a cohesive customer-centric experience. While modernization is necessary, agencies should ensure that they modernize ‘for the future’ and not just for ‘the present’.

Modernization ‘for the present’ involves migration of the legacy system onto a new platform that can address known requirements – for example customer-centricity, seamless connectivity with partner agencies, support for key trends like virtualization, and optimized operations and reporting. Modernization ‘for the future’ involves building a system that not only addresses known requirements but is scalable, flexible and intelligent to adapt to unforeseen demands quickly while minimizing risk and disruption.

Instead of a COTS-based solution or piecemeal modernization, agencies should implement a solution that offers best of these worlds – ‘Software-as-a-Solution’.

Modernizing for the future: The right solution

Most of the requirements for an agency are not generic, and one-size-fits-all solutions require the agency to mold or adapt to the product, regardless of the fit. Most pure commercial off-the-shelf (COTS) systems are designed to address up to 80% of a state's current requirements. They are generally less able to adapt to a state's unique present and future requirements. Attempting to build the solution in-house, in stages, using existing agency or state resources may involve additional time and expense.

Software-as-a-Solution combines best-of-breed technologies and products, offers most of the requirements out of the box and yet is easier to change, and includes the following key features:

1. Customer-centricity: “One-customer, one-record” model to build a 360° view of a customer and deliver personalized services across channels of choice.

2. Platform-independence: Reference architecture that is not tied to any specific product and can be implemented on or extended to a variety of infrastructure options.

3. Connectivity: Real-time secure interfaces with internal and external systems to enable seamless information sharing and collaboration.

4. Agility: Service Oriented Architecture and user-based dynamic rules management to quickly scale and adapt to evolving requirements.

5. Ease-of-Use: Intuitive UI and UX that meets accessibility standards with a common look and feel across all channels and provides a transformational experience to all users.

Another key advantage of adopting a ‘Software-as-a-Solution’ approach versus platform migration or COTS solution, is control. With ‘Software-as-a-Solution’, an agency can use its own IT team to maintain the system post implementation. This allows for greater flexibility to develop new capabilities as needs arise. The flexibility and modularity of the solution would make it extremely easy for the agency’s business and technical teams to support new service offerings quickly and cost-effectively.

**Agile: Key enabler to modernize for the future**

Motor vehicle and licensing agencies that want to build their system of the future, respond to rapidly changing requirements, and quickly introduce new services and solutions should migrate from traditional program execution approaches such as waterfall to more iterative approaches. This will enable organizations to quickly take an idea from concept to production, without losing essential testing and validation steps. The graphic below shows an example of an agile/iterative implementation approach.

![Agile Implementation Diagram](Image)

**Amplifying employee potential**

Modern, agile and automated systems will improve employee productivity. Employees will have more time to focus on strategic initiatives and tasks. To amplify the potential of employees and enable them to build the motor vehicle and licensing agency of the future, agencies should foster a culture that rewards adaptability and encourages innovation.

Design thinking has been successfully used by many organizations to build this type of culture. It is a collaborative approach to product and service innovation that puts the needs and expectations of the customer at the center of a project aimed at solving a problem through creative experimentation.
Partnering for success

One of the most crucial questions that an agency faces as it executes its modernization program is whether to do it alone or use a partner? Both approaches have their advantages and disadvantages. However, given the complexity of this exercise, we believe a partner with the right approach, experience, and perspective can add value and increase the chances of success.

Agencies should not have to compromise their requirements to accommodate a COTS solution. Given the long-term nature of these initiatives, including follow-up maintenance, choosing a partner that can complement and augment the agency will produce the best possible outcomes.

Agencies should choose modernization partners with these key attributes:

1. **EXPERTISE IN CURRENT AND EMERGING TECHNOLOGY**
   Technology and domain expertise to not only implement suggested features and requirements but also help the agency understand and incorporate new trends and technologies.

2. **EXPERIENCE WITH CRITICAL SOFTWARE VENDORS**
   Established partnerships and deep implementation experience with critical software vendors – Oracle, Microsoft, Informatica, etc.

3. **CROSS-INDUSTRY EXPERIENCE**
   Cross-industry experience to adapt insights and best-practices for motor vehicle and licensing agencies and help them innovative outside-in.

4. **PROVEN EXECUTION**
   Proven execution models that ensure predictability and business value.

Conclusion

Motor vehicle and licensing agencies need to modernize for the future. A future that includes self-driving cars, demanding customers, rapidly evolving technologies, and complex integrations with law enforcement and other partner agencies. Instead of adopting standard commercial-off-the-shelf (COTS) solution or embarking on a custom modernization program, motor vehicle and licensing agencies should use ‘Software-as-a-Solution’ to build their modern, agile and customer-centric IT system.

Software-as-a-Solution brings best of both the worlds (COTS and custom modernization) while providing more control over the solution to the agency. Additionally, to ensure that the adoption is effective and without any risk or disruption, motor vehicle and licensing agencies should partner with an experienced systems integrator and leverage agile or iterative implementation methodology to execute their modernization program.

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